



Annual Information Return 2012

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Section 1

Board's Overview



Annual Information Return 2012

Section 1

Board's Overview

Board's Statement

In support of Northern Ireland Water's 2012 Annual Information Return (AIR12), its Board of Directors is required by the Utility Regulator to prepare a statement on the compilation of AIR12, explaining how it has satisfied itself as to the accuracy and completeness of the information provided.

The Directors consider that AIR12 provides a true and fair view of the state of affairs of NI Water for the financial year 2011/12. In preparing AIR12, 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 AIR12 is as reliable, accurate and complete as is reasonably practicable.

Processes and Internal Systems of Control

AIR12 has been compiled in accordance with NI Water's AIR Completion Manual, which ensures clear ownership of AIR data, evidence of peer review and procedural documentation covering the processes followed in compiling the AIR submission.

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

AIR12 Project Governance

The AIR12 Project was coordinated by the Regulation Manager and representatives (senior managers) from relevant functional areas, i.e. those functions which contribute data to the AIR12 submission.

The Regulation Manager ensured:

1. information disseminated to and from functional Working Groups;
2. coordination of cross-functional Working Groups;
3. AIR submission programme was adhered to;
4. implementation of Reporter's recommendations.

Senior managers from across NI Water chaired AIR12 functional Working Groups. The Working Groups' roles included:

- ensuring that the Utility Regulator's "Reporting Requirements" were understood and followed;
- ensuring that relevant Line Methodologies were updated in line with the Reporting Requirements;
- coordinating the population of Data Tables and the drafting of associated Company Commentaries in accordance with Line Methodologies and Reporting Requirements in compliance with the AIR programme;
- ensuring that relevant Line Methodologies, Data Tables and Company Commentaries were reviewed and approved in accordance with the AIR Completion Manual Roles and Responsibilities Matrix and that all Assurance Statements were completed.

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

- Line Methodologies,
- Data Tables, and
- Company Commentaries

Population of Data Tables and drafting of associated Company Commentaries was in accordance with the Utility Regulator's Reporting Requirements. In addition, company-specific methodologies (Line Methodologies), explaining how raw data is collected, processed and input to the Data Tables, were updated and adhered to when populating Data Tables and drafting Company Commentaries.

Responsibility for each of the key deliverables was agreed by the AIR12 Project Board. Authors, reviewers and approvers of Line Methodologies, Data Tables and Company Commentaries were designated for all input data in the AIR12 submission.

To ensure reporting consistency for AIR12, every item of data provided in the AIR12 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 AIR12 Reporting Requirements on 1 March 2012. Audits were undertaken by the company's Auditor and the Reporter in May and June 2012. 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 AIR12 submission was endorsed by the Executive Committee and Board in June 2012.

Board Involvement

In summary, the involvement of NI Water's Board in the completion of AIR12 included:

- Reviewing monthly company business performance analysis;
- Receiving a presentation from the Reporter and the Auditor in June 2012;
- Reviewing, commenting upon and approving the AIR12 Board's Overview;
- Reference back to NI Water's Executive Committee and Senior Management Team to verify corporate information;
- Executive Directors received regular reports on progress and reviewed, challenged, commented and influenced the content of AIR12.

The following activities were undertaken which enhanced NI Water's ability to meet the Reporting Requirements of AIR12:

- Development of systems and controls to populate AIR12 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 AIR12 complies with the Utility Regulator's Reporting Requirements and provides some assurance in respect of material assumptions and judgements included in the AIR12 commentaries:

- Clear accountability at senior management level for the ownership of all elements of AIR12. 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 AIR12 process have been disseminated through the AIR12 Project Board to all staff involved in the data collection process.
- Every datum in AIR12 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 AIR12 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.
- Both the Reporter and the Auditor present to the Audit Committee and/or Board near the conclusion of the AIR12 process.
- Directors directly challenge the production and content of AIR12 to satisfy themselves that their duties are fulfilled.
- In any case of uncertainty regarding data, commentary or line methodology, NI Water seeks advice and clarification from the Utility Regulator, the Reporter or the Auditor as appropriate.

Directors' Endorsement

In light of the above, NI Water's Board believes that it has developed and applied processes, governance and systems of internal control sufficient to meet its obligations for the provision of information contained in AIR12.

Each Director is satisfied that:

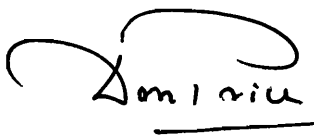
- a) so far as he/she is aware, there is no relevant audit information of which NI Water's auditors or reporters are unaware;
- b) He/she has taken all the steps that he/she ought to have taken as a Director in order to make himself/herself aware of any relevant audit information and to establish that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

For and on behalf of NI Water:



Trevor Haslett

Chief Executive, Northern Ireland Water



Donald Price

Non-Executive Director, Northern Ireland Water

Chapter 1

Key Outputs and Service Delivery

Tables A and B

Water Quality

NI Water carries out over 110,000 tests every year to make sure our water is clean and safe. The 2011¹ compliance levels for drinking water at the customer tap are at some of their highest levels, with a Mean Zonal Compliance (MZC) of 99.80%.

The compliance for 2011 was marginally below that for 2010 (99.81%), primarily due to additional compliance requirements covering taste and odour², but exceeds the requirement of the DRD Social and Environmental Guidance of 99.7%.

We use Drinking Water Safety Plan's (DWSP) to proactively highlight investment needs for those water supply systems which are likely to fail any parameters, including taste and odour.

Wastewater

As well as providing high quality, reliable and safe drinking water to our customers, we also remove wastewater from homes and businesses all over Northern Ireland. After appropriate treatment, the effluent is returned safely to the environment.

We achieved the targets for the calendar year 2011 of 85.83% of works complying with wastewater treatment standards and the target of 94.83% of the population served by compliant wastewater treatment works. Our wastewater compliance is the highest ever seen in Northern Ireland, having continually improved over the last 6 years.

NI Water recognises the damage that can be caused to our environment through water pollution incidents. We are committed to reducing the number of our pollution incidents over the PC10 period through our Pollution Mitigation and Reduction Strategy.

There were 44 high and medium severity pollution incidents in 2011 against a target of no more than 51. The target for 2012 is no more than 48 pollution incidents.

We hold Pollution Prevention Control (PPC) permits for 31 wastewater and water treatment sites to regulate sludge thickening and dewatering activities. The main focus now is on complying with odour conditions set for each site. Other waste activities within the organisation are managed through waste management licences and exemptions.

¹ This target is measured on a calendar year basis.

² The regulatory limits for taste and odour were reduced by regulatory amendment in 2010 and therefore affected the 2011 outturn. The effect was minimised by improved drinking water quality, in real terms.

Table B – Sewerage Service

The Northern Ireland Environment Agency (NIEA) issues Water Order Consents (WOC) which set out legally binding conditions under which discharges to the aquatic environment are permitted. NI Water has in the order of 1,500 WOC covering all Wastewater Treatment Works (WwTW), Water Treatment Works and sewerage systems.

NIEA assesses compliance with WOC conditions on a calendar year basis. The population equivalent (PE) figures used for setting the 2011 KPI's were agreed with NIEA in October/November 2010.

Prior to AIR10, WwTW compliance AIR submissions were reported on a similar basis as the NIEA methodology. The following changes in reporting methodology were implemented in AIR10 and continue to apply in AIR 12:

1. The most significant difference in compiling AIR12 data is that the base for designation of WwTWs in service and the PE for each WwTW are determined by NI Water on 31st March 2012. Whilst this ensures consistency with other AIR12 Tables, it also means:
 - any WwTWs which were decommissioned between 1st April 2011 and 31st March 2012 are not included in the assessment. Hence, AIR12 compliance figures are not comparable with those of the NIEA/KPI outturn, which report on all works in service at start of calendar year;
 - the updated PEs also mean that the AIR12 return is not comparable to that of the 2011 KPI outturn, as the latter were set on the basis of the PE figures of October/November 2010.
 - all wastewater compliance figures for KPIs are impacted by the changes.
2. Only WwTW serving greater than 250 PE with numeric standards are included.
3. Following on from (2) above, the figures for AIR12 contain a number of WwTWs which have just crossed the 250 PE threshold, but for which NIEA has not yet issued standards.
4. Only the resident PE is included for compliance assessment, i.e. tourists/visitors are not included in the total PE for Lines 10 and 11a.
5. Following on from (4) above, this approach poses problems for UWWTR definitions. The total PE, both resident and visitor numbers, is an integral part of defining which works are subject to the UWWTR numeric standards. For example, Benone WwTW would not be a numeric UWWTR works if the holiday/visitor numbers were not included. For this reason the total PE is included in UWWTR compliance for Lines 11 and 11b.

For all of the reasons above, it must be emphasised that the AIR12 outturn is not comparable to that of the 2011 NIEA/KPI outturn.

EC Bathing Waters

Bathing water quality is monitored by the Northern Ireland Environment Agency (NIEA) under the European Bathing Water Directive. The 2011 Bathing Water Quality results show that all 24 designated beaches have met the required EU Bathing Water Directive standard.

The NIEA recorded the results from June to mid-September at 24 bathing waters. Out of those tested, 20 received an excellent rating and 4 received a good rating.

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

We achieved the 10 day target response time for complaints, with a performance of 99.27% against the target of 98.5%. We are working to further reduce the number of written complaints we receive by identifying and addressing the root causes of written complaints and reducing the number of holding responses issued.

We achieved our 5 day target response time for billing contacts (DG6) at 99.96% against the target of 99.90%.

Quarterly independent market research is carried out through telephone surveys of 100 customers who have called us for any reason. The surveys were completed in quarters 2 to 4, achieving an overall average score of 4.57 out of 5. These independent quarterly surveys will continue during the 2012/13 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.

The Consumer Council for Northern Ireland (CCNI) undertakes an annual review of our complaint handling process and we work to implement any recommendations made.

We will continue to work with CCNI throughout 2012/13 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.

Account Management

Accurate measured bills are central to customer account management and we had a series of performance targets for meter reading and measured billing in 2011/12.

- 97.5% of bills to be based on actual meter reads – we achieved 97.88%; and
- 95%/98% of bills to be issued within 5 working days of a meter reading (including/excluding any that require investigation). Unfortunately, our performance of 94.8% and 96.4%, respectively, fell below our targets. Our performance in 2011/12 was adversely impacted by ongoing data quality projects for metered customers which caused 're-prints', thereby extending the 'read to bill print' time period.

We continue to work on billing improvements which will be introduced throughout 2012/13 and include both a new bill format which will be easier for all customers to understand and consolidated billing for those customers who have multiple sites.

We are helping customers understand their bills – in 2011/12 we reduced billing contacts by 12%.

We are working to introduce new web self-serve functionality during 2012/13 for retail and commercial customers. Customers will be offered paperless billing, billing and consumption histories, the ability to pay bills online and to change account details.

We have introduced a number of Customer Liaison Officers who have been visiting our agricultural non-domestic customers to engage them to understand billing and payments. This has proved very successful and we will expand this role during 2012/13 to include other customer groups.

Substantial efforts have been made to drive down call volumes and we met our target of no more than 275,000 calls in 2011/12, receiving around 268,000 calls.

We achieved our 2011/12 targets on 'calls not abandoned' - 99.26% against a target of 99%, and 'calls not receiving an engaged tone' - 100% against a target of 99.90%.

Further service improvements, especially the introduction of a new self-service solution, will continue to reduce call volumes and improve the level of service being provided to customers.

Codes of Practice

We are committed to providing high quality services to all our customers. We produce a range of leaflets on the different services we offer to our customers. These are available in various formats such as Braille and large print.

We have published a series of Codes of Practice - information booklets outlining the services we provide, our commitment to dealing fairly with customers and where and how to get advice and help. The Codes of Practice are reviewed by CCNI and approved by the Utility Regulator.

We have increased the number of individual customers on our Customer Care Register to 1,990 during 2011/12.

Health and Safety

We continue to focus on making NI Water a safe place to work by working with our staff, trade unions and contractors to reduce accidents in the workplace. We are also actively involved with health and safety professionals in other utility companies, the Health and Safety Executive for Northern Ireland (HSENI) and the Institution of Occupational Safety and Health (IOSH).

One of our key performance indicators in this area is to reduce the number of RIDDOR³ accidents. We surpassed our 2011/12 Health and Safety KPI target of not more than 9 RIDDOR accidents, with 4 RIDDOR accidents incurred. The health and safety KPI target for 2012/13 has been set at not more than 8 RIDDOR accidents.

We received the ROSPA Gold Award in 2011 when we achieved our best performance record of 3.03 RIDDOR incidents per 1,000 employees.

We are always striving for continuous improvement across all aspects of health and safety with one such initiative being our "Working S.A.F.E.R" campaign which focuses on delivering a safety culture through effective safety behaviours. We will continue our focus on health and safety regulation, leadership and behaviour-led initiatives in 2012/13.

³ Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (Northern Ireland) 1997. RIDDOR accidents are those with more than 3 days absence associated and which require to be reported to the Health and Safety Executive for Northern Ireland.

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 £413.3m for the year to 31 March 2012 (2011: £403.2m). Included in revenue was £289.3m (2011: £283.1m) received from DRD (Subsidy £269.2m; Road Drainage Charges £20.1m) - the remainder being measured and unmeasured charges, transfers of assets from customers, connection / infrastructure charges and other third party contributions.

The customer subsidy covered the full domestic charge and the Northern Ireland Executive has decided that this arrangement will remain in place during 2012/13. In its Programme for Government (PfG), published in March 2012, the Executive gave a commitment that no new household charges would be introduced during the PfG period (2011-15).

Operating expenses in 2011/12 of £221.5m (2011: £234.8m) were reduced from last year as a result of the continued focus to drive through efficiencies. This can be seen in the lower costs for staffing, power, hire and contracted services and other expenses, offset in part by an increase in rates. Results from operating activities before interest for the year was £192.0m (2011: £168.4m).

The net finance costs are primarily due to interest on our liabilities of £38.2m (2011: £34.9m) and PPP liabilities of £21.7m (2011: £22.2m) offset by income on our financial assets of £7.4m (2011: £6.6m).

The tax charge for the year was £18.8m (2011: £31.7m). The effective tax rate for the year to 31 March 2012 was 14.1% (2011: 28.3%). The reduced tax charge was mainly due to a reduction in the rate of corporation tax from 26% to 24%.

The Board will consider a proposal to declare a dividend of £27m in July 2012. Total assets increased by 8.6% to £2,267.9m (2011: £2,087.8m). Our net debt⁴ figure was £1,034.6m at 31 March 2012 (2011: £959.2m). Gearing (the ratio of net debt to equity and liabilities) increased from 45.9% to 46.9%.

The main movements in the financial position items were increases in property, plant and equipment of £164.5m (2011: £154.7m) relating to our Capital Investment Programme, offset by increases in net debt.

⁴ Refer to notes 18 and 20 in the Statutory Accounts. Net debt consists of loans of £807.6m (2011: £737.6m) and finance leases of £230.1m (2011: £237.5m) less cash and cash equivalents of £3.1m (2011: £15.9m).

Cash flows and debt

Operating activities generated a net cash inflow of £200.5m (2011: £173.3m). Net cash outflows of £190.7m (2011: £181.4m) related to investing activities. Net financing activities created a cash outflow of £22.7m (2011: inflow of £10.5m). Investing activities included the acquisition of property, plant and equipment of £191.1m (2011: £181.9m), proceeds from the sale of property, plant and equipment of £0.3m (2011: £0.3m) and interest received of £0.1m (2011: £0.2m). In order to meet the requirements of the above net outflow there was an increase in the financing requirement over the year. The increase in net debt was financed through an increase in net financial liabilities due after one year.

Dividends paid to the DRD during the year totalled £36m in respect of the previous financial 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 2010/11 closing balance is set out in NI Water's Regulatory Accounts.

Pensions

The pension scheme had a surplus value of £9.5m at 31 March 2011/12 (2011: £6.2m). This was made up of a total market value of assets of £130.2m (2011: £113.3m), less actuarial value of liabilities £120.7m (2011: £107.1m).

PPP Contracts

Project Alpha:

A contract with Dalriada Water Limited was signed on 30 May 2006 for the provision of bulk drinking water supplies. This has a capital cost in the region of £111m. The service provision commenced roll-out from November 2008. The contract is for 25 years, with an end date of 29 May 2031. The cost and net book value of assets included in Property, Plant and Equipment at 31 March 2012 is £116.25m and £102.84m respectively (2011: £115.96m, £107.37m). The amount included in PPP Creditors at 31 March 2012 is £101.21m (2011: £104.84m).

Project Omega

A contract with Glen Water Limited was signed on 6 March 2007 for the provision of sewage treatment and sludge disposal at five sites, with a capital cost in the region of £122 million. The contract is for 25 years, with an end date of 5 March 2032. The cost and net book value of assets included in Property, Plant and Equipment at 31 March 2012 is £139.96m and £127.53m respectively (2011: £142.19, £133.68m). The amount included in PPP Creditors at 31 March 2012 is £124.15m (2011: £127.29m).

Kinnegar Wastewater Treatment Works

A contract with Coastal ClearWater Limited was signed on 30 April 1999 for the provision of sewage treatment which covered the upgrading of the Kinnegar Waste Treatment Works with a capital cost in the region of £11m. The contract is for 25 years with an end date of 30 April 2024. The cost and net book value of assets included in Property, Plant and Equipment at 31 March 2012 is £11.98m and £7.60m respectively (2011: £11.82m, £7.78m). The amount included in PPP Creditors at 31 March 2012 is £4.75m (2011: £5.37m).

2011/12 PPP Cash Payments

On Balance Sheet Alpha	£k
Opex	2,051
Interest	11,750
Total P&L Impact	13,801
Capital Repayment	3,632
Life Cycle Maintenance	236
Total Balance Sheet Impact	3,868
Total Unitary Charge	17,669

Effective Interest Rate used to calculate Alpha finance charge	5.8%
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Off Balance Sheet	Omega £k	Kinnegar £k
Opex	21,487	1,970
Residual Interest	2,978	243
Total Unitary Charge	24,465	2,213

Estimated Residual Value at End of Contract

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

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 £192m⁵ of capital investment was delivered during 2011/12.

Around 44% of the capital investment in 2011/12 was targeted at water projects while 56% was targeted at wastewater projects.

Around £147m⁶ of capital investment is scheduled for delivery during 2012/13. As part of this investment it is planned to continue with improvements to the water main infrastructure in a number of areas throughout Northern Ireland. This is part of a three year programme of work to lay or replace at least 900km of water mains.

The majority of this work will be completed using trenchless or 'low dig' underground technology, which is less disruptive for the local community and environmentally friendly, producing less waste material in the process.

Public expenditure

NI Water was designated as a Non-Departmental Public Body (NDPB) for public expenditure purposes in March 2009. This followed the decision by the NI Assembly to defer the introduction of direct domestic charges - the DRD provides a public expenditure subsidy to replace the revenue that would otherwise have come from domestic customer billing⁷.

The NDPB designation requires our regulatory funding requirements to be managed within the public expenditure funding constraints. Therefore, whilst the Utility Regulator determines the expenditure necessary to deliver outputs in a price control period, the actual funding is constrained by public expenditure allocation to NI Water. This situation was not envisaged at the outset of the PC10 process and has since been partially addressed by a Memorandum of Understanding (MoU) between DRD and the Utility Regulator which sets out the process for adjusting the PC10 Final Determination to reflect the public expenditure allocations.

Good working arrangements have been developed through the Water Stakeholder Steering Group (WSSG) structure which brings together key stakeholders including the DRD. This has facilitated the formulation and prioritisation of the investment programme within the limits of public expenditure allocations.

⁵ Based on the capital expenditure in the Regulatory Capital Value. Excludes grants and contributions.

⁶ Per NI Water's 2012/13 budget. UK GAAP based in line with Final Determination.

⁷ Water and sewerage charges are levied on non-domestic customers.

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 improving the resilience and security of essential control and monitoring networks. We have developed and implemented a new Research, Development and Innovation (RDI) Strategy. This sets out how technical needs and opportunities are identified, before research and development or innovation projects are then initiated.

We installed a Network Distribution Control System at key service reservoirs, allowing the demand from the upstream water treatment works to be smoothed, improving drinking water quality and reducing costs. This has proved to be a success and is to be progressively implemented across Northern Ireland.

We installed intelligent locks at over 2,200 wastewater treatment works and wastewater pumping stations as part of a site security access management system. This has improved security and reduced costs.

Over 2011/12, our research, development and innovation programme projects have included:

- testing and proving alternative communication protocols for use with our telemetry system, reducing future costs ;
- piloting the use of improved accuracy inlet flow measurement devices at wastewater treatment works to improve control and deliver compliance;
- installing automated sludge weighing systems at a number of works to monitor sludge and vehicle weights improving control and efficiency; and
- participating in an EU INTERREG IVA Project (ANSWER), using willows to develop low carbon and environmentally sustainable solutions for dealing with organic waste.

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

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

Public Private Partnerships

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

Water Resources, Supply and Demand

We operate around 30 water sources⁸ which comprise upland impounding reservoirs, boreholes, rivers and loughs.

Our Water Resource Management Plan emphasises the need to further reduce water losses from the system whilst continuing to increase our system connectivity. This will allow us to increase the robustness of the network and meet our needs in a cost effective and reliable manner.

Our Water Demand Management Strategy is focussed on reducing water taken from the environment by managing leakage and consumption.

Our 2012 Water Resource Management Plan has considered the effect of climate change on our ability to supply water during periods of increased demand, typically experienced during warmer weather. For example, we have completed a £600k project to protect Killyhevlin water treatment works from increased flood levels in the Lough Erne system.

Water is a precious resource and we are committed to encouraging people to save water. As part of our water efficiency plan we:

- reduce the number of leaks on our pipes;
- promote appliances, facilities and practices that help save water;
- raise awareness of consumption through metering of commercial customers; and
- educate schools and communities on water efficiency.

We are undertaking a water efficiency pilot project in partnership with Omagh District Council to investigate the link between domestic water efficiency measures and reduction in demand.

Our 2011/12 education initiatives improved consumers' water efficiency measures, resulting in a saving of around 0.3 million litres of water per day.

Leakage

We recognise that customers perceive the levels of leakage as high. However, there is a balance to be struck between the costs of fixing leaks (including environmental impacts) against the value of water saved – the economic level of leakage. We are working to develop this long term leakage target.

We have both internal and external leakage detection resources focused on proactive leakage detection. In addition, there is 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 which help to identify and reduce leakage.

⁸ In addition there are a further 4 sources operated on behalf of NI Water by a Public Private Partnership (PPP) contractor.

We reduced our leakage in 2011/12 to 168 MI/day, which is 3 MI/day better than our target. This outperformance against target saved water equivalent to around one Olympic sized swimming pool each day.

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

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

We have reduced the operational cost efficiency gap from 49% in 2007/08 to 34% in 2010/11. The reducing efficiency gap with the most efficient water and sewerage companies in the comparator group (the frontier) is shown below:

Year	2007/08	2008/09	2009/10	2010/11
Gap to frontier	48.7%	43.1%	39.7%	34.1%

The efficiency gap to the average (i.e. not the frontier company) of the English and Welsh water and sewerage companies was 27.4% in 2010/11.

We delivered £12m of operational cost efficiency savings in 2011/12 through our continued focus on cost control.

Risk of Failure to Deliver

NI Water has reduced its number of staff from approximately 2,000 at the beginning of 2005/06 to approximately 1,300 in 2011/12, while at the same time delivering the operational efficiency targets. The operational cost efficiency targets for the PC10 period are extremely challenging, with further reduction in staff numbers anticipated in the PC13 period. A significant internal control issue surrounds the capacity of NI Water to achieve the efficiency targets while maintaining its essential services to customers and protecting the environment. The capacity of the organisation to quickly become more efficient and effective, during a sustained period of restructuring and people efficiency, may be exceeded, increasing the risk of operational and service failure.

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.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

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

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

SERVICEABILITY ASSESSMENT
S Stable
M Marginal
I Improving
D Deteriorating

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

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

DESCRIPTION	UNITS	DP	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12
A SERVICE PERFORMANCE							
Sewer flooding- internal							
1 2 in 10 register at end of year	nr	0	80	80	1	6	17
2 1 in 10 register at end of year	nr	0	0	745	704	3	10
3 1 in 20 register at end of year	nr	0	0	0	0	211	189
3a Potential risk of property flooding identified requiring further investigation to assess the risk category.	nr	0			6	8	0
4 Properties flooded in the year (overloaded sewers)	nr	0	195	3	6	4	10
5 Properties flooded in the year (other causes)	nr	0	366	23	5	28	23
Sewer flooding- external							
6 Areas flooded externally in the year (overloaded sewers)	nr	0	899	1,792	1,196	0	313
7 Areas flooded externally in the year (other causes)	nr	0	4,283	7,968	6,872	1,314	N/C
B QUALITY & ENVIRONMENTAL COMPLIANCE - Total							
8 % of WWTWs compliant (Water (NI) Order numeric consents)	%	1	87.0	90.4	91.9	88.7	93.3
9 % of WWTWs compliant (UWWTD consents)	%	1	89.6	92.0	92.9	93.6	96.2
10 % of total p.e. served by WWTWs compliant with Water (NI) Order consent (LUT)	%	2	N/C	N/C	93.80	95.57	96.45
11 % of total p.e. served by WWTWs compliant with UWWTD consent (LUT)	%	2	92.40	89.38	97.58	96.58	99.1
11a % of total p.e. served by WWTWs complying with Water (NI) Order numeric consents	%	2				87.95	95.13
11b % of total p.e. served by WWTWs complying with UWWTD consent	%	2				96.58	96.07
12 % of intermittent discharges satisfactory	%	2	67.97	93.89	74.01	73.67	76.68
13 Percentage unsatisfactory sludge disposal	%	2	0.00	0.00	0.00	0.00	0.00
C QUALITY AND ENVIRONMENTAL ACTIVITIES AND OUTPUTS							
14 Delivery of improvements to nominated UIDs as part of a defined programme of work	nr	0	N/C	27	11	20	44
16 Delivery of improvements to WWTW through nominated schemes as part of a defined programme of work	nr	0	16	44	63	20	7
18 Total sewage sludge produced (inc. PPP)	ttds	1	38.4	38.0	37.9	38.1	39.0
D SERVICEABILITY TO CUSTOMERS							
20 Sewer collapses per 1,000 km	nr	1	47.3	96.3	68.7	84.9	80.7
21 Number of high and medium pollution incidents attributable to NI Water	nr	0	67	56	55	46	44
22 % of WWTWs discharges compliant with numeric consents	%	1	86.7	90.0	92.1	88.3	92.5
23 Sewerage infrastructure	text		N/C	N/C	NI Water is currently in the process of defining serviceability indicators with NIAUR. Until these indicators have been agreed these lines cannot be usefully completed to indicate serviceability trends.	NIW is currently defining serviceability indicators with NIAUR, and until these are agreed lines 23 and 24 cannot be usefully completed.	Stable - however serviceability indicators are still to be agreed with NIAUR to define and measure serviceability
24 Sewerage non- infrastructure	text		N/C	N/C			
E DEFINED OUTPUTS FOR MAINTAINING BASE SERVICES							
25 Sewerage infrastructure (1)			Description No defined outputs				
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

TABLE C - EXPENDITURE & FINANCIAL PERFORMANCE MEASURES (TOTAL)

DESCRIPTION	UNITS	DP	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12
A TOTAL EXPENDITURE							
1 Total operating expenditure - water service (NI Water only)	£m	3	95.358	98.499	71.762	87.148	76.089
1a Total operating expenditure (PPP) - water service	£m	3	N/C	N/C	10.944	1.795	2.051
2 Total capital expenditure (excl. adopted and nil cost assets)	£m	3	80.389	206.859	101.554	73.876	84.067
3 Total operating expenditure - sewerage service (NI Water only)	£m	3	88.395	109.092	97.808	71.569	69.725
3a Total operating expenditure (PPP) - sewerage service	£m	3	2.872	N/C	17.975	23.371	23.457
4 Total capital expenditure (excluding adopted and nil cost assets)	£m	3	173.896	186.296	156.420	88.267	107.944
B CURRENT COST ACCOUNTS - PROFIT & LOSS							
5 Total Turnover	£m	3	294.057	327.395	347.569	345.740	354.819
6 Current cost operating costs (including CCD & IRC)	£m	3	-278.250	-315.427	-328.924	-341.824	-355.174
7 Current cost operating profit	£m	3	17.077	11.626	22.963	8.893	2.184
C CAPITAL BASE & POST TAX RETURN							
8 Capital Value Year - End (outturn)	£m	3	984.814	1,194.686	1,421.544	1,582.344	1724.786
9 Total net debt	£m	3	250.717	435.006	617.211	725.832	809.900
10a Post tax return on capital	%	2	1.88	1.06	1.72	0.58	0.13
10b Pre tax return on capital	%	2	N/C	1.06	1.72	0.58	0.13
D KEY FINANCIAL INDICATORS							
11 Cash interest cover (funds from operations; gross interest)	ratio	2	12.26	5.75	3.97	3.07	3.55
12 Adjusted cash interest cover (funds from operation less capital charges; gross interest)	ratio	2	2.17	0.77	0.49	-0.28	0.16
13 Adjusted cash interest cover (funds from operation less capital maintenance; gross interest)	ratio	2	5.12	1.62	1.86	1.77	1.52
14 Funds from operations: debt	ratio	2	0.43	0.24	0.18	0.13	0.16
15 Retained cash flow: debt	ratio	2	0.54	0.18	0.11	0.1	0.13
16 Gearing: D/RCV	%	2	25.45	36.41	43.42	45.87	46.96

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

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

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

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

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

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



Annual Information Return 2012

Section 2

Tables and Commentary

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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

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

Table 1 – Key Outputs – Water Service 1**Introduction**

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

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

The company has undertaken a review of the viability of implementing a free or subsidised repair/replacement supply pipe policy. The conclusion of the report is that this is not a cost effective option compared to the marginal cost of water. A copy of this report has been made available to both DRD and NIAUR.

Line 1 – Number of Household Supply Pipes Repaired

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

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

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

Lines 9- 22 - Household - Water Efficiency Methods

NI Water has during this year continued its efforts to promote water efficiency to its customers. These efforts have included using the methods successful to date i.e. education schemes, distribution of water saving devices and working in partnership with other organisations on new projects, and by designing and introducing new strategies.

The Water Education Team (WET) consists of two personnel serving schools, community and specialist groups, stakeholders and partners. Sixty 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

- Colin Environmental Fair, Belfast –April
- BBC Sustainability Day- April
- Banks of Ballinderry River Fair -May
- Water Saving Week -11th-18th June, at B&Q and Forestside Shopping Centre
- National Trust Properties-Mount Stewart, Castlewellan- August
- European Heritage Open Day -September
- Two Family Fun days at Silent Valley Mountain Park-Sept 2011 & March 2012
- Lifestyle Green Show- September
- Harvest Fair at National Trusts Mount Stewart –October
- NI Hotel Federation Hospitality Exchange-Oct
- Winter Planning for Older People-Anderstown Leisure Centre & Hammer Centre
- Winter Ready Clinic- Iverary, Olympia, Shankill, Walkway Ardoyne, East City Business centre, Ballysillan
- Eco schools Celebration-February

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
- Lisburn Wildlife Group
- Rathcoole Community Safety group
- RNIB various groups
- Cub Scout Groups

The WET promotes water efficiency at their Education Centre, at Silent Valley where sessions take place in alternating weeks. Specific classroom talks on conservation are given to primary school children supporting the Eco Schools initiative or at their request. Monthly educational visits to the Wastewater and

Water Treatment Centres for both schools and the general public are organised by the team.

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

- Water-butt leaflets
- Drought resistant gardening leaflets and seeds
- Promotional and educational leaflets
- School water audits
- Interactive games encouraging conservation
- Hippo bags and instructions
- Shower timers (5mins)
- Fridge magnets
- Water cycle poster (teachers 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 2011/12 the figure requested from CRC was 51 (included with March figures in the Table below). NI Water has distributed 2895 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. During 2011 we targeted the “hotel group” of commercial customers, who had an environmental policy and supported water efficiency.

The table shows the number of CDD's distributed in 2011/12.

Month	No. Distributed at School Visits	No. Distributed Community Visits	No. Distributed at shows	Requested Community	Commercial Use	Monthly Total
Apr 11	50	0	34	0	0	84
May 11	39	170	337	0	0	546
Jun 11	62	15	65	300	0	442
Jul 11	0	0	253	1	0	254
Aug 11	0	0	345	3	35	383
Sep 11	33	0	0	3	0	36
Oct 11	35	103	178	0	0	316
Nov 11	81	92	0	0	0	173
Dec 11	44	0	0	35	15	94
Jan 12	34	146	0	14	0	194
Feb 12	68	102	40	18	0	228
Mar 12	94	0	26	76	0	196
Annual Total	540	628	1278	450	50	2946

The calculation for the water savings achieved in 2011/12 report year is as follows:

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

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

Values derived from the Ofwat Water Efficiency Targets 2010-11 to 2014-15 were used to estimate the number of CDD's installed.

Using the OFWAT Efficiency Report the volume displaced per flush was recorded as 2.5l/per flush and flushes per person per day as recorded as 5. This figure is the average savings per flush achieved through the installation of Hippo Bags which are the CDD distributed by NIW. An installation rate of 20% was due to the distribution method used i.e. through shows and events. Occupancy rate was 2.5 from NISRA

Calculation:

$$2.5 \times 2.5 \times 5 \times (1278 \times 0.2) = 7987.5 \text{ l/per day} = 0.00079875 \text{ MI/d}$$

70% installation rate for those from CRC requests, community requests, those given to schools and community talks with a total of (1668),
Volume displaced per flush, flushes per person per day occupancy as above.

Calculation:

$$2.5 \times 2.5 \times 5 \times (1668 \times 0.7) = 36487.5 \text{ l/per day} = 0.0364875 \text{ MI/d}$$

Giving a total of 0.03729 MI/d, a very slight increase from the previous year.

The cost of the initiative was calculated by multiplying the no of hippo bags 2946 by the cost per bag giving £1,679.

Lines 13-16 Water Butts Distributed to Households

For the report year 2011/12 NI Water have not distributed water butts to households. NI Water has promoted the use of water butts through leaflet distribution. During Dec-Feb, the company re designed and launched its water efficiency web pages. As part of the launch of re-designed water efficiency pages, NIW ran a competition to win a waterbutt. The public were asked to describe how they would use waterbutt. We received some great ideas, including using the water from the butt to wash your hair! 22 waterbutts have been collected and 30 runners up got water efficiency goodie bags, (recorded by Education in other water efficiency items).

The table shows the number of water butts distributed:

Month	No. Distributed at School Visits/prizes	No. Distributed Community visits	No. Distributed at shows	Requested Community	Monthly Total
Apr 11					
May 11					
Jun 11	1				1
Jul 11					
Aug 11					
Sep 11					
Oct 11					
Nov 11					
Dec 11		1			1
Jan 12	4	16			20
Feb 12					
Mar 12					
Annual Total	5	17			22

The calculation for the water savings achieved in 2011/12 report year is as follows:

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

S= savings per butt, V=volume of waterbutt, F= fills per year I= instillation rate, N= number of Water butts

Using the OFWAT Efficiency Report the volume is company based (NI Water supplied 22, 190l butts) the fills per year is estimated at 6 and the installation rate is 100%.

Calculation:

$$190 \times 6 \times 1 \times 22 = 25080 \text{ l per year}$$

$$25080 / 365 = 68.712 \text{ l per day} = 0.0000687 \text{ Ml/day}$$

The cost of the initiative was calculated by multiplying the no of water butts awarded as prizes 22 by the cost per water butt giving £839.57.

Lines 17- 22 - Water Audits – Household

During 2011/12 the self water audit for domestic households which can be accessed through the company's website has not been taken up by visitors to the site, there have however been 153 hits to the on line audit and 0 audits completed online. 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, unfortunately no uptake has been taken within this time period.

Domestic Self Water Audit Packs

Over the report year 2011/12 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 2012 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 2486 and the number of audits returned was 274 which is a return rate of 11.02% a drop of 6% from 2010 -11, (15 where requested by schools but not part of the Spread the Word initiative).

1800 audits distributed as community request (Thepvail Army Camp, Lisburn). 35 at events or shows making a total of 4336.

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

Calculation:

$$4336 * 0.70 * 10 = 30352 \text{ l/per day} = 0.030352 \text{ MI/d}$$

From the figures supplied by IT division of the Corporate Affairs Team, 153 hits have been recorded, for observations of, the on line water audit.

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

$$\text{Calculation: } 153 * 0.10 * 10 = 153 \text{ l/per day} = 0.000153 \text{ MI/d}$$

Total savings figure for domestic audits 0.030505 MI/d

The total number of audits is the addition of the number of audits distributed through 'Spread the Word' (2486) plus those requested by schools (15) plus the number distributed to the community (1800) plus the number distributed at events (35) plus the number of visitors to the online audit (153), giving a total 4489.

Line 19

Cost of "Spread the Word" is the cost of the prizes £150 added to the cost per audit multiplied by the number of audits distributed £182.11. The total is £332.11

Water Audits Completed by Company in Households

No audits were completed in the homes of customers 2011/12.

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.

Lines 23 – 28 - 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 2011/12 314 Water Audits for Schools were distributed by WET through Teachers Packs.

Added to a number of Commercial Audits which were distributed at the piloted "Hotel Groups", these totalled 35. Along with these audits other water efficiency items including our Conservation Pyramid, were given hippo bags, shower timers recorded in the appropriate table below. This gives a total of 349 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 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:

$$349 * 0.20 * 10 = 698 \text{ l/per day} = 0.000698 \text{ MI/d}$$

Cost is the number of school audits multiplied by their cost added to the number of commercial audits added to their cost £65.17

Totals

Lines 29-30 Totals

Savings

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

The total recorded savings for Sections B, C and E is **0.26379** Ml/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 Ml/d	Initiative cost £
Household B		
Cistern Devices	0.03729	1679.22
Water butts	0.0000687	839.57
Self-Water audits	0.030505	332.11
Non Household C		
School/Commercial Audits	0.000698	65.17
Other Methods E		
Shower timers/Gel Bags (see below)	0.004472	4577.29
UKWIR-Softer Measures (see below)	0.190765	included in Education Dept
Leaflets (see below)		2122.08
PR items(see below)		26,158.34
Education Dept		56,025.28
Total	0.26379	91,799

The calculation of costs due to staffing has been calculated using accepted methodology from the AIR11 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 6,328 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.

The delivery of water efficiency messages to Commercial customers was piloted through hotels with the initial development of a "Conservation Pyramid" with three messages "turn off the tap when brushing your teeth", "take a shower instead of a bath" and "turn off taps tightly". These are available to hotels for their use, free of charge. (Numbers distributed are recorded in the water efficiency items table below). The pilot started in August with the delivery of a water efficiency talk to Jury's Hotel, Belfast this was followed up by attendance at the NI Hotel Federation Hospitality Exchange in October. Following on from this we supported a "Water Workshop" run by NI HF and InvestNI in December.

NI Water also has a large range of leaflets that promote water efficiency, the distribution of these may also lead to increased water savings but at present these savings cannot be calculated.

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

Efficiency Method	Name	Total	Cost £
Leaflet	Water Butt	1196	224.85
	How water wise are you	9548	945.25
	Hippo Bag	2946	600.98
	Drought gardening	818	67.08
	Frozen Pipes	16701	283.92
Total Leaflets			2122.08
PR Item	Bookmark- Saving Water	1658	189.01
	Bookmark- "Flo" Kids saving water	1557	177.50
	Seeds: Drought Resistant	780	1934.40
	Adult Magnet	556	271.33
	Magnet-H2O magnet	4699	1221.74
	Game: Snakes and Ladders	175	31.33
	Conservation Pyramids	475	745.75
	Stop Tags	50320	21,587.28
Total PR			26,158.34
Measurable	Shower timers	3886	4430.04
	Gel Bags	31	147.25
Total Measurable			4577.29

Over the reporting year 3886 shower timers were distributed at shows, events and presentations by NI Water staff. The installation rate of these can be assumed at 23% (Ofwat Water Efficiency Targets 2010-11 to 2014-15) a saving of 5 litres per property per day can also be assumed. The calculation for the savings achieved in 2010/11 report year is as follows:

D*I*S = Savings in litres

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

Calculation:

$$3886 * 0.23 * 5 = 4468.9 \text{ l/per day} = 0.004469 \text{ MI/d}$$

The gel bags were distributed as part of the online competition to re-launch the water efficiency pages. Using the Ofwat Water Efficiency Targets 2010-11 to 2014-15) a saving of 0.1 litres per property per day can also be assumed.

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

D*I *S= Savings in litres

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

Calculation:

$$31*1*0.1=3.1 \text{ l/per day}= 0.0000031\text{MI/d}$$

Total savings = 0.004472 MI/day

The work of the Education Department has continued to significantly improve NI Water's water efficiency figure. This can be demonstrated through the behavioural change activity has led to our customers becoming more efficient in their use of water and the UKWIR method is now being used to quantify the water saving benefits for "softer measures" (2010 reporters recommendation, document reference T1niw.R10 Page 1.

The UKWIR spreadsheet WR25 "Estimating water saving calculator for baseline water efficiency" has been used and activities have been apportioned between Low, Medium and High Levels of engagement.

This is summarised in the following table.

Level of Engagement	Litres/day	MI /day
High	173466.4	0.174664
Medium	12817.8	0.012817
Low	3283.7	0.003284
Totals		0.1908 MI/day

This shows an improvement from last year's figure from 0.16763 to 0.1908 Ml/d through the work of Education in schools, at community talks and through PR at shows and events.

NI Water Education contributed to a new "Utility Badge" for the Scouting movement. The "Scouts Resource Pack" booklet has been commissioned by the Utility Regulator. It contains utility information from NI Water, NIE, Phoenix Natural and Power NI on conserving each commodity. Under Water Conservation the programme has been geared towards Cubs and Scouts and includes leader's notes, practical activities and games to be complete by the organizations' members. The pilot scheme was limited to 25 Scouting groups and accumulated with an award ceremony with the Chief Scout for NI the Minister of Tourism in attendance. It is planned to extend the badge to all parts of Northern Ireland.

During the reporting year 2011/12 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 households daily use of water, "How do I save water" gives advice in the home and tips for water use in the garden and within schools. It has been well received by both teachers and pupils and is widely used for "investigation" in the revised curriculum and is a valuable tool to both schools, education establishments and the company. The Education Teachers Pack "Teachers Little Helper" has 6 new Conservation Worksheets for pupils.

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

"YouTube" video on "Saving Water" (featuring the Education Department staff), was made by NI Water's Corporate Affairs Team has had 421 hits on the site <http://www.youtube.com/northernirelandwater> to date. It promotes water saving tips around the home and garden. The video is highlighted during Water Saving Week (11th -18th June) which promotes water efficiency to the public, encouraging the public to pledge to do one thing to save water for the rest of their life, this was promoted this year at Belfast shopping centre "Forestside" and at B&Q.

NI Water has highlighted throughout the year the issue of water efficiency and in particular the potential for frozen pipes as part of its "Winter Preparation Campaign". The campaign ran from September 2011 and was conveyed via various communication channels TV, Radio, Press (daily and regional papers) website, social media, outdoor Adshels and Billboards. The tag line "Don't

Wait, Insulate” ran with the generic message of “Frozen Pipes Disrupt Lives” and was carried with three advertisements “No Water, No Shower”, “No Water, No Cuppa”, and “No Water, No Washing”.

The “Lag and Tag” message involved the distribution of a florescent “Stop Tap Valve tag” which helped customers to be aware to their stop valve and its location in the event of a burst this was accompanied by a leaflet drop to domestic and commercial customers.

A large number of winter meetings were attended, targeting specifically ones aimed at the elderly in preparation for winter, council organised events and stakeholder events. Distribution was from school children, to estate agents and commercial businesses, each was told what to do to prevent frozen pipes and what to do if they got a burst it was positively received. In support of this campaign several new features are downloadable from NI Water on YouTube: “Protect your Pipes” (569 hits); Insulation (410 hits); Don’t wait Insulate (359 hits); “How to locate your stop Valve” (227 hits); “If a pipe burst” (199 hits); “If a pipe freezes” (158 hits).

Using the UKWIR Methodology, which as previously mentioned was recommended by the Reporter, has resulted in a general improvement in water efficiency measurement for the company e.g. 2009/10 0.0479MI/d compared to 0.216 MI/d for 2010/11 this encouraging result has been built upon with this year’s figure at 0.26379MI/d.

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		5	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG
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	810.4	A2
2 Properties below reference level at start of year	nr	0	N/C		10,321	B4	5,770	B4	2,248	B4	2,020	B3
3 Properties below reference level at end of year	nr	0	10,321	B4	5,770	B4	2,154	B3	2,020	B3	1,748	B3
4 Properties receiving low pressure but excluded from DG2	nr	0	N/C		218	B4	94	B3	0	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	133	B2
4b DG2 Properties at risk of low pressure removed from the risk register by company action	nr	0							283	B3	262	B3
4c Average capex cost of permanent solutions to DG2 problems	£000/prop	1							13.7	C4	3.0	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	54,303	B3
6 More than 6 hours	nr	0	9,483	B3	8,175	B3	9,427	B3	476,289	B3	7,023	B3
7 More than 12 hours	nr	0	1,839	B3	2,010	B4	3,675	B3	214,274	B3	765	B3
8 More than 24 hours	nr	0	72	B3	609	B4	2,294	C4	40,959	B3	18	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	58,162	B3
10 More than 6 hours	nr	0	20,273	B3	26,480	B3	22,460	B3	10,025	B3	31,808	B3
11 More than 12 hours	nr	0	62	B3	0	B4	135	B3	0	B3	1250	B3
12 More than 24 hours	nr	0	0	B3	0	B4	0	B3	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	1,675	B3
14 More than 6 hours	nr	0	510	B3	36	B3	499	B3	699	B3	70	B3
15 More than 12 hours	nr	0	22	B3	33	B4	154	B3	63	B3	0	B3
16 More than 24 hours	nr	0	6	B3	4	B4	0	B3	30	B3	0	B3
(iv) UNPLANNED INTERRUPTIONS (OVERRUNS OF PLANNED INTERRUPTIONS)												
17 More than 6 hours	nr	0	835	B3	590	B3	452	B3	1,418	B3	1,131	B3
18 More than 12 hours	nr	0	99	B3	43	B4	118	B3	2	B3	288	B3
19 More than 24 hours	nr	0	0	B3	8	B4	1	B3	0	B3	4	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	1,823.89	C2
D DG4 RESTRICTIONS ON USE OF WATER												
21 % population - hosepipe restrictions	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1
22 % population - drought orders	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1
23 % population - sprinkler/unattended hosepipe restrictions	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1

Table 2 – Key Outputs - Water Service - 2**Introduction**

The PC10 Determination for the period April 2010 to March 2013 set a target of 800 properties to be removed from the Register through 'Company Action'. The cumulative target profile for year 1 (2010/11) was 220 properties, year 2 (2011/12) 520 properties and year 3 (2012/13) 800 properties. In the 2010/11 and 2011/12 years there have been 283 and 262 properties removed respectively from the DG2 register through company action. Therefore the total number of properties removed for year 1 and 2 of the PC10 period is 545. The actual number of removals is therefore 25 ahead of the year 2 cumulative target of 520 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 1 - Total connected properties at year end

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

The methodology for calculating the total connected properties has changed since AIR11 to ensure alignment and consistency between all tables, therefore the figures aren't comparable. Our desire is for improved reporting and confidence in our figures. In terms of Table 2, we are currently analysing the data to achieve greater understanding of the movement within data sets and alignment with the figures for newly connected properties.

It was NIW's intention to automate the production of this report via the DIAMOND database reporting tool during the 2011/2012 year although this piece of the DIAMOND project has not yet been taken forward by our ICT department. This year we introduced an automated tool to populate the figures within Table 2 from the Rapid Property Summary.

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 2020, as reported in line 3 of the AIR 11 submission.

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

As per the 2012 Regulatory guidance, as issued by NIAUR, this line includes properties within a 10m height of service reservoirs. The final number of properties recognised as being below the reference level at end of year is 1748.

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 additions and removals process is as per NI Water's methodology and consistent with previous AIR submissions.

The reductions arising from capital schemes are captured within reports received following the completion of watermain rehabilitation or infrastructure improvements. In total NI Water processed Post Project Rehabilitation Appraisal reports were received for 8 work packages, see Table 1 below, resulting in 224 properties being removed from the DG2 register due to company action.

The facility has been developed during the current year to provide regular updates of all DG2 properties for upload onto the CARtoMAP system which is available throughout the company and is of particular benefit to the Contact Centre to assist in handling low pressure complaints.

Table 1

Rehabilitation Scheme	DG2 Properties Removed
Portballintrae	6
Carmoney East	6
Lisburn Urban	19
Fofanny Banbridge Phase 1	94
Ballinrees Central	1
Kilknock	35
Kirkinriola	1
Ballygowan	62
Total	224

Portballintrae PPRA – This portion of work was developed from the Altnahinch Design Zonal Study and was completed between December 2007 and April 2010. A total of 48 km of mains were rehabilitated and as a result of this work 6 properties were removed from the register based on the submission of a DG 2 Investigation Report.

Carmoney East PPRA - This mains rehabilitation construction phase was conducted between May 2009 and June 2010. It incorporates a variety of hydraulic, operational and water quality solutions to improve the condition and performance of the distribution network. A total of 25 km of mains were rehabilitated under this work package removing 6 properties from the DG2 register.

Lisburn Urban PPRA – Capital investment resulted in the replacement of 10 km of watermain following the Lisburn Town and Lisburn North Rural Design Zonal study to improve network performance in this area. The work package was completed between March 2009 and April 2010 and enabled 19 properties to be removed from the register

Fofanny Banbridge Phase 1 PPRA – Rehabilitation works in the Banbridge and Dromore areas were ongoing from June 2008 until March 2009. A variety

of hydraulic, operational and water quality solutions resulted in 94 properties being removed from the register.

Ballinrees Central PPRA – The construction phase was carried out between June 2009 and May 2010. A total of 47.5 km of water mains were rehabilitated resulting in 1 property being removed from the register.

Kirkinriola 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.

Kilknock PPRA – Although the rehabilitation process is ongoing operational changes have been made to enable 35 properties to be removed from the DG2 register.

Ballygowan PPRA – A total of 120.74 km of watermains were rehabilitated between April 2009 and December 2009 to contribute to improved network performance. For operational reasons many of the network improvements were not completed until the latter stages of 2010. This work resulted in 62 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.

A total of 38 properties were removed during the year due to infrastructure improvements undertaken by Leakage Services. These schemes are highlighted in Table 2 below.

Table 2

Infrastructure Improvements	DG2 Properties Removed
Tullyhill Crumlin	12
Redhills	17
Limehill	9
Total	38

A total of 17 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
Portballintrae	2
Ballynahone	2
Lisburn Urban	5
Fofanny Banbridge	3

Better Information	DG2 Properties Removed
Castor Bay Banbridge	5
Total	17

Finally 7 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
Portballintrae	7
Total	7

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

Table 5

Year Start	2020
Removals due to PPRAs	224
Removals due to infrastructure improvements	38
Removals due to better information	17
Sub-total	1741
Additions due to better information	7
End of year Total	1748

Line 4 – Properties receiving low pressure but excluded from DG2

As per the NIAUR interpretation of 2010/11, properties within 10m are no longer excluded from the DG2 Register. Therefore there are currently 0 properties that are justifiably covered by the exclusions as per the current guidance notes.

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

A query of the DG2 register confirms that 133 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. See Table 6 below.

Table 6

Removals Due to Company Action	Number
Rehabilitation Schemes	224
Infrastructure Improvements	38
	262

The final number of properties removed due to Company Action is recorded in Table 6 above as 262. This has exceeded the yearly target of 237 and as such reflects good progress as 545 removals have been made at the end of year two in comparison to a target figure of 520 removals. The company remain on course in 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 a number of these Work Packages (WPs) was carried out during the Strategic Business Plan period and, as such, the capital spend is not necessarily within the PC10 period. The reason for the lag period is described below.

The Utility Regulator issued guidance in April 2011 for AIR11 Table 2 which included additional reporting lines for average cost of removing DG2 properties from the Register as a result of Company Action. This is the second year that the company has reported this figure and it will allow the benchmarking of NI Water costs to commence. The UR Final Determination Document indicated an average cost per property removed, which appears to be based on historic figures from England and Wales, but the appropriateness of this comparison without a factor to account for the much longer length of main per property in Northern Ireland needs further discussion. The variability of cost per property removed as outlined in the table below is reflective of the current method of delivery of the Water Mains Rehabilitation Programme. Work packages have multiple drivers and assignment of costs to DG2 removal relies on the use of the CIDA allocation rather than directly attributable costs arising from individual projects designed solely to remove DG2 properties. NIW will continue to develop these reporting lines to deliver a more robust process for attributing costs to DG2 properties.

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

PPRA reports for ten WPs and two additional DIRs were produced during 2011-12 which removed a total of 224 properties from the register and resolved 1094 modelled LoS failures. These are detailed in Table 7 below.

Table 7

WP Title	DG2 Properties Removed	Total Cost	Modelled Future Level of Services
Portballintrae Ph1 & Ph2	6	£221,853.21	57
Carmonney East & Waterside	6	£7,977.16	242
Lisburn Urban	19	£0	599

WP Title	DG2 Properties Removed	Total Cost	Modelled Future Level of Services
Castor Bay & Fofanny Banbridge	94	£177,701.86	110
Ballinrees Central	1	£252,888.38	24
Ballygowan (Drumreagh) & Mid-Down	62	£113,574.62	62
Kirkinriola (Cushendall Road DIR)	1	unknown	0
Dungonnell (Kilknock DIR)	35	unknown	0
TOTAL:	224	£773,995.24	1094
Average Cost per DG2 Removal	£3,455.34		£707.49

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 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 table 8 below.

Table 8

Infrastructure Improvements	DG2 Properties Removed	Cost Attributed to DG2 Removals
Tullyhill Crumlin	12	£6428
Redhills	17	£952
Limehill	9	£6943
Total	38	£14323

Therefore the average overall cost of removing a DG2 property from the register is obtained by combining the total cost (£773,995 and £14323) = £788,318 and dividing by the total number of properties removed i.e. 224 (PPRA reports) + 38 (Infrastructure Improvements) = 262

Average cost per DG2 removal = £3008

Comments on Specific Work Packages

Drumreagh DMA within WP69 Ballygowan has been logged and assessed however, remaining DG2s within Ballygowan and Mid-Down will not be resolved and completely assessed until WP100 Ballynahinch schemes have been constructed in late 2012/13. The remaining DG2 issues within

Drumreagh DMA have recently been assessed and a set of schemes in the vicinity of Balloo PS are currently receiving Buy-In and will either be included within Ballynahinch WP or slotted into a separate PCF at an estimated cost of £80,957.

DG2 issues in Pond Park DMA within WP62 Lisburn Urban are currently being assessed by NIW staff.

Confidence Grade Line 4c

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

Lag in Confirming Removal from Register

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

This is consistent with the process included in the company PC10 Business Plan.

Work Packages awaiting PPRA

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 and the predicted number of properties removed.

Table 9

Work Package Name	Construction End Date	No of properties to be removed
WP35 Ards North/Lough Cowey/N'ards Town	Apr-09	30
WP75 South Down/WP77 Downpatrick	Dec-11	149
WP78 Mourne Coastal & Newcastle	Feb-12	1
WP79 Dunore West/Tardree P1/Tardree P2	Dec-11	7
WP71 Lough Ross	Jun-12	12
WP14 The Glens	Aug-12	10
Total		209

Removals Pending

It should be noted that currently 209 properties have been identified for removal from the DG2 register due to the planned completion of PPA reports during 2012/13 as the direct result of company action via rehabilitation works.

Lines 5-19 - DG3 Properties Affected by Supply Interruptions

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

Note: This commentary includes figures based on a Total Connected Properties at Year End figure of 810,367 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**

AIR	DG3 Properties Affected	2009/10	2009/10 Freeze/ Thaw Excluded	2010/11	2010/11 Freeze/ Thaw Excluded	2011/12
Table 2: Line 9	More than 3 hours	47,970	36,032	529,448	47,454	54,303
Table 2: Line 10	More than 6 hours	9,427	4,473	476,289	12,409	7,023
Table 2: Line 11	More than 12 hours	3,675	1,395	214,274	3,997	765
Table 2: Line 12	More than 24 hours	2,294	347	40,959	1,846	18

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

With the impact of the winter weather removed, the figures were still higher than in 2008/09 when the winter was relatively mild. Several major incidents involving burst mains had a significant impact on performance. Heavy snow and resultant power failures at the start of April 2010 also contributed to underperformance. The Company's DG3 performance in 2011/12 has been good and all outturns are within the Monitoring Plan targets for PC10.

The unusually mild winter has helped to offset periods of underperformance in the year, with fewer bursts than expected. In December, the mean temperature was over 5 °C warmer than December 2010 whilst February was the mildest since 1998 and the fourth mildest on record. Actions aimed at minimising supply interruptions have also helped.

Planned and Warned Interruptions

AIR	DG3 Properties Affected	2009/10	2010/11	2011/12
Table 2: Line 9	More than 3 hours	43,341	27,547	58,162
Table 2: Line 10	More than 6 hours	22,460	10,025	31,808
Table 2: Line 11	More than 12 hours	135	0	1,250
Table 2: Line 12	More than 24 hours	0	0	0

The numbers of properties affected by planned and warned interruptions lasting more than 3 hours and 6 hours have risen significantly in 2011/12. These changes can be attributed to substantial changes in the meterage installed under the Watermains Rehabilitation Programme. Watermain distribution meterage installed in 2011/12 was 509km compared to 198km in 2010/11 and 351km in 2009/10.

1,250 properties experienced planned and warned interruptions lasting more than 12 hours in 2011/12 compared to 0 in 2010/11 and 135 in 2009/10. NI Water tries to avoid planned and warned interruptions exceeding 12 hours but on this one occasion in June, a new mains tie-in took 14 hours to complete. The latter part of the interruption occurred during the night.

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

Interruptions Caused by Third Parties

AIR	DG3 Properties Affected	2009/10	2010/11	2011/12
Table 2: Line 13	More than 3 hours	2,737	978	1,675
Table 2: Line 14	More than 6 hours	499	699	70
Table 2: Line 15	More than 12 hours	154	63	0
Table 2: Line 16	More than 24 hours	0	30	0

The number of properties experiencing interruptions caused by third parties lasting more than 3 hours, decreased by 1,759 between 2009/10 and 2010/11 and increased by 697 between 2010/11 and 2011/12.

The number of properties experiencing interruptions caused by third parties lasting more than 6 hours, increased by 200 between 2009/10 and 2010/11 and decreased by 629 between 2010/11 and 2011/12.

No properties experienced planned and warned interruptions lasting more than 12 hours in 2011/12.

Unplanned Interruptions (Overruns of Planned Interruptions)

AIR	DG3 Properties Affected	2009/10	2010/11	2011/12
Table 2: Line 17	More than 6 hours	452	1,418	1,131
Table 2: Line 18	More than 12 hours	118	2	288
Table 2: Line 19	More than 24 hours	1	0	4

The number of properties experiencing overruns of planned interruptions lasting more than 6 hours, increased by 966 between 2009/10 and 2010/11 and decreased by 287 between 2010/11 and 2011/12.

In 2010/11, the majority of properties were affected by a single overrun. In 2011/12 there has been an increase in the number of planned interruptions which overran, 25 compared to 10 in 2010/11 and 13 in 2009/10. This

increase can be attributed to an increase in the overall number of planned interruptions by the company, including those associated with the water mains **rehabilitation framework**.

2009/10			2010/11			2011/12		
Planned Interruptions >6hrs	Planned Which Overran	%	Planned Interruptions >6hrs	Planned Which Overran	%	Planned Interruptions >6hrs	Planned Which Overran	%
478	13	2.72	461	10	2.17	1,068	25	2.34

The number of properties experiencing overruns of planned interruptions lasting more than 12 hours decreased by 116 between 2009/10 and 2010/11 and increased by 286 between 2010/11 and 2011/12.

4 properties experienced overruns of planned interruptions lasting more than 24 hours in 2011/12 compared to 0 in 2010/11 and 1 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
- 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		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 (%)	Outturn		11/12 KPI Target (%)
		2009/10 (Props)	2009/10 (%)		2010/11 (Props)	2010/11 (%)					2011/12 (Props)	2011/12 (%)	
>6hrs	U/P	9,427	1.180		See Total						As 2010/11		
	UTP	499	0.062		Target excludes third party interruptions								
	O/R	452	0.057		Target excludes overruns								
	Total	10,378	1.299	1.00	476,289	59.060	2.17	1.83	1.00	1.00	7,023	0.867	0.970
>12hrs	U/P	3,675	0.460		See Total						As 2010/11		
	UTP	154	0.019		Target excludes third party interruptions								
	O/R	118	0.015		Target excludes overruns								
	Total	3,947	0.494	0.15	214,274	26.570	0.78	0.51	0.22	0.22	765	0.094	0.210
>24hrs	U/P	2,294	0.287		See Total						As 2010/11		
	UTP	0	0.000		Target excludes third party interruptions								
	O/R	1	0.000		Target excludes overruns								
	Total	2,295	0.287	0.01	40,959	5.079	0.31	0.23	0.01	0.01	18	0.002	0.010

Note 1: Percentage outturns are based on total connected properties as follows: 798,740 (AIR10); 806,444 (AIR11); 810,367 (AIR12)

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

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

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

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

The following table provides a summary of those interruption records in 2011/12 whose Interruption Start Date/Time and All Props Restored Date/Time fell within the hours of 12 midnight and 7am.

Interrupt Type	Interrupt No.	Interruption Start		All Props Restored		Duration (Hours)	Properties Affected		
		Date	Time	Date	Time		> 0 Hrs	> 3 Hrs	> 6 Hrs
Unplanned	15691	20/04/11	00:15	20/04/11	03:30	3.25	295	295	0
Planned	E&P070	12/06/11	00:30	12/06/11	07:00	6.5	42	42	42
Unplanned	16662	04/10/11	00:00	04/10/11	03:15	3.25	100	100	0
Unplanned	17249	03/11/11	00:00	03/11/11	03:15	3.25	1,227	1,227	0
Unplanned	17367	19/11/11	01:00	19/11/11	06:00	5	12	12	0
Unplanned	17689	20/12/11	01:00	20/12/11	04:15	3.25	13	13	0
Unplanned	17548	10/12/11	01:00	10/12/11	07:00	6	60	60	0
Unplanned	18034	12/01/12	00:00	12/01/12	03:15	3.25	557	557	0
Unplanned	17859	17/01/12	00:00	17/01/12	03:30	3.5	600	600	0
Unplanned	18372	01/02/12	00:00	01/02/12	03:30	3.5	600	600	0
Unplanned	18374	23/02/12	00:00	23/02/12	03:30	3.5	887	887	0
Unplanned	18375	28/02/12	00:00	28/02/12	04:00	4	770	770	0
Unplanned	18377	07/02/12	00:15	07/02/12	06:15	6	10	10	0
Unplanned	18505	10/03/12	01:00	10/03/12	04:15	3.25	185	185	0

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.

13 unplanned records have been identified where customers would not have noticed the loss of service because it occurred at night. All 13 interruptions lasted 6 hours or less. The number of properties affected by these interruptions was 5,316, representing 9.8% of the total number of properties experiencing unplanned interruptions lasting more than 3 hours in 2011/12.

$$\text{Unplanned: } (5,316 / 54,303) \times 100 = \mathbf{9.8\%}$$

NI Water reported in its AIR11 commentary that there were 6 unplanned interruptions and 0 planned interruptions where customers would not have noticed the loss of service because it occurred at night. The number of properties affected by these interruptions was 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).

Interruptions of 3 hours or less occurring at night

NI Water has a record of 265 unplanned interruptions and 1 unplanned third party interruption of 3 hours or less where customers would not have noticed the loss of service because it occurred at night. The numbers of properties affected by these interruptions are 164,938 unplanned and 204 unplanned third party.

NI Water reported in its AIR11 commentary that there were 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 were 141,362 unplanned and 32 planned.

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

There were 14 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was

$$21 + 26 + 20 + 15 + 35 + 140 + 52 + 94 + 6 + 109 + 6 + 19 + 8 + 24 = \mathbf{575}$$

This number is small compared to the number of properties that experienced a planned and warned interruption of between 3 and 6 hours (26,459).

$$T2: L9 = 58,261$$

$$T2: L10 = 31,802$$

$$58,261 - 31,802 = \mathbf{26,459}$$

NI Water reported in its AIR11 commentary that there were 11 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was 406.

The following table provides a summary of all the overruns of planned and warned interruptions lasting 6 hours or less in 2011/12.

Interrupt. No.	Month	Duration (Hours)	Properties Affected		Duration Of Overrun (Hours)
			> 0 Hrs	> 3 Hrs	
15702	Apr 11	1.5	14	0	1.5
15658	Apr 11	5.0	21	21	0.5
15834	May 11	2.0	14	0	2.0
15922	May 11	2.0	11	0	1.5
16070	Jun 11	2.25	100	0	0.5
16271	Jun 11	3.5	26	26	0.5
17172	Oct 11	2.25	8	0	2.25
17109	Oct 11	2.5	10	0	0.25
17122	Oct 11	3.0	30	0	1.5
17073	Oct 11	3.5	20	20	1.0
17316	Oct 11	6.0	15	15	0.25
17354	Nov 11	3.75	35	35	0.25
E&P084	Nov 11	4.25	140	140	3.75
17308	Nov 11	5.5	52	52	2.5
17831	Jan 12	4.0	94	94	0.5
18052	Jan 12	4.0	6	6	1.0
17932	Jan 12	4.5	109	109	0.5
18179	Jan 12	4.5	6	6	0.5
17980	Jan 12	6.0	19	19	0.5
18367	Feb 12	1.25	4	0	0.25
18370	Feb 12	1.25	5	0	0.25
18368	Feb 12	3.75	8	8	0.25
18162	Feb 12	5.0	24	24	1.0
18645	Mar 12	1.75	15	0	0.25

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	
15759	Apr 11	4	18	18	0	0	0	██████████ - Boho Dooletter Belcoo pumps off
16025	May 11	3.5	11	11	0	0	0	██████████ - NIE power failure in wind storm tripped out pumps
15821	May 11	4	8	8	0	0	0	Monea Pumping Station, Enniskillen - Pump was airlocked
16089	Jun 11	8.5	24	24	24	0	0	Reaghan Pumps – Pumps tripped out
16364	Jul 11	2.5	3	0	0	0	0	Tullyrossmearn, Belleek - Pump was off
16615	Aug 11	3.5	7	7	0	0	0	██████████ Derrygonnelly - Mountdrum Pumps, Lisbellaw. Electric was off to pump
17014	Sep 11	2	7	0	0	0	0	Tonell Pumps, Boho, Enniskillen
16924	Sep 11	19	1	1	1	1	0	Largancarron Booster, Florencecourt - Electrical fault at pump
17089	Oct 11	2.5	3	0	0	0	0	Tullyrossmearn Pumps were tripped off
17183	Oct 11	3.5	11	11	0	0	0	Doon Pumps, Derrylin
17339	Nov 11	2.5	5	0	0	0	0	Tullyvogy pumps, ██████████ Belleek - Pumps off due to airlock
17494	Nov 11	4	3	3	0	0	0	██████████ Lisnaskea
17609	Dec 11	3	5	0	0	0	0	██████████ Belleek (Tullyvogy Pumping Station off)
17677	Dec 11	6	21	21	0	0	0	NIE power failure caused instrument control failure at Moys BPT
17736	Dec 11	6.25	13	13	13	0	0	████████████████████ ████████████████████
17761	Dec 11	17.75	17	17	17	17	0	████████████████████ - 11.30: Pumps were found to have stopped due to storm and were turned back on. 16.30: Pumps had tripped again. Mains filling from 17.30 until 19.45.
17829	Jan 12	10.75	59	59	59	0	0	Ballybracken SR Ballyclare
18354	Feb 12	8	11	11	11	0	0	██████████ Booster, Belleek

The table provides a summary of the 18 unplanned interruptions caused by electricity supply failures in 2011/12.

No incidents were particularly significant in terms of numbers of properties affected with only one incident involving more than 50 properties. This incident occurred in January and was due to a power failure at Ballybracken SR, Ballyclare.

In terms of duration, 13 incidents lasted more than 3 hours, 6 lasted more than 6 hours and 2 lasted more than 12 hours.

Combined impact of electricity supply failures on annual outturns

	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs
Numbers of Properties Affected by Electricity Supply Failures	204	125	18	0
Numbers of Properties Affected by Unplanned Interruptions	54,303	7,023	765	18
Percentage Impact	0.38%	1.80%	2.35%	0.00%

The impact of the electricity supply failures was greatest on the >12hr outturn, accounting for 2.35% of the total number of properties affected by unplanned interruptions.

Combined impact of electricity supply failures on KPI target compliance

	> 6 Hrs	> 12 Hrs	> 24 Hrs
Percentage of Connected Properties Affected by Electricity Supply Failures	0.015%	0.002%	0.000%
KPI Target	0.97%	0.21%	0.01%
Percentage of Annual Target	1.55%	0.95%	0.00%

The impact of the electricity supply failures was greatest on >6hr KPI target compliance, amounting to 1.55% of the annual target.

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

The following table provides a summary of all 59 supply interruption incidents during 2011/12 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	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category
001	15634	13/04/2011	Burst 6" main, [REDACTED], Carrickfergus	8.5	49	49	49	0	0	Precautionary / 4
002	15783	14/04/2011	Burst main, [REDACTED], Bushmills	4	31	31	0	0	0	3
003	15675	14 & 15/04/2011	Burst Main, [REDACTED]	9.5	1	1	1	0	0	Precautionary – Third Party
004	15671	16/04/2011	[REDACTED] Omagh	6.5	42	42	0	0	0	4
005	15843	16/04/2011	Burst pumping main, [REDACTED] Coleraine	12.75	45	45	45	2	0	Precautionary / 4
006	15767	28/04/2011	Burst Main, [REDACTED] Enniskillen	4.5	77	77	0	0	0	3
007	15769	28/04/2011	Leak on inlet trunk main to Kilreal SR, Castlederg	4.5	1	1	0	0	0	3
008	15965	29/04/2011	Burst Main, [REDACTED] Newtownards	6.75	1	1	1	0	0	3
009	15827	06 & 07/05/2011	Tullyvar Water Pumping Station, Ballygawley, Co Tyrone	12	259	259	119	0	0	3
010	15861	09/05/2011	Burst on Drumkeeran SR Inlet	2.5	2	0	0	0	0	3
011	15875	12 & 13/05/2011	Burst main, [REDACTED] Whitehead	9.25	24	24	24	0	0	3
	15876	13/05/2011		9.25	11	11	11	0	0	
012	16025	23/05/2011	Severe Weather - High winds across NI	3.5	11	11	0	0	0	3
013	16084	08/06/2011	Burst main, [REDACTED], Crossmaglen	12.25	57	57	11	1	0	3

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category
014	16272	23 & 24/06/2011	Burst on 27" Carryduff trunk main	18	2	2	2	2	0	Precautionary / 2
	16273			7	1	1	1	0	0	
015	16258	27/06/2011	Burst main, [REDACTED] Crossmaglen	4.5	98	98	0	0	0	3
016	16216	28 & 29/06/2011	Burst main, [REDACTED] Conlig	14.25	408	408	408	1	0	3
017	16339	04/07/2011	Burst on trunk inlet to Largy SR, Ederney	13	71	71	25	5	0	3
018	16429	27/07/2011	Burst distribution main, [REDACTED] Brookeborough	12.5	56	56	36	1	0	3
	16431	27 & 28/07/2011		12.5	80	53	12	5	0	
019	16459	28 & 29/07/2011	Burst trunk main, [REDACTED] Cookstown	18	100	100	100	100	0	3
020	16620	02/08/2011	Burst trunk main, [REDACTED] Broughshane	7	5	5	5	0	0	3
021	16534	06/08/2011	Burst main, Doagh, Antrim	4	1,200	1,200	0	0	0	3
022	E&P151	08/08/2011	Burst main, [REDACTED] Ballymena	8	206	206	206	0	0	3
023	16522	09/08/2011	Burst trunk main from Killyclogher Service Reservoir, Omagh	19.5	47	47	47	42	0	3
	16527	09/08/2011		14.75	25	25	25	25	0	
024	16752	09/08/2011	Burst water main, [REDACTED] Armagh	5.75	200	200	0	0	0	3
025	16737	16 & 17/08/2011	Loss of supply, Conlig HL SR, Bangor	5.75	7,891	7,891	0	0	0	2
	16738	16 & 17/08/2011		11.75	41	41	41	0	0	

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category
	16739	16 & 17/08/2011		23.75	5	5	5	5	0	
026	16809	17/08/2011	Loss of supply, Edenaveys SR, Armagh	7.5	300	300	300	0	0	3
027	16876	14/09/2011	Burst main, Corvanagh SR, Cookstown	9.25	103	103	4	0	0	3
028	17031	15/09/2011	Burst inlet main, Kilnock SR, Ahoghill	5	87	87	0	0	0	3
029	16953	16/09/2011	Burst watermain at [REDACTED] Portadown	6	456	456	0	0	0	Precautionary
	16954	20/09/2011		2	456	0	0	0	0	
030	16857	16/09/2011	Burst main, Downpatrick	11.5	224	224	224	0	0	3
	16861	16 & 17/09/2011		3.75	16	16	0	0	0	
031	17044	10/10/2011	Burst main, [REDACTED]	11.5	366	366	366	0	0	3
	17045	10 & 11/10/2011	10 inch burst trunk watermain, [REDACTED] Omagh	35.25	104	104	104	104	7	
032	17062	11/10/2011	Burst watermain, [REDACTED] Ballymoney	3	402	0	0	0	0	3
033	17165	20/10/2011	Burst 400mm main on the [REDACTED] [REDACTED] Cookstown	4.25	2	2	0	0	0	3
034	17181	01 & 02/11/2011	Interruption to supply, [REDACTED] Dungannon	7	295	295	295	0	0	3
035	E&P113	02/11/2011	Interruption to supply, [REDACTED] Rasharkin	10.5	246	246	246	0	0	3
036	17397	05/11/2011	Burst on 8" asbestos inlet main to Lagavara SR, at [REDACTED], Ballintoy, Co. Antrim	3.5	18	18	0	0	0	Precautionary
037	17238	08 & 09/11/2011	Burst trunk main, [REDACTED] Omagh	3	41	0	0	0	0	3

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category
038	E&P111	15/11/2011	Burst TM, [REDACTED] Magherafelt	5.75	24	24	0	0	0	3
039	17514	23/11/2011	Caugh Hill WTW unplanned shutdown	5	86	86	0	0	0	
	17518			5	268	268	0	0	0	
	17519			5	756	756	0	0	0	
	17522			2	30	0	0	0	0	
	17523			4.5	824	824	0	0	0	
	17524			4.5	21	21	0	0	0	
040	17548	12/2011	[REDACTED] Dungannon	6	60	60	0	0	0	3
	17549	12/2011		6	61	61	0	0	0	
041	17717	12/2011	Burst trunk main, [REDACTED] Armoy	5.5	1,097	1,097	0	0	0	3 - Planned
042	17785	01/2012	Burst main, Greysteel	12	44	44	44	0	0	3
043	17829	01/2012	Ballybracken pumping main	10.75	59	59	59	0	0	3
044	18141	01/2012	Tankering operation to Sconce Service Reservoir	7	41	41	41	0	0	3
045	18072	01/2012	Burst inlet to Monaclough SR, Armoy	4	5	5	0	0	0	3
046	17958	01/2012	Burst trunk main - [REDACTED] Belfast	12	112	112	65	0	0	3
047	E&P126	01/2012	Interruption to supply, [REDACTED] Toome	22	86	86	86	86	0	2 - Overrun
048	18024	01/2012	Trunk main repair at [REDACTED] Ballyclare	9.5	196	196	196	0	0	3
049	18349	01/2012	Fault at Lisnabreeny Scanner	8	1	1	1	0	0	Precautionary
	18351	01/2012		144	1	1	1	1	1	
050	18004	01/2012	Burst trunk main, [REDACTED] Clogher	6	95	95	0	0	0	3
051	18103	02/2012	Breach at [REDACTED] Belfast (MLA Interest)	4	58	58	0	0	0	Precautionary
052	18113	02/2012	High outlet flow at Poleglass SR	6	167	167	0	0	0	2

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category
053	18407	02/2012	Burst main, [REDACTED] L'Derry	6	1,160	1,160	0	0	0	3
054	18154	02/2012	10" trunk/distribution main - [REDACTED] [REDACTED] Belfast [REDACTED]	1.5	2,995	0	0	0	0	3
055	18377	02/2012	Burst main, [REDACTED] Armagh	6	10	10	0	0	0	3
056	18262	02/2012	[REDACTED] Ballygawley - 3" SI distribution main	10	50	50	2	0	0	3
	18269	02/2012		4	50	50	0	0	0	
057	18382	02/2012	10" Ballylucas inlet main - [REDACTED] [REDACTED] Downpatrick	10.25	8	8	8	0	0	3
058	18410	02/2012	Burst main, [REDACTED] L'Derry	3.5	1,081	1,081	0	0	0	3
059	18443	03/2012	Burst 8" PVC main - [REDACTED] Ballyclare.	7.5	134	134	55	0	0	3

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

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

KPI	2011/12 Target		Monthly Target Allowance			
			Apr to Oct		Nov to Mar	
	%	Properties	%	Properties	%	Properties
>6hrs	0.970	7,864	0.057	463	0.114	924
>12hrs	0.210	1,700	0.012	100	0.025	200
>24hrs	0.010	80	0.001	5	0.001	9

The following table provides a summary of the incidents in 2011/12 where one or more of the monthly target allowances were exceeded. Numbers equalling or 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
16459	Jul 11	18	100	100	100	100	0	Burst main	464	100	5
17044	Oct 11	11.5	366	366	366	0	0	Burst mains	464	100	5
17045		35.25	104	104	104	104	7				

NI Water would normally use this rationale as a basis for determining the incidents for discussion in this section of the commentary but since there was only 2 such incidents in the year, the Company has also looked at the incident involving the greatest number of properties for more than 3 hours as well as any incidents involving 400 or more properties for more than 6 hours and 100 or more properties for more than 12 hours.

Major Incidents

Burst Main, Conlig (Ref: Interrupt No. 16216)

In June, a burst on a 6 inch asbestos cement distribution main affected 408 properties in the Conlig area for more than 6 hours. This was one of three unplanned interruptions in the year involving 400 or more properties for more than 6 hours. The defective length of main was valved off almost immediately to conserve water in Conlig High Level SR and to minimise the impact on Carryduff Trunk Main contingencies. Repairs were delayed due to rock in the excavation.

The impact of this incident in terms of percentages of connected properties affected was 0.050% >6hrs, 0.000% >12hrs and 0.000% >24hrs.

Leak on Craig's SR to Craig's DMA Trunk Main, Cookstown (Interrupt No. 16459)

In July, an unplanned interruption to repair a leak on the electrofusion collar of a 400mm diameter MDPE trunk main from Craig's SR affected 100 properties in the Cookstown area for up to 18 hours. This was one of two unplanned interruptions in the year involving 100 or more properties for more than 12 hours. The Craigs DMA was rezoned allowing supplies to be taken from Unagh SR. Initial attempts to execute a repair were unsuccessful because of fusion problems.

The impact of this incident in terms of percentages of connected properties affected was 0.012% >6hrs, 0.012% >12hrs and 0.000% >24hrs.

Telemetry signal fault, Conlig High Level SR, Bangor (Interrupt Nos. 16737, 16738 & 16739)

In August, a telemetry signal fault at Conlig High Level SR, Bangor was responsible for the loss of supplies to 7,937 properties for more than 3 hours, 46 properties for more than 6 hours and 5 properties for more than 12 hours. This was by far, the greatest number of properties affected by a single

unplanned incident in the year although the impact on KPI performance was minimal.

Telemetry signal fault & drain down at Edenaveys SR, Armagh (Interrupt No. 16809)

In August, one of two compartments at Edenaveys SR drained down due to a telemetry signal fault. The signal indicated that the tank was full and as a result, the inlet flow was shut off. The other compartment had already been drained down in preparation for cleaning. The majority of the Edenaveys supply area was rezoned to minimise the impact but 300 properties in Central Armagh experienced an unplanned interruption of up to 7.5 hours.

The impact of this incident in terms of percentages of connected properties affected was 0.037% >6hrs, 0.000% >12hrs and 0.000% >24hrs.

Burst Main, Newtownstewart (Interrupt No. 16695)

In September, a burst main affected 406 properties in the Newtownstewart area for over 6 hours. This was one of three unplanned interruptions in the year involving more than 400 properties for more than 6 hours.

The impact of this incident in terms of percentages of connected properties affected was 0.050% >6hrs, 0.000% >12hrs and 0.000% >24hrs.

Note: This incident is not included in the summary of incidents identified from the Upward Reports.

Bursts on Killyclogher SR to Lisnagardy SR & Carnalea DMA Trunk Main (Interrupt Nos. 17044 & 17045)

In October, 366 properties in Seskinore experienced an unplanned interruption of more than 6 hours whilst in Fintona, 104 properties experienced an unplanned interruption of more than 12 hours and 7 properties experienced an unplanned interruption of more than 24 hours, all as a result of two separate bursts on the 10 inch ductile iron trunk main from Killyclogher SR to Lisnagardy SR and Carnalea DMA.

This was one of three unplanned interruptions in the year involving 400 or more properties for more than 6 hours and one of two unplanned interruptions in the year involving 100 or more properties for more than 12 hours. Two tankers were mobilised to stabilise storage in the downstream SRs of Dungoran and Carryglass. A third tanker was deployed to sustain Lisnagardy SR. Heavy rain and saturated ground conditions made the repairs difficult to execute and one of the bursts was located in deep fill on private property.

The impact of this incident in terms of percentages of connected properties affected was 0.058% >6hrs, 0.013% >12hrs and 0.001% >24hrs.

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

The AIR09 Reporter recommended the use of consistent accuracy bands.

In 2010/11, NI Water assigned a confidence grade of “B3” to all lines of Table 2 despite the lower accuracy of component figures for supply rotation and service reservoir drain-down. This decision was based on the fact that larger outturns provide a greater margin of inaccuracy within the same accuracy bands.

In 2011/12, there was no change in the processes and procedures used to capture the base data for DG3. Therefore, NI Water has assigned the same “B3” confidence grade as in previous years.

Justification of Reliability Band “B”

- There is no reliance on unconfirmed verbal reports, cursory inspections or analysis. Every record in the DG3 Register represents an interruption to supply where the cause has been investigated, identified and recorded by experienced field staff or contractors.
- There is no reliance on extrapolation from a limited sample for which Grade A or B data is available. Every figure reported in Table 2 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 2011/12, the Company has maintained its policy of 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. A DG3 reporting solution feasibility study was carried out in 2010/11 to explore options for the replacement of the existing OMIS system but as yet, no indication has been given as to when or if the development work will take place. In the meantime, the Company continues to make progress in an effort to improve its confidence grades.

In the past, the tendency has been to obtain a GIS address list for an unplanned interruption, only when it proved impractical to manually count the number of properties affected by the interruption.

In 2011/12, NI Water ran a pilot exercise whereby a GIS address list of properties was obtained for every unplanned and planned and warned interruption in the Magherafelt distribution area. The purpose of the exercise was to ascertain the feasibility of obtaining a GIS address list for every interruption dealt with by Networks Water.

It is hoped to examine this protocol for the remaining distribution areas. However, it may still be necessary to impose a series of limits which would govern the criteria for requesting a GIS address list as the volume of records for some areas may be unmanageable in terms of the time required to make and process the requests.

The pilot exercise illustrates NI Water's commitment to improving the quality of its DG3 data.

Reporter's Recommendations on AIR11 – Progress Update

- *DG3 - Supply Interruptions: Consideration should be given to the facility to record more precise times in the design of a replacement system for OMIS.*

NI Water has considered the above recommendation to facilitate the recording of more precise times in the design of a replacement system for OMIS. Although a DG3 reporting solution feasibility study was carried out to explore options for the replacement of the existing OMIS system, as yet, no indication has been given as to when or if the development work will take place.

It is not feasible to implement the recommendation without a replacement system. Nor is it feasible to implement mitigating actions in the current system as such measures would only be temporary whereas a replacement system would address a number of issues relating to DG3 reporting including the issue of precise times. Changes to the current system can no longer be made in-house and the expense could be hard to justify if there is a permanent and more complete solution.

- *DG3 - Supply Interruptions: NI Water should clarify which property types are included in their GIS property counts*

NI Water's Asset Information Development (AID) Unit has been consulted regarding the above recommendation and subsequently, the DG3 Levels of Service Methodology has been updated to include relevant extracts from the Pointer 2.1 Specification.

The following table of information is taken from the Pointer 2.1 Specification.

Property Type
Approved Built
Approved Derelict
Approved Under Construction
Candidate Built
Candidate None
Candidate Under Construction
Historical Built
Historical Derelict
Historical None
Historical Under Construction
Provisional Built
Provisional Under Construction

Unless AID is specifically asked to exclude void properties when running queries, a GIS address list will include any of the above property types. The list confirms that the GIS picks up twelve different property types including void properties which according to the regulatory definition are a type of connected property.

Note: There is a delay in updating the GIS with property status information.

- *DG3 Supply Interruptions: Conduct an exercise to fully understand how agents interpret and log 'nowater/lowpressure' complaints*

NI Water has reviewed the Customer Response Centre call scripts to understand how call agents classify no water and low pressure complaints. The review has confirmed that provided the customer provides an accurate response to the questions asked by the agent, the risk of wrong classification should be negated. These latest scripts have been incorporated into the DG3 Levels of Service Methodology for AIR12 as evidence that agents adopt a specific line of questioning with the customer to establish the cause of complaint.

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 2011. Information was extracted from monthly bulletins published on the DETNI website.

MONTH	HOTEL BED-SPACES SOLD	GUESTHOUSE & B&B BED-SPACES SOLD	TOTAL BED-SPACES SOLD	PERCENTAGE
Jan-11	138,600	22,800	161,400	5.15%
Feb-11	180,400	29,900	210,300	6.71%
Mar-11	201,900	29,300	231,200	7.37%
Apr-11	222,600	44,400	267,000	8.51%
May-11	232,900	61,700	294,600	9.39%
Jun-11	229,000	53,500	282,500	9.01%
Jul-11	255,200	63,400	318,600	10.16%
Aug-11	293,500	80,000	373,500	11.91%
Sep-11	242,100	59,200	301,300	9.61%
Oct-11	223,000	46,800	269,800	8.60%
Nov-11	196,000	29,000	225,000	7.17%
Dec-11	177,000	24,200	201,200	6.41%
Total	2,592,200	544,200	3,136,400	100.00%

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.

$$5.15\% + 6.71\% + 7.37\% + 8.51\% + 7.17\% + 6.41\% = 41.32\%$$

- According to the DETNI statistics bulletin "Results from the Northern Ireland Passenger Survey 2011", the number of non-resident visitor nights for Northern Ireland was 5,285,000 (excluding RoI).

Reporting Constraint

The population (winter) is equal to the baseline resident population plus the winter non resident population. The baseline resident population is readily available from NISRA. The winter non resident population is representative of the average number of visitors to Northern Ireland at any time throughout the winter.

As the length of stay varies per visitor, some indication is required of how many nights each visitor spends in the country. This figure is known as Visitor Nights. Up to and including 2010, a figure was obtainable from the Northern Ireland Tourist Board who was responsible for conducting the surveys aimed at establishing tourism statistics. However, from 2011 these surveys have been conducted by NISRA and this has resulted in changes to both the nature and availability of published information.

One key change is that the figure for the number of visitors to Northern Ireland no longer includes visitors from the Republic of Ireland. NISRA has issued an instruction on its website referring clients to its Irish equivalent, the Central Statistics Office (CSO) and in particular, to a survey entitled "Household Travel Survey". However a review of the survey has revealed that it has not

been updated since the first quarter of 2010 hence, the number of RoI visitors to NI has had to be assumed as follows:

Assumption

The relationship between the number of overseas visitor nights and its percentage was established by examining the changes in growth between 2007 and 2009. (The same relationship was assumed to apply to the changes in growth between 2009 and 2011.)

	2006	2007	2008	2009	2011	2011
RoI Nights (000's)	834 ¹	839 ¹	927 ¹	1,273 ¹		$6,602 - 5,285 = 1,317$
RoI + Overseas Nights (000's)	9,618 ²	10,486 ²	10,469 ²	8,111 ²		$5,285 \times 80.05\% = 6,602$
Overseas Nights (000's)	$9,618 - 834 = 8,784$	$10,486 - 839 = 9,647$	$10,469 - 927 = 9,542$	$8,111 - 1,273 = 6,838$	5,285 ³	
Percentage Overseas Nights	91.33%	92.00%	91.15%	84.31%		$84.31\% - 4.25\% = 80.05\%$

¹ Data Source: Household Travel Survey: Table 9a: European Union international travel by Irish Residents - Number of Trips & Number of Nights by Country/Region Visited, Q1 2008 - Q1 2010 (Page 11)

² Data Source: Annual Statistics Bulletin - Overseas Visitor Estimates for Northern Ireland

³ Results from the Northern Ireland Passenger Survey 2011

	2007 - 2009	2009 - 2011	2009 - 2011
Percentage Overseas Nights Difference	$92.00\% - 84.31\% = 7.69\%$		$1,553 \times 2.74 \times 10^{-3} = 4.25\%$
Overseas Nights Difference (000's)	$9,647 - 6,838 = 2,809$	$6,838 - 5,285 = 1,553$	
Ratio	2.74×10^{-3}	2.74×10^{-3}	

- By calculation, the estimated number of non-resident visitor nights = $5,285,000 + 1,317,000 = 6,602,000$
- By calculation, the estimated number of non-resident winter visitor nights = $(6,602,000 / 100) \times 41.32 = 2,727,946$
- By calculation, the estimated average number of non-resident winter visitors per night = $2,727,946 / (31 + 28 + 31 + 30 + 30 + 31) = 15,072$
- According to AIR12: Table 7: Line 17, the baseline resident population is **$1,808.82 \times 10^3$** .
- By calculation, the Population (winter) = $1,808,820 + 15,072 = 1,823,892$.

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

AIR10	AIR11	AIR12
1,805.80 x 10 ³	1,814.34 x 10 ³	1,823.89 x 10³

The Winter Population figure has increased from 1,814.34 x 10³ in AIR11 to 1,823.89 x 10³ in AIR12, an increase of 9.55 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 1,798.48 x 10³ to 1,808.82 x 10³, an increase of 10,340. And the estimated average number of non-resident winter visitors per night has decreased from 15,861 to 15,072, a decrease of 789. This decrease is believed to be attributed to the economic downturn.

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 (including RoI visitor nights), 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 & 2010, NI Tourist Board published the actual number of non-resident visitor nights (Jan-Aug 09 and Jan-Sep 10) in their "GB and Overseas Visitors to Northern Ireland Summaries" and NI Water estimated the annual numbers on the basis of the percentages of bed-spaces sold for hotel, guesthouse and bed and breakfast establishments during the same periods.

In 2011, the source of the information used to calculate the Winter Population has changed as the NI Tourist Board is no longer involved in conducting the NI Passenger Survey (NIPS). Instead, this task has been passed to the Department of Enterprise, Trade and Investment (DETINI). Details of the actual survey and how it is conducted are available at www.detini.gov.uk/deti-stats-index/tourism-statistics/stats-accomm-6.

The administration of the survey is carried out by the Northern Ireland Statistics & Research Agency (NISRA), Central Survey Unit.

In addition to this change, the estimated annual number of RoI non-resident visitor nights must now be sourced direct from the Central Statistics Office (CSO), Ireland as the NI Passenger Survey does not include visitors from the RoI. The recommended publication is the "*Household Travel (HOTRA) Survey*" but the bulletin has not been updated since the first quarter of 2010, hence the need for extrapolation.

Confidence Grade

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

1. The NI Passenger Survey covers overseas visitors to Northern Ireland who exited through a NI air or sea port during 2011. The data does not include estimates of those overseas visitors to NI who exited via a port in the Republic of Ireland.
2. The Household Travel Survey is a random stratified sample involving 13,000 households (or approximately 1% of all private households). Falling response rates and reduced coverage has resulted in data becoming less reliable.
3. The “Statistics on Accommodation” bulletins 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. Although there have been changes in the methodology and survey teams, data confidence is still believed to be comparable to previous years.

The “2” has been assigned because even if all visits occurred in the winter, the difference in the calculated winter population would only be 21,403 properties (+1.17%). (*see calculation below*)

$$\begin{aligned}
 &6,602,000 / (31 + 28 + 31 + 30 + 30 + 31) = 36,475 \\
 &1,808,820 + 36,475 = 1,845,295 \\
 &1,845,295 - 1,823,892 = 21,403 \\
 &(21,403 / 1,823,892) \times 100 = 1.17\%
 \end{aligned}$$

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 2011/12 and therefore, the percentage population experiencing DG4 Restrictions on Use of Water is 0.0% for Lines 21, 22 and 23.

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

Future Reporting

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

NORTHERN IRELAND WATER LIMITED -ANNUAL INFORMATION RETURN

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

DESCRIPTION			UNITS		DP		1		2		3		4		5	
							REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
							2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG
A DG5 ANNUAL FLOODING SUMMARY																
1	Number of domestic properties connected to sewerage system		000	1			676.3	B2	598.8	B2	603.4	C3	612.1	C2	618.5	A2
(i) OVERLOADED SEWERS																
2	Properties flooded in the year (overloaded sewers)		nr	0			195	D6	3	B4	6	B4	4	B3	10	B3
3	Flooding incidents in the year (overloaded sewers)		nr	0			212	D6	3	B4	6	B4	10	B3	15	B3
4	Flooding incidents (overloaded sewers attributed to severe weather)		nr	0			126	D6	0	B4	0	B4	4	B3	1	B3
4a	Properties flooded in the year attributed to severe weather		nr	0			N/C		N/C		N/C		10	B3	1	B3
5	Props. where flooding limited to uninhabited cellars only (o/loaded sewers)		nr	0			0	D6	0	DX	0	D6	0	B3	0	B3
(ii) OTHER CAUSES																
6	Properties flooded in the year (other causes)		nr	0			366	D6	23	B4	5	B4	28	B3	23	B3
7	Properties which have flooded more than once in the last ten years (other causes)		nr	0			108	D6	3	CX	1	CX	7	B3	6	B3
8	Flooding incidents (other causes - equipment failures)		nr	0			19	D6	4	B4	0	B4	4	B3	4	B3
9	Flooding incidents (other causes - blockages)		nr	0			324	D6	16	B4	3	B4	14	B3	17	B3
10	Flooding incidents (other causes - collapses)		nr	0			34	D6	3	B4	2	B4	10	B3	2	B3
11	Props. where flooding limited to uninhabited cellars only (other causes)		nr	0			0	D6	0	DX	0	D6	6	B3	0	B3
B DG5 PROPERTIES ON THE AT RISK REGISTER																
(i) SUMMARY																
12	2 in 10 register at end of year		nr	0			80	DX	80	DX	1	DX	6	B4	17	B3
13	1 in 10 register at end of year		nr	0			0	DX	745	D6	704	D6	3	B4	10	B3
14	Total 1 in 10 and 2 in 10 properties on the register at end of year		nr	0			80	DX	825	DX	705	DX	9	B4	27	B3
15	1 in 20 register at end of year		nr	0			0		0	DX	0	DX	211	B4	189	B4
15a	Potential risk of property flooding identified requiring further investigation to assess at risk category.		nr	0							6	B2	8	B2	0	B2
16	Props. on the register which have not flooded in the past 10 yrs (excl. severe weather)		nr	0			N/C		N/C		N/C		0	BX	1	B2
17	Properties which have not flooded internally but suffer restricted toilet use (RTU)		nr	0					N/C		350	C4	0	B3	0	B2
(iii) ANNUAL CHANGES TO 2 IN 10 & 1 IN 10 REGISTERS																
22	Removed by company action		nr	0			N/C		N/C		185	A1	0	B4	0	B3
23	Removed because of better information		nr	0			N/C		N/C		N/C		705	B4	0	B3
24	Added because of better information (actually flooded)		nr	0									9	B4	18	B3
25	Added because of better information (modelled)		nr	0									0	A1	0	A1
26	Average capex cost of permanent solutions to 1 in 10 & 2 in 10 DG5 problems		£000/prop	1									0.0	B4	0.0	B3
(v) ANNUAL CHANGES TO THE 1 IN 20 REGISTER																
30	Removed by company action (1 in 20)		nr	0			N/C		N/C		N/C		4	B4	14	B3
31	Removed because of better information (1 in 20)		nr	0			N/C		N/C		N/C		0	B4	11	B3
32	Added because of better information (actually flooded - 1 in 20)		nr	0									215	B4	3	B3
33	Added because of better information (modelled - 1 in 20)		nr	0									0	A1	0	A1
34	Average capex cost of permanent solutions to 1 in 20 DG5 problems		£000/prop	1									219.9	B4	148.9	B3

Table 3 - Key Outputs – Sewerage Service – Internal Flooding**Objective/Aim**

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

Internal Flooding Process

The DG5 register process has been live since April 2011. The DG5 register is now developed; 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 2011/2012. The process ensures that a robust investigation is carried out for all internal flooding reports. An expert panel (the DG5 Panel) examines the evidence for each incident and governs the addition of properties to and removal of properties from the register.

The register is no longer held as an MS Excel spreadsheet but has been transferred to an Oracle database represented on the Corporate Asset Register as GIS layer on CARtomap. The database is maintained and updated by Asset Management who make changes when instructed to by the DG5 Panel. Although the Internal Flooding process is now in place, the process itself continues to be refined.

AIR12 reporting for internal flooding is produced by querying the Internal Flooding Oracle Database.

Cleansing of Historical Internal Flooding Records

The Historical data has now been cleansed and the properties allocated to the appropriate category in the Register. This will now leave line 15a obsolete as it will always be a nil return.

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

5 Properties experienced repeat flooding in the year. See table below.

Address	Internal Flooding incident dates
██████████, Carrickfergus	21.07.10 - 06.07.11 - 24.08.11
██████████, Carrickfergus	21.07.10 – 06.07.11 – 24.08.11
██████████ Carrickfergus	21.07.10 - 06.07.11 - 24.08.11
██████████ Carrickfergus	21.07.10 - 06.07.11 - 24.08.11
██████████, Belfast	04.09.08 - 13.09.08 - 12.07.09 - 07.06.11 - 04.08.11

Properties added and then removed in the reporting year

There were no properties added to the registers which were subsequently removed in the reporting year.

Mitigation

The company provides mitigating measures to lessen the risk of flooding to properties. This is done on a case by case assessment governed by the operational field manager and funded through the Operational capital budget. 3 properties protected by mitigating measures have been added to the 1 in 20 internal flooding register in the year. 37 properties in total remain on the register which are protected by mitigation measures.

Early Start Programme

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

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

Cost benefit Analysis

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

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

Progress against profile

The Final determination stated that 'Investment in the sewerage network will address the risk of internal flooding at 200 domestic properties'. This referred to removing properties on the 1 in 10 and 2 in 10 registers only. However the Reporter recommended that all historic records be defaulted to the 1 in 20 register. After complying with this recommendation only 9 properties remained on the 1 in 10 and 2 in 10 registers.

NI Water intends to present a paper on DG5 to the next ORG meeting in June and seek permission to address properties on the 1 in 20 flooding register. The purpose of this paper is to explain how the Reporters recommendation that historic flooding records are defaulted to the 1 in 20 register has meant that only a small number of properties remained in the 2 in 10 and 1 in 10 registers. NI Water has started work to properly categorise the properties defaulted to the 1 in 20 register and expects the numbers on each register to change significantly as a result. This will enable NI Water to address the risk of flooding at more properties in the 1 in 10 and 2 in 10 registers.

14 domestic properties were removed from the 1 in 20 register by company action over this reporting period.

In total for PC10 NI Water intends to remove 60 properties from all registers (4 in year 1, 14 in year 2 and 42 in year 3) by company action and also intends to remove 67 properties from all registers in the PC 13 period by company action.

Predicted/Actual additions to the register

The final PC210 business plan submission predicted that;

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

In the report year 2011 – 2012 twenty one new properties which have suffered internal flooding due to hydraulic incapacity were added to the register.

Unknown cause flooding incidents

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

Assumptions

For the purpose of AIR12, 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 the Sewerage System

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

In terms of Table 3, we are currently analysing the data to achieve greater understanding of the movement within data sets and alignment with the figures for newly connected properties.

It was NIW’s intention to automate the production of this report via the DIAMOND database reporting tool during the 2011/2012 year although this

piece of the DIAMOND project has not yet been taken forward by our ICT department. This year we introduced an automated tool to populate the figures within Table 3 from the Rapid Property Summary.

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

Data gathering and calculation is as described below.

Sources/Primary Process

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

A download of internal flooding records was obtained from the Ellipse system for the period April 2011 to March 2012 on a month by month basis.

Investigations were carried out for each reported incident and those properties found not to be flooded after investigation, using information from the Sewer Maintenance Contractor, Flood Incident Report (FIR) Forms, Field Manager reports and contacting the Customers directly, are removed. The remaining properties were recorded as Flooding Incidents.

Sources/Secondary Process

1. Wastewater Business Unit (WWBU) carries out further investigations to determine the cause of every internal flooding incident.
2. WWBU assess the information held on customer report, Flood Incident Report (FIR), along with photographic evidence and closure details provided by the contractor.
3. WWBU determine if the cause of the flooding incident was hydraulic incapacity or flooding other cause, i.e. Blocked Sewer, Equipment Failure or Collapsed Sewer. This is done by a number of methods including site visits, concentric circle surveys, Customer Field Manager reports, customer interviews, field manager interviews and review of existing incident information.
4. If hydraulic incapacity is confirmed a Met Office Weather report is used to determine if the incident is as a result of severe weather (Line 4). The company has included the Duty Manager's Upward Report detailing a heavy rainfall event, for one incident reported in the AIR12 period (L4 & L4a).
5. These properties were then recorded on a spreadsheet under the appropriate categories for lines 2, 3, 4, 4a, 5, 6, 8, 9, 10 and 11 using the information gathered from, the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly. All incidents of internal flooding attributed to severe weather are included in the total in Table 3 Line 3. A folder of evidence was created for all confirmed cases and this was brought to the monthly DG5 panel for approval and addition to the appropriate section of the register. At the end of the reporting year this was the data used for AIR 12 returns.

6. The figure for line 7 was obtained by getting a report ran in the DG5 Oracle Database which holds the information as a DG5 layer in the GIS system.
7. Line 15a relates to properties on the Historical register which have now been fully investigated and categorized accordingly thus the nil return.
8. The required information to populate Line 17 is extracted directly from the monthly spreadsheet completed by the contractor.

Changes in Methodology over the Previous Year

The DG5 Registers have now been developed using, evidence gathered from Sewer Maintenance Contractor, Flooding Incident Reports (FIR), Operational reports, and direct customer contact and the cleansing of the Historical Data. During this reporting year NIW have made strenuous efforts to improve the quality of information provided. As per the Reporter's recommendation the company has given specific DG5 familiarisation training to the call centre staff and they also held meetings with call centre line managers to review the scripts (see Appendix A) so that the correct line of questioning is followed and the call centre staff understand the information being provided to them by the customer. The call centre managers now monitor their staff to ensure that they are conforming to the correct process. As result of this the numbers of reported incidents have been reducing month on month which is very evident in January and February, last year there were 687 reported instances of Internal Flooding and this year there were 419 a reduction of 39%. During the reporting year the number of calls received by the call centre has reduced by approximately 25% i.e. from around 360 thousand calls down to around 270 thousand which is also a contributing factor.

Due to the improved quality of the logging of internal flooding incidents NIW now thoroughly investigate every reported incident of internal flooding. The FIR has been further improved as per the Reporter's recommendations (see appendix B) to ensure that the quality of information provided by the contractor is of a much higher standard and that there is a photograph scanned onto the FIR. At present NIW are awaiting the Contractor's implementation of a new handheld PDA which will require all fields to be completed before the operator can close any job. It is hoped that this device will be in operation by the end of May 2012. As per the Reporter's recommendation the Business Unit is proactively ensuring that the FIR is fully completed, this is being done by continuous liaising with the MUL Contracts Manager and pointing out any errors which he then resolves. In any case where there is ambiguity the Customer Field Manager attends to resolve the issue.

As all the Internal historical data has been investigated and entered in the appropriate categories of the register Line 15a is now obsolete.

As per the Reporter's recommendation any property flooded internally due to the failure of a mitigation device will be reported as equipment failure.

Rainfall Radar Data

The reporter in his AIR11 report recommended that;

'Whilst we are unsure of the availability or costs associated with the acquisition of raw radar data for NI to assess severe weather events, we would recommend the Company explore the feasibility of this approach as a future initiative'

NI Water consulted widely with other Water Utilities, the Met Office and the Centre for Ecology & Hydrology on the availability and functionality of Radar data and software for the Northern Ireland area.

NI Water has approved a business case for acquisition of raw Radar Rainfall data and associated software to enable more accurate assessment of severe weather events. Tender documents are currently being prepared and NI Water will shortly be going to the market to procure the radar service and software in an open competition to ensure best value for money.

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

Every reported incident of internal flooding is thoroughly investigated and cross checked with the returned Flooding Incident Report Forms, Operation Staff, Customer Field Managers and Customer where appropriate. Therefore the confidence grade on the figures reported for lines 2-11 is B3 and lines 15A and 17 is B2.

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

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

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

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

NI Water did not remove any properties from the 1 in 10 and 2 in 10 registers by company action during this reporting period hence Average capex cost of permanent solutions to 1 in 10 and 2 in 10 DG5 problems for line 26 is zero.

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

The total cost of removing properties from the 1 in 20 register due to company action was calculated. This total was divided by the number of properties removed properties from the 1 in 20 registers due to company action to give the average capex cost of permanent solutions to 1 in 20 DG5 problems for line 34.

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 and must satisfy the DG5 panel of experts before being added to the Register. Therefore grading for lines 12 to 14 have been upgraded to B3.

As investigation of 'historical' records in the 1 in 20 register continues the confidence grading remains B4. It is expected that the investigation and proper categorisation of the records in the 1 in 20 register will be completed in the current reporting period allowing an improved confidence grading for AIR 13.

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

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

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

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

Changes from last year

In line with the regulators request all historic records were removed from the 1 in 10 and 2 in 10 registers and placed in the 1 in 20 register. NI Water has started work to properly categorise the properties defaulted to the 1 in 20 register.

11 Properties were removed from the 1 in 20 register in the year due to 'better information'. 14 properties were removed from the 1 in 20 register due to company action. 21 properties were added to the internal flooding registers.

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 due to new properties added in this reporting period.

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 change in numbers is due to new properties added in this reporting period.

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.

Line 15 – 1 in 20 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 twenty years. The change in numbers is due to properties added and removed in this reporting period.

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

This line reports the number of properties on the 1 in 10 and 2 in 10 registers which have not flooded in the last 10 years. 1 property falls into this category.

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

This line reports the number of properties actually removed from the 1 in 10 and 2 in 10 registers. No properties were removed from the 1 in 10 and 2 in 10 registers in this reporting period.

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

This line reports the number of properties which have been fully investigated and excluded from the 2 in 10 and 1 in 10 registers because of better information. No properties were removed from the 1 in 10 and 2 in 10 registers due to better information.

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

This line reports properties which were fully investigated and sufficient evidence presented to the DG5 panel of experts to allow their addition to the appropriate 'At Risk' register. 18 properties were added in this reporting period.

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)

The DG5 Oracle database was interrogated to produce statistics for properties removed from the 1 in 20 register.

The report for this year revealed that 14 flooding problems addressed by company action in the 1 in 20 register.

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

This line reports the number of properties which have been fully investigated and excluded from the 1 in 20 register because of better information. 11 properties were removed from the 1 in 20 register because of better information.

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

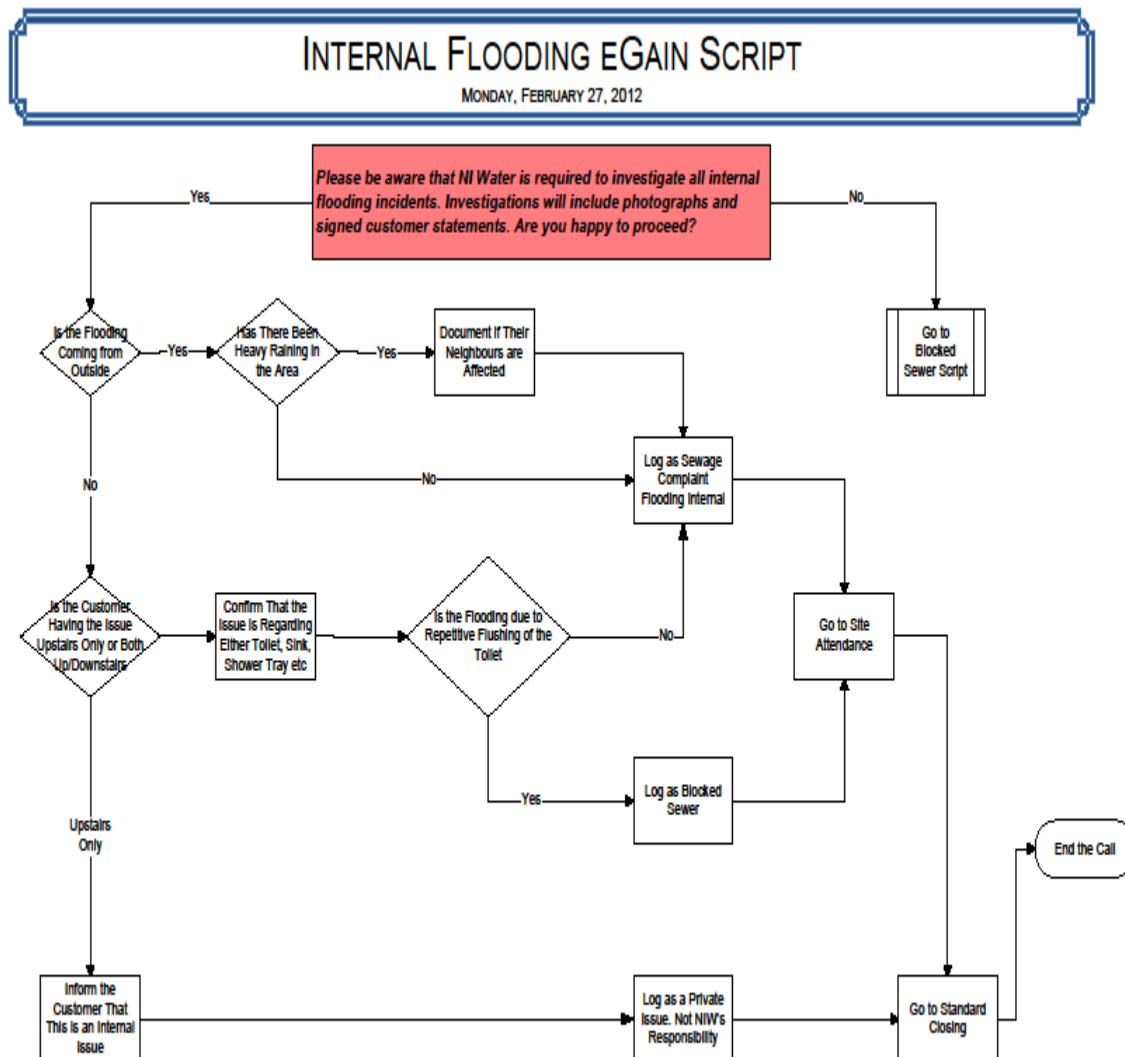
This line reports properties which were fully investigated and sufficient evidence presented to the DG5 panel of experts to allow their addition to the appropriate 'At Risk' register. 3 properties were added in this reporting period.

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

The company did 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 (from the 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 14 flooding problems were addressed at an average cost of £148.9k each.

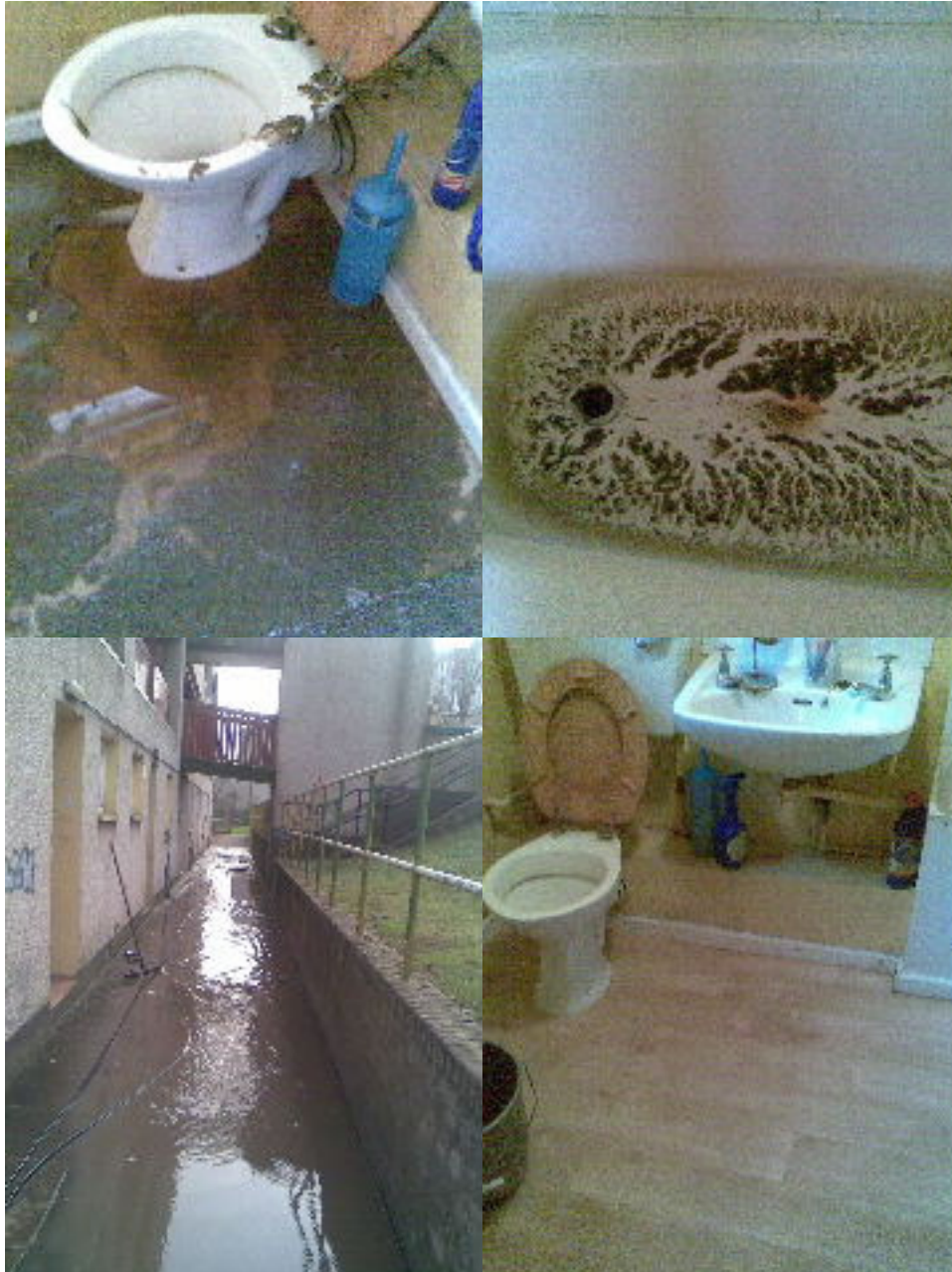
APPENDIX A – New Flooding Internal Script

northern ireland
water

Date: 22/03/2012 Arrival time: 16:25:00

- Comments: Especially for Flooded jobs or Follow on jobs**
cleared, internal flooding at bathroom, clean up b

PHOTO FOR FLOODED JOBS:





NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		5	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG
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		313 D6	
2 Curtilege flooding incidents in the year (overloaded sewers)	nr	0	733 D6		1,619 D6		1,160 D6		0 B3		137 D6	
3 Highway flooding incidents (overloaded sewers)	nr	0	194 D6		357 D6		299 D6		0 B3		108 D6	
4 Other flooding incidents (overloaded sewers)	nr	0	120 D6		244 D6		144 D6		0 B3		94 D6	
5 Total flooding incidents (overloaded sewers)	nr	0	1,047 D7		2,220 D6		1,603 D6		0 B3		339 D6	
6 External flooding incidents (overloaded sewers attributed to severe weather)	nr	0	458 D6		1,062 D6		575 D6		0 B3		2 D6	
6a Areas flooded externally attributed to severe weather	nr	0							N/C		2 D6	
(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		N/C	
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		N/C	
9 Flooding incidents (other causes - equipment failure)	nr	0	173 D6		438 D6		318 D6		12 B3		12 D6	
10 Flooding incidents (other causes - blockages)	nr	0	4,300 D6		9,217 D6		7,323 D6		1,389 B3		2,693 D6	
11 Flooding incidents (other causes - collapses)	nr	0	210 D6		528 D6		401 D6		35 B3		10 D6	
B AREAS ON THE 1:10, 2:10, 1:20 AT RISK REGISTER												
(i) SUMMARY												
12 2 in 10 register at end of year	nr	0	7 DX		7 DX		7 DX		N/C		N/C	
13 1 in 10 register at end of year	nr	0	1 DX		1 DX		1 DX		N/C		N/C	
14 1 in 20 register at end of year	nr	0	0 DX		0 DX		0 DX		N/C		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		N/C	
15A Potential risk of property flooding identified requiring further investigation to assess at risk category.							40,863 DX		N/C		N/C	
(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		N/C	
21 Removed by company action (external linked)	nr	0	N/C		N/C		N/C		N/C		N/C	
22 Removed because of better information	nr	0	N/C		N/C		N/C		N/C		N/C	
23 Added because of better information (actually flooded)	nr	0							N/C		N/C	
24 Added because of better information (modelled)	nr	0							N/C		N/C	
25 Transferred from external to internal register	nr	0	N/C		N/C		N/C		N/C		N/C	

Table 3a – Sewerage Service – External Flooding

Responsibility for the population of Table 3A has been transferred from Customer Services Directorate (Networks Sewerage Business Unit) to Asset Management (Asset Performance section). The population of Table 3A has been executed retrospectively at 'end of year' by the Asset Performance section; no ongoing analysis of the data was executed during the year.

It should be noted, in relation to Line 1, that the information available for months March and April did not contain the information regarding location necessary to enable a definition of areas. The number of incidents was therefore subdivided by using the proportional split from the remainder of the year.

The analysis required to populate lines 7 and 8 has not been executed; as a consequence these lines have not been populated. The raw external contractor data has been collected but the analysis required to populate lines 7 & 8 has not been undertaken. To do this at the end of the year, in a retrospective manner, would require the use of a significant man-hours resource in order to achieve a limited benefit. It is intended that an improvement in the quality of information from the External Contractor along with the ongoing analysis of the information will enable these lines to be completed within AIR 13.

The analysis has been made on the basis that the information supplied by the external contractor is accurate. No investigation has been carried out in relation to individual incidents. As a consequence the data has a low Confidence Grade of D6.

For year 12/13 the analysis of the data necessary for the population of Table 3a will be carried out on a periodic basis throughout the year. Furthermore, the initiation of the External At Risk Register will require the investigation of those incidents which are potentially due to overloaded sewers and will therefore bring about increased confidence in the processing of the information for lines 1 to 6.

It should be noted that Lines 1 to 6 were not populated within AIR11.

NORTHERN IRELAND WATER - ANNUAL INFORMATION RETURN

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

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

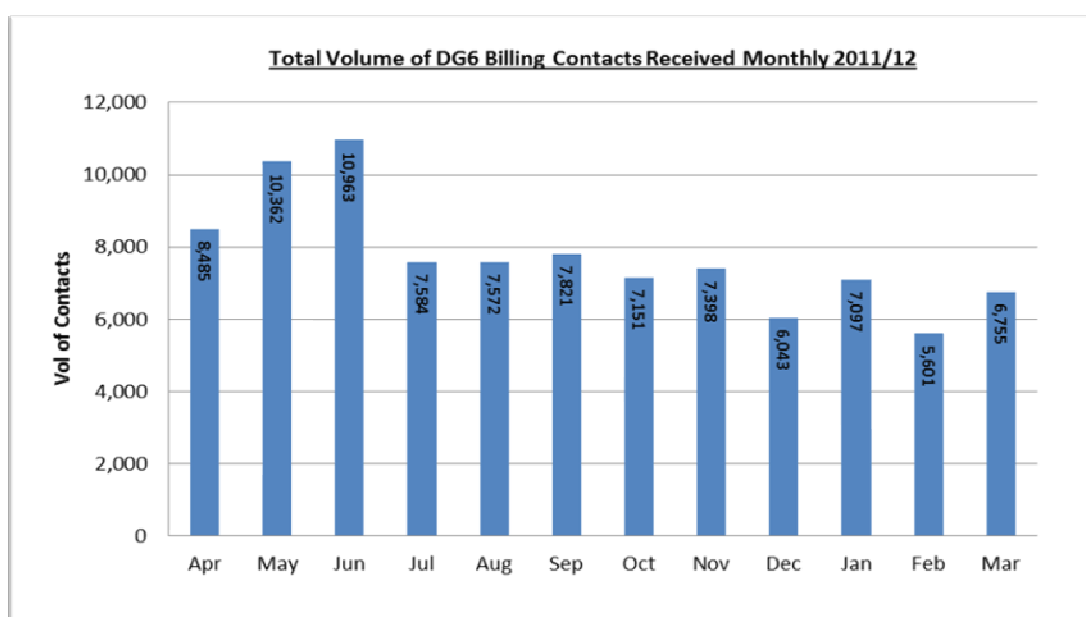
Table 4 Lines 1-5 – Customer Service 1**Lines 1 - 5 - DG6 – Response to Billing Contacts**

This was the fifth year of non-domestic billing by Northern Ireland Water (NIW). Following decision of the Executive, domestic charges continued to be deferred for 2011/12 charging year.

No changes, other than tariff changes were made to billing from April 2011.

Chart 1 below shows the monthly profile of DG6 contacts received during 2011/12.

Chart 1 Total volume of monthly DG6 contacts

**Top 5 Reasons for Customer Contact**

Customer Details Change	8827
Debit / Credit Card Payment	8764
Promise Of Payment	7621
Bill Understanding /explanation	7335
Leakage Allowance	5748

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

- Annual bills raised early April
- The level of Promise of Payment contacts may have increased due to increased focus on debt collection activities during the year.

The source data for DG6 Table 4 (lines 1 to 5) is reported using the submitted methodology stated for DG6. NIW have closed more contacts than were received during the 2011/12 reporting year, due to concerted efforts by the DG6 team to drive down the number of open contacts that carried over from previous reporting years.

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

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

Responses

For DG6 reporting purposes the date of resolution of the item or date of the substantive response / holding response is used as the closure date. If a customer has a billing related query which leads to a recalculated bill, the date of the 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.

Categorisation Checks

As per the Level of Service Methodology, an additional check was introduced during 11/12 following a Customer Contact Management audit performed by NI Water's Internal Audit department.

A sample of closed DG6, DG7 and non-regulated contacts is checked monthly to ensure that they have been appropriately categorised in line with the DG6/DG7 definitions. Any errors are rectified on-system and feedback provided to the relevant staff members by their line manager.

Billing (DG6) Project

There has been continuous focus to improve DG6 performance, reduce overall call volumes and improve the handling of billing contacts. A Billing project was initiated this year containing the five Workstreams below:

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

The benefits to be derived from this project include:

- Reduce DG6 Volumes by 10% through improved bill accuracy and customers having a better understanding of their bills;

- Reduce DG6 Billing Calls by 10%
- Reduce Visit Requests by 10%

Cost reduction due to efficiencies gained

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

Key Metrics to Measure Success of Project

Description of Benefit (List each non financial benefit)	Baseline Measure	Forecast End state Measure	Planned Reduction	Actual AIR12 Measure	Qtr4 11/12 Actual
10% Reduction in Billing Calls	83118	74807	10%	73760	11.26%
10% Reduction in DG6	104897	94410	10%	92832	11.49%
10% Reduction in Visit Requests sent to the field	6932	6239	10%	4707	32.10%
Movement of 5% of wanted DG6 to other channels (Dependent on self service project)	35995	34196	5%		

The scope of the project in 11/12 included:

- Streamlining of processes within the Account Services Team.
- The introduction of a Billing Contacts Team in CRC.
- The development of a Visit Requests Guidelines document and other initiatives to reduce the number of Visit Requests raised.
- An update of the current NIW website with Billing and Metering information to help with bill understanding and leakage responsibilities for example.
- The introduction of Billing scripts to CRC to improve call handling.
- A review of NIW Data Protection processes to improve the customer experience and answer more calls at the point of contact.
- The introduction of a triage process for meter driven contacts to help reduce the number of visit requests raised and improve turnaround times.
- The introduction of envelope messaging for billing items.
- New information sharing processes with LPS.
- The introduction of improved Management Reporting in relation to DG6.

Holding Letters – The 10/11 DG6 project introduced a 60 day hold letter to set a more realistic target for customers requiring a visit request and reduce the need for multiple hold letters. Work was also completed to drive down a substantial backlog in open visit requests and improve meter query processes in the field.

From 20th March 12 revised processes implemented enabled the longest holding letter period to be reduced from 60 to 40 days going forward. This timeframe was subject to constraint as the standard completion time for a Meter Maintenance request, which can often be required following a visit request, is currently 28 days. Cases are also now reviewed on an individual basis and where possible the holding letter period quoted is reduced.

We shall continue to monitor the performance and the number of holding letters required to ascertain if any further improvements can be made. The introduction of a case management solution to Account Services should also help improve the efficiency of case management by the Contacts Team and enable better reporting with regards to holding letters.

The Billing project shall continue into 12/13 and shall include the delivery of the Case Management and Workflow solution to Account Services mentioned above and a Rapid Bill Print system upgrade along with a revised bill format to assist with Bill understanding and other billing process improvements. Other planned improvement projects such as Self Service and Web improvements should also help drive down the number of DG6 contacts received and improve levels of Customer Service with regards to Billing.

Lines 6 – 9 - Connected Properties

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

Line 6 – Number of Properties Connected for Water Supply Only

There has been a net increase of circa 2350 properties during the 11/12 year which are connected only for water may be attributed to newly connected domestic dwellings in rural areas which have a septic tank.

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

There has been a net increase of circa 1500 properties connected for water and sewerage services during the 11/12 year.

Line 8 – Number of Properties Connected for Sewerage Services Only

The number of properties connected for sewerage only has decreased by 2 during the 11/12 year.

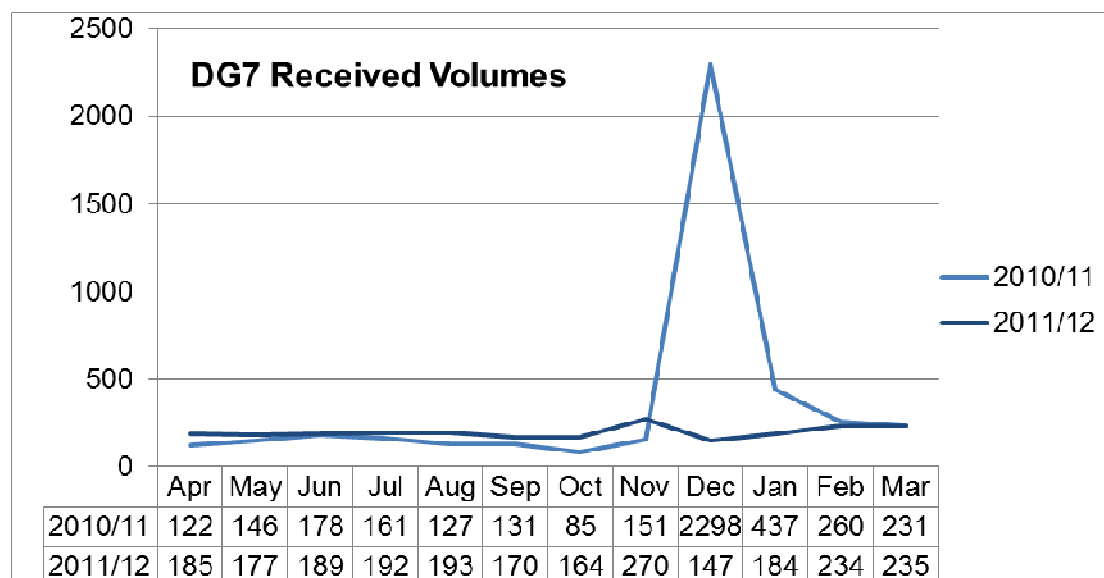
NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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

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

Table 5 – Customer Service 2**Lines 1-5 – DG7 Response to Written Complaints**

The chart below shows the DG7 received volumes during 10/11 and 11/12.



The chart shows a significant decrease in the overall volume of written complaints received in 11/12 compared to the previous year during which the incoming volume was so heavily impacted by the Freeze/Thaw major incident of December/January 10/11.

There were no such major incidents during 11/12 notably impacting the DG7 volumes.

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

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

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

Based on data extracted on 16 April 2012:

- 15 DG7 received during 11/12 complaints were open;
- the oldest open DG7 complaint received during 11/12 was 45 working days old;

- 12 complaints received during 11/12 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 received during 11/12 was 20 working days.

Consumer Council for Northern Ireland (CCNI):***Stage 1 Complaints Process***

Amendments to CCNI's Stage 1 complaint process proposed early in the reporting year resulted in no change to contact handling within NI Water and, as such, no impact on DG7 reporting.

Annual Complaints Assessment

CCNI conducted the third annual complaints assessment on 3 April 2012. Over the course of the day, a sample of 25 complaints was assessed against a list of "essential" and "beneficial" criteria. CCNI will then draft a report, including recommendations, for review & agreement with NI Water.

Consumer Council Investigations

The new line in Section C (line 15) shows the number of unique DG7 instances recorded which have been passed to NI Water by CCNI for investigation and response.

The total 80 contacts reported can be further broken down as below:

- CCNI Stage 1 Complaints - 28
- CCNI Stage 2 Complaints - 52

It does not include complaints copied to CCNI by DRD which have already passed directly to NI Water by DRD for response.

Substantive Holding Response

As per the AIR11 company commentary, a regular audit check is in place to ensure that the correct closure dates are being used for those complaints where closure is backdated to the date of issue of the initial holding response.

E-mail and Faxes

As per the AIR11 company commentary, we have had systems in place to ensure that the receipt date of email/fax contacts is recorded as the date it is delivered to the company with the following working day being recorded as Day 1.

Categorisation Checks

As per the Level of Service Methodology, an additional check was introduced during 11/12 following a Customer Contact Management audit performed by NI Water's Internal Audit department.

A sample of closed DG6, DG7 and non-regulated contacts is checked monthly to ensure that they have been appropriately categorised in line with the DG6/DG7 definitions. Any errors are rectified on-system and feedback provided to the relevant staff members by their line manager.

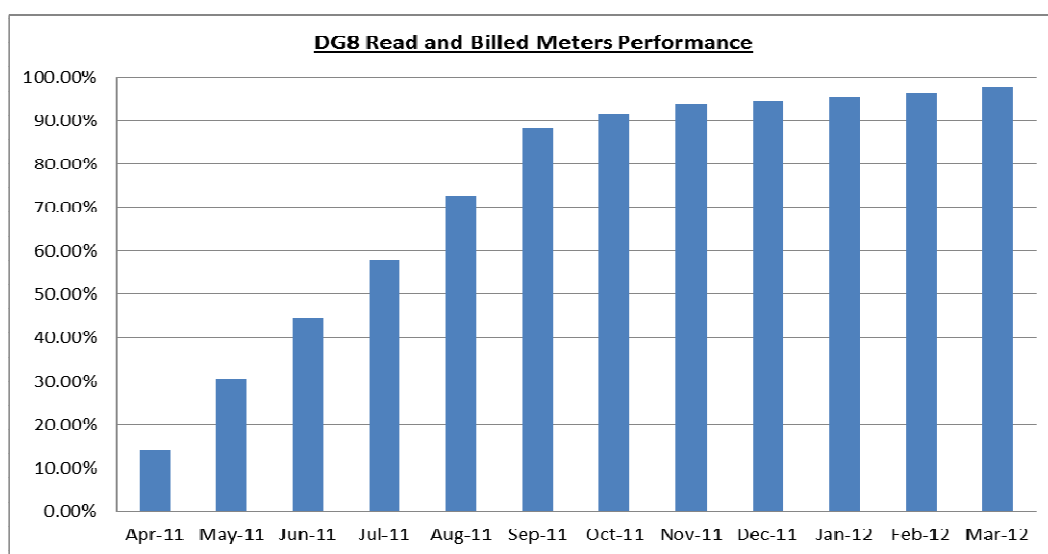
Exclusions

A total of 15 written customer complaints have been excluded from DG7 reporting during 2011/12 for a variety of exclusion reasons as per the Level of Service Methodology.

Lines 6-12 - DG8 Bills for Metered Customers

DG8 performance was 97.88% against a target of 97.5%. The benefits of the DG8 project which commenced in July 10 were further realised this year. This has resulted in the numbers of meters being skipped reducing and those not read for a longer period reducing significantly. A focus on operational activity plus enhanced management information facilitated targeting of meter reads to ensure the DG8 target was achieved.

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



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.

The DG8 target for 2012/13 has again increased to a very challenging 98.5%. The focus will remain on regular management reporting, targeted maintenance and direction of resources to ensure compliance.

Billing Policy

Frequency of Bill Issue:

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

Customer Reads

The Company encourages our customers to take readings themselves so that they are aware of their usage. The company has introduced a message on bill

and recovery envelopes to highlight the importance of customers ensuring they check and read their own meter where possible. Customer reads can be registered for billing purposes by using the On-line facility available on our website, email or by calling our billing line.

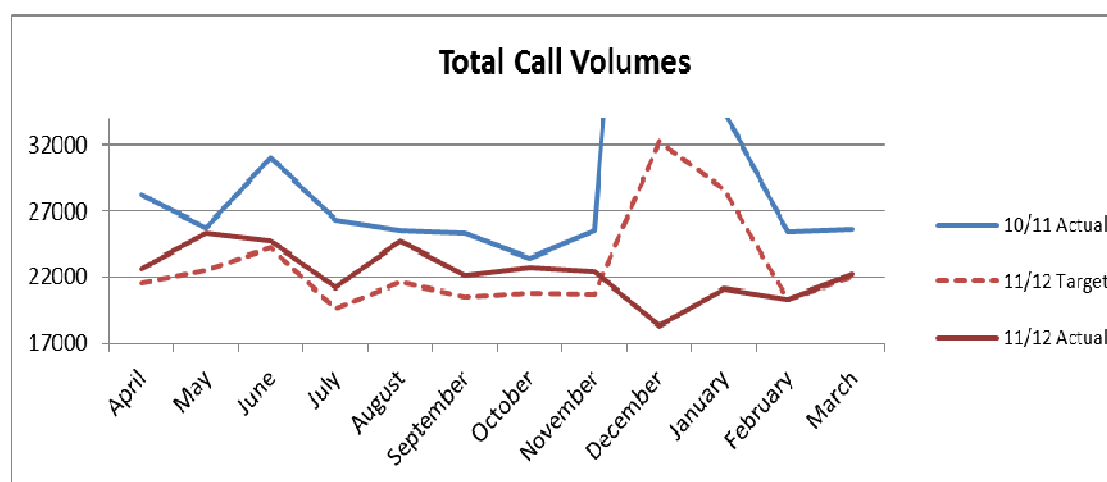
The Confidence grade of A1 has been applied for lines 6-12.

Lines 13-17 DG9 Telephone Contact

Introduction

During the reporting year a total of 267,973 calls were made to the advertised Company telephone numbers, of which 36,728 were calls to the company switchboard. Of this a total of 265,998 were answered and 1,975 calls were abandoned.

The above figures reflect the mild winter experience in 2011/12 and the substantial effort put in by Customer Services to reduce call volumes. The graph below shows a comparison against 10/11 and against our target level of calls.



All Lines Busy

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

Calls Abandoned

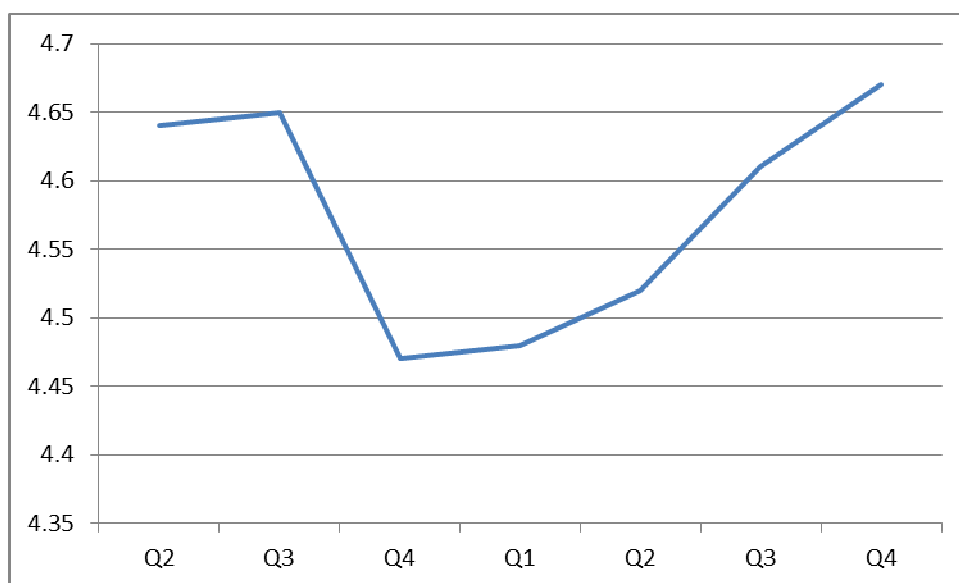
1,975 calls were abandoned during the reporting year. The Company's performance of 99.15% of calls not abandoned exceeds the 99% target set for the year.

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 4190 (versus 5847 in 2010/11) rejected calls made outside of published working hours recorded during the 2011/12 reporting period. The customer received the appropriate out of hours message.

Call Handling Satisfaction

Customer's satisfaction with regards call handling is assessed by McCallum Layton, an independent market research company. McCallum Layton carry out quarterly customer survey of 100 customers who have called the Company for any reason. McCallum Layton carried out the survey in all quarters of this reporting year. The Company achieved an overall score of 4.57/5.0 for the reporting year. The graph below shows the quarterly scores for the last seven quarters. It is clear that the freeze / thaw event in 2010/11 had a major impact on customer satisfaction. It is however encouraging to see the recovery from this position to the current score of 4.67 giving a yearly average of 4.57. Further work will be carried out in 2012/13 to improve this score.



Customers on the Special Assistance Register

A substantial amount of work has been carried out to increase numbers on the register and to improve the level of service provided to the more vulnerable of our customers. At end March 2012 there were a total of 1990 individuals / organisations on the register as show below:

- 1570 unique individual customers
- 386 nursing homes with 12,979 beds
- 50 closed communities (hospitals, prisons)

The company held two Vulnerable Customer Forums during the reporting period. These forums allows the Company to interact with a range of stakeholders organisations to promote the service and to receive direct feedback on how with serve this community. Further forums are planned for this year.

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. During the reporting period circa 150 jobs were received by the Company through this process.

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 has introduced network IVR capacity and geographic based routing. This was used to great effort during the reporting period for a number of incidents. During the Ballymoney water quality issue in November the IVR handled 5100 calls that would normally have gone through to a call agent. During this incident only 169 customers held on to speak to a call agent.

Sampling Methods

Samples of calls are listened to on a monthly basis and any issue feed back to our outsource partners Echo through the monthly operational reporting mechanism. In addition NI Water will implement an upgrade to the call recording solution 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 the Company, or a service or lack of service provided by NI Water or agent/contractor has fallen below his/her expectation.

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

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

During the reporting period the Company received 51,680 telephone complaints.

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.

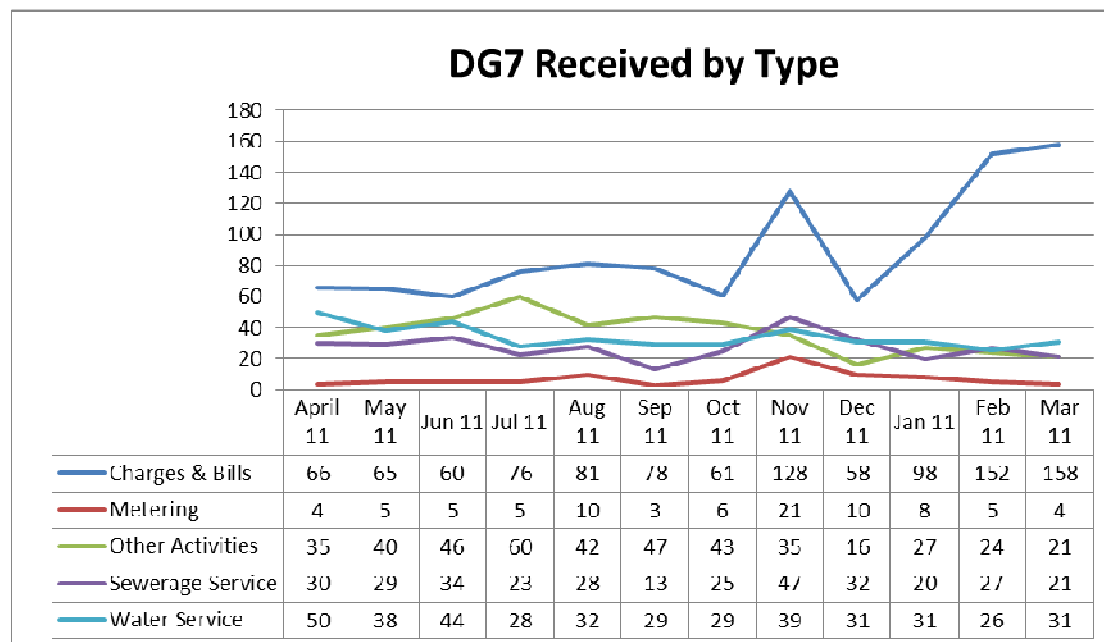
Call Handling Satisfaction has been given a confidence grade of A2 as it is conducted independently and the results are provided to NI Water (via its outsourced partner) from McCallum Leyton.

ANNUAL INFORMATION RETURN - TABLE 5A KEY OUTPUTS
Customer complaints data for Consumer Council for Northern Ireland (TOTAL)

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

Table 5a – Customer Complaints Data for CCNI**DG7 Received Annual Profile & Explanation**

The volume of DG7 complaints received each month during 11/12 by type is shown in the chart below.



This shows that the predominant type month-on-month was “Charges & Bills” with a spike in November. This spike can be attributed, in part, to complaints resulting from changes to billable status as part of data projects such as the Test Meter project.

There is also a steady rise from January onwards following a seasonal low in December. There is no clearly identifiable theme driving the volume in Q4 however 43% of the “Charges & Bills” complaints were recorded as being from customers disputing liability for measured bills.

Second Stage Complaints

Following recommendation from the reporter, work was undertaken during 10/11 to introduce a protocol & methodology to allow the reporting second stage complaints in the DG7 handling process.

The necessary systems were put in place to enable the reporting of second stage complaints throughout the whole of 11/12 for the first time.

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

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

PC10 Other Customer Measures

Within the P10 final Determination, stakeholders agreed to introduce monitoring systems to allow reporting of:

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

Whilst there is no data line to report on repeat complaints, those complaints reported as having reached stage 2 can be said to be repeat complaints.

Systems have not been in place during 11/12 to support the reporting on the number and frequency of holding responses. As such, the data line has been left blank for the 11/12 return.

Monitoring systems will be in place to allow reporting on the number and frequency of holding responses throughout 12/13. This will initially be a manually-recorded, off-system process however will be replaced with on-system reporting following the introduction of new case management software planned for roll out in Q2 of 12/13.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 6A BAD DEBT

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

DESCRIPTION			UNITS	DP	1	2	3		4		5	
					REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	CG	REPORTING YEAR 2010-11	CG	REPORTING YEAR 2011-12	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	7.348 A2				
30	Number of measured non households with outstanding revenue < 48 months	nr	0		27160	20,254 A2	17,708 A2	14,284 A2				
31	Revenue outstanding < 3 months (measured non households)	£m	3		5.913	9.556 A2	9.232 A2	6.179 A2				
32	Number of measured non households with outstanding revenue < 3 months	nr	0		13002	12,754 A2	13,846 A2	10,951 A2				
33	Revenue outstanding 3 - 12 months (measured non households)	£m	3		1.962	3.165 A2	1.564 A2	1.169 A2				
34	Number of measured non households with outstanding revenue 3 - 12 months	nr	0		14158	7,500 A2	3,862 A2	3,333 A2				
35	Revenue outstanding 12 - 24 months (measured non households)	£m	3			0.000 A1	0.000	0.000				
36	Number of measured non households with outstanding revenue 12 - 24 months	nr	0		0	0 A1	0	0				
37	Revenue outstanding 24 - 36 months (measured non households)	£m	3			0.000 A1	0.000	0.000				
38	Number of measured non households with outstanding revenue 24 - 36 months	nr	0			0 A1	0	0				
39	Revenue outstanding 36 - 48 months (measured non households)	£m	3			0.000 A1	0.000	0.000				
40	Number of measured non households with outstanding revenue 36 - 48 months	nr	0			0 A1	0	0				
41	Revenue outstanding > 48 months (measured non households)	£m	3			0.000 A1	0.000	0.000				
42	Number of measured non households with outstanding revenue > 48 months	nr	0			0 A1	0	0				
D REVENUE OUTSTANDING - UNMEASURED NON HOUSEHOLDS												
43	Total revenue outstanding < 48 months (unmeasured non households)	£m	3		0.584	0.302 A2	0.163 A2	3.083 A2				
44	Number of unmeasured non households with outstanding revenue < 48 months	nr	0		5647	3,238 A2	1,304 A2	10,805 A2				
45	Revenue outstanding <3 months (unmeasured non households)	£m	3		0.173	0.042 A2	0.040 A2	2.812 A2				
46	Number of unmeasured non households with outstanding revenue < 3 months	nr	0		198	516 A2	219 A2	9,836 A2				
47	Revenue outstanding 3 -12 months (unmeasured non households)	£m	3		0.411	0.260 A2	0.123 A2	0.271 A2				
48	Number of unmeasured non households with outstanding revenue 3 - 12 months	nr	0		5449	2,722 A2	1,085 A2	969 A2				
49	Revenue outstanding 12-24 months (unmeasured non households)	£m	3			0.000 A1	0.000	0.000				
50	Number unmeasured non households with outstanding revenue 12 - 24 months	nr	0			0 A1	0	0				
51	Revenue outstanding 24-36 months (unmeasured non households)	£m	3			0.000 A1	0.000	0.000				
52	Number of unmeasured non households with outstanding revenue 24 - 36 months	nr	0			0 A1	0	0				
53	Revenue outstanding 36 - 48 months (unmeasured non households)	£m	3			0.000 A1	0.000	0.000				
54	Number of unmeasured non households with outstanding revenue 36 - 48 months	nr	0			0 A1	0	0				
55	Revenue outstanding >48 months (unmeasured non households)	£m	3			0.000 A1	0.000	0.000				
56	Number of unmeasured non households with outstanding revenue > 48 months	nr	0			0 A1	0	0				
E REVENUE WRITTEN OFF												
57	Amount of revenue written off from measured households	£m	3		N/C		0.000 A1	0.000			0.000	
57a	Amount of revenue written off from measured non-households	£m	3		0.815	0.170	0.340 A2	1.534 A2			0.957 A2	
58	Amount of revenue written off from unmeasured households	£m	3		N/C		0.000 A1	0.000			0.000	
58a	Amount of revenue written off from unmeasured non-households	£m	3		0.005	0.000	0.013 A2	0.070 A2			0.057 A2	
F CUSTOMER SERVICES OPERATING EXPENDITURE												
59	General customer services operating expenditure Total	£m	3		17.579	16.873	18.558 A2	6.667 A2			6.745 A2	
i	Employment costs	£m	3				3.621 A2	3.168 A2			3.862 A2	
ii	Hired and contracted costs	£m	3				13.474 A2	2.731 A2			3.129 A2	
iii	Other	£m	3				1.376 A2	1.429 A2			0.686 A2	
iv	Adjustments	£m	3				0.087 A2	-0.661 B3			-0.932 B3	
60	Outstanding revenue collection operating expenditure (households)	£m	3		N/C	N/C	N/C	N/C			N/C	
60a	Outstanding revenue collection operating expenditure (non households)	£m	3								2.009 DX	
61	Donations to charitable trusts assisting customers in debt (households)	£m	3		N/C	N/C	N/C	N/C			N/C	
62	Operating expenditure due to vulnerable household customers	£m	3		N/C	N/C	N/C	N/C			N/C	
63	Total customer services operating expenditure	£m	3		17.579	16.873	18.558 A2	6.667 A2			8.754 A2	

Table 6a – Bad Debt**Overview**

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

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

The figures contained within the table are clarified below:

Lines 1 - 14 – Revenue Outstanding – Measured Households

For the year ended 31 March 2012 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 £1.085m due to NIW from DRD for subsidy at 31 March 2012.

Lines 15 - 28 – Revenue Outstanding – Unmeasured Households

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

Lines 29 – 58a – 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 2012.

At 31 March 2012 the closing trade debtor balance was £7.348m. Trade Debtors decreased this year largely due to a reduction of £2.2m in measured income to take account of anticipated future system adjustments (see pages 7 & 8).

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 £5.3m and is made up of the following:

- £3.2m for debt over 1 year
- £1.6m for debt 90 – 365 days
- £0.5m 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. £2.4m more than the detailed debtors listing provided by Echo. This was due to the following:

- Referred bills (£0.2m)
- Future system adjustments (£2.2m)

Line 29 – Total Revenue Outstanding < 48 months - Measured Non Households

The total amount of revenue at the end of 2011/12 outstanding from measured non households for less than 48 months. Balance as at 31 March 2012 was £7.348m.

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

The number of measured non households at the end of 2011/12, with revenue outstanding for less than 48 months. Total at 31 March 2012 was 14,284. The number of households has been adjusted in line with the decrease in debtors taking account of anticipated future system adjustments of £2.2m. The £2.2m is approximately 12% of total outstanding debtors at 31 March 2012 of £18m. An assumption was made to apply a 12% reduction across all measured revenue age groups.

Line 31 – Revenue Outstanding < 3 months (Measured Non Households)

The total amount of revenue at the end of 2011/12 that has been outstanding from measured non households for less than 3 months. Balance as at 31 March 2012 was £6.179m.

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

The number of measured non households at end of 2011/12, with revenue outstanding for less than 3 months. As at 31 March 2012 this totalled 10,951.

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

The total amount of revenue at the end of 2011/12 that has been outstanding from measured non households for at least 3 months but less than 12 months. Balance as at 31 March 2012 was £1.169m.

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

The number of measured non households at end of 2011/12 with revenue that has been outstanding for at least 3 months but less than 12 months. At 31 March 2012 this totalled 3,333.

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

The total amount of revenue at the end of 2011/12 outstanding from measured non households for at least 12 months but less than 24 months.

Lines 35 – 42

Once the bad debt provision is applied there are no debtors greater than 12 months. Therefore at 31 March 2012 this line and all remaining lines in box C are zero.

Lines 43 – 56 - 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 2012.

- At 31 March 2012 the closing trade debtor balance was £3.083m. (31 March 2011, £0.163m). Reason for the increase is due to the 2012/13 annual billing invoices for £2.8m which were raised in March 2012 and held in the balance sheet as deferred income to be released in 2012/13.

The debtor balance reported figure is made up of unmeasured water and sewerage debtors less bad debt provision. The bad debt provision is £0.407m and is made up of the following:

- £0.232m for debt over 1 year
- £0.118m for debt 90 – 365 days
- £0.057m for debt less than 90 days

Line 43 – Total Revenue Outstanding < 48 months - Unmeasured Non Households

The total amount of revenue at the end of 2011/12 outstanding from unmeasured non households for less than 48 months. Balance at 31 March 2012 was £3.083m.

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

The number of unmeasured non households at the end of 2011/12 with revenue that has been outstanding for less than 48 months. Total at 31 March 2012 was 10,805.

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

The total amount of revenue at the end of 2011/12 outstanding from unmeasured non households for less than 3 months. Balance at 31 March 2012 was £2.812m.

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

The number of unmeasured non households at the end of 2011/12 with revenue outstanding for less than 3 months. Total at 31 March 2012 was 9,836.

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

The total amount of revenue at the end of 2011/12 outstanding from unmeasured non households for at least 3 months but less than 12 months. Balance at 31 March 2012 was £0.271m.

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

The number of unmeasured non households at end of 2011/12 with revenue outstanding for at least 3 months but less than 12 months. Total at 31 March 2012 was 969.

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

The total amount of revenue at the end of 2011/12 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 2012 this line and all remaining lines in box D are zero.

Lines 57 – 58a – 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 £1.014m (2010/11, £1.6m). Write-offs in the year are similar to 2010/11. The apparent decrease is due to the £0.6m of write offs in relation to legacy debts in 2010/11.

Authorisation of bad debt write-off

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

Authorisation approval levels are as follows:

Delegation Limits [By Item]	Recommendation from (External service provider)	Approval required Grade (Internal)	DFP/DRD * (External)
Value			N/A
Up to £100	Agent	Billing & Collection L4.	
>£100 to £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.

Line 57 – Measured Households

As NI Water receives no revenue from households, there was no revenue written off from measured households.

Line 57a – Measured Non-Households

Bad debts written off are calculated on a monthly basis and include trade effluent. The total for 2011/12 was £0.957m (2010/11, £1.534m). Write-offs in the year are similar to 2010/11. The apparent decrease is due to the £0.6m of write offs in relation to legacy debts in 2010/11.

Line 58 – Unmeasured Households

As NI Water receives no revenue from households, there was no revenue written off from unmeasured households.

Line 58a – Unmeasured Non-Households

Bad debts written off are calculated on a monthly basis. The total for 2011/12 was £0.057m (2010/11, £0.070m).

Bad Debt provisioning

The standard methodology for calculating the bad debt provision is consistent with 2010/11 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:

General provision	Age of Debt	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	121-150 days	2%
	>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	121-150 days	2%
	>151 days	25%
Specific provision		
Uncollectables	All	100%

In addition to the standard methodology above, NI Water applied 4 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.
3. Increased Provision for Veolia Water leakage.
4. Reduction in Provision calculated on reduced debtor figure.

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. Further test meters were billed in 2011/12. Based on historic collection patterns, it was decided that all test meter debt due less than 6 months should be provided for at 75%, 6 to 12 months at 90% and greater than 12 months at 100%.

All of this debt related to measured non-households and this approach resulted in an additional provision of £0.2m at 31 March 2012.

Industry Specific Additional Provision

Individual customers and industries were banded according to risk and a revised percentage applied compared to the current provision percentage as shown below:-

	0-30 days	31-60 days	61-90 days	91-120 days	121-150 days	151-180 days	181-365 days	1-2 years	2-3 years	3-4 years	4 years+
Current Provision	2%	2%	2%	2%	20%	35%	65%	100%	100%	100%	100%
Agreed Provision - HIGH	25%	25%	30%	40%	60%	80%	100%	100%	100%	100%	100%
Agreed Provision - MEDIUM	2%	2%	2%	2%	20%	35%	65%	100%	100%	100%	100%
Agreed Provision - LOW	1%	1%	1%	1%	10%	20%	30%	50%	75%	100%	100%

Allocation of High, Medium and Low

Initially, the total debtors (debit balances) at the end of March 2012 were reviewed, taking into account the outstanding balance and the age of the debt. The following additional steps were taken:

- The top 100 customers were individually reviewed;
- Large commercial entities were reviewed; e.g. Tesco, Seagate, Montupet, FG Wilson, Coca-Cola, Norbrook, Sainsburys, Wrightbus, Almac, Diageo, NIE, Phoenix Gas, Kilroot Power, Invista, Moypark.
- All public sector accounts e.g. Health Trusts, Education Boards, Schools, were reviewed;
- The following customers were grouped and reviewed;

- agricultural customers;
- food processors;
- retail customers;
- hotel, bar and restaurant customers;
- charity, voluntary sector, housing association and church customers;
- construction and quarry customers;
- sports clubs;
- management agencies;
- Accounts with a STD VAT code were reviewed individually;
- The manufacturing customers were grouped and reviewed by name and by activity;

Adopting the judgement of the Billing, Revenue and Collections Lead person, customers were designated a risk of payment band as High, Medium and Low. Test meters were separately identified (see above).

This approach resulted in an additional provision of £0.4m all related to measured non-household debt. Analysis of industry specific bad debt was carried out which banded specific industry types as high, medium or low risk in terms of collectability of debt. Percentages were then applied in terms of bad debt provision with the assumption that 'medium risk' should have the bad debt percentages which NIW is currently applying. Percentages for 'high risk' were set at an increased level and percentages for 'low risk' at a reduced level.

Water Leakage Provision

All of these accounts are subject to leakage and are in the process of being repaired. Once repaired, the accounts will be adjusted based on check readings taken after the repair. At 31 March 2012 all debt was less than 6 months old and provision was made as per the revised test meter provision above i.e. 75%.

Reduction in Provision

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

Using the monthly analysis of system adjustments carried out, an estimate of the future system adjustments was made for measured water and measured sewerage only. This was done by setting a percentage against the original invoiced figure in the month on the basis of the adjustments in previous months. Percentages of 7% for water and 16% for sewerage were used. This resulted in an estimate of £2.2m of future system adjustments.

Debtors was reduced by £2.2m in March 2012 and the bad debt provision calculated on the reduced debt was decreased by £1m.

Bad Debt Provision Summary

The following is a summary of the bad debt provision at 31 March 2012 and 31 March 2011:

	2012	2011
	£m	£m
Measured water & sewerage	4.667	6.178
Unmeasured water & sewerage	0.407	0.356
Trade effluent	0.283	0.091
Total	5.357	6.625

Subsidy

NI Water received £253.3m subsidy in relation to household customers in 2011/12 with nothing outstanding from DRD at 31 March 2012.

NI Water received £12.88m subsidy in relation to non-household customers and at 31 March 2012 an amount of £1.085m was outstanding from DRD. The total subsidy for non-households for the year ended 31 March 2012 was £13.96m.

Line 59 – General customer services operating expenditure

The row 59 total of £6.745M in AIR12 is a £1.9M increase against the costs of £4.798M in AIR11. This arises for the following reasons:

Employment costs (Increase of £0.8M (24%)).

Hired and contracted costs (increase of £2.2M (239%)):

- In AIR11, there was a £2.4M release of a provision relating to a commercial claim made against NI Water. AIR12 had no such release.
- The Gross Service Charge from Echo reduced by £0.4M in AIR12, due to:
 - AIR11 contained 8 months of account services costs, prior to the service being passed across to NI Water (net saving of £0.6M).
 - The Gross Service Charge had an inflation rise of £0.2M.
- AIR11 had £0.4M of over-accruals of contractor and consultants costs, which did not occur in AIR12.

Other costs (decrease of £0.7M (52%))

- AIR11 had £0.7M of legal costs in connection with the commercial claim mentioned above. AIR12 had no such costs.

Adjustments (decrease of £0.3M (41%))

- The costs associated with meter reads and customer services has dropped by £0.1M, due to 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.

- Income from un-appointed activities has risen by £0.2M in AIR 12, because of increased septic tank emptying activity and the introduction of a new income stream for privately tankered waste.

Line 60 – Outstanding revenue collection operating expenditure (households)

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

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

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

The following assumptions were used in providing the figure for this line:

1. Includes costs of Echo and NIW staff directly involved in chasing the payment of debt.
2. Echo costs based on an estimate from Echo. Costs includes staff plus overheads.
3. Echo costs have been written back to AIR12 and AIR11 prices using the relevant indexation.
4. NIW staff costs based on an estimate from the grading.
5. The percentages for NIW staff are a very high level estimate.
6. Doesn't include any costs of billing.
7. Doesn't include costs of staff involved in dealing with complaints, or billing queries.
8. Doesn't include any NIW overhead costs e.g. travel, stationery etc.
9. Doesn't include costs of bad debt.
10. Doesn't include management or finance in reviewing the level of debt.

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

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

Line 62 – Operating expenditure due to vulnerable household customers

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

Line 63 – Total customer services operating expenditure

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

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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

DESCRIPTION			UNITS		DP		1		2		3		4		5		6	
							REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		CURRENT YEAR	
							2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG
A PROPERTIES							7.595		8.358 B3		4.457 B3		4.748 B2		3.838 B2			
1	Household properties connected during the year		000	3			1.482		0.723 B3		0.272 B3		0.284 B2		0.329 B2			
2	Non-household properties connected during the year		000	3														
B BILLING																		
3	Households billed unmeasured water		000	3	634.990		646.099 C3		654.625 C3		663.353 C2		672.816 A2		679.560 A2			
4	Households billed measured water (external meter)		000	3	30.398		0.000 C3		0.000 C3		0.000 A1		0.000 A1		0.000 A1			
5	Households billed measured water (not external meter)		000	3	0.000		0.000 C3		0.000 C3		0.000 A1		0.000 A1		0.000 A1			
6	Households billed water		000	3	665.388		646.099 C3		654.625 C3		663.353 C2		672.816 A2		679.560 A2			
7	Household properties (water supply area)		000	3	712.932		686.036 C3		693.005 C3		702.825 C2		713.341 A2		720.544 A2			
8	Non-households billed unmeasured water		000	3	31.341		30.519 C3		16.050 C3		13.648 B3		11.943 A2		10.767 A2			
9	Non-households billed measured water		000	3	42.823		78.416 C3		68.666 C3		68.713 B2		68.674 A2		70.835 A2			
10	Non-households billed water		000	3	74.164		108.935 C3		84.716 C3		82.361 B3		80.617 A2		81.602 A2			
11	Non-household properties (water supply area)		000	3	83.516		116.249 C3		102.636 C3		99.674 B3		93.072 A2		94.388 A2			
12	Void properties		000	3	56.896		49.698 C3		49.572 C3		51.290 B3		52.981 A2		56.934 A2			
C POPULATION																		
13	Population - households billed unmeasured water		000	2	1637.01		1672.51 B3		1685.97 B3		1686.41 B2		1698.55 B2					
14	Population - households billed measured water		000	2	85.06		0.00 A1		0.00 A1		0.00 A1		0.00 A1					
15	Population - non-households billed unmeasured water		000	2	8.10		6.67 B3		8.86 B3		8.41 B3		7.61 B3					
16	Population - non-households billed measured water		000	2	18.36		95.93 B3		95.33 B3		103.66 B3		102.66 B3					
17	Population - total		000	2	1748.53		1775.11 B2		1790.16 B2		1798.48 B2		1808.82 B2					

Table 7 – Water Properties and Population

Introduction

Table 7 focuses on the number of properties and population connected to the public water supply system. 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.

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 2012/13. 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 AIR12. Previously, in AIR08, farms had been classified and reported as ‘billed’ households on the principle of their status and allocation of ‘domestic allowance’.

Data Sources, Data Validation and Data Quality Projects

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

Customer information is updated through;

- ‘business as usual’ customer contacts, such as new connection requests, move in/move outs, or
- through initiatives such as the data quality programme, and/or
- unmeasured non-domestic metering programme (UNHH) which refers to a specific regulatory target as set out in PC10 Appendix 19 submission.

The Data Quality programme has been considering a number of initiatives to further cleanse customer data, particularly legacy customer data (data which

was inherited from DRD Water Service in April 2007) – such projects include Test Meters, Rapid-Pointer alignment, Third-party data sources (which looks to commercially available databases to provide enhanced customer and property information to deliver more robust customer and billing information), Pipe Size, Customer and Property analytical tools, etc.

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

In the IPS report the Reporter recommended;

1. NIW review, for AIR11 submission, the revised NIHE Housing Condition Survey and check if inconsistencies in the figures for unconnected properties have been resolved.
2. 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.

Reports have now been completed although the findings still have to be analysed to establish if there are issues.

There has been further significant focus on customer numbers during 2011/12, primarily due to commitments within PC10/Final Determination submissions and NIW Undertakings. As a result, there have been considerable data shifts from AIR11, 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 12,600 in March 2011 to 11,250 in March 2012. 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 short by 253 conversions for 2011/12; however the resulting average estimated consumption (190 m³/prop/year) is on target to meet the PC10 target. Property numbers are ahead of profile at this stage.

Under the Water & Sewerage Services (2006) Order, NI Water is required to install meters on all new household connections since April 2007. As explained above, customers are not being charged on a measured basis, so

the property is still being reported as unmeasured. Some domestic properties were initially reported as measured in AIR10 but this was rectified as per the erratum to AIR10. Depending on the basis for charging when domestic billing is introduced, these customers can be activated as measured household if required.

Data on property counts and classifications continue to be reported monthly from Rapid and reconciled (where possible) with other data collection activities, such as the metering programme and the Diamond reporting database. The Rapid Property Summary provides us with a snapshot at the end of each month in terms of gross movements; it doesn't support us in the explanation of net movements within the data.

Data on population continues to be obtained from Northern Ireland Statistics and Research Agency (NISRA), adjusted for the winter months based on information published by the Department of Enterprise, Trade and Investment (DETINI) and the Central Statistics Office (CSO), Ireland

From the Rapid Property Summary there are deemed to be 587 (gross) 'unmeasured – not charged' properties which (based on sample taken) are mostly NI Water premises as per table below.

Unmeasured - Not Charged Properties	Count
NI Water	550
Fire Authority For NI	13
Other	24
Grand Total	587

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

Test Meters

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

The fieldwork element of the project to survey and reclassify test meters was completed on 28th March this year. Any follow up work required will now be completed in BAU. The key points with regards to NIW's test meters' review are detailed below:

- Of the total 10,898 Test Meters
 - 10,855 have been surveyed and a new classification given
 - 43 still to have a classification confirmed via survey in BAU
- Two final batches of Test Meters billing are expected to be released in Quarter 1 2012/13
- Final Surveys/Resurveys and desktop analysis of returned surveys on-going in BAU

Those that were found to be non-domestic billable were attributed to the non-domestic measured category and billed retrospectively to April 2007.

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

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

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

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

The Rapid Property Summary for 31st March 2012 indicates a reduction of 1,100 non-domestic test meters and 600 domestic test meters during 2011/12 for water services, as a result of our Data Quality programme.

Site Metered Properties

As part of the ongoing data checks, NIW has been confirming the number of site metered properties (multiple properties being charged through a single meter, such as business parks and industrial estates).

To ensure that these properties are not double counted, they are not included in Table 7 non-domestic property counts (although NIW still retain this information for customer record and charging purposes). However, there are 548 domestic properties classified as site meters and there will be further investigations and analysis to be completed during 2012/13 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 445 during 2011/12, driven primarily as a result of extended non-domestic charging.

Unmeasured Household Property Movement

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

Property Numbers	2011/12	2012/13	2013/14
	Actual	Forecast	Forecast
Start of Year	668661	676970	681791
New/Metered (plus)	3838	5180	5180
Data Cleanse/Backlog (plus)	6051	0	0
Test Meters (minus)	595	0	0
Site Meters (minus)	67	0	0
Voids (minus)	918	359	309
End	676970	681791	686662
PC13 Figure	678139	683165	688115
Variance	1169	1374	1453

This is the first time we've completed this table for AIR. We will be developing a more automated process for reporting during the 12/13 year in terms of numbers of New Connections. This process (in conjunction with our DQ team in ICT) will allow for an on-going reconciliation of New Connection data within Rapid to Pointer, (once a UPRN is made available) to ensure that R-P percentage reconciliation is maintained.

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

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

For the purposes of forecasting, in light of the above, we have only considered the increases due to new connections and the projected variance in voids at this stage, until we have more robust information for decision making.

There is a variance between the AIR end of year and the PC13 figure for the same as they are based on different time periods (AIR12 April-Mar, PC13 Dec-Nov).

Measured Household Property Movement

We don't report figures for measured household property movements (they are included in the unmeasured line as they are not billed)

Additional Information

As Table 7 is based on averages, please find as below actual figures for 1st April 2011, 1st December 2011 and 31st March 2012.

Property Numbers	1st April 2011	1st Dec 2011	31st March 2012
Unmeasured Water Household	668661	673841	676970
Unmeasured Water Non-Household	12618	11629	11267
Metered Water Non-Household	68487	68491	68860
Voids	52691	53631	53270

Confidence Grades

As the benefits of the data quality programme are realised we would expect to see this reflected in the confidence grade in future years. Whilst the quality of data will improve, the method of extraction and reporting remained similar. This year we introduced an automated tool to populate the figures within Table 7 from the Rapid Property Summary.

Lines 13 – 17 Population

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

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

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 6,080 and an occupancy rate is calculated at 0.866 to determine a total population for unconnected properties of 5,263. The total supplied population for all connected properties is calculated as 1,808.82 (x1000). (Line 17)

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

http://www.nisra.gov.uk/archive/demography/population/household/NI08_House_Projs.pdf#6 to the population of farms. The number of farms has been determined from the company's Rapid system and the occupancy rate is obtained from NISRA http://www.nisra.gov.uk/archive/demography/population/household/NI08_House_Projs.pdf#6. NISRA have updated their communal population assessment. The communal population for 2011/12 is 31,129 compared to 30,690 as used in AIR11. The farm population is 31,786 x 2.49 = 79,147. Therefore the non-household population is 110.27 (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 1,698.55 (x1000) (Line 13). The confidence grade for this line is a B2. This line remains the dominant figure within Section C of Table 7.

The population for non-household measured/unmeasured was derived from the percentage split between measured (not including farms) and unmeasured non-household properties and applied against the NHH communal population. The total farm population (79,147) has been classed as measured. The communal population (31,129) is split based on 11,943 unmeasured customers (24.5%) and 36,888 measured customers which excludes farms (75.5%). This therefore provides a population for measured NHH of 102.66 (x1000) (Line 16) and an unmeasured NHH population of 7.61 (x1000) (Line 15).

Line 17 is calculated by summing Line 13 + Line 14 + Line 15 + Line 16. This gives a figure of 1,808.82 (x1000) which is the total connected population.

It is recognised that the primary means of determining population numbers is from data published by NISRA. Bearing this in mind NI Water, as in previous years, has endeavoured to populate a confidence grade against the various lines. The Reporter has previously stated that in doing so the company has made a reasonable effort to assign appropriate confidence grades and accepts that NI Water has no influence over the methodology adopted by NISRA.

NORTHERN IRELAND WATER LIMITED -ANNUAL INFORMATION RETURN

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

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

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

NIW installs meters on newly connected domestic properties as per the obligation associated with Article 81 of The Water and Sewerage Services (Northern Ireland) Order 2006. The company does not install meters in existing domestic premises or at the request of domestic customers (including those over 60 years of age) given the deferral of charging by the Northern Ireland Assembly (NIA) in March 2007. The company does not exercise its power to meter domestic properties upon change in occupancy or ownership for the same reasons as stated above. For these reasons the company 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 3458 water meters were installed at new domestic properties during the reporting period.

Lines 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 3458 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 747 which includes 611 UNHH properties changed from unmeasured to measured status. The additional 136 selective meters installations was as a result of the

metering of 35 new large diameter connections and 101 other installations performed by metering section staff.

Line 7a - Number of Non Household Meters Renewed

NIW has a reactive meter maintenance section within the metering team and reactively replaces meters and street furniture associated with meters. The maintenance activities are driven by reports generated by the meter readers and meter query technicians. All Meter Maintenance Requests (MMR's) are logged on a local database and channelled through a maintenance process. The MMR's are forwarded to the maintenance contractor who has a maximum of 28 days to complete the replacement or remedial work and return the associated data. The returned data is processed by the metering team and any meter exchanges are notified to the individual who requested the job, the CRC (for billing purposes) and the Corporate Asset Register (for asset management reasons). The meter maintenance process is an end to end process managed by the metering section using an in house database. During the reporting year NIW meter maintenance section replaced 3009 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 1878 meters under the PME programme.

An additional 1239 meters were replaced through an Engineering and Procurement contract for water mains rehabilitation as well as 596 meters directly replaced by meter 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 6722 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 67.

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 578.

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 35 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 201.

Line 12 – Number 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 23.

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 814 installations. This total is the made up by combining lines 9, 10 and 11 in Table 8 and above. The meter locations reported across the selective and optant categories can be split as 201 internal and 613 external installations.

Line 13 – Average Water Billed - Selective Metered Properties

The methodology for this line has changed since AIR11. The meters which were uploaded to Rapid during the 2010/11 year were used as the base dataset for this line, rather than meters uploaded during the 2011/12 year. The meter installation date does not always reflect the date of upload; therefore meters wouldn't have completed their 1st year of measured charging in the same year they were installed. The consumption is based on that which was used during the 2011/12 year.

The figure reported for line 13 is 625.61 l/prop/day.

NORTHERN IRELAND WATER LIMITED COMPANY - ANNUAL INFORMATION RETURN

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

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

Table 9 – Water Quality

Background – Year on Year

The perceived quality of water supplied by NI Water to customers has plateaued between 2010 and 2011:

- Mean Zonal Compliance has decreased slightly from 99.81% in 2010 to 99.80% in 2011 (figure assessed by NI Water - waiting for confirmation from DWI)
 - The small perceived decrease in water quality is to an extent due to changes in the methodologies for assessing taste and odour which were put in place in December 2010. These changes in the assessment methodology led to an increase in analytical odour exceedances from 17 in 2010 to 24 in 2011; however this increase was not reflected in overall customer complaints. (Please note: one fewer odour exceedance in 2011 would have led to the overall Mean Zonal Compliance being the same as that of 2010).
 - The changes in the assessment methodology however has identified an area fed by W4701 Killyhevlin WTW as having higher perceived odours under analytical conditions than other areas. This has led to a Consideration of Provisional Enforcement Order (CPEO) being issued by Drinking Water Inspectorate (DWI) for Killyhevlin WTW.
- The Operational Performance Index (for NI Water based on turbidity, iron and manganese as agreed with DWI) increased from 99.08% in 2010 to 99.31% in 2011 (NIW assessment on Turbidity, Iron and Manganese).
- The percentage compliance measured at Water Treatment Works (WTWs) increased from 99.99% in 2010 to 100.00% in 2011.
- The percentage compliance measured at Service Reservoir (SR) decreased from 99.97% in 2010 to 99.92% in 2011.
- Overall out of 219,967 measurements (directive standards, national standards, indicator parameters and additional monitoring requirements) made at customer tap, WTWs, SRs and Authorised Supply Points, 99.91% met the standards.

Please note a total re-zoning exercise was carried out for 2009 based on more accurate DMA data. The new 2009 and 2010 Water Supply Zones were not contiguous with the previous zones, and as such were given new codes and names, with the codes reflecting the leakage supply areas, and the names reflecting the supplying WTW / SR and the major conurbation in the zonal area. Following some small WTWs being taken out of service in 2010, some further zones were created for 2011 with new codes and names as before.

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

The data used for the estimation of average flow at WTWs in Table 9 lines 1-3 was supplied from operations leakage metering. For this return the Distribution Input was calculated as the average daily flow from the various individual sites or amalgamation of associated readings obtained from leakage metering. In accordance with the guidance, sites which were out of service at the end of the reporting period (the calendar year) have been excluded and are listed here.

Site Code	Supply Source	Average DI (ML/d)
W2501	Altmore	1.096
W2512	Gortlenaghan Borewell	0.323
W2515	Shanmoy Borewell	0.434
	Total	1.853

Article 31 Undertakings or Authorised Departures

- Article 31 Undertakings – NI Water did not use Article 31 Undertakings during 2011.
- Authorised Departures – NI Water had no authorised departures in place during 2011.

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

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

During 2011 there were no new Article 31 undertakings or Authorised Departures in place for NI Water. The entry in Line 2 is therefore 0 MI/d.

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

There were no Article 31s or ADs in place during 2011. The entry in Line 3 is therefore 100%.

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

There were no Article 31s or ADs in place during 2011. 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 2011 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 2011 and are not included in the calculations. Further to this, Altmore WTW was placed permanently out of service during 2011 and so does not feature in the DI table. The only site in service with a former legal instrument is therefore Lough Bradan.

Site Code	Site Name	MI/d Raw Water Deterioration	Comment
W4513	Lough Bradan	7.40	Upgrade for pesticide removal
	Total	7.40	

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. During 2010/2011 further exceedances of MCPA were detected at Killyhevlin, Derg, Ballinrees, and Belleek WTWs. A programme of enhanced monitoring for MCPA has been setup for these sites.

Site Code	Site Name	MI/d Raw Water Deterioration	Comment
W1701P	Ballinrees PPP	24.51	Enhanced sampling programme
W2706	Camlough	4.18	PAC for Pesticide removal
W3317	Dorisland	23.53	PAC for Pesticide removal
W4501	Derg	14.57	Enhanced sampling programme
W4701	Killyhevlin	26.80	Enhanced sampling programme
W4722	Belleek	1.68	Enhanced sampling programme
	Total	95.27	

DWI is content with the above methodologies and again the sites have not been included in the calculations.

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

Line 7 – Conditioning water supplies to reduce Plumbosolvency

NI Water, as required by DWI following discussion with the Health Authorities, has put in place orthophosphoric acid dosing to control plumbosolvency in the distribution system. The average initial dose rate was approximately 1 mg/l following propensity testing. The level of dosing is reviewed annually against compliance with existing and future lead standards, with DWI being informed as to the proposed dosing rates. DWI has the opportunity to query the proposed dose rates. Following the annual review, some of the dose rates for 2011 were reduced with most however remaining at the same levels.

Site Code	Supply Source	Average Dosed Water (ML/d)
W1301P	Moyola PPP	15.342
W1302	Lough Fea	11.840
W1303	Dungonnell	8.050
W1501	Killylane	10.717
W1701P	Ballinrees PPP	24.514
W1702	Altnahinch	8.345

W2308P	Castor Bay PPP	84.665
W2509	Clay Lake	3.931
W2514	Seagahan	10.310
W2706	Camlough	4.176
W2801	Fofanny	38.228
W2802	Carran Hill	6.445
W3301P	Dunore Point PPP	118.222
W3315P	Forked Bridge PPP	21.095
W3317	Dorisland	23.528
W3801	Drummaroad	106.481
W4301	Carmony	19.941
W4306	Caugh Hill	19.833
W4501	Derg	14.572
W4513	Lough Bradan	7.398
W4523	Lough Macrory	11.345
W4541	Glenhordial	4.346
W4701	Killyhevlin	26.802
W4722	Belleek	1.675
Total		601.801

Line 8 – Reducing the risk from *Cryptosporidium*

DWI approved *Cryptosporidium* risk assessments were previously carried out on all sources annually and showed effective barriers existed at all NI Water's treatment works. These risk assessments are now incorporated into annual revisions of the treatment works and supply systems Drinking Water Safety Plans (DWSP) which are submitted to DWI under regulation 26.

Under the current guidance, which requires that this should be assessed against sites with "legally binding instruments", NI Water has no sites which fall into this category. The return for this line is therefore 0 ML/d.

Line 9 – Other

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

However, NIW had 1 current CPEO (Consideration of Provisional Enforcement Order) at a WTW in force as at 31/12/2011. CPEOs are regarded as legal instruments under Northern Ireland legislation, and require NIW to carry out certain undertakings to achieve a DWI specified aim. Details of this CPEO are contained in the appendix to this commentary.

CPEO Code	LIMS Code	LIMS Name	Volume Supplied (ML/d)
CPEO/11/02	W4701	Killyhevlin	26.802
Total			26.802

Confidence Grades

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

Appendix - Line 9

Reference Number	Location	Parameter	Notice of Acceptance Action Point	NI Water Undertakings	NIW Progress with Undertakings
CPEO/11/02 issued 24/02/2011	Killyhevlin Water Treatment Works Killyhevlin Enniskillen ZN0802	Contravention of Regulatory Standard for Taste and Odour Parameters (Acceptable to consumers and no abnormal change)	3.1	To undertake a feasibility study for the introduction of a Granular Activated Carbon (GAC) package plant at the works. The study should commence by 31 January 2012 and be completed, as soon as practicable , but by 31 July 2012 at the latest. A copy of the study is to be provided to the Inspectorate when complete	Feasibility study project commenced 14 th December 2011.
			3.2	To provide quarterly updates to the Inspectorate on progress with the feasibility study as detailed in 3.1, commencing with the first update by 30 April 2012 .	Sample programme in place as of 1 January 2012
			3.3	To implement a weekly sampling programme for the odour parameter for raw water at Killyhevlin WTWs and a weekly sampling programme for the taste and odour parameters from the final	Sample programme in place as of 1 January 2012

Reference Number	Location	Parameter	Notice of Acceptance Action Point	NI Water Undertakings	NIW Progress with Undertakings
			3.4	water at Killyhevlin WTWs to be implemented from 1 January 2012 . To increase sampling for the taste and odour parameters within the Killyhevlin Enniskillen water supply zone (ZN0802) to 104 samples per year to be implemented from 1 January 2012	Sample report for January 2012 issued to Inspectorate on 6th February 2012.
			3.5	To provide the results from all sampling at Killyhevlin WTWs and within Killyhevlin Enniskillen zone (ZN0802) for the taste and odour parameters to the Inspectorate as a monthly summary report. The summary reports are to be provided on the 5th of each month . The sampling frequencies in 3.4 and 3.5 will be kept under review by the Inspectorate.	Ongoing monitoring of water quality as required.
			3.6	To continue to trial the dosing of sodium permanganate at the WTWs as required and identified through on site tests and water quality monitoring. The permanganate dose should be optimised	Currently no sodium permanganate dosing being carried out.

Reference Number	Location	Parameter	Notice of Acceptance Action Point	NI Water Undertakings	NIW Progress with Undertakings
				according to the raw water quality. Manganese levels post clarification should be monitored via the Permatest instrument to ensure manganese levels do not exceed the regulatory limit in the final water. This trial is to continue from 1 January 2012 , as deemed appropriate by NI Water.	
			3.7	To refurbish the Sulzer filters at the works with virgin carbon and fresh sand. This work is to be completed by 31 August 2012 .	Work to commence beginning of 12/13 financial year.
			3.8	To correlate and map taste and odour failures and customer complaints within the affected zone on a monthly basis and use this information to target and develop its cleaning and flushing programme to reduce taste and odour developing within the onward distribution from the works. Ongoing.	Ongoing
			3.9	To liaise with the Lough Erne Invasive	Ongoing

Reference Number	Location	Parameter	Notice of Acceptance Action Point	NI Water Undertakings	NIW Progress with Undertakings
			3.10	<p>Species Group (LEISG) in relation to control measures for pondweed growth in the vicinity of the Killyhevlin WTWs abstraction. Ongoing</p> <p>To provide updates to the Inspectorate on progress with the above undertakings through its quarterly compliance programme meetings.</p>	Ongoing

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 10 NON FINANCIAL MEASURES
WATER DELIVERED (TOTAL)

DESCRIPTION	UNITS	DP	1		2		3		4		5		6
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		CURRENT YEAR
			2007-08	CG	2008-09	CG	2009-10	CG	2010-2011	CG	2011-12	CG	2012-13
A WATER DELIVERED - VOLUMES													
1 Billed measured household	MI/d	2	14.76		0.00		0.00		0.00		0.00		0.00
2 Billed measured non-household	MI/d	2	124.68		134.05		127.02		134.71		129.67		
3 Billed measured	MI/d	2	139.44		134.05		127.02		134.71		129.67		
4 Billed unmeasured household	MI/d	2	306.61		311.07		310.06		318.04		301.44		302.35
5 Billed unmeasured non-household	MI/d	2	24.48		20.80		11.38		9.04		7.29		
6 Billed unmeasured	MI/d	2	331.09		331.87		321.44		327.08		308.73		
B WATER DELIVERED - COMPONENTS													
7 Estimated water delivered per unmeasured non-household	l/prop/d	2	803.30	B4	784.61	B4	665.60	B4	662.37	C4	610.40	C4	
7a Estimated water delivered per unmeasured household	l/prop/d	2	443.29	B4	481.59	B3	470.49	B3	479.44	B3	448.03	B3	
8 Per capita consumption (unmeas'd h'hold - excl s/pipe leakage)	l/h/d	2	145.18	B3	158.97	B3	158.41	B3	164.19	B3	152.90	B3	
9 Per capita consumption (meas'd h'hold - excl s/pipe leakage)	l/h/d	2	158.34		0.00		0.00		0.00		0		
10 Underground supply pipe leakage (unmeas'd households)	l/prop/d	2	63.58		65.97		62.02		62.03		62.03		
11 Underground supply pipe leakage (ext. metered households)	l/prop/d	2	0.00		32.98		31.01		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		62.03		
13 Underground supply pipe leakage (void properties)	l/prop/d	2	63.58		65.97		62.02		62.03		62.03		
14 Meter under-registration (measured households)	MI/d	2	0.53		0.00		0.00		0.00		0		
15 Meter under-registration (measured non-households)	MI/d	2	5.53		9.84		9.62		10.18		9.87		
16 Distribution system operational use	MI/d	2	4.97		4.72		4.80		4.66		2.97		
17 Water taken legally unbilled	MI/d	2	25.09		29.37		25.89		21.96		19.44		
18 Water taken illegally unbilled	MI/d	2	2.48		1.21		3.54		6.08		1.08		
19 Water taken unbilled	MI/d	2	27.57		30.58		29.43		28.04		20.52		
20 Water delivered (potable)	MI/d	2	498.10		496.50		477.89		489.83		458.92		
21 Water delivered (non-potable)	MI/d	2	0.00		0.0		0.00		0.00		0.00		
22 Water delivered (non-standard rates: potable)	MI/d	2	4.20		13.90		0.00		0.00		0.00		
23 Water delivered (non-standard rates: non-potable)	MI/d	2	0.00		0.00		0.00		0.00		0.00		
24 Distribution losses	MI/d	2	111.38		131.49		140.55		130.66		122.02		
25 Total leakage	MI/d	2	156.52	B3	180.93	B4	186.86	B4	176.97	B4	168.32	B4	
26 Distribution input	MI/d	2	614.45	B2	632.71	B2	623.24	B2	625.15	B2	583.91	B2	
27 Bulk supply imports	MI/d	2	0.00		0.00		0.00		0.00		0.00		
28 Bulk supply exports	MI/d	2	0.22		0.34		0.34		0.52		0.81		
29 Water treated at own works to own customers	MI/d	2	614.45		632.37		622.90		624.63		583.10		
30 Overall water balance	cg			B2		B3		B2		B2		B2	
C SECURITY OF SUPPLY													
31 Security of supply index - company's planned levels of service	nr	0	-26		42		88		97		100		
32 Security of supply index - reference levels of service	nr	0	-26		42		88		97		100		

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

The reported leakage figure of 168.32 MI/d is 2.68 MI/d below the 2011/12 annual target of 171 MI/d. In addition the 2011/12 leakage figure is significantly below the reported leakage figure for 2010/11 of 177 MI/d.

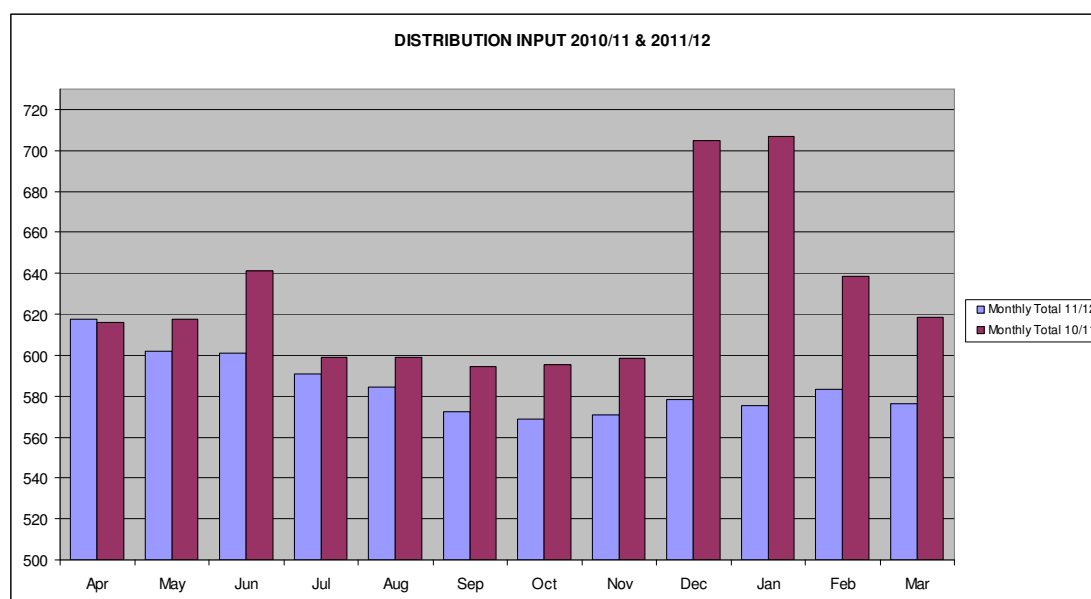
NI Water has followed the methodology described in Chapter 10 of the Northern Ireland Authority for Utility Regulation (NIAUR) Annual Information Return Reporting Requirements and Definitions Manual 2012. In doing so it has adhered to the methodologies for estimating the water balance set out in the Demand Forecasting Methodology report produced by NERA on behalf of UKWIR.

Distribution Input

There has been a noted reduction in the distribution input of 42.41 MI/d pre MLE from a value of 627.50 MI/d in AIR 11 to 585.09 MI/d in AIR12. Overall there has been a reduction in the major water balance components of measured non-household, unmeasured household and leakage. In addition reductions have been noted in a number of lines within Table 10 where last year there was an adjustment for increased demand as a consequence of the Freeze Thaw event in AIR11.

Since the 2010/11 freeze thaw there has been a concerted effort made to reduce leakage. NI Water has also focused on improving data quality and its availability within the Leakage function to improve the targeting, detection and reporting process. During the autumn/winter of 2011/12 there was major media campaign targeted at customers in relation to “Don’t wait Insulate.” The 2010/11 year was relatively mild in comparison to the previous two years with their very challenging cold winters (1:30 in AIR10 and 1:100 in AIR11). As can be seen from the graph below there was a significant reduction in distribution input between 2010/11 and 2011/12.

There has been a reduction in Per Capita Consumption with a figure of 144.74 l/hd/d recorded in AIR11 in comparison to 137.38 l/hd/d for AIR12. This equates to a reduction of 4.8% and is potentially the result of increased awareness campaigns of protecting private pipework and advertising for consumers to use water wisely. It is also directly affected by the adjustment that was made due to increased demand in AIR11 due to the Freeze Thaw and the weather pattern that was experienced last year.



Data Quality

NI Water had previously indicated that for the geo-referencing of properties it used Pointer within TDMS as part of the bottom up leakage assessment. As part of NI Water's Data Quality Programme a project was completed at the end of March 2012. The purpose of the project was to reconcile the property records in the Rapid billing dataset with spatial information located within other recognised datasets such as Pointer and Royal Mail. The outcome of this exercise, which has provided a company specific dataset, is a reduction in the number of occupied properties which has a material impact on the bottom up TDMS leakage calculation for the 2011/12 year. It is estimated that the impact of the reduced property numbers has increased reported leakage by approximately 9 MI/day.

The new property dataset within RAPID will be used in Netbase, the recently procured new leakage software. As per previous AIR commentaries NI Water has indicated that there would be a difference between the estimated leakage, as calculated by TDMS and Netbase. Initial work has indicated that this difference could be of the order of 10 to 30 MI/day. Work in relation to the reconciliation of this difference will continue throughout 2012/13. Netbase will then be employed for reporting the leakage estimate for the year 2013/14.

During AIR12 progress has continued to be made in the automation of the Gross Measured Consumption Report that is used to quantify and populate various elements of measured consumption. The availability of this information is beneficial to annual reporting.

In line with the economic downturn there has been a noted reduction in measured consumption of pre MLE NHH consumption of 4.0 MI/d.

The PC10 leakage business plan identified a number of areas of capital investment to replace and improve our network/assets as well as the ongoing improvement in data availability and quality. During 2011/12 NI Water

continued to invest capital expenditure in projects that support and promote the current PC 10 Leakage initiative.

One such project is the upgrade of DMA meters from GSM logger technology to telemetry status thus providing access to continuous data. This followed on from the Freeze Thaw incident where in some cases DMA data was not available because the cold weather affected the GSM technology. A total of 29 sites were upgraded during the year and at present 83% of sites are now monitored directly through telemetry. This has increased data availability and quality to enhance leakage monitoring, targeting and reporting and during major incidents.

During 2011/12 projects were carried out to replace existing PRV stock that are operational across the network and to design, install and commission new PRV sites to optimise leakage reduction. This has resulted in 48 PRVs being installed or replaced during the year.

As part of DMA optimisation NI Water has commenced a programme of work that focuses on the resolution of High Volume DMAs, which are defined as DMAs that traditionally have not responded to normal leakage detection techniques. The objective has been initially to investigate the unique factors that cause these DMAs to behave in such a manner and subsequently to provide an engineering solution where possible to reduce leakage in the long term.

NI Water continues to focus on maintaining accurate flow measurement across the network via a continuous meter calibration programme. This ensures accuracy of flow data particularly in relation to distribution input meters as well as inter zonal meters, flow monitoring zones and DMA meters. Overall the programme of work undertaken was in relation to capital investment and pro-active leakage detection which have resulted in a real substantive reduction in leakage during 2011/12.

In summary, the outputs of this water balance are that the Integrated Flow Method of leakage assessment has given a figure of 177.57 MI/d for total leakage and the Minimum Night Flow Method has provided a figure of 163.74 MI/d. When the resulting imbalance between the two methods of 13.83 MI/d is compared to the Distribution Input figure of 585.09 MI/d (pre-MLE), it provides a percentage discrepancy of 2.36 %. 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 168.32 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 decreased from 134.71 MI/d in AIR11 MI/d to 129.67 MI/d in AIR12.

For AIR12, NI Water has used the same type of report as per AIR11 to determine the total gross volume of water delivered in-year (1 April to 31 March) to all billed metered customers. The report utilises metering data from the RAPID billing system. This volume does not include test meters that are not billed, trade effluent volumes, free supplies or NI Water supplies which are included under water taken unbilled.

In accordance with the Utility Regulators reporting requirements a volume of 1.18 Ml/d (pre MUR and pre MLE) is included and accounts for water delivered which is associated with customer rebates.

A non-Household meter under-registration (MUR) value of 8.33% has been added to billed measured non-household use. The company specific MUR figure of 8.33% was determined by WRc and is consistent with the figure used in AIR11.

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 AIR12 is 301.44 Ml/d. This figure represents a decrease of 16.60 Ml/d from the AIR 11 value of 318.04 Ml/d.

The Billed Unmeasured Household volumes have been calculated by multiplying the average PCC figure for NI Water by the unmeasured household population. As per previous AIR returns 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) 2010. Adjustments are made to this household population figure to account for:

- Non-Household Population – Sourced from the most recent NISRA 2008 based population projections.
- Unconnected Properties Population – The number of unconnected properties has been provided within NI Water by Rapid. The population of unconnected properties is determined by multiplying the assessed

average occupancy from the NIHE Housing Condition Survey report by the number of unconnected properties.

- Farm Population – The population of farms is included as non-household use. The population is calculated as the number of farms multiplied by the average occupancy rate from NISRA. The number of farms is sourced from RAPID (NI Water's Billing System). The assessment takes into consideration farm properties that became void during 2011/12 but will have billed consumption associated with them.
- PCC Night Use Allowance Assessment.

Underground Supply Pipe leakage has been applied to the billed unmeasured household volume component of this calculation.

A meter under registration factor of 7.39% has been applied to this total volume. This percentage was assessed by WRc for AIR10 and is specific to NI Water's domestic consumption monitor meters and has remained constant throughout the PC10 period.

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

- A comprehensive door to door survey of approximately 17% of the Domestic Consumption Monitor Areas. This survey covered a total of 855 properties to determine more up to date information on property types, numbers of vacant properties and ultimately occupancy rates. The data from the 2011/12 survey has been input into the AIR12 consumption monitor assessment. The overall occupancy rate is 2.42 for AIR12 compared to an occupancy rate for AIR11 of 2.26. The NISRA interpolated occupancy rate for Northern Ireland is 2.49 for 2011/12.
- As per AIR10 and AIR11 a figure of 1.5% has been applied to allow for the 'Hawthorne Effect'.
- Use of company specific MUR value as determined by WRc.

The confidence limit of 10% on this component has not been changed and is considered to be appropriate.

Line 5 – Billed Unmeasured Non-Household

The reported value for Billed Unmeasured Non-Household for AIR12 is 7.29 Ml/d. The value reported in AIR11 was 9.04 Ml/d and had been subjected to an uplift of 8.25% based on an estimate of increased demand as described in AIR11 commentary.

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 13,648 to 11,943.

The assessed unmeasured non-household figure for AIR12 is 191.21 m³/prop/yr, which is a reduction compared to a figure of 211.65m³/prop/yr for AIR11. 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 AIR12.

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 AIR12 is 610.40 l/prop/d. The figure reported for AIR11 was 662.37 l/prop/d.

The allowance for unmeasured non-Household properties for AIR12 is 191.21 m³/prop/yr. The figure used for AIR11 was 211.65 m³/prop/yr.

Line 7a – Estimated Water Delivered Per Unmeasured Household

The post MLE figure for estimated water delivered per unmeasured household for AIR12 is 448.03 l/prop/d. The figure reported for AIR11 was 479.44 l/prop/d. The methodology adopted for AIR12 is consistent NIAUR's AIR12 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 AIR12 is 152.90 l/hd/d. The figure reported for AIR11 was 164.19 l/hd/d which took into consideration the impact of the Freeze Thaw.

NI Water has 105 domestic consumption monitors set up specifically to monitor unmeasured household consumption. These sites are small (average size of 49 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 137.38 l/hd/d. This assessment is based on 12 months consumption data from 1 April 2011 to 31 March 2012. This compares to a pre MLE figure of 144.74 l/hd/d for AIR11.

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, 855 properties have been surveyed in 2011/12 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 AIR12 PCC Monitor.

Line 9 – Per Capita Consumption (Measured Household - Excluding Supply Pipe Leakage)

There are no measured household supplies in NI Water; therefore no value has been input against this line.

Lines 10 to 13 – Underground Supply Pipe Leakage

The assessment of supply pipe leakage has not been updated and remains as per AIR11.

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 AIR11 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 27.5% of total leakage. This figure is comparable to those reported by water companies in England and Wales.

Work previously undertaken for AIR10, utilising Ofwat published data, indicated that the majority of the water companies in England and Wales estimate the underground supply pipe leakage on externally measured properties to be approximately half that of internally measured and other properties. This is the assumption that has been made in the estimation of per property values for underground supply pipe leakage and is consistent with AIR11. 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 AIR11 at 46.31 MI/d as agreed with the Utility Regulator in keeping consistency.

Lines 14 to 15 – Meter Under-Registration

The company specific MUR figures provided by WRC for AIR10 have again been adopted for AIR12. For non-household consumption the MUR figure remains at 8.33%. Furthermore the MUR value applied to the unmeasured household consumption remains at 7.39%.

Line 16 – Distribution System Operational Use

The reported value of Distribution System Operational Use (DSOU) for AIR12 is 2.97 MI/d. The value reported for AIR11 was 4.66 MI/d.

A significant review of DSOU was undertaken for AIR08. The methodology adopted has again been used for AIR12. This included a review of the components that make up DSOU, such as service reservoir cleaning; mains renewal; repair flushing; water and chlorine sampling. Further refinement has occurred in relation to the DSOU estimate and as such the estimated figure has reduced by 1.69 MI/d.

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

Lines 17 to 19 – Water Taken Unbilled

The reported Water Taken Unbilled figure has decreased from 28.04 MI/d in AIR11 to 20.52 MI/d in AIR12. This decrease in AIR12 is partially due to a reduction in unmeasured consumption at fire-mains recorded during the Freeze Thaw period last year. In addition there has been a reduction in Non Household Test meter consumption. Finally occupied void consumption is now included under billed non Household as these have been confirmed as properties which have become void during AIR12.

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

- As per AIR11 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 AIR11.
- Unmetered SPS consumptions have been assessed on the average consumption of metered SPSs and is consistent with AIR11.
- 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 3.18 MI/d, including MUR, pre MLE.

Line 20 – Water Delivered (Potable)

All potable water supplied by NI Water is calculated as the sum of lines 3, 6 and 19.

Line 21 – Water Delivered (Non-Potable)

There are no non-potable supplies to NI Water customers.

Line 22 – Water Delivered (Non-Standard Rates: Potable)

There are no non-standard rates for potable supplies to NI Water customers.

Line 23 – Water Delivered (Non-Standard Rates: Non-Potable)

There are no non-standard rates for non-potable supplies to NI Water customers.

Line 24 – Distribution Losses

Distribution Losses for NI Water are calculated by subtracting Lines 16 (DSOU) and 20 (Water Delivered) from Line 26 (Distribution Input). Distribution Losses for AIR12 are estimated to be 122.02 MI/d. This is a decrease on the AIR11 figure of 130.66 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 AIR12 is 168.32 MI/d. The reported figure for AIR11 was 176.97MI/d.

Total leakage is also calculated using an MNF methodology. For AIR12 reported pre MLE MNF method leakage is 163.74 MI/d. The figure reported for AIR11 was 168.54 MI/d.

NI Water has an extensive DMA network (approx. 1055 DMAs) covering 99% of all properties in Northern Ireland. Approximately 83% 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.

As mentioned in previous AIR commentaries NI Water currently use 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, Netbase, to mitigate the restrictions of the current system. In previous AIR commentaries it was anticipated that there would be a difference in estimated reported leakage between Netbase and TDMS. Initial work has indicated that this difference could be of the order of 10 to 30 MI/d. Work on accurately determining this will continue during A1R13

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.

The number of properties recognised by the company has an impact on the minimum night flow calculations mentioned above. Until now NI Water have used Pointer information as this was the sole geo-referenced dataset available and this was used to populate TDMS. However NI Water previously recognised the need to create a geo-referenced company specific property dataset to coincide especially with the implementation of Netbase and during 2011/12 work was undertaken under the Data Quality Programme. This project will result in better alignment between Top Down and Bottom Up property numbers.

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 AIR12. For non-household properties the figure used for AIR12 is 8 l/prop/h which is the same figure used for AIR11. The non-household night use figure is from the WRc Managing Leakage Suite of Reports.

As identified in AIR11 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 will be introduced with the implementation of the new leakage management software, Netbase. It should be recognised that the introduction of new night time assessments will impact on the estimate of leakage..

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.

The calculated SPL using this method is 47.61 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 Ml/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 Ml/d would equate to a per property SPL reported in lines 10 to 13 of 60.33 l/p/d & 30.17 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 AIR12 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 AIR12 service reservoir and trunk main leakage assessments are the same as those within AIR11. Service reservoir leakage estimated as 4.53 Ml/d and trunk mains leakage estimated as 13.66 Ml/d.

However NI Water have been developing a tile analysis process to facilitate the calculation of a company specific SR and TM assessment. This activity will continue in 2012/13 and 2013/14 in order to ensure that company specific values will be in place for AIR14. As per AIR 10 and AIR 11 a 15% confidence has been used for the MNF Method Leakage in the MLE calculations. However this may be subject to review following the implementation of Netbase and the accompanying assessment of the difference between Netbase and TDMS packages.

Line 26 – Distribution Input

The distribution input figure for AIR12 has been calculated as a post MLE figure of 583.91 Ml/d. The distribution figure for AIR11 was 625.15 ML/d. The company specific confidence interval for distribution input for AIR12 is 2.13%. This is the same as AIR11.

An independent audit of the 2011/12 DI calculation was undertaken by RPS and the findings concluded that there is a robust process behind the calculation. It also indicated that the series of meters contained within the master spreadsheet supporting the DI calculation accurately records the distribution input from all sources across the entire network.

The method of reporting and calculating the company distribution input figure remains constant with the procedure adopted during AIR09. In addition during the reporting year NI Water has continued with the annual calibration of all DI meters.

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	24.78	24.73
Castor Bay	104.18	103.97
Dunore Point	113.38	113.16
Moyola	14.85	14.82
Total	257.19	256.68

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 0.81 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 583.91 ML/d and deducting the cross border exports the volume of water treated at own works to own customers is 583.10 MI/d.

Overall Water Balance**Table 1 Water Balance Table**

<i>NIW</i>						
<i>Water Balance April 2011 - March 2012</i>						
<i>NIW</i>	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	128.41	10%	164.90	9.1%	1.25	129.67
Billed Unmeasured HH	294.84	10%	869.30	47.8%	6.61	301.44
Billed Unmeasured NHH	7.28	15%	1.19	0.1%	0.01	7.29
SPL	46.31					46.31
DSOU	2.97	25%	0.55	0.0%	0.00	2.97
Water Taken Unbilled	20.33	25%	25.83	1.4%	0.20	20.52
Sum of components	571.26					583.91
Distribution Input	585.09	2%	155.31	8.5%	1.18	583.91
Top Down Leakage	177.57					
BU Leakage	163.74	15%	603.25	33.1%	4.58	168.32
Imbalance (mld)	13.83			100.0%		
% Imbalance	2.36%					461.90

The Water Balance produces an overall imbalance of 13.83 MI/d, 2.36%. The imbalance reported for AIR11 was 26.06 MI/d, 4.15%.

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 2012, the confidence grade applied to the NI Water's water balance is B2. The confidence level for the overall water balance for AIR11 was B2.

Confidence Grades

All components in the water balance are subject to errors to a greater or lesser extent, and as a method of comparing the accuracy and robustness of water balance components, NIAUR use an Alpha-numeric confidence grading system consisting of reliability bands (A to D) and Accuracy Bands (1 to 6).

NI Water adopted this approach several years ago and the current confidence grading for the water balance are shown in Table 2 below.

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

Line 7a – Unmeasured Household Water delivered has been assigned a B3

confidence grade.

Line 8 - Unmeasured Household Per Capita Consumption has a confidence grade of B3. This component has been calculated using the company's own consumption monitor data. An error estimate of 10% has been applied to this component in the MLE calculations.

Line 25 - Total Leakage has a confidence grade of B4. A 15% error estimate has been applied to BU Leakage in the MLE calculation.

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 Non-Household Water Delivered (l/prop/d)											
Unmeasured Household Water Delivered (l/prop/d)											
Unmeasured Household Per Capita Consumption (l/head/d)											
Total Leakage (Ml/d)											
Distribution Input (Ml/d)											
Overall Water Balance											

Lines 31 & 32 - Security of Supply

Security of Supply is discussed in Table 10a.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 10A NON FINANCIAL MEASURES

Security of Supply Index - Planned level of service (Total)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Water resource zone	WAFU (EA definition) (Ml/d)	Bulk imports (Ml/d)	Bulk exports (Ml/d)	Dry year distribution input (Ml/d)	Reporting year distribution input (Ml/d)	Dry year available headroom (Ml/d)	Target headroom (Ml/d)	Surplus/ deficit (Ml/d)	Percentage surplus/ deficit (Ml/d)	Zonal population	Percentage of total population with headroom deficit	Zonal index (%age deficit ² x % population affected x 100)	Security of supply index
North	55.08	50.00	0.00	76.00	71.06	29.08	4.74	24.34	30.15%	248.821	0%	0.000	
West	75.07	0.00	0.00	67.62	63.21	7.45	4.90	2.55	3.52%	161.563	0%	0.000	
Central	11.86	19.00	0.00	28.41	26.56	2.46	1.99	0.47	1.55%	70.895	0%	0.000	
East	146.51	207.00	0.00	305.21	285.39	48.30	19.68	28.62	8.81%	913.353	0%	0.000	
South	70.17	127.00	0.00	148.79	138.87	48.38	13.12	35.26	21.78%	414.188	0%	0.000	
Total	358.69	403.00	0.00	626.03	585.09					1808.820		0.000	100

**Table 10a (i) – Non Financial Measures - Security of Supply Index –
Planned level of service**

NI Water has developed a Water Resource Management Plan (WRMP) covering the period 2010-2035, which has been approved and is now company policy. The Security of Supply Index (SoSI) calculated for AIR12 is based on Ofwat's letter RD 03/02, and is formulated from the information presented in the WRMP.

The WRMP has adopted the latest methodology for producing water resource management plans. There has been an increase in the reported SOSI since 2010/11, which was 97, to the reported 100 for 2011/12. This is mainly due to the following reason;

- There has been a significant reduction in Distribution Input (DI) since 2010/11. For 2011/12 the total average DI is 585.09M/l/d, down from 627.58M/l/d the previous year, which represents a decrease of 6.77%. This decrease has been influenced by a number of factors including reduced leakage from the supply network and lower than expected household consumption.
- In addition, during 2009/10 and 2010/11 Northern Ireland experienced two periods of freeze thaw that impacted upon the volumes of water that was put into supply. The increase in demand during these two periods of freeze thaw increased the average DI for these years. The DI reported for 2011/12 is considered to be more reflective of a normal year.

There are also a number of other factors that influence the AIR12 SOSI calculation. These include;

- There is a significant interaction between South and East water resource zones (WRZs). The WRMP indicates it is likely that circa 20Ml/d from Castor Bay is actually used within the East WRZ. This reallocation of Water Available for Use (WAFU) between East and South is believed to be a more accurate reflection of the actual situation on the ground.
- Water Available for Use (WAFU) across Northern Ireland for 2011/12 has decreased to 358.69M/l/d, from 363.06 in 2010/11. This is due to a reassessment of the Strule abstraction, the associated increased capacity and the application of outage. The Strule River abstraction, when completed, will likely increase the WAFU in the West WRZ.
- Outage allowance for NI Water WTWs remains at 2% as indicated in the WRMP for the period 2010-2035.
- For this calculation it has been assumed that the bulk imports from the PPP WTWs are available at the contracted volumes as set out in the WRMP.

The calculation for AIR12 is believed to be an accurate reflection of the current NI Water SOSI. It is possible that further review for the 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) (Ml/d)	Bulk imports (Ml/d)	Bulk exports (Ml/d)	Dry year distribution input (Ml/d)	Reporting year distribution input (Ml/d)	Dry year available headroom (Ml/d)	Target headroom (Ml/d)	Surplus/ deficit (Ml/d)	Percentage surplus/ deficit (Ml/d)	Zonal population	Percentage of total population with headroom deficit	Zonal index (%age deficit ² x % population affected x 100)	Security of supply index
North	55.08	50.00	0.00	76.00	71.06	29.08	4.74	24.34	30.15%	248.821	0%	0.000	
West	75.07	0.00	0.00	67.62	63.21	7.45	4.90	2.55	3.52%	161.563	0%	0.000	
Central	11.86	19.00	0.00	28.41	26.56	2.46	1.99	0.47	1.55%	70.895	0%	0.000	
East	146.51	207.00	0.00	305.21	285.39	48.30	19.68	28.62	8.81%	913.353	0%	0.000	
South	70.17	127.00	0.00	148.79	138.87	48.38	13.12	35.26	21.78%	414.188	0%	0.000	
Total	358.69	403.00	0.00	626.03	585.09					1808.820		0.000	100

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

NI Water has developed a Water Resource Management Plan (WRMP) covering the period 2010-2035, which has been approved and is now company policy. The Security of Supply Index (SoSI) calculated for AIR12 is based on Ofwat's letter RD 03/02, and is formulated from the information presented in the WRMP.

The WRMP has adopted the latest methodology for producing water resource management plans. There has been an increase in the reported SOSI since 2010/11, which was 97, to the reported 100 for 2011/12. This is mainly due to the following reason;

- There has been a significant reduction in Distribution Input (DI) since 2010/11. For 2011/12 the total average DI is 585.09M/l/d, down from 627.58M/l/d the previous year, which represents a decrease of 6.77%. This decrease has been influenced by a number of factors including reduced leakage from the supply network and lower than expected household consumption.
- In addition, during 2009/10 and 2010/11 Northern Ireland experienced two periods of freeze thaw that impacted upon the volumes of water that was put into supply. The increase in demand during these two periods of freeze thaw increased the average DI for these years. The DI reported for 2011/12 is considered to be more reflective of a normal year.

There are also a number of other factors that influence the AIR12 SOSI calculation. These include;

- There is a significant interaction between South and East water resource zones (WRZs). The WRMP indicates it is likely that circa 20Ml/d from Castor Bay is actually used within the East WRZ. This reallocation of Water Available for Use (WAFU) between East and South is believed to be a more accurate reflection of the actual situation on the ground.
- Water Available for Use (WAFU) across Northern Ireland for 2011/12 has decreased to 358.69M/l/d, from 363.06 in 2010/11. This is due to a reassessment of the Strule abstraction, the associated increased capacity and the application of outage. The Strule River abstraction, when completed, will likely increase the WAFU in the West WRZ.
- Outage allowance for NI Water WTWs remains at 2% as indicated in the WRMP for the period 2010-2035.
- For this calculation it has been assumed that the bulk imports from the PPP WTWs are available at the contracted volumes as set out in the WRMP.

The calculation for AIR12 is believed to be an accurate reflection of the current NI Water SOSI. It is possible that further review for the 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 LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 10A NON FINANCIAL MEASURES

Security of Supply Index - Critical period (Total)[illegible]

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

As indicated in AIR11 NI Water has been developing a Water Resource Management Plan, which has now been finalised and is company policy. The security of supply index has been calculated based on Water Resource Management Plan 2012.

In accordance with best practice guidance for water resource planning, companies generally consider their supply demand balances under different planning scenarios. For each planning scenario a baseline forecast of supply and demand is produced.

Some companies might need to derive critical period scenarios, where their supply demand balance is sensitive to these because there are sustained periods when demands are significantly higher than average; this is a peak demand condition. Supply-side characteristics may also influence whether or not critical period analysis is required, for instance, where WRZs are supplied predominantly by groundwater, or by run of river abstractions with limited storage.

The supplies available to NI Water are dominated by abstractions from Lough Neagh, which can be considered an infinite hydrological storage resource. In addition, recent demand data does not suggest that there is a strong peak demand driver in Northern Ireland. For these reasons, it is not appropriate or necessary to consider the critical period scenario for Northern Ireland, because this is not the primary driver for investment to maintain the supply demand balance.

On this basis there has been no need for NI Water to develop a SOSI calculation for a critical period.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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

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

Table 11– Water Service Activities**Line 1 – Total length of mains at 1st April 2011**

The value of 26,441.81km, confidence grade B3, has been extracted from line 12 of the AIR11 Table 11.

Line 2 - Mains Renewed (km)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
2	Mains renewed	km	2	445.82	A1	0.00	A1	445.82	A2

Engineering Procurement (EP) has continued its method of reporting on renewed mains in line 2 to comply with the Regulator's Annual Information Return reporting requirements and definitions manual, dated March 2010. The amendment required that mains activity lengths should only be reported on line 2 on the basis of primary purpose for the activity.

EP's input to this line has increased from 174.49km in AIR11 to 445.82km in AIR12 due to the lower than expected figure during the AIR11 period, as a result of the initiation of the new Framework, and due to the increase in the water mains programme during the past year.

Line 3 - Mains Relined (km)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
3	Mains relined	km	2	0.00	A1	0.00	A1	0	A1

Line 4 - Mains cleaned (Total)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
4	Mains cleaned (total)	km	2	0.00	A1	839.75	B2	839.75	B3

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

The recorded units are the total number of reactive fire hydrant flushing jobs plus the count of flushing MST's active on the Ellipse system which is then converted from units to km using the factor of 0.156km per flushing.

2012 information return is:

5383no. flushings x 0.156km = 839.75 kms. This comprises 2460 flushing MST's and 2923 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.

Although the total no. of reactive flushing jobs (2923no.) may contain some repeat flushings at the same location these are considered to be minimal and the Company considers the data collated for this line to be continually improving.

Line 6 - New Mains (km)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
6	New Mains	km	2	91.135	A1	27.02	B2	118.16	B2

The Networks Water figure primarily includes data for new mains laid in new housing developments throughout the year. Networks Water is the sole contributor for new main laid in new housing developments. Engineering Procurement is the primary contributor for new mains (replacement upsizing).

The Networks Water figure has reduced from last year due to the continuing down turn in the new housing market. Field Managers contributing to this line can more easily monitor lengths of new mains laid due to all work being completed solely by a contractor.

EP has continued its method of reporting on new mains in line 6 to comply with the Regulator's Annual Information Return reporting requirements and definitions manual, dated March 2010. The amendment required that mains activity lengths should only be reported on line 6 on the basis of primary purpose for the activity. The EP input of 91.135km into line 6 includes 25.047km from nominated trunk main projects.

Line 7 - Mains abandoned and other changes (km)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
7	Mains abandoned and other charges	km	2	476.63	A1	0.00	A1	476.63	A2

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

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
8	Lead communication pipes replaced - quality	nr	0	0.00	A1	341	B2	341	B3

This figure shows an increase (from 258 to 341) from last year and may be attributable to an upturn in more house renovations being carried out as opposed to 'new builds'.

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

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
9	Lead communication pipes replaced – maintenance or other	nr	0	2,034	A1	85	B3	2,119	B3

The overall total increase in the replacement of lead communication pipes (maintenance or other) during the AIR12 period has been as a result of:

- EP carrying out more work in Belfast this year as opposed to some more rural locations during the AIR11 period and the overall increase in the level of work carried out by EP,
- Networks Water has analysed work orders in more detail this year and identified lead related repairs by checking both Work Order descriptions and completion comments text for every single work order. This detail has not been gone into before.

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

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
10	Communication pipes replaced - other	nr	0	9,198	A1	1055	B3	10,253	B3

The overall total increase in the replacement of communication pipes (other) during the AIR12 period has been as a result of:

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

Lines 2-10 General Commentary

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 3 year 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.

Breakdown of Watermains Activity

Activity	Length (km) – 2 dp		
	2010/11	2011/12	PC10 Cumulative Total
New Mains (WMRP)	31.6	66.09	97.69
Renewed mains (WMRP)	172.7	443.95	616.65
Relined mains (WMRP)	0	0	0
Total WMRP Activity	204.3	510.04	714.34
Nominated trunk mains – New	55.23	25.05	80.28
Nominated trunk mains – Renewed	1.49	1.87	3.36
Total Nominated Trunk Mains Activity	56.72	26.92	83.64
New Mains – New Development	34.33	27.02	61.35
Total Mains Activity in Period	295.35	563.98	859.33
Nominated Trunk Main Activity in 2011/12		Renewed (km)	New (km)
Ballydougan (Castor Bay)-Newry (Phase 1)	JG035	0.00	18.69
Ballydougan (Castor Bay)-Newry (Phase 2a)	JG035	1.87	3.36
Castor Bay-Dungannon	JG036	0.00	3.00
Castor Bay-Belfast Phase 2	JR342	0.00	0.00
CTM Extension (Barnetts Park-Purdysburn)	JR416	0.00	0.00
Sub-Total		1.87	25.05
Total		26.92	

Lines 2-10 Data Sources

EP

Within EP information is compiled from EP contract management information monthly returns. This is an accurate measurement of the actual lengths of water mains laid, renovated or replaced, compiled from the project Cost Management System. The information is collated from each individual work package within the Cost Management System on a monthly basis and aggregated into an overall annual figure. The EP data is assessed as confidence grade A1 on the basis of the competency of EP's understanding of their reporting requirements, the quality and robustness of their Cost Management System, on-site measurements and NI Water's Captrax management system which stores the information and is used to populate the AIR table.

Network Water Operations

Data from Network Water Operations for 1st April 11 – 31st March 12 was collated by Field Managers, confirmed and input onto a spreadsheet managed by the Water Business Unit who collate the data for the annual reporting

period. For AIR13 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Lines 2 - 10 Confidence Grades

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

The confidence grades have been reviewed by AMS, taking into consideration those proposed by both NIW sections and the AIR11 Reporter's Report, as follows:

Although EP has listed a confidence grade of A1 for lines 9 and 10, the latter has been amended to B3 (in line with that from Networks Water Operations). The AIR10 Reporter's Recommendation stated that lines 9 and 10 should have a confidence grade B3 due to the current method for breakdown between lead and non-lead communications pipes and the derivation of quality/maintenance drivers. The AIR11 Reporter's Report also stated ***'The Company have adopted B3 grades for Lines 8-10 in line with our recommendations last year. We agree that these remain appropriate, but acknowledge there may be some justification to improve them in future given recent improvements to data collection and allocation in this area, particularly if the material categorisation is improved.'***

The confidence grades for lines 2, 3 and 7 were proposed by EP as A1, as these lines are not relevant to Networks Water Operations or they have zero as a return. In line with the AIR11 Reporter's Report lines 2 and 7 have been allocated A2. The AIR11 Reporter's Report accepted the A1 for line 3, and has thus been maintained.

The confidence grades for lines 4 and 8 were proposed by Networks Water Operations as B2. These lines are not relevant to EP or they have zero as a return. With reference to Line 4 the AIR11 Reporter's Report stated ***'Given the recent improvements, but retention of the applied flushing factor, we agree B3 remains appropriate for Line 4.'*** Hence the B3 is maintained for AIR12 Line 4. B3 has been assigned to line 8 due to the comments above from the AIR11 Reporter's Report.

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 B2; and
2. The proportion of the data, from Networks Water Operations, for this line amounts to 29% of the total value populated.

The Reporter's AIR10 Recommendation previously recommended re-assessing the method for reporting of line 7, i.e. ***'Line 7 should include a mains adjustment factor to ensure that the calculation of Line 12 matches the total extracted from GIS'***. A process still has to be developed to ensure that GIS can provide a single source of data for this line. However the latter is presently not possible with current NIW procedures. Hence NIW has not been able to alter its method for reporting the total length of abandoned mains in Table 11 Line 7, for AIR12.

In addition the ADAI project has a water infrastructure package designed to improve the data quality held in CAR. This will allow a baseline to be developed and reconciliation to be completed. The work package is expected to be completed in mid 2012. It is proposed not to action this recommendation until the work package is completed.

Line 11 - Mains bursts per 1000km

The specified unit for Line 11 is Mains Bursts per 1000km. NIW do not currently record Mains Bursts per 1000km but record the actual number of Mains Bursts Repairs carried out. Detailed data for the reporting period April 11 – March 12 was collated using MWM system reports which when checked and confirmed were transferred onto a summary spreadsheet. A number of Repairs attributable to third party damage has also been extracted from the final total. The total no. of Mains Bursts Repairs for Networks Water was then converted to bursts per 1000km.

Calculation of Mains Bursts per 1000km

Total Burst Mains divided by Total length of mains multiplied by 1000

$$2746 - 81 \text{ (rechargeables)} / 26,499.03\text{km} = 0.101 \times 1000 = 100.57$$

Total Bursts per 1000km = 100.57

2009 information return was 3764

2010 information return was 3910

2011 information return was 3667

Proportion of Bursts within Line 11 detected by Proactive Methods

The total number of Mains Repairs carried out by NIW was 2746 (including 81 no. due to third party damage)

The number of Mains Repairs carried out by Networks Water Function due to non-proactive Leakage detection methods was 1706. The number of Mains Repairs carried out due to proactive Leakage detection methods was 1040

Confidence Grade B3

The number of bursts for Networks Water has been captured for the complete year using base information on a monthly basis from MWM reporting systems. Individual Work Orders have been analysed and duplicates and non-repairs extracted. There is a notable reduction from 2011 figures primarily for the following reasons:

- There have been no freeze / thaw periods through Dec 11 and Jan 12 resulting in a large reduction in the no. of repairs required (approx. 400 plus)
- Mains Rehabilitation Schemes continue to have a positive impact in reducing the no. of defects.
- Focus is increasing in relation to ensuring that repairs due to third party damage are properly recharged (up from 33 no. last year to 81 no. this year).

- More detail has been paid to the classification of mains repairs as opposed to communication pipe replacements (hence an increase in the no. of claimed communication pipes replaced).

Future Reporting

For AIR13 Line 11 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 12 - Total Length of Mains

There has been no change to the structure of the data reported on this year from the previous years that would directly affect the total. The same queries have been used to extract the data from the Corporate Asset Register and have been checked to ensure that they are still relevant. The confidence grade of the data will remain the same as the previous year. There have been no significant improvements in data quality since the AIR11 reports. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

Line 13 - Cumulative number of distribution zone studies completed

This value is derived from the number of zones studied year by year against a total of 71 no. zones in Northern Ireland with start/finish dates detailed below. 64 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 2012)				
Zone	Area	Start Date	Completion Date	AIR12 Population
Craigavon West	SE	11/11/99	Aug-01	21698
B'mena Borough	NW	20/04/00	Dec-02	28362
Silent Valley	SE	16/07/01	Jan-Mar 2004	3483
Fofanny Newry	SE	16/07/01	Jan-Mar 2004	51693
Camlough	SE	10/10/01	Jan-Mar 2004	14717
Ballinrees West	NW	07/01/02	Apr-Jun 2003	16927
Breda South	SE	20/03/01	Oct-02	38245
Cityside	NW	09/08/00	Oct-04	58056
Castor Bay/Armagh	NW	18/12/02	Feb-06	16206
Seagahan	NW	18/12/02	Feb-06	31976
Clay Lake	NW	18/12/02	Feb-06	6746
Ards North	SE	24/06/03	Nov-05	28028
Lough Cowey	SE	24/06/03	Nov-05	9600
Bangor Outer	SE	24/06/03	Nov-05	44205
Castor Bay/M'liskmisk	SE	19/11/03	Nov-05	16646
Altnahinch	NW	04/06/01	Feb-03	31228
Drumabest	NW	05/06/01	Feb-03	13374
Ballinrees East	NW	07/01/02	Apr-Jun 2003	23112
Ballinrees Central	NW	07/01/02	Apr-Jun 2003	25856
Dungonnell	NW	30/05/01	Jan-05	37322
North Tyrone	NW	10/05/01	May-Jun 2006	29939
South West	NW	10/05/01	May-Jun 2006	13589
Tardree	NW	04/09/03	Mar-09	10583
Dunore West	NW	04/09/03	Mar-09	44214
Lough Fea	NW	23/04/01	Dec-07	29934
Castlereagh	SE	19/05/02	Nov-07	25927
Purdysburn East	SE	19/05/02	Nov-07	31941
Castor Bay Shanmoy	NW	12/11/02	Dec-09	22127
Altmore/Gortlenaghan	NW	12/11/02	Dec-09	11560
Newtownards Town	SE	02/11/04	Dec-07	32501
Ballintemple	SE	02/07/02	Apr-09	15564
Lough Ross	SE	02/07/02	Apr-09	10497
Fofanny B'bridge	SE	05/04/01	Dec-07	19217
Castor Bay/Banbridge	SE	05/04/01	Dec-07	30389
Carmony East	NW	04/07/01	Mar-08	16617
Waterside	NW	04/07/01	Mar-08	25524
Moyola	NW	01/10/01	Aug-09	40705
Lisburn Town	SE	29/04/03	Jan-08	41117
Lisburn Rural	SE	29/04/03	Jan-08	10346
Mid Down	SE	02/11/04	Feb-09	29451
Ballygowan	SE	02/11/04	Feb-09	6430
Comber	SE	02/11/04	Feb-09	13050
Craigavon North	SE	19/11/03	Feb-08	35552
Craigavon South	SE	19/11/03	Feb-08	21078
Limavady	NW	19/05/04	Sep-08	30993
North East	NW	19/05/04	Sep-08	4221

Zone	Area	Start Date	Completion Date	AIR12 Population
South	NW	06/01/08	Sep-12	20853
South East	NW	06/01/08	Sep-12	14242
N Down/Bangor	SE	01/04/06	Jan-08	31735
South Down	SE	15/06/07	Mar-09	15779
Downpatrick	SE	15/06/07	Mar-09	8376
Newcastle	SE	15/06/07	Mar-09	10194
Mourne Coastal	SE	15/06/07	Mar-09	12489
Breda North	SE	22/02/08	Oct-09	53733
Belfast East	SE	22/02/08	Oct-09	37418
Hollywood	SE	22/02/08	Oct-09	8387
Dunmurry	SE	Jul-08	Feb-12	35061
Lisburn South Rural	SE	Jul-08	Feb-12	20421
Ballywonard/Dunanney	SE	Jun-08	Jun-10	39195
Ballysillan/Ballyaghagan	SE	Jun-08	Jun-10	33945
West Belfast rural	SE	Jun-08	Jun-10	10268
Omagh	NW	Jul-08	Aug-12	39291
Dunore East	NW	Jun-09	Mar-12	20869
Killylane	NW	Jun-09	Mar-12	32673
Lough Mourne	SE	05/02/09	Sep-10	7629
Carrickfergus	SE	05/02/09	Sep-10	38203
Newtownabbey	SE	05/02/09	Sep-10	34959
Whiterock	SE	Jun-09	Jun-12	32885
B'gomartin/P'burn West	SE	Jun-09	Jun-12	33825
Oldpark	SE	Jun-09	Jun-12	64607
Ballygomartin North	SE	Jun-09	Jun-12	29587
KEY				
Started/finished	64	Studies completed population		1,571,880
Started/ongoing	7	N Ireland population		1,807,170
Programmed to start	0			
Remaining zones to start	0	Percentage Complete		87.0%

Line 14 - Distribution zone studies ongoing

The number of zonal studies ongoing, 7 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 (64 no.) compared to the number of zones to be studies (71 no.). Figures from above Table.

Line 17 - Percentage population/properties - completed studies

The population for zones is calculated using the zone boundaries which are applied to the POINTER address database and the NISRA population projections, as described in the commentary for the Leakage Table. The 87.0% accounts for updated studies up to 31st March 2012.

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.

Project ID Code	PC10 Reference Code	Nominated Trunk Main	Scheme Length (m)	Beneficial Use Date
JR416	TMS/002	Cross Town Main	3,865	Pre Mar-2011
JG036	TMS/001	Complete Castor Bay to Dungannon	38,688	Apr-2011
JG035	TMS/003	Complete Ballydougan to Newry Ph1	19,345	May-2012
JR342	TMS/004	Start Construction of Castor Bay to Belfast Ph2		
JG035	TMS/005	Complete Ballydougan to Newry Ph2A	5,911 to 31/03/2012	Construction commenced

Cross Town Main and Castor Bay to Dungannon have been recognised as two nominated trunk main output schemes for AIR11, with the latter being substantially complete before April 2011. There have been no nominated trunk main output schemes completed during the AIR12 period.

The Castor Bay to Dungannon trunk main was operational in April 11 and the Ballydougan to Newry Phase 1 trunk main was commenced in AIR12. The project manager has confirmed the commissioning date on CPMR, i.e. 25th May 2012. Construction has also commenced on the Ballydougan to Newry Phase 2A trunk main (This main was programmed for PC13 in the Annex N1 document, but included in the Public Expenditure 10 (PE10) change process monitoring plan as TMS/005). Due to the funding constraints outlined in the PE10 change process the commitment to start construction of JR342 Castor Bay to Belfast was removed from the PE10 monitoring plan.

The completion of the Castor Bay to Dungannon trunk main has removed a number of risks to supply including Water Quality risks, Water Pressure risks, Water Interruption Risks and Operational Supply risks. It also provides capacity for planned growth in the areas supplied.

The other completions in the programme, JR461 Ballystockart Quarry Repair, JL750 Ballinarees to Limavady/Londonderry Supply Augmentation were not claimed as these are not nominated outputs within the PE10 monitoring plan, though NI Water will be seeking to log up JL750 in the PC13 submission as an additional output. . CIM also contains the historic expenditure associated with the final closure of JR348 Dunore to HydePark pumping main replacement.

The confidence grades for this line were determined using the reporting guidance and were assessed as A1 – based on the evidence within the

methodology and the limited volume of completions the confidence gradings available is limited.

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

Project ID Code	PC10 Reference Code	Nominated Trunk Main	Scheme Length (m)	Beneficial Use Date
JR416	TMS/002	Cross Town Main	3,865	Pre Mar-2011
JG036	TMS/001	Complete Castor Bay to Dungannon	38,688	Apr-2011

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

The Killylane WTW study was completed in August 2011 but does not represent a nominated output.

The Carmoney WTW project extended base maintenance programme has been completed in 11/12, but does not represent a nominated output. Other completed projects at WTW, including Flood protection at Killyhelvin WTW are not PE10 nominated outputs and not included in this return.

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

WTWs Delivered during the first year of PC10 – AIR11 Period

Capital Investment Project ID Reference Code	Project Name	Project Code	Beneficial Use Date	AIR11 Comments
WTW/001	Carmoney WTW	JL723	28/2/11	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.
WTW/002	Lough Braden WTW	KR389	2/3/11	This represents the delivery of the PC10 nominated output at Lough Bradan WwTW.

WTWs Delivered during the second year of PC10 – AIR12 Period

Capital Investment Project ID Reference Code	Project Name	Project Code	Beneficial Use Date	AIR12 Comments
WTW/003	Killylane WTW - Study	JA217	2/8/11	The study for Killylane WTW was completed in August 2011.

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

In the PE10 Monitoring Plan, NI Water included the completion or start of construction on upgrades to seven service reservoirs and two clear water tanks. The latter has changed from the statement in AIR11 as Killyhevin and Lough Macrory and Drumaroad CWTs have been removed since the PC10 Business Plan, and JC385 Monaclough SR was not a nominated output in either PC10 or PE10.

Project ID Code	PC10 Reference Code	SR or CWT	Beneficial Use Date	Comment
JB665	SRV/007	Tullaghans SR	Aug-2010	1.6MI added and operational Mar 11
JC381	SRV/006	Altnahinch CR	Nov-2010	2.2MI added and operational Mar 11
JC378	SRV/005	Glenlough SR	Dec-2010	6.0MI added and operational Mar 11
JR151	SRV/003	Crewe Hill SR	Jan-2011	3.3MI added and operational Mar 11
JB648	SRV/004	Dungonnell CR	Mar-2011	5.5MI added and operational Mar 11
JF583	SRV/001	Carland SR	Apr-2011	6.0MI added (operational April11)
JS179	SRV/002	Ballylone SR	Jun-2011	5.6MI added (operational June11)
JV827	SRV/008	Tullyhappy SR	Dec-2011	4.5MI added (operational Dec 2011)
JV830	SRV/009	Crieve SR	PC13	4.5MI (due to funding deferred to PC13)
JB649	SRV/010	Tully SR	3/12/12	4.7MI Currently on site (Completion Dec12). Only design incl in PC10 programme.
JN410	SRV/011	Lough Macrory CWT	PC15	PC15
JP631	SRV/013	Killyhelvin CWT	PC15	PC15
JS274	SRV/012	Drumaroad CWT	PC15	PC15

Construction of Carland and Ballylone Service Reservoirs were completed in early 2011/12, with Tullyhappy Service Reservoir completed later in the year. Excluded from the AIR 12 claim is the completion of JA264 Crosskennan SR WPS which was not a nominated output.

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.

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

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

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

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

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

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (NIW Only)

DESCRIPTION			1		2		3		4	
			NR OF SOURCES		PROP'N DIST INPUT		BULK PROP'N OF D.I.		REPORT YEAR 2011-12	
			UNITS	DP	UNITS	DP	UNITS	DP	CG	
A SOURCE TYPES AND PUMPING			nr	0	Prop'n (0-1)	3	Prop'n (0-1)	3		
1	Impounding reservoirs		14		0.784					B2
2	River abstractions		6		0.215					B2
3	Boreholes		4		0.001					B2
4	Source types and pumping; total		24		1.000					B2
5	Average pumping head - total	m.hd		1					156.5	B4
			TOTAL PROP'N OF D.I.		TOTAL NR OF WORKS					
B TREATMENT TYPE			UNITS	DP	UNITS	DP				
6	Proportion of distribution input - simple disinfection		Prop'n (0-1)	3	nr	0				
7	Proportion of distribution input - W1		0.001		4					
8	Proportion of distribution input - W2		0.000		0					
9	Proportion of distribution input - W3		0.000		0					
10	Proportion of distribution input - W4		0.577		10					
11	Proportion of distribution input - total		0.422		10					
12	Total numbers of works		1.000		24					
			BAND 1		BAND 2		BAND 3		BAND 4	
			<= 165mm		166 - 320mm		321 - 625mm		> 625mm	
C POTABLE MAINS										
13	Potable mains (nominal bore)	km		2	21018.83	3987.95	1277.45	214.8		

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS (PPP Only)

DESCRIPTION			1		2		3		4	
			NR OF SOURCES		PROP'N DIST INPUT		BULK PROP'N OF D		REPORT YEAR 2011-12	
			UNITS	DP	UNITS	DP	UNITS	DP	CG	
			nr	0	Prop'n (0-1)	3	Prop'n (0-1)	3		
A SOURCE TYPES AND PUMPING										
1	Impounding reservoirs		1		0.096					B2
2	River abstractions		3		0.904					B2
3	Boreholes		0		0.000					B2
4	Source types and pumping: total		4.000		1.000					B2
5	Average pumping head - total	m.hd	1						155.1	B3
			TOTAL PROP'N OF D.I.		TOTAL NR OF WORKS					
B TREATMENT TYPE			UNITS	DP	UNITS	DP				
6	Proportion of distribution input - simple disinfection		Prop'n (0-1)	3	nr	0				
7	Proportion of distribution input - W1		0.000		0					
8	Proportion of distribution input - W2		0.000		0					
9	Proportion of distribution input - W3		0.000		0					
10	Proportion of distribution input - W4		1.000		4					
11	Proportion of distribution input - total		1.000							
12	Total numbers of works				4					
			BAND 1	BAND 2	BAND 3	BAND 4				
			<= 165mm	166 - 320mm	321 - 625mm	> 625mm				
C POTABLE MAINS										
13	Potable mains (nominal bore)	km	2		0.00	0.00	16.42	0.00		

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (Total)

DESCRIPTION		UNITS	DP	1		2		3		4		CG
				NR OF SOURCES	PROP'N DIST INPUT	BULK PROP'N OF D		REPORT YEAR 2011-12				
A SOURCE TYPES AND PUMPING				UNITS	DP	UNITS	DP	UNITS	DP			
nr			0	Prop'n (0-1)		3		Prop'n (0-1)		3		
1 Impounding reservoirs				15		0.482						
2 River abstractions				9		0.518						
3 Boreholes				4		0.001						
4 Source types and pumping; total				28		1.000						
5 Average pumping head - total		m.hd	1							155.9	B4	
				TOTAL PROP'N OF D.I.		TOTAL NR OF WORKS						
				UNITS	DP	UNITS	DP					
				Prop'n (0-1)	3	nr	0					
				0.001		4						
				0.000		0						
				0.000		0						
				0.324		10						
				0.676		14						
				1.000								
						28						
				BAND 1		BAND 2		BAND 3		BAND 4		
				<= 165mm		166 - 320mm		321 - 625mm		> 625mm		
				21018.83		3987.95		1293.87		214.80		
C POTABLE MAINS												
13 Potable mains (nominal bore)		km	2									

Table 12 – Water Explanatory Factors**Water Sources & Treatment Types – NIW only**

The following table is a summary of the status of NIW only water sources and their treatment types in service during the AIR12 period, and those in service on 31st March 2012. The status of the latter for the AIR11 period is also shown.

Location	Source Type	Treatment Type	In Service			
			during AIR 11	at 31 st Mar 11	during AIR 12	at 31 st Mar 12
Gortlenaghan	Borehole	SD	Yes	Yes	Yes	No
Shanmoy BHs	Borehole	SD	Yes	Yes	Yes	No
Lenamore Spring	Borehole	SD	Yes	Yes	Yes	No
Rathlin	Borehole	SD	Yes	Yes	Yes	Yes
Killylane	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Dungonnell	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Altnahinch	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Lough Fea	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. Reservoir	W4	Yes	Yes	Yes	Yes
Altmore	Imp. Reservoir	W3	Yes	Yes	Yes	No
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
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
Glarryford	Borehole	W2	Yes	No	No	No
Cabragh	Borehole	SD	Yes	No	No	No
Total			26	24	24	20

On 31st March 2011 NIW had 24 NR Sources in-Service consisting of 14 NR Impounding Res., 6 NR River/Lough Abstraction & 4NR BH Sources. These 24 NR Sources were in service for part or all of the AIR12 reporting period. (Although Glarryford Borehole is listed on the Leakage DI table, it was decommissioned on 31st March 2010.) As listed below Atmore WTW, Gortlenaghan BH, Shanmoy BH and Lenamore BH were decommissioned during the AIR12 reporting period. Hence at 31st March 2012, NIW had 20 NR Sources in-Service consisting of 13 NR Impounding Res., 6 NR River/Lough Abstraction & 1NR BH Source.

Changes during the AIR12 Period

Altmore WTWs Decommissioned May 2011 (IR & W3)
 Gortlenaghan BH Decommissioned June 2011 (BH & SD)
 Shamnoy BH Decommissioned June 2011 (BH & SD)
 Lenamore BH Decommissioned Dec 11 (BH & SD)

The source type's totals in service for part or all of AIR12 include: - boreholes (4 nr), impounding reservoirs (14 nr), and rivers & loughs (6 nr). The treatment type totals in service for part or all of AR12 include - simple disinfection (4 nr), W1 (0 nr), W2 (0 nr), W3 (10 nr) & W4 (10 nr).

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 was "abandoned" or "capable of being brought back into service at reasonable notice". Summary tables stating the latter were included in the AIR11 Table 12 Commentary.

However the AIR11 Reporter's Report stated '**These lists have been useful to identify the Company's capabilities, but we do not consider it necessary to include the tables in future commentaries..... we would recommend that reference is continued to be made to the number of sites and that they are continued to be categorised where possible**'.

The Water Supply Business Unit continues to keep this information up to date and liaises with NIW's Asset Information Centre to ensure that this information is aligned with GIS. Some anomalies with information held on GIS, compared to that held by the Water Supply Business Unit have been identified, as part of the audit process for AIR12, and steps are being taken to realign the data.

The following table summarises NIW's position, at 31st March 2012, regarding **mothballed boreholes (i.e. boreholes which are not capable of being brought into service at reasonable notice), emergency boreholes (i.e. boreholes capable of being brought into service at reasonable notice)** and abandoned WTWs, compared to the status on 31st March 2011.

Status as at:	'Mothballed' Boreholes	'Emergency' Boreholes	Abandoned WTWs
31st March 2011	34	2	22
31st March 2012	38	1	23

During the past financial year the 2 'Emergency' boreholes (i.e. Glarryford and Cabragh) from AIR11 and an additional 2 boreholes (Gortglenaghan and Shanmoy) have been 'mothballed'. Lenamore has been abandoned but designated as 'capable of being brought into service at reasonable notice'. In addition Altmore WTWs has been abandoned.

Lines 1 - 4 and 6 - 11 - Distribution Input

Leakage has provided the AIR12 Distribution Input figure of 585.09 ML/d Distribution. It has been assigned a Confidence Grade of B2, which has not changed since AIR10.

The DI figure is the average amount of potable water entering the distribution system and supplied to customers within the company's area of supply. All distribution input meters are on telemetry and these report via the Serck Telemetry system to TDMS and this discrete list of sites forms the templates on which calculations are based.

The reporting process produces a DI total on a daily basis using a single spreadsheet with the minimum amount of data input and a maximum amount of spreadsheet calculation. The data is extracted from TDMS using automated functionality within that system to transfer to an Excel spreadsheet with all information calculated in ML/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 585.09 ML/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)

The proportional distributional input has been calculated using the spreadsheet provided by Leakage, depicting the 585.09 ML/d Distribution Input, with sources (NIW and PPP) as listed below, with associated DIs.

Company Total DI

Supply Source	Average DI (ML/d)
Ballinrees	24.78
Rathlin	0.07
Altnahinch	8.17
Glarryford	0.00
Dungonnell	7.61
Killylane	11.19
Moyola	14.85
Lough Fea	11.71
Caugh Hill	18.70

Carmoney	19.34
Lenamore	0.26
Lough Macrory	10.88
Derg	14.03
Supply Source	Average DI (ML/d)
Glenhordial	4.11
Lough Braden	7.20
Belleek	1.64
Killyhevlin	25.33
Altmore	0.15
Gortlen	0.04
Shanmoy	0.01
Seagahan	10.02
Clay Lake	3.81
Castor Bay - Craigavon	83.44
Castor Bay - Forked Bridge	20.74
Carron Hill	6.26
Camlough	3.89
New Fofanny	37.46
Dunore	113.38
Drumaroad	103.08
Dorisland	22.94
Company Total AIR 12 DI	585.09

NIW Only DI

Supply Source	Average DI (ML/d)
Rathlin	0.07
Altnahinch	8.17
Glarryford	0.00
Dungonnell	7.61
Killylane	11.19
Lough Fea	11.71
Caugh Hill	18.70
Carmoney	19.34
Lenamore	0.26
Lough Macrory	10.88
Derg	14.03
Glenhordial	4.11
Lough Braden	7.20
Belleek	1.64
Killyhevlin	25.33

Altmore	0.15
Gortlen	0.04
Shanmoy	0.01
Seagahan	10.02
Supply Source	Average DI (ML/d)
Clay Lake	3.81
Carron Hill	6.26
Camlough	3.89
New Fofanny	37.46
Drummaroad	103.08
Dorisland	22.94
NIW Only AIR 12 DI	327.90

PPP Only DI

Supply Source	Average DI (ML/d)
Ballinrees	24.78
Moyola	14.85
Castor Bay - Craigavon	83.44
Castor Bay - Forked Bridge	20.74
Dunore	113.38
PPP Only AIR 12 DI	257.19

Although Glarryford Borehole is listed on the Leakage DI table, it was decommissioned on 31st March 2010.

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.

Average Pumping Head - Distribution Pump Data in Master Pump Table

The Average Pumping Head for NIW only 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.

In addition, for AIR12, NIW has investigated the use of alternative data sources, principally Telemetry, for updating and improving confidence. Data sourced from the NIW telemetry system, Telemweb, has been included in the AIR12 calculation, for 6 pumpsets.

Omagh, South East & South areas were included in the Average Pumping Head calculation for AIR11, though the information was based on field test data. The Omagh study has progressed to calibrated network model stage with the data now included in the Master Pump Table and incorporated into the AIR12 Average Pumping Head calculation. South and South East remain as field test data with no change from AIR11.

Field Managers have identified installations where operational status has changed from AIR11. These are:-

- Raleigh Corner (out of service during AIR12 reporting year)
- Duneany WPS (out of service during AIR12 reporting year)
- Ardmore Heights (out of service during AIR12 reporting year)
- Conlig Low (out of service during AIR12 reporting year)
- Whitespots (New) (out of service during AIR12 reporting year)
- Ballycullen Low (HL) (out of service during AIR12 reporting year)
- Ballycullen Low (out of service during AIR12 reporting year)
- Tullyhubbert (out of service during AIR12 reporting year)
- Drimalig Rd, Carricknaveagh (out of service during AIR12 reporting year)
- Babylon Hill (out of service during AIR12 reporting year)
- Stradreagh SR (out of service during AIR12 reporting year)
- Cloneytrace out of service during AIR12 reporting year)

The above installations 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 DZS consultants for completed zonal study areas. For AIR12 the models, and hence data from the models, still represent the best data available for these areas, apart from the telemetry information obtained for the 6 network pumpsets. Telemetry information was also obtained for 3 NIW WTWs pumpsets.

Where calculated mean lift and Average Daily Distribution flow cannot be obtained from a suitable network model or where flow and pressure data from field test installations are 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 AIR11.

Name	AIR11 Flow	AIR11 Lift	AIR12 Flow	AIR12 Lift	Source
Ardmore Hts	0.05	29.64	Not reported	Not reported	Field Manager
Raleigh Corner	0.185	41.35	Not reported	Not reported	Field Manager
Duneany WPS	0.3	44.6	Not reported	Not reported	Field Manager
Conlig Low	4.65	29.98	Not reported	Not reported	Field Manager
Whitespots (New)	3.018	69.26	Not reported	Not reported	Field Manager

Ballycullen Low (HL)	3.970	45.17	Not reported	Not reported	Field Manager
Ballycullen Low	5.605	89.011	Not reported	Not reported	Field Manager
Tullyhubbert	0.4	85.0	Not reported	Not reported	Field Manager
Babylon Hill	0.12	6.3	Not reported	Not reported	Field Manager
Name	AIR11 Flow	AIR11 Lift	AIR12 Flow	AIR12 Lift	Source
Drumalig Rd, Carricknaveagh	0.024	39.228	Not reported	Not reported	Field Manager
Strareagh SR	0.02	175.0	Not reported	Not reported	Field Manager
Cloneytrace	0.04	131.5	Not reported	Not reported	Field Manager
Ballyleighery WPS	0.68	60	0.4105	57.83	Teleweb
Brootally WPS	2.4	28	2.601	14.58	Teleweb
Carnbane	Not previously reported	not previously reported	5.1671	35.90	Teleweb
Lisnasure WPS	0.374		0.3052	21.52	Teleweb
Redhills WPS	0.336	70.98	0.5112	62.316	Teleweb
Stonebridge WPS	0.5	76	0.6472	48.45	Teleweb
Altcloughfin	0.314	44.956	0.124	36.742	DZSC
Backglen Rd (Inisclan DMA)	0	50.239	2.601	77.088	DZSC
Beltany	0.052	87.148	0.016	81.723	DZSC
Backglen Rd (Erganagh DMA)	0	47.403	0.007	47.966	DZSC
Black Lough WBS	0	59.152	0.031	59.943	DZSC
Black Lough WPS	0	4.664	0.992	4.553	DZSC
Botera (SR)	0.272	86.690	0.26	87.589	DZSC
Carryglass	0	25.839	0.004	30.571	DZSC
Cashty Rd (WPS)	0.052	60.36	0.005	63.556	DZSC
Cashty Rd WBS	0	57.623	0.036	54.723	DZSC
Erganagh WPS	0.324	88.843	0.386	92.214	DZSC
Fallagh Rd	0	10.476	0.019	9.33	DZSC
Foremass (WPS)	0.254	75.469	0.17	75.42	DZSC
Garvallah (original)	0	61.569	0.016	46.303	DZSC
Inisclan Rd WBS	0	0	Not in service	Not in service	DZSC
Killybrack (SR)	1.482	28.538	1.482	28.537	DZSC
Mulnafye (WBS)	0.138	23.177	0.04	21.807	DZSC
Radergan (WPS)	0.657	97.071	0.617	95.269	DZSC
Reaghan	0	41.62	0.025	41.259	DZSC
Syonfin	1.091	84.797	1.109	105.515	DZSC
Tattykeel	0	54.098	0.097	49.382	DZSC
Todds Leap	0	28.938	0.014	28.691	DZSC
Whitebridge Rd (WBS)	0.025	26.350	0.055	25.983	DZSC
Inisclan (SR)	0.031	50.769	Not in service	Not in service	DZSC

Ballyleighery WPS – The Field Manager is not aware of any significant changes to the network to explain the daily pumped flow reduction. A possible explanation is perhaps that work has been carried out by the Prison Service to address internal leakage issues at Magilligan.

Brootally WPS – The Field Manager is not aware of any significant changes in the network to explain the slight increase in flow and sizeable decrease in lift.

Carnbane – Pumpsets were commissioned after DZS field test.

Redhills WPS – At the time of the DZS field test pumps serviced Redhills Water Tower. The Water Tower was by-passed in 2010 with pumping direct to the network.

Stonebridge WPS – The Field Manager is not aware of any significant changes to the network to explain changes in flow and lift, other than there would have been significant development in 2003 when the field test was carried out.

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 NIW 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

Supply pump data collection for AIR12 focused on where changes to the network have been put into effect since AIR11. The main changes to supply data from AIR11 are boreholes and Altmore WTW being taken out of service. The boreholes in question are: -

- Gortlenaghan
- Shanmoy

With Altmore WTW being removed from service, Cappagh Raw pumps are no longer required. The high lift pumps remain in service and are now the responsibility of Networks Water.

Gortlenaghan and Shanmoy Boreholes were decommissioned in June 2011, with Altmore WTW decommissioned in May 2011. Due to the limited operation of these pumpsets (2-3 months during AIR12) they have been excluded from the calculation.

Although Lenamore BH was also removed from service, it did not have any impact on the calculation, as it had no supply pumpset.

As part of the process to improve data, Telemweb was looked at as a possible source. As with distribution, most pumpsets have pumped flow recording but limited points to provide pump lift. Flow data for Lough Ross Raw, Fofanny/Crocknafeola & Drumaroad WTW To Break Pressure Tank to North Down / Belfast and are included in the calculation.

The only other change to Supply data is the lift at Drumaroad WTW to BPT. When reviewing the Telemetry data the Field Manager for Drumaroad WTW indicated the lift to be 9 bar. This is based on the reading of the pressure gauge on the outlet main of the pumpset. The pumpset is located within the building of the treatment works with the inlet pressure assumed as zero.

The table below lists updates/changes to Supply pump data from AIR11.

Name	AIR11 Flow	AIR11 Lift	AIR12 Flow	AIR12 Lift	Source
Rathlin	0.07	90	0.07	90	Leakage Section
Gortlenaghan	1.01	118	not reported	not reported	Water Supply BU
Shanmoy	1.98	90	not reported	not reported	Water Supply BU
Cappagh Raw Water	4.5	15	Not reported	Not reported	Water Supply BU
Lough Ross	6.5	81	6.29	81	Telemweb (Flow only)
Carronhill interstage	6.2	4	6.29	4	Flow altered to reflect Telemweb reading for L Ross Raw pumps
Carronhill Transfer Pumps	6.2	5	6.29	5	Flow altered to reflect Telemweb reading for L Ross Raw pumps
Fofanny/ Crocknafolia	7	131	6.72	131	Telemweb (Flow only)
Drumaroad WTW To Break Pressure Tank to North Down / Belfast	105	57	86.4	91.79	Telemweb (Flow only) On-site pressure gauge

There are 88 pumpsets with no or incomplete data, as they have not been included within zonal studies. Thirty of these pumpsets will have data available once the South & South West DZS model is complete.

Distribution Input

The DI, of 585.09 Ml/d figure has been provided by the Company's Leakage Section

Distribution Input used in Average Pumping Head (APH) Calculation

	Total DI – Ml/d	DI Used in Calculation	DI Used in APH Calculation as % of Total
2008 Return	616.575	284.459	46.14%
2009 Return	633	420.93	66.5
2010 Return	625.4	609.62	97.48

2011 Return	627.5	627.5	100
2012 Return	585.09	585.09	100

The above table details DI used in the calculation for this and previous years return.

PPP Pump Data in Master Pump Table

As mentioned above in the Supply section, previous years returns have been based on data provided by the supply personnel responsible for the installation. Last year, updated data provided by the PPP Concessionaire included revised lift figures based on design pump lift as stated on the design data tags stamped on the pumps. This resulted in a significant increase in the Average Pumping Head calculated figure from AIR10. The Reporter raised concerns that these revised lift figures resulted in a high average pump calculated figure and that the lift figures should be investigated in greater detail to assess appropriateness, though acknowledged that the design head is arguably a more accurate representation as previous returns were based on the static lift.

The AIR11 Table 12 Reporter's Report had a '***Recommendation to improve collation of telemetry data at primary pump locations and to further investigate the revised lift head at Dunore HL.***' To this end the PPP Concessionaire has installed fixed pressure gauges onto tapping points on all High Level pumps and took daily flow and pressure readings over several months of the reporting period. This is therefore an improvement on last year's approach.

Where no pressure gauges were installed (low lift and interstage pumping) last year's lift figures have been used. This data is now included in the Master Pump Table and incorporated into the AIR12 Average Pumping Head calculation.

The table below lists updates/changes to PPP pump data from AIR11

Name	AIR11 Flow	AIR11 Lift	AIR12 Flow	AIR12 Lift	Source
Crewe Hill	2	76.5	2	87	PPP
Castor Bay LL	117	24	109	24	PPP
Castor Bay Interstage 1	117	7.3	109	7.3	PPP
Castor Bay Interstage 2	117	10.8	109	10.8	PPP
Castor Bay HL-B'dougan	80	104	74	88	PPP
Castor Bay HL-M'liskmisk	10	160	10	147	PPP
Castor Bay to Forked Bridge	22	137	21	125	PPP
Moyola-interstage	15	10	15	10	PPP
Moyola WTW-Mullaghboy	15	141	15	120	PPP
Reservoir to Moyola	15	16	15	16	PPP
Dunore LL	132	47	119	47	PPP
Dunore Interstage 1	132	3.2	119	3.2	PPP
Dunore Interstage 2	132	8.4	119	8.4	PPP
Dunore HL	125	140	113	113	PPP
Ballinree LL (R Bann)	15	164	14	149	PPP
Ballinrees LL (Dam)	0	4.8	0	4.8	PPP

Ballinrees Interstage	12.5	12.4	13	12.4	PPP
Moys WPS	3	140	3	117	PPP

Anomalies

During the review of the pump list for AIR12 it came to light that a number of pumpsets had been double counted in AIR11. The error relates to final water pumps at treatment works. When compiling the original list, pumps within a treatment works generally are not listed on CARtoMAP. This required site visits to the works to identify pumps. The error occurred when data was returned from DZS Consultant where final water pumps at treatment works were included in the study and the duplication was not identified. The pumpsets in question are:-

- Seagahan
- Carmoney to Avish SR
- Lough Macrory to Lough Macrory Hill HL
- Lough Fea WTW pump to Ballybriest SR
- Moyola Final Water

NIW Total, PPP Only and NIW Only Average Pumping Head Calculations

The total NIW 'Total' AIR12 Average Pumping Head is 155.9 m.hd, with a confidence grade of B4.

The 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.

The NIW Only and PPP Only 'Average Pumping Heads' are 87.7m.hd and 68.2m.hd respectively, based on the AIR11 approach. The PPP Only value of 68.2m.hd is in relation to the Pumping Head within the works. This has changed for the following reasons;

- The average flows represent updated figures for the 2010/11 year and vary from last year's average flows
- More accurate figures for Lift at each site, considering interstage pumping, are now available The Lift has therefore changed

PPP WTWs do not have specific Distribution Networks, and therefore the water is extracted, treated and then exits the works into the NIW Distribution Network. Within the Distribution Network, PPP water then mixes with NIW water, therefore making it impossible for NIW and PPP flows to be truly separated for use in PPP only and NIW only average pumping head calculations.

However the NIAUR AIR12 guidance document for Table 12 states '**Average pumping head should be calculated for 'NI Water only', 'PPP only' and**

the ‘total company’. Different denominators should be used to calculate the average pumping head for each table (i.e. ‘NI Water only’, ‘PPP’ and ‘Total’) reflecting the amount of water entering supply from NI Water treatment works, PPP treatment works and in total, respectively. There is no requirement for the sum of the NI Water and PPP pumping head figures to equal the total company APH. The numerator for the ‘NI Water only’ calculation should reflect pumping from NI Water treatment works and all NI Water distribution system pumping. The numerator for the ‘PPP’ calculation should reflect only pumping associated with the PPP concession.’

NIW has complied with this request and has provided separate Average Pumping Head values for NIW only, PPP only and the Company ‘total’. The respective distribution input values, associated with NIW only, PPP only and Company ‘total’ sources have been used as denominators to calculate the respective Average Pumping Head values.

	NIW Only (m.hd)	PPP Only (m.hd)
AIR11 APH	84.07	77.75
AIR12 APH (based on AIR11 approach)	87.7	68.2
AIR12 APH (based on T12 Guidance Notes for AIR12)	156.5	155.1

The issue, outlined above, as posed by NIW for AIR11 regarding the proportioning of the Average Pumping Head between NIW Only and PPP Only, is further exacerbated through the AIR12 approach, as requested by NIAUR. The use of the PPP source related DI, as a denominator to calculate the PPP Average Pumping Head, indicates the amount of pumping required to transport an average ML of water from abstraction at source to the ‘exit’ gate of the WTWs. However the use of the NIW Only source related DI, as a denominator for the NIW Only Average Pumping Head, indicates the amount of pumping required to transport an average ML of NIW Only water from abstraction at source to supply the customer through the Distribution Network, in addition to the pumping required to transport an average ML of PPP Only water from the ‘exit’ gate of the PPP WTWs through the NIW Distribution Network.

NIW note that the NIAUR AIR12 Guidance for Table 42 – PPP Reporting, line 27 is based on the Average Pumping Head AIR11 approach, with the PPP Only figure of 68.2 m.hd, as in the table above.

With reference 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.

Average Pumping Head Result Comparison from 2008 to 2012

	DI MI/d	Sum (flow x lift)	Average Pumping Head
2008 Assessment	284.459	31655.54	111.28
2009 Assessment	420.93	47845.27	113.67
2010 Assessment	609.62	84470.31	138.57
2011 Assessment	627.5	100446.95	161.82
2012 Assessment	585.09	91225.01	155.916

The above table summarises the DIs and Average Pumping Head values over the past 5 years.

There are several factors that can be attributed to the decrease in the Average Pumping Head from AIR11, including:

- The updated data provided by PPP, in particular the lift figures for the High Level pumps which are now based on pressure monitors installed since last year
- The removal of the recently out of service and the double counted pumpsets
- The updated data from the Omagh DZS
- The introduction of the data from Telemweb
- NIW's AIR 12 Distribution Input has decreased by 6.7% from the AIR11 reporting period

Data Shortcomings

Calibrated hydraulic network models used in the data collection of pump lift and head have been built by a framework of DZS consultants 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 DZS consultants.

NI Water distribution input for WTW's / sources are current 2011/12 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 NI Water 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**.

Line 13 - Potable mains

There has been no change to the structure of the data reported on this year from the previous years that would directly affect the totals provided. The same queries have been used to extract the data from the Corporate Asset Register and have been checked to ensure that they are still relevant. The confidence grade of the data will remain the same as the previous year. There have been no significant improvements in data quality since the AIR11 reports. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

Improvements from AIR11

For AIR11 the Reporter raised concerns over the use of the design pump lift as listed on the pump nameplate and recommended that this is investigated in greater detail to assess the appropriateness of revised lift figures particularly at primary pumpsets. Through discussions with Telemetry Section a list was identified of pumpset available on the telemetry system, Telemweb. Unfortunately when reviewing the list to identify pumpsets that would address the Reporter's recommendation it was noticed that, although objects are available to record pumped flows, objects to record pumpset lift are limited. There are 30 pumpsets with pump flow and inlet/outlet pressure objects. The majority of these pumpsets have a pumped flow of 1 l/s or less with only 6 with a pumped flow of 5 l/s or greater. These 6 sites have been taken forward and Telemetry Section has provided pumped flow and pressure data for this reporting period. Three other pumpsets at treatment works were identified, though this was for pumped flows only.

Future Improvements

Data taken from record drawings / site supervision staff regarding pump lift for high & 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 Telemweb. For AIR13 NIW plan to investigate how these improvements can be progressed including identifying any additional resource and/or funding that may be required to allow delivery.

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.

Discussions are ongoing with Telemetry Section regarding the continued roll-out of obtaining data from Telemweb. It should be noted, as mentioned above, that data from Telemweb may be limited, in particular to mean lift. The use of Telemweb data will update aging DZS data and capture leakage

reduction and network changes subsequent to the field test. It will also help bring the pumped flow total in line with the DI figure for the reporting year.

Recommendations for Future Returns

For AIR13 NIW plan to investigate further how Telemweb can be expanded to allow the capture data for use in the Average Pumping head calculation. This may require the installation of additional telemetry points for flow and/or pumped pressure readings but may be dependent on additional resources and/or funding to allow delivery.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 13 NON FINANCIAL MEASURES
SEWERAGE PROPERTIES & POPULATION (TOTAL)

DESCRIPTION			UNITS	DP	1		2		3		4		5	
					REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
					2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG
A PROPERTIES														
1	Households properties connected during the year		000	3	6.380	C4	7.447	C3	3.493	C3	3.938	B3	3.001	B2
2	Non-households properties connected during the year		000	3	1.319	B3	0.723	C3	0.167	C3	0.224	B3	0.236	B2
B BILLING														
3	Households billed unmeasured sewage		000	3	533.506	C4	564.052	C3	568.886	C3	574.400	C2	580.815	A2
4	Households billed measured sewage		000	3	25.616	C4	0.000	C3	0.000	C3	0.000	A1	0.000	A1
5	Households billed sewage		000	3	559.122	C4	564.052	C3	568.886	C3	574.400	C2	580.815	A2
6	Non-households billed unmeasured sewage		000	3	30.638	B2	27.881	C3	13.635	C3	11.496	B3	10.109	A2
7	Non-households billed measured sewage		000	3	38.002	B2	32.063	C3	22.067	C3	22.374	B2	22.622	A2
8	Non-households billed sewage		000	3	68.640	B2	59.944	C3	35.702	C3	33.870	B3	32.731	A2
9	Void properties		000	3	38.357	C4	39.469	C3	41.508	C3	42.988	B3	44.605	A2
C POPULATION														
10	Total connected population		000	3	1495.054	C4	1423.480	C4	1453.610	C4	1459.467	B3	1476.185	B3

Table 13 – Sewerage Properties and Population**Introduction**

Table 13 focuses on the number of properties and population connected to the public sewerage supply system. 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 2012/13. 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.

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

In the IPS report the Reporter recommended;

1. NIW review, for AIR11 submission, the revised NIHE Housing Condition Survey and check if inconsistencies in the figures for unconnected properties have been resolved.
2. 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.

Reports have now been completed although the findings still have to be analysed to establish if there are issues.

There has been further significant focus on customer numbers during 2011/12, primarily due to commitments within PC10/Final Determination submissions and NIW Undertakings. As a result, there have been considerable data shifts from AIR11, most notably in the reclassification of test meters, upload of domestic metered properties and in unmeasured non-domestic numbers.

The roll-out of the metering programme has continued. Overall, based on the Rapid Property Summary extract, the number of non-domestic unmeasured properties has decreased during 2011/12 from circa 10,650 in March 2011 to circa 9550 in March 2012. This shows a reduction of circa 1100 in year.

The basis and targets for the UNHH is set out in the PC10 submission and is a regulatory requirement through the 'unwinding' of the estimated average unmeasured consumption to a single figure by the end of PC10 period for both leakage/water balance calculation and tariff setting/charging.

Under the Water & Sewerage Services (2006) Order, NI Water is required to install meters on all new household connections since April 2007. As explained above, customers are not being charged on a measured basis, so the property is still being reported as unmeasured. Some domestic properties were initially reported as measured in AIR10 but this was rectified as per the erratum to AIR10. Depending on the basis for charging when domestic billing is introduced, these customers can be activated as measured household if required.

Data on property counts and classifications continue to be reported monthly from Rapid and reconciled (where possible) with other data collection activities, such as the metering programme and the Diamond reporting database. The Rapid Property Summary provides us with a snapshot at the end of each month in terms of gross

movements; it doesn't support us in the explanation of net movements within the data.

Data on population continues to be obtained from Northern Ireland Statistics and Research Agency (NISRA), adjusted for the winter months based on information published by the Department of Enterprise, Trade and Investment (DETINI) and the Central Statistics Office (CSO), Ireland. Population is based on the ratio of % water/sewerage properties and the estimated population served for water services. This is set out in the corresponding line methodology.

There are deemed to be 585 (gross) unmeasured – not charged properties which (based on sample taken) are mostly NI Water premises as per table below.

Unmeasured - Not Charged Properties	Count
NI Water	550
Fire Authority For NI	13
Other	22
Grand Total	585

As with Table 7, NI Water is currently investigating any 'unmeasured – not charged' properties outside of DRD/NI Water ownership.

Test Meters

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

The fieldwork element of the project to survey and reclassify test meters was completed on 28th March this year. Any follow up work required will now be completed in BAU. The key points with regards to NIW's test meters' review are detailed below:

- Of the total 10,898 Test Meters
 - 10,855 have been surveyed and a new classification given
 - 43 still to have a classification confirmed via survey in BAU
- Two final batches of Test Meters billing are expected to be released in Quarter 1 2012/13
- Final Surveys/Resurveys and desktop analysis of returned surveys on-going in BAU

Those that were found to be non-domestic billable were attributed to the non-domestic measured category and billed retrospectively to April 2007.

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

As per last year, no allowance is being made for non-domestic test meter numbers until their status is confirmed and uploaded onto Rapid. As discussed with the

Reporter in November 2009, these test meters have not been added to the unmeasured base being deemed to be water taken legally unbilled.

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

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

The Rapid Property Summary for 31st March 2012 indicates a reduction of 1,100 non-domestic test meters and 600 domestic test meters during 2011/12 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, 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 424 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.

The number of non-domestic site meters has increased by 36 during 2011/12.

Confidence Grades

As the benefits of the data quality programme are realised we would expect to see this reflected in the confidence grade in future years. Whilst the quality of data will improve, the method of extraction and reporting remained similar. This year we introduced an automated tool to populate the figures within Table 13 from the Rapid Property Summary.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 14 NON FINANCIAL MEASURES
SEWAGE COLLECTED (TOTAL)

DESCRIPTION			1		2		3		4		5	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG
A SEWAGE - VOLUMES												
1	Volume unmeasured household sewage	MI/d	2	244.67 B3	257.99 C3	256.26 C3	261.62 C3	246.17 A2				
2	Volume unmeasured non-household sewage	MI/d	2	20.70 B4	18.05 C3	9.19 C3	7.23 C3	6.1 A2				
3	Volume unmeasured sewage	MI/d	2	265.37 B4	276.04 C3	265.45 C3	268.85 C3	252.27 A2				
4	Volume measured household domestic sewage	MI/d	2	11.78 C3	0.00 A1	0.00 A1	0.00 A1	0.00 A1				
5	Volume measured non - household domestic sewage	MI/d	2	79.17 C3	53.34 B3	49.38 B3	39.16 B3	36.56 B3				
6	Volume trade effluent (excluding Roads Drainage)	MI/d	2	26.25 C3	18.44 C4	28.37 B2	20.18 B2	31.15 B2				
7	Volume waste water returned	MI/d	2	382.57 C3	347.82 B4	343.20 C3	328.19 C3	319.98 B3				
8	Volume of Roads Drainage returned	MI/d	2			175.80 CX	175.80 CX	175.80 CX				

Table 14 – Non Financial Measures - Sewage Collected (Total)**Line 1 – Volume Unmeasured Household Sewage**

This is calculated by assuming a 95% return to sewer of volume delivered to households factored by the percentage of the number of households billed for water against the number of households billed for sewerage services.

Sources

- AIR Table 10 Line 4 – Billed unmeasured household (MI/d)
- AIR Table 13 Line 3 – Households billed unmeasured sewage
- AIR Table 7 Line 3 – Households billed unmeasured water

Volume of unmeasured = AIR Table 10 Line 4 X 0.95 X $\frac{\text{AIR Table 13 Line 3}}{\text{AIR Table 7 Line 3}}$
household sewage (MI/d)

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 = AIR Table 10 Line 5 X 0.95 X $\frac{\text{AIR Table 13 Line 6}}{\text{AIR Table 7 Line 8}}$
Non-household sewage
(MI/d)

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 AIR12 is 7.56 MI/d. The value reported in AIR11 was 9.04 MI/d.

Line 5 - Volume Measured Non-Household Domestic Sewerage

The reported sewerage figure was based on actual billed sewerage discharge April 11 to March 12. The discharge volumetric information was derived directly from;

- The monthly 'Reconciling' Reports Apr11-Mar12 - detailing actual billed sewerage discharge M³.
- The DRD Domestic Allowance Subsidy Assurance Report Apr11 – Mar12 – detailing actual domestic sewerage allowance applied per bills.

The calculated sewerage discharge volume was 13,345,940 M³ converted to mega litres per day of 36.56 MI/d.

Sewerage volume is lower than last year due to;

- Continued economic downturn
- Prior year outturn overstated due to leakage.

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

Sources

The names of individual traders were taken from Primary Source of Trade Effluent Customers (PSTEC). This database is updated by NIW on a regular basis. The actual volume of each trader was supplied by our Billing Section in Metered Accounts Management. Where no volumes were available, then consented volumes, on the small number of traders were used.

AIR 11 Volume = 20.18 MI/day

AIR 12 Volume = 31.15 MI/day

This increase of 54.4% is predominantly due to the inclusion this year of the five discharges from the Incinerator to Duncrue Wastewater Treatment Works. This is a PPP operated sludge disposal facility and as these discharges were classified as trade effluent, they were included in the above returns. It was not included in previous years due to the ongoing discussion on its classification.

The incinerator contributed 14.3 MI/day, leaving 16.85 MI/day for the remaining traders' contribution (31.15 -14.3). This 16.85 figure equates to a 16.5% reduction in volume when compared with the previous year of 20.18.

This reduction was due to four main factors

1. Volume decrease in the following large companies:

Trader	2011 (m ³)	2012 (m ³)
	669	513
	110	52
	121	106
	318	205
	366	193
	212	167
	543	355
	1642	1573
	200	163
	134	87
	279	143

These traders alone represent a volume reduction of 24% from 2011.

2. Due to a policy change, all residential and nursing homes discharge were classified as domestic and removed from the PSTEC. This equated to 1.25MI per day.
3. Hospitals operating as nursing/residential homes were also removed from this list.
4. For Hospitals, only 5% (as opposed to 100% in previous years) of water consumption figures were used in the calculation of trade effluent volume. This 5% equated to 175m³ per day, compared with 3092m³ per day for 2011.

As there were no significant changes this year, the confidence grade has been kept as B2.

Line 7 – Volume of Waste Water Returned

This line is a calculation of the figures from lines 3, 4, 5 and 6. The components of this calculation received confidence grades of A2, A1, B3 and B2 respectively. As B3 was the lowest confidence grade for a component, this line has been allocated a confidence grade of B3.

Line 8 – Volume of Road Drainage Returned

In line with the proposed methodology, we carried out the following steps:

1. Based on information provided by Road Service, determined the surface area of all roads and footpaths in urban areas (i.e. within the 40mph speed limit) as follows:
 - Urban road surface area 39,264,486 m²
 - Urban footway surface area 17,022,987 m²
 - Total urban road & footway surface area 56,287,473 m²
2. Obtained Northern Ireland average annual rainfall data from the Met Office over the last 10 years – 1.14m
3. Using the above, calculated the annual volume of rain falling on these surfaces and hence the run-off from roads & footpaths discharged to NIW sewers and storm drains.

- $56,287,473 \times 1.14 = \mathbf{64,167,719m^3}$ (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			1		2		3		4		5	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG
A SEWAGE - LOADS												
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1		4,484.0	C4	3,086.5	B2	2,783.3	B2	4,232.6	B2
2	Total load receiving secondary treatment (BOD/year)	tonnes	1		45,024.1	C3	39,716.5	C3	38,541.8	C3	38,366.4	C3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1		377.8	C3	199.4	C3	184.1	C3	193.9	C3
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1		473.2	C3	553.7	C3	553.5	C3	668.4	C3
5	Total load entering sewerage system (BOD/year)	tonnes	1		46,431.4	C5	40,931.0	C5	39,680.5	C5	39,504.1	C5
6	Equivalent population served (resident)	000	2		2,088.64	C5	1,837.56	C5	1,778.08	C5	1,769.98	C5
7	Equivalent population served (resident) (numerical consents)	000	2		2,024.99	C5	1,783.03	C5	1,718.57	C5	1,708.58	C5
B SEWERAGE - SERVICE FACILITIES												
8	Number of sewage treatment works	nr	0		1,056	A2	1,040	A2	1,028	A2	1,023	A2
9	Treatment capacity available (BOD5/day)	tonnes	1		133.9	D3	126.3	D3	127.0	D3	129.2	D3
C SEWAGE - SLUDGE DISPOSAL												
14	Percentage unsatisfactory sludge disposal	%	2		0.00	A1	0.00	A1	0.00	A1	0.00	A1
15	Total sewage sludge produced	ttds	1		38.0	B3	30.5	B2	30.5	B2	31.4	B2
16	Total sewage sludge transferred to PPP	ttds	1		38.0	B3	36.9	B2	29.9	B2	30.7	A2
17	Total sewage sludge disposal by NI Water	ttds	1						0.6	B2	0.7	B2

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES

SEWAGE TREATMENT (PPP Only)

DESCRIPTION	UNITS	DP	1		2		3		4		5	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG
A SEWAGE - LOADS												
1 Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	N/C		N/C		879.3	B2	1,058.1	B2	1,124.6	B2
2 Total load receiving secondary treatment (BOD/year)	tonnes	1	1,880.0		3,331.0	A2	8105.2	B3	7,396.5	B3	7,834.5	B3
3 Total load receiving primary treatment only (BOD/year)	tonnes	1	0.0		0.0	A1	0.0	A1	0.0	A1	0.0	A1
4 Total load receiving preliminary treatment only (BOD/year)	tonnes	1	0.0		663.0	B5	0.0	A1	0.0	A1	0.0	A1
5 Total load entering sewerage system (BOD/year)	tonnes	1					N/A	A1	7,396.5	B3	7,834.5	C5
6 Equivalent population served (resident)	000	2	78.00		152.00	A2	370.10	B3	337.74	B3	356.76	B2
7 Equivalent population served (resident) (numerical consents)	000	2			152.00	A2	370.10	B3	337.74	B3	356.76	B2
B SEWERAGE - SERVICE FACILITIES												
8 Number of sewage treatment works	nr	0	1		2	A1	6	A1	6	A1	6	A1
9 Treatment capacity available (BOD5/day)	tonnes	1	12.4		17.5	B4	30.4	B3	30.4	B3	30.4	B3
C SEWAGE - SLUDGE DISPOSAL												
14 Percentage unsatisfactory sludge disposal	%	2	0.00				0.00	A1	0.00	A2	0.00	A1
15 Total sewage sludge produced	ttds	1	0.8				7.4	B3	7.6	B3	7.6	B3
16 Total sewage sludge received from NI Water	ttds	1	0.8				1.0	B3	29.9	B3	30.7	A2
17 Total sewage sludge disposal	ttds	1							37.5	B3	38.3	B2

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES

SEWAGE TREATMENT (Total)

DESCRIPTION			UNITS	DP	1		2		3		4		5	
					REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
					2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG
A SEWAGE - LOADS														
1	Trade effluent load receiving secondary treatment (BOD/year)		tonnes	1	4,919.9	C3	4,484.0	C4	3,965.8	B2	3,841.4	B2	5,357.2	B2
2	Total load receiving secondary treatment (BOD/year)		tonnes	1	43,690.2	C3	48,355.1	C3	47,822.0	C3	45,938.3	C3	46,200.9	C3
3	Total load receiving primary treatment only (BOD/year)		tonnes	1	482.3	C3	377.8	C3	199.4	C3	184.1	C3	193.9	C3
4	Total load receiving preliminary treatment only (BOD/year)		tonnes	1	444.1	C3	1,136.2	C5	553.7	C3	553.5	C3	668.4	C3
5	Total load entering sewerage system (BOD/year)		tonnes	1	46,877.0	C3	46,431.4	C5	40,931.1	C5	47,076.9	C5	47,338.6	C5
6	Equivalent population served (resident)		000	2	2,120.90	C3	2,240.64	C5	2,207.66	C5	2,115.82	C5	2,126.74	C5
7	Equivalent population served (resident) (numerical consents)		000	2	2,054.70	C3	2,176.99	C5	2,153.13	C5	2,056.31	C5	2,065.34	C5
B SEWERAGE - SERVICE FACILITIES														
8	Number of sewage treatment works		nr	0	1058	A2	1058	A2	1046	A2	1034	A2	1,029	A2
9	Treatment capacity available (BOD5/day)		tonnes	1	132.1	D3	151.4	D4	156.7	D3	157.4	D3	159.6	D3
C SEWAGE - SLUDGE DISPOSAL														
14	Percentage unsatisfactory sludge disposal		%	2	0.00	A1	0.00	A1	0.00	A1	0.00	A2	0.00	A1
15	Total sewage sludge produced		ttds	1	38.4	B2	38.0	B3	37.9	B3	38.1	B3	39.0	B2
16	Not used		ttds	1										
17	Total sewage sludge disposal		ttds	1	38.4	B2	38.0	B3	37.9	B3	38.1	B3	39.0	B2

Table 15 - Sewage Treatment**NIW Only****Line 1 - Trade effluent load receiving secondary treatment (BOD/year)**

The loading for AIR12 was 5357.197 tonnes/year compared to 3841.35 tonnes/year for AIR11. This represents a 39.5% increase in the loading and is due predominantly to the inclusion this year of the five discharges from the incinerator to Duncrue Wastewater Treatment Works. This is a PPP operated sludge disposal facility and as these discharges were classified as trade effluent, they were included in the above returns. It was not included in previous years due to the ongoing discussion on its classification.

The incinerator contributed 1929 tonnes/year, leaving 3428.197 tonnes for the remaining traders' contribution (5357.197-1929). This 3428.197 figure equates to a 10.8% reduction in loading when compared with the previous year of 3841.35 tonnes.

This reduction was due to four main factors

1. Loading (tonnes) decrease in the following large companies:

Trader	2011	2012
	5.6	4.6
	9.1	3.6
	3.9	0.45
	0.85	Closed
	137	82
	75	16
	87	21
	99.97	41.78
	39.25	23.13
	525.29	384.82
	20	8
	72	55
	13	7

These traders alone represent a loading reduction of 44.8% from 2011.

2. Due to a policy change, all residential and nursing homes discharge were classified as domestic and removed from the PSTEC. This equates a loading of 92 tonnes/year.
3. Hospitals operating as nursing/residential homes were also removed from this list.
4. For Hospitals, only 5% (as opposed to 100% in previous years) of water consumption figures were used in the calculation of trade effluent volume. This loading was calculated by multiplying this volume by the standard sewage strength figure and equated to a loading of 12.31 tonnes per year.

As there were no significant changes this year, the confidence grade has been kept as B2.

Total

Line 1 - Trade effluent load receiving secondary treatment (BOD/year)

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Lines 2 - 9 – Loads and Service facilities

NIW Only

It should be noted that the banding of the WWTWs for this table is on the same basis as that used for Table 17c. It is based on the latest set of Populations Equivalents minus the allowance for the tourist population. Since AIR11 PEs for 134 WWTWs have been updated.

The allowance for the tourist population, which has been deducted for the purposes of band size determination, has been the proportion of PE allocated to hotels, and caravan and tent pitches only. No deduction has been made for commuters as such information has not been captured.

The loads reported in this table are the sums of the loads received by each WWTWs or outfall in each particular category, and hence include the proportion of PE allocated to hotels, and caravan and tent pitches therefore loads reported in this table include the non-resident population. The method for computing loads from NIW only WWTWs is the same as was implemented for AIR11, there has been no inclusion of re-circulated sludge/sludge liquors in the loads reported.

Trade effluent information was obtained from NIW's Trade Effluent Section, for each individual consented trader, which enabled easy conversion to PEs. The COD: BOD conversion factor of 2:1 was not used as more accurate flow based information was available to the Trade Effluent Section.

The Water and Sewerage Services (NI) Order 2006 designated that the discharge from hospitals, nursing homes & clinics should no longer be considered as Trade Effluent, therefore for AIR12 these have been removed from the Trade Effluent Submission. 5% of hospital discharges has been included due to discharges from x-ray departments and bathing pools. However the AIR11 Trade Information, for these nursing homes and clinics, has been maintained for AIR12 in order to allow for this proportion of the influent entering the WWTWs. Similarly the PEs for the hospitals have been factored up to 100% of their total discharge to give a more accurate figure of load discharging to the sewerage network.

Information received from the Trade Effluent Section, for the first time, has depicted trade effluent, (equating to 88,095PE), being discharged from the Incinerator to Belfast WWTWs. The Asset Performance Team (APT) liaised with the Operational Staff, OTST and the Process Scientist in an attempt to understand the true value of loading on Belfast WWTWs. Although flow and load measurement has been ongoing at Belfast WWTWs this information was

portraying widely differing values, which had not been validated by the Operational or OTST staff. Hence it was agreed that the Belfast WWTWs AIR12 theoretical PE, (updated to 354,507), computed by APT, should be used as the Operational staff are of the opinion that the Incinerator's trade effluent is reflected in this figure.

NIW has 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 3 of the WWTWs. The Septic Tank Imports are discharged to the Sludge Reception Centres at the other 12 WWTWs. For AIR12 conversion factors, received from our Scientific Staff, are being used to convert the Septic Tank Imports to PEs for the 3 WWTWs where imports are discharged directly to the Inlet Works. Allowance at the other 12 WWTWs is not being made as there is no way of computing the PE of the supernatant return as a result of the Septic Tank Imports. As part of an on-going meter calibration exercise for the Flow & Load studies it is planned that within the next six months that the Supernatant Return Meters will be checked for accuracy and calibrated if necessary at the 12 WWTWs.

The only works where this sludge was discharged at the head of the works was at Belfast, Glenstall and Limavady. A conversion was used to get an equivalent PE which was adopted for these sites for AIR12.

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	319.11	0.87	0.01	8.74	146
Limavady	3162	1010.8	2.77	0.03	27.69	462
Glenstall	1109	8006.4	21.94	0.22	219.35	3656

NIW has also information pertaining to Sludge Imports to its WWTWs. 18 WWTWs have received Sludge Imports during the AIR12 period, with 2 WWTWs being used as sludge holding centres, i.e. supernatant is not decanted off the holding tanks. Due to the fact that the supernatant return is metered at only a small number of WWTWs, and it appears that these meters would require verification and perhaps calibration, no allowance is being made for PE resulting from Sludge Imports as these works. As part of an on-going meter calibration exercise for the Flow & Load studies it is planned that within the next six months that the Supernatant Return Meters will be checked for accuracy and calibrated if necessary at the 12 WWTWs.

The Reporters Report on AIR09 recommended that NIW correct possible overestimation of total STW loads due to the inclusion of offices/commercial premises. The majority of the residential and non-residential element of PEs used to calculate tables 17c and 17d was based on Pointer information from MapInfo. However it should be noted that the non-residential element of Pointer is made up of both commercial and unknown properties. At this present time it is not known what proportion of the unknowns are actually residential and which are non-residential and therefore it has been decided to include both elements when calculating the PEs for the band sizes. It is difficult to estimate the proportion of load at a WWTW due to commuters, or the load which should be deducted from a particular WWTW due to population commuting out of the catchments, which that WWTW serves. Hence no allowance to WWTWs loads has been made either way for Table 17d.

The table below gives a breakdown of the total load received by the company in '000 tonnes of BOD per annum by each component used to build up the reported data. Please note the total equates to Line 5 (minor discrepancy of 2pe due to rounding up of fractions).

Components used in build up of Total Load	Total PE	000 tonnes of BOD per annum
Residential	1209756	26493.66
Non-Residential	239427	5243.45
Hotels	3453	75.62
Nursery School	1001	21.92
Playschool	1037	22.71
Primary School	25926	567.77
Secondary School	24074	527.23
Trade PE	118502	2595.19
Large (>7500m3) Consumers	125840	2755.9
Caravan Parks	30401	665.78
Sludge Import / Export	24419	534.78
Total (Line 5)	1803836	39504.01

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 AIR11, 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.

Although NIW to date has produced a number of flow and load studies at WWTWs, outputs from only two have been agreed for use to date. Due to the lack of understanding of flow and load survey output interpretation within NIW a Flow and Load Survey Group has been established to discuss and agree on the outputs from the backlog of surveys carried out to date and those to be carried out in the future. The experience held by the individuals involved in the Group (with process, operational, engineering and procurement and asset performance backgrounds) will enable sound decisions to be made regarding the adoption of the Flow and Load Survey outputs.

The confidence grades of the data in lines 8 and 9 remain as in AIR11, 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 AIR11 for Line 2. NB. Change in PE (-Ve AIR12 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Ballygowan	S00247	-5	Trade PE Updated for AIR12
Ballykinler (WWTW)	S00299	-13	Trade PE Updated for AIR12
Ballynahinch (Down)	S00311	10	Trade PE Updated for AIR12
Carrickfergus (WWTW)	S00261	6	Trade PE Updated for AIR12
Clough (WWTW)	S00296	68	A PE Count was carried out by APT during AIR12
Downpatrick (WWTW)	S00771	-319	Trade PE Updated for AIR12
Dromara (WWTW)	S00316	6	Trade PE Updated for AIR12
Drumaroad (WWTW)	S00312	20	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Belfast (WWTW)	S00345	4018	Trade PE Updated for AIR12
Dunmurry	S00346	-71	Trade PE Updated for AIR12
Glassdrumman (Down)	S00302	-51	Dunmore Cottages now pumps to this site
Greenisland (WWTW)	S00263	-25	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Kilkeel (WWTW)	S00313	-495	Trade PE Updated for AIR12
Killinchy (WWTW)	S00252	-155	Trade PE Updated for AIR12
Killyleagh (WWTW)	S00273	-1323	Trade PE Updated for AIR12
Mullaghboy	S00259	-488	WWTWs was upgraded during AIR12
Lisburn (New Holland)	S00329	-10	Trade PE Updated for AIR12
Newcastle (WWTW)	S00303	-27	Trade PE Updated for AIR12
Newtownbreda (WWTW)	S00342	-20	Trade PE Updated for AIR12
Larne (WWTW)	S02044	73	Trade PE Updated for AIR12
Saintfield (WWTW)	S00290	-25	Jacksons Crescent (1-6), Jacksons Crescent (7-8) & Jacksons Crescent (9-10) all now pump away to this site
Whitehouse	S00265	4	Trade PE Updated for AIR12
Aird	S01171	134	Aird is now a pumpaway to Bushmills
Ballyclare	S01467	379	Trade PE Updated for AIR12
Ballyronan (WWTW)	S01558	-121	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Ballyvoy	S01177	1	
Bushmills (WWTW)	S01178	-203	Aird & Giants Causeway now pump to this site
Carnan	S01559	-3	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Castledawson	S01609	24	Trade PE Updated for AIR12
Curran	S01613	35	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Derrycrin	S01567	-53	
Derrykeighan	S01101	-13	
Drumullan	S01573	-10	
Garvagh (WWTW)	S01154	-528	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Glenstall	S01109	-1506	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Gulladuff (WWTW)	S01619	35	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Cookstown (WWTW)	S01582	-154	Trade PE Updated for AIR12
Magherafelt (WWTW)	S01621	-126	Trade PE Updated for AIR12
Kilrea	S01156	35	Trade PE Updated for AIR12
Knockloughrim	S01623	-20	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Limestone (2)	S03163	6	NIEA had requested details of Assets at all the small WWTWs. These were checked by APT and the asset details for a number of sites were updated as the details held by APT were incorrect. Details of this can be seen within the back-up folder.
Maghera (L/Derry)	S01629	-35	Trade PE Updated for AIR12
Antrim (WWTW)	S01422	-279	Trade PE Updated for AIR12
Mullans (Antrim)	S01118	1	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Mullanahoe (WWTW)	S02043	20	Trade PE Updated for AIR12
Roughfort (WWTW)	S01470	14	Trade PE Updated for AIR12
Swatragh (WWTW)	S01637	-57	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Ballymena (WWTW)	S01456	4315	Trade PE Updated for AIR12
Annsborough	S02687	19	Trade PE Updated for AIR12
Attical (WWTW)	S02688	-15	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.

Name of Works	CAR ID	PE Change	Comments
Banbridge (WWTW)	S02102	534	Trade PE Updated for AIR12
Blackwatertown (WWTW)	S02552	-134	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Coalisland	S02828	-106	Trade PE Updated for AIR12
Corbet	S02123	13	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Cross Lane(9-22)	S02427	-1	
Derryhale	S02570	38	
Donaghmore (WWTW)	S02840	203	
Dromore (Down)	S02127	30	Trade PE Updated for AIR12
Dyan	S02842	-1	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Hilltown (WWTW)	S02701	5	Trade PE Updated for AIR12
Keady (Armagh)	S02553	1	Trade PE Updated for AIR12
Markethill	S02591	325	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Moirra	S02429	2	Trade PE Updated for AIR12
Moy (WWTW)	S02859	121	Trade PE Updated for AIR12
Dungannon	S02850	7448	Trade PE Updated for AIR12
Newry (WWTW)	S02685	-2547	Trade PE Updated for AIR12
Robinsonstown	S02419	-87	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Tamnamore (WWTW)	S02862	-13	Trade PE Updated for AIR12
Tandragee	S02174	-2453	Trade PE Updated for AIR12
Tullyroan	S02600	-16	Trade PE Updated for AIR12
Warrenpoint (WWTW)	S02720	-34	Trade PE Updated for AIR12
Artigarvan (WWTW)	S03002	102	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Ballykelly (L/Derry)	S03016	-1	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Ballymagorry (WWTW)	S03018	58	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Belleek (Fermanagh)	S03024	-73	
Bonnanaboigh	S03031	31	
Carrickmore (WWTW)	S03039	-103	
Castlederg (WWTW)	S03042	25	Trade PE Updated for AIR12
Cavanacaw	S03048	9	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Clabby (WWTW)	S03051	-100	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Omagh (WWTW)	S03999	1062	Trade PE Updated for AIR12
Cranagh (WWTW)	S03065	63	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet. So to confirm this entry is replaced by Legcloghfin Cranagh. CC 8th June 2011
Cullion (Bready)	S03070	4	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Culmore (WWTW)	S03071	898	Trade PE Updated for AIR12
Donagh (WWTW)	S03078	-13	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Donnybrewer	S03080	-137	Trade PE Updated for AIR12
Dooish	S03081	14	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Douglas Bridge	S03082	-49	
Dromore (Tyrone)	S03083	115	
Drumquin (WWTW)	S03098	83	
Drumraighland	S03099	14	
Drumsum	S03100	2	

Name of Works	CAR ID	PE Change	Comments
Dungiven	S03101	-17	Trade PE Updated for AIR12
Donemana	S03103	-32	Trade PE Updated for AIR12
Enniskillen	S03218	-1257	Trade PE Updated for AIR12
Fivemiletown (WWTW)	S03113	-966	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Glack (WWTW)	S03118	-2	
Greysteel (WWTW)	S03123	-2	Trade PE Updated for AIR12
Gortnahey (WWTW)	S03126	-25	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Gosheden (1)	S03128	30	Now a Gravity Away to the upgraded Gosheden (2). The PE was assessed prior to gravity away as 29
Gosheden (2)	S03129	-25	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption. Gosheden (1) is also now a gravity away to this site
Kesh (WWTW)	S03140	1	Trade PE Updated for AIR12
Killylane (WWTW)	S03147	33	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Largy (WWTW)	S03155	10	
Limavady (WWTW)	S03162	-505	Trade PE Updated for AIR12
Lisnarrick	S03170	-13	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Lisnaskea (WWTW)	S03171	-33	Trade PE Updated for AIR12
Magheraveely	S03178	29	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Milltown (Burndennet)	S03184	-4	
Mountjoy (Omagh)	S03193	96	
Newtownstewart (WWTW)	S03202	4	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Newtownbutler (WWTW)	S03200	2	Trade PE Updated for AIR12
Nixons Corner (WWTW)	S03203	11	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Spamount	S03221	115	
Strabane	S03223	2829	
Tamnaherin	S03226	-82	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
Teemore (WWTW)	S03228	-32	
Tempo (WWTW)	S03229	-98	
Tully (WWTW)	S03232	-6	
Whin Road (21-23)	S04122	6	NIEA had requested details of Assets at all the small WWTWs. These were checked by APT and the asset details for a number of sites were updated as the details held by APT were incorrect. Details of this can be seen within the back-up folder.
Drumalig Road(9-11)	S04158	6	Two houses have been knocked into one and septic tank now serves one property and therefore is designated as private
Clady (Tyrone)	S04149	-4	Trade PE Updated for AIR12
North Coast (WWTWs)	S04150	-403	Trade PE Updated for AIR12
Legcloghfin Road Cranagh	S05369	-63	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet.
Total		8010	Change in Line 2 PE since AIR11

The change in PE equates to a reduction in load of 175.4 t BOD/yr (i.e. 8010×60 for 60g/hd/day /1000/1000 x 365) from AIR11 to AIR12.

Difference between AIR12 and AIR11:

Line 2 for AIR11 -	38,541.85
Line 2 for AIR 12 -	38,366.45
Total Difference -	175.4

Line 3 - Total load receiving primary treatment only

The table below shows the changes in WWTWs receiving primary treatment only since AIR11 for Line 3. NB. Change in PE (-Ve AIR12 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Ardglass (WWTW)	S00268	-473	Trade PE updated for AIR12
Ballyhalbert Old (Retention Tank)	S00215	2719	WWTW was upgraded during AIR11 and details adopted then. However new WWTWs is on a new site with a new name - Ballyhalbert Victoria, therefore this entry replaced with new one
Belfast Road(207-209)	S00856	6	Now a private WWTWs
Limestone (2)	S03163	-6	NIEA had requested details of Assets at all the small WWTWs. These were checked by APT and the asset details for a number of sites were updated as the details held by APT were incorrect.
Jacksons Crescent (1-6)	S04106	18	Now a pumpaway to Saintfield
Whin Road (21-23)	S04122	-6	NIEA had requested details of Assets at all the small WWTWs. These were checked by APT and the asset details for a number of sites were updated as the details held by APT were incorrect. Details of this can be seen within the back-up folder.
Jacksons Crescent (7-8)	S04107	6	Now a pumpaway to Saintfield
Jacksons Crescent (9-10)	S04108	6	Now a pumpaway to Saintfield
Ballyhalbert Victoria	SO5412	-2719	Ballyhalbert WWTWs was upgraded during AIR11 but upgraded works is on a new site and has a new name, Ballyhalbert Victoria and therefore is a new entry on spreadsheet
Total		-449	Change in Line 3 PE since AIR11

The change in PE equates to an increase in load of 9.8 t BOD/yr (i.e. 449 x 60 for 60g/hd/day /1000/1000 x 365) from AIR11 to AIR12.

Difference between AIR12 and AIR11:

Line 3 for AIR11 -	184.12
Line 3 for AIR 12 -	193.95
Total Difference -	-9.8

Line 4 - Total load receiving preliminary treatment only

The table below shows the changes in WWTWs receiving preliminary only since AIR11 for Line 4. NB. Change in PE (-Ve AIR12 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Ballystrudder (Retention Tank)	S00264	-1193	It is hoped that flows will turn at upgraded WWTWs during Mid February/Early March
Mullaghboy	S00259	488	Upgrade of WWTWs is now complete and handed over
Whitehead (WWTW)	S00452	-4536	It is hoped that flows will turn at upgraded WWTWs during Mid February/Early March
Ballycastle (WWTW)	S01071	-3	Trade PE updated for AIR12
	Total	-5244	Change in Line 4 PE since AIR11

The change in PE equates to an increase in load of 114.8 t BOD/yr (i.e. 5244 x 60 for 60g/hd/day /1000/1000 x 365) from AIR11 to AIR12, allowing for rounding up and down and conversions.

Difference between AIR12 and AIR11:

Line 4 for AIR11 -	553.55
Line 4 for AIR 12 -	668.39
Total Difference -	-114.8

Line 5 - Total load entering sewerage system

The table below shows the changes in WWTWs since AIR11 that affects load entering the system for Line 5. NB. Change in PE (-Ve AIR12 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Annalong (WWTW)	S00300	-222	Trade PE Updated for AIR12
Ardglass (WWTW)	S00268	-473	Trade PE Updated for AIR12
Ballygowan	S00247	-5	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Ballyhalbert Old (Retention Tank)	S00215	2719	WWTW was upgraded during AIR11 and details adopted then. However new WWTWs is on a new site with a new name - Ballyhalbert Victoria, therefore this entry replaced with new one
Ballykinler (WWTW)	S00299	-13	Trade PE Updated for AIR12
Ballynahinch (Down)	S00311	10	Trade PE Updated for AIR12
Belfast Road(207-209)	S00856	6	Now a private WWTWs
Carrickfergus (WWTW)	S00261	6	Trade PE Updated for AIR12
Clough (WWTW)	S00296	68	A PE Count was carried out by APT during AIR12
Downpatrick (WWTW)	S00771	-319	Trade PE Updated for AIR12
Dromara (WWTW)	S00316	6	Trade PE Updated for AIR12
Drumaraod (WWTW)	S00312	20	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Belfast (WWTW)	S00345	4018	Trade PE Updated for AIR12
Dunmurry	S00346	-71	Trade PE Updated for AIR12
Glassdrumman (Down)	S00302	-51	Dunmore Cottages now pumps to this site
Greenisland (WWTW)	S00263	-25	Trade PE Updated for AIR12
Kilkeel (WWTW)	S00313	-495	Trade PE Updated for AIR12
Killinchy (WWTW)	S00252	-155	Trade PE Updated for AIR12
Killyleagh (WWTW)	S00273	-1323	Trade PE Updated for AIR12
Lisburn (New Holland)	S00329	-10	Trade PE Updated for AIR12
Newcastle (WWTW)	S00303	-27	Trade PE Updated for AIR12
Newtownbreda (WWTW)	S00342	-20	Trade PE Updated for AIR12
Portavogie(Retention Tank)	S00209	118	Trade PE Updated for AIR12
Larne (WWTW)	S02044	73	Trade PE Updated for AIR12
Saintfield (WWTW)	S00290	-25	Jacksons Crescent (1-6), Jacksons Crescent (7-8) & Jacksons Crescent (9-10) all now pump away to this site

Name of Works	CAR ID	PE Change	Comments
Whitehouse	S00265	4	Trade PE Updated for AIR12
Aird	S01171	134	Now a pump away to Bushmills
Ballycastle (WWTW)	S01071	-3	Trade PE Updated for AIR12
Ballyclare	S01467	379	Trade PE Updated for AIR12
Ballyronan (WWTW)	S01558	-121	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Ballyvoy	S01177	1	
Bushmills (WWTW)	S01178	-203	Aird & Giants Causeway now pump to this site
Carnan	S01559	-3	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Castledawson	S01609	24	Trade PE Updated for AIR12
Curran	S01613	35	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Derrycrin	S01567	-53	
Derrykeighan	S01101	-13	
Drumullan	S01573	-10	
Garvagh (WWTW)	S01154	-528	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Giant's Causeway (Retention Tank)	S01186	70	Giant's Causeway is now a pumpaway to Bushmills
Glenstall	S01109	-1506	Trade PE Updated for AIR12
Gulladuff (WWTW)	S01619	35	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Cookstown (WWTW)	S01582	-154	Trade PE Updated for AIR12
Magherafelt (WWTW)	S01621	-126	Trade PE Updated for AIR12
Kilrea	S01156	35	Trade PE Updated for AIR12
Knockloughrim	S01623	-20	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Maghera (L/Derry)	S01629	-35	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Antrim (WWTW)	S01422	-279	Trade PE Updated for AIR12
Mullans (Antrim)	S01118	1	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Mullanahoe (WWTW)	S02043	20	Trade PE Updated for AIR12
Roughfort (WWTW)	S01470	14	Trade PE Updated for AIR12
Swatragh (WWTW)	S01637	-57	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Ballymena (WWTW)	S01456	4315	Trade PE Updated for AIR12
Annsborough	S02687	19	Trade PE Updated for AIR12
Attical (WWTW)	S02688	-15	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Banbridge (WWTW)	S02102	534	Trade PE Updated for AIR12
Blackwatertown (WWTW)	S02552	-134	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Coalisland	S02828	-106	Trade PE Updated for AIR12
Corbet	S02123	13	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Cross Lane(9-22)	S02427	-1	
Derryhale	S02570	38	
Donaghmore (WWTW)	S02840	203	
Dromore (Down)	S02127	30	Trade PE Updated for AIR12
Dyan	S02842	-1	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Hilltown (WWTW)	S02701	5	Trade PE Updated for AIR12
Keady (Armagh)	S02553	1	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Markethill	S02591	325	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Moir	S02429	2	Trade PE Updated for AIR12
Moy (WWTW)	S02859	121	Trade PE Updated for AIR12
Dungannon	S02850	7448	Trade PE Updated for AIR12
Newry (WWTW)	S02685	-2547	Trade PE Updated for AIR12
Robinsonstown	S02419	-87	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Tamnamore (WWTW)	S02862	-13	Trade PE Updated for AIR12
Tandragee	S02174	-2453	Trade PE Updated for AIR12
Tullyroan	S02600	-16	Trade PE Updated for AIR12
Warrenpoint (WWTW)	S02720	-34	Trade PE Updated for AIR12
Artigarvan (WWTW)	S03002	102	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Ballykelly (L/Derry)	S03016	-1	Trade PE Updated for AIR12
Ballymagorry (WWTW)	S03018	58	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Belleek (Fermanagh)	S03024	-73	
Bonnanaboigh	S03031	31	
Carrickmore (WWTW)	S03039	-103	
Castlederg (WWTW)	S03042	25	Trade PE Updated for AIR12
Cavanacaw	S03048	9	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Clabby (WWTW)	S03051	-100	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Omagh (WWTW)	S03999	1062	Trade PE Updated for AIR12
Cranagh (WWTW)	S03065	63	PE updated following a

Name of Works	CAR ID	PE Change	Comments
Cullion (Bready)	S03070	4	population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Culmore (WWTW)	S03071	898	Trade PE Updated for AIR12
Donagh (WWTW)	S03078	-13	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Donnybrewer	S03080	-137	Trade PE Updated for AIR12
Dooish	S03081	14	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Douglas Bridge	S03082	-49	
Dromore (Tyrone)	S03083	115	
Drumquin (WWTW)	S03098	83	
Drumraighland	S03099	14	
Drumsum	S03100	2	
Dungiven	S03101	-17	Trade PE Updated for AIR12
Donemana	S03103	-32	Trade PE Updated for AIR12
Enniskillen	S03218	-1257	Trade PE Updated for AIR12
Fivemiletown (WWTW)	S03113	-966	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Glack (WWTW)	S03118	-2	
Greysteel (WWTW)	S03123	-2	Trade PE Updated for AIR12
Gortnahey (WWTW)	S03126	-25	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Gosheden (1)	S03128	30	WWTWs is now a gravity away
Gosheden (2)	S03129	-25	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Kesh (WWTW)	S03140	1	Trade PE Updated for AIR12
Killylane (WWTW)	S03147	33	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Largy (WWTW)	S03155	10	

Name of Works	CAR ID	PE Change	Comments
Limavady (WWTW)	S03162	-505	Trade PE Updated for AIR12
Lisnarrick	S03170	-13	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Lisnaskea (WWTW)	S03171	-33	Trade PE Updated for AIR12
Magheraveely	S03178	29	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Milltown (Burndennet)	S03184	-4	
Mountjoy (Omagh)	S03193	96	
Newtownstewart (WWTW)	S03202	4	Trade PE Updated for AIR12
Newtownbutler (WWTW)	S03200	2	Trade PE Updated for AIR12
Nixons Corner (WWTW)	S03203	11	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Spamount	S03221	115	
Strabane	S03223	2829	Trade PE Updated for AIR12
Tamnaherin	S03226	-82	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Teemore (WWTW)	S03228	-32	
Tempo (WWTW)	S03229	-98	
Tully (WWTW)	S03232	-6	
Jacksons Crescent (1-6)	S04106	18	Now a pumpaway to Saintfield
Jacksons Crescent (7-8)	S04107	6	Now a pumpaway to Saintfield
Jacksons Crescent (9-10)	S04108	6	Now a pumpaway to Saintfield
Drumalig Road(9-11)	S04158	6	This is now a private WWTWs
Ballyhornan Outfall	S04090	-3	Trade PE Updated for AIR12
Clady (Tyrone)	S04149	-4	Trade PE Updated for AIR12
North Coast (WWTWs)	S04150	-403	Trade PE Updated for AIR12
Dunmore Cottages	S00806	51	This site is now a pump away to Glassdrumman Down

Name of Works	CAR ID	PE Change	Comments
Legcloghfin Road Cranagh	S05369	-63	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet.
Ballyhalbert Victoria	SO5412	-2719	Ballyhalbert WWTWs was upgraded during AIR11 but upgraded works is on a new site and has a new name, Ballyhalbert Victoria and therefore is a new entry on spreadsheet.
	Total	8059	Change in Line 5 PE since AIR11

The change in Pe equates to a reduction in load of 176.5 t BOD/yr (i.e. 8059 x 60 for 60g/hd/day /1000/1000 x 365) from AIR11 to AIR12, allowing for rounding up and down and conversions.

Difference between AIR12 and AIR11:

Line 5 for AIR11 -	39,680.55
Line 5 for AIR 12 -	39,504.06
Total Difference -	176.5

Line 6 - Equivalent population served (resident)

The table below shows the changes in WWTWs since AIR11 that affects equivalent population served (resident) for Line 6. NB. Change in PE (-Ve AIR12 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Annalong (WWTW)	S00300	-222	Trade PE Updated for AIR12
Ardglass (WWTW)	S00268	-473	Trade PE Updated for AIR12
Ballygowan	S00247	-5	Trade PE Updated for AIR12
Ballyhalbert Old (Retention Tank)	S00215	1744	WWTW was upgraded during AIR11 and details adopted then. However new WWTWs is on a new site with a new name - Ballyhalbert Victoria, therefore this entry replaced with new one

Name of Works	CAR ID	PE Change	Comments
Ballykinler (WWTW)	S00299	-13	Trade PE Updated for AIR12
Ballynahinch (Down)	S00311	10	Trade PE Updated for AIR12
Belfast Road(207-209)	S00856	6	This is now a private WWTWs
Carrickfergus (WWTW)	S00261	6	Trade PE Updated for AIR12
Clough (WWTW)	S00296	67.835	A PE Count was carried out by APT during AIR12
Downpatrick (WWTW)	S00771	-319	Trade PE Updated for AIR12
Dromara (WWTW)	S00316	6	Trade PE Updated for AIR12
Drumroad (WWTW)	S00312	19.76	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Belfast (WWTW)	S00345	4018	Trade PE Updated for AIR12
Dunmurry	S00346	-71	Trade PE Updated for AIR12
Glassdrumman (Down)	S00302	-51	Dunmore Cottages now pumps to this site
Greenisland (WWTW)	S00263	-25	Trade PE Updated for AIR12
Kilkeel (WWTW)	S00313	-495	Trade PE Updated for AIR12
Killinchy (WWTW)	S00252	-155	Trade PE Updated for AIR12
Killyleagh (WWTW)	S00273	-1323	Trade PE Updated for AIR12
Lisburn (New Holland)	S00329	-10	Trade PE Updated for AIR12
Newcastle (WWTW)	S00303	-27	Trade PE Updated for AIR12
Newtownbreda (WWTW)	S00342	-20	Trade PE Updated for AIR12
Portavogie(Retention Tank)	S00209	118	Trade PE Updated for AIR12
Larne (WWTW)	S02044	73	Trade PE Updated for AIR12
Saintfield (WWTW)	S00290	-25	Jacksons Crescent (1-6), Jacksons Crescent (7-8) & Jacksons Crescent (9-10) all now pump away to this site
Whitehouse	S00265	4	Trade PE Updated for AIR12
Aird	S01171	133.977	This site is now a pump away to Bushmills
Ballycastle (WWTW)	S01071	-3	Trade PE Updated for AIR12
Ballyclare	S01467	379	Trade PE Updated for AIR12
Ballyronan (WWTW)	S01558	-108.6	PE updated following a

Name of Works	CAR ID	PE Change	Comments
Ballyvoy	S01177	1	population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Bushmills (WWTW)	S01178	-179.552	Aird & Giants Causeway now pump to this site
Carnan	S01559	-2.74	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Castledawson	S01609	24	Trade PE Updated for AIR12
Curran	S01613	34.94	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Derrycrin	S01567	-52.384	
Derrykeighan	S01101	-13.276	
Drumullan	S01573	-9.704	
Garvagh (WWTW)	S01154	-528.248	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Giants Causeway (Retention Tank)	S01186	45.575	Giants Causeway is now a pumpaway to Bushmills
Glenstall	S01109	-1506	Trade PE Updated for AIR12
Gulladuff (WWTW)	S01619	35.476	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Cookstown (WWTW)	S01582	-154	Trade PE Updated for AIR12
Magherafelt (WWTW)	S01621	-126	Trade PE Updated for AIR12
Kilrea	S01156	35	Trade PE Updated for AIR12
Knockloughrim	S01623	-20.382	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Maghera (L/Derry)	S01629	-35	Trade PE Updated for AIR12
Antrim (WWTW)	S01422	-279	Trade PE Updated for AIR12
Mullans (Antrim)	S01118	1.5	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Mullanahoe (WWTW)	S02043	20.001	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Roughfort (WWTW)	S01470	14	Trade PE Updated for AIR12
Swatragh (WWTW)	S01637	-56.42	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Ballymena (WWTW)	S01456	4315	Trade PE Updated for AIR12
Annsborough	S02687	19	Trade PE Updated for AIR12
Attical (WWTW)	S02688	-14.984	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Banbridge (WWTW)	S02102	534	Trade PE Updated for AIR12
Blackwatertown (WWTW)	S02552	-134.39	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Coalisland	S02828	-106	Trade PE Updated for AIR12
Corbet	S02123	13.125	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Cross Lane(9-22)	S02427	-1.16	
Derryhale	S02570	38.431	
Donaghmore (WWTW)	S02840	203.203	
Dromore (Down)	S02127	30	Trade PE Updated for AIR12
Dyan	S02842	-0.64	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Hilltown (WWTW)	S02701	5	Trade PE Updated for AIR12
Keady (Armagh)	S02553	1	Trade PE Updated for AIR12
Markethill	S02591	325.091	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Moir	S02429	2	Trade PE Updated for AIR12
Moy (WWTW)	S02859	121	Trade PE Updated for AIR12
Dungannon	S02850	7448	Trade PE Updated for AIR12
Newry (WWTW)	S02685	-2547	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Robinsonstown	S02419	-86.72	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Tamnamore (WWTW)	S02862	-13	Trade PE Updated for AIR12
Tandragee	S02174	-2453	Trade PE Updated for AIR12
Tullyroan	S02600	-16	Trade PE Updated for AIR12
Warrenpoint (WWTW)	S02720	-34	Trade PE Updated for AIR12
Artigarvan (WWTW)	S03002	101.926	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Ballykelly (L/Derry)	S03016	-1	Trade PE Updated for AIR12
Ballymagorry (WWTW)	S03018	58.24	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Belleek (Fermanagh)	S03024	-67.625	
Bonnanaboigh	S03031	31.02	
Carrickmore (WWTW)	S03039	-102.8	
Castlederg (WWTW)	S03042	25	
Cavanacaw	S03048	8.93	
Clabby (WWTW)	S03051	-99.536	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Omagh (WWTW)	S03999	1062	Trade PE Updated for AIR12
Cranagh (WWTW)	S03065	62.534	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet
Cullion (Bready)	S03070	4.272	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Culmore (WWTW)	S03071	898	Trade PE Updated for AIR12
Donagh (WWTW)	S03078	-13.062	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption

Name of Works	CAR ID	PE Change	Comments
Donnybrewer	S03080	-137	Trade PE Updated for AIR12
Dooish	S03081	13.808	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Douglas Bridge	S03082	-48.767	
Dromore (Tyrone)	S03083	115.18	
Drumquin (WWTW)	S03098	83.32	
Drumraighland	S03099	13.74	
Drumturn	S03100	2.058	
Dungiven	S03101	-17	Trade PE Updated for AIR12
Donemana	S03103	-32	Trade PE Updated for AIR12
Enniskillen	S03218	-1257	Trade PE Updated for AIR12
Fivemiletown (WWTW)	S03113	-973.798	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Glack (WWTW)	S03118	-2	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Greysteel (WWTW)	S03123	-2	Trade PE Updated for AIR12
Gortnahey (WWTW)	S03126	-0.908	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Gosheden (1)	S03128	30.43	This WWTWs is now a gravity away
Gosheden (2)	S03129	-25.054	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption Gosheden (1) is also now a gravity away to this site
Kesh (WWTW)	S03140	1	Trade PE Updated for AIR12
Killylane (WWTW)	S03147	33.188	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Largy (WWTW)	S03155	9.544	
Limavady (WWTW)	S03162	-505	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Lisnarrick	S03170	-13.328	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Lisnaskea (WWTW)	S03171	-33	Trade PE Updated for AIR12
Magheraveely	S03178	29.134	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Milltown (Burndennet)	S03184	-4.026	
Mountjoy (Omagh)	S03193	96.172	
Newtownstewart (WWTW)	S03202	4	Trade PE Updated for AIR12
Newtownbutler (WWTW)	S03200	2	Trade PE Updated for AIR12
Nixons Corner (WWTW)	S03203	11	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Spamount	S03221	114.796	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Strabane	S03223	2829	Trade PE Updated for AIR12
Tamnaherin	S03226	-82	PE updated following a population review by consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Teemore (WWTW)	S03228	-31.91	
Tempo (WWTW)	S03229	-98.4	
Tully (WWTW)	S03232	-5.888	
Jacksons Crescent (1-6)	S04106	18	Now a pumpaway to Saintfield
Jacksons Crescent (7-8)	S04107	6	Now a pumpaway to Saintfield
Jacksons Crescent (9-10)	S04108	6	Now a pumpaway to Saintfield
Drumalig Road(9-11)	S04158	6	This is now a private WWTWs
Ballyhornan Outfall	S04090	-3	Trade PE Updated for AIR12
Clady (Tyrone)	S04149	-4	Trade PE Updated for AIR12
North Coast (WWTWs)	S04150	-403	Trade PE Updated for AIR12
Dunmore Cottages	S00806	51	Now a pump away to Glassdrumman Down

Name of Works	CAR ID	PE Change	Comments
Legcloghfin Road Cranagh	S05369	-63	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet.
Ballyhalbert Victoria	SO5412	-1744	Ballyhalbert WWTWs was upgraded during AIR11 but upgraded works is on a new site and has a new name, Ballyhalbert Victoria and therefore is a new entry on spreadsheet.
Total		8094	Change in Line 6 PE since AIR11

(Note some figures in the above table are listed to 2 and 3 decimal places. The latter does not indicate accuracy, but rather a carry across from a calculation sheet)

Difference between AIR12 and AIR11:

Line 6 for AIR11 -	1,778,080
Line 6 for AIR 12 -	1,769,980
Total Difference -	8,100

Line 7 - Equivalent population served (resident) (Numerical consents)

The table below shows the changes in WWTWs since AIR11 that affects equivalent population served (resident) with numerical consents for Line 7. NB. Change in PE (-Ve AIR12 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Ardglass (WWTW)	S00268	-473	Trade PE Updated for AIR12
Ballygowan	S00247	-5	Trade PE Updated for AIR12
Ballynahinch (Down)	S00311	10	Trade PE Updated for AIR12
Ballystrudder (Retention Tank)	S00264	1193	This WWTWs is no longer designated as having a numerical consent
Carrickfergus (WWTW)	S00261	6	Trade PE Updated for AIR12
Clough (WWTW)	S00296	68	A PE Count was carried out by APT during AIR12

Name of Works	CAR ID	PE Change	Comments
Downpatrick (WWTW)	S00771	-319	Trade PE Updated for AIR12
Dromara (WWTW)	S00316	6	Trade PE Updated for AIR12
Belfast (WWTW)	S00345	4018	Trade PE Updated for AIR12
Dunmurry	S00346	-71	Trade PE Updated for AIR12
Greenisland (WWTW)	S00263	-25	Trade PE Updated for AIR12
Kilkeel (WWTW)	S00313	-495	Trade PE Updated for AIR12
Killinchy (WWTW)	S00252	-155	Trade PE Updated for AIR12
Killyleagh (WWTW)	S00273	-1323	Trade PE Updated for AIR12
Lisburn (New Holland)	S00329	-10	Trade PE Updated for AIR12
Newcastle (WWTW)	S00303	-27	Trade PE Updated for AIR12
Newtownbreda (WWTW)	S00342	-20	Trade PE Updated for AIR12
Portavogie(Retention Tank)	S00209	118	Trade PE Updated for AIR12
Larne (WWTW)	S02044	73	Trade PE Updated for AIR12
Saintfield (WWTW)	S00290	-25	Jacksons Crescent (1-6), Jacksons Crescent (7-8) & Jacksons Crescent (9-10) all now pump away to this site
Strangford	S00226	1236	This WWTWs is no longer designated as having a numerical consent
Whitehouse	S00265	4	Trade PE Updated for AIR12
Ballycastle (WWTW)	S01071	-3	Trade PE Updated for AIR12
Ballyclare	S01467	379	Trade PE Updated for AIR12
Ballyronan (WWTW)	S01558	-109	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Ballyvoy	S01177	1	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Bushmills (WWTW)	S01178	-180	Aird & Giants Causeway now pump to this site
Castledawson	S01609	24	Trade PE Updated for AIR12
Derrycrin	S01567	-52	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption

Name of Works	CAR ID	PE Change	Comments
Garvagh (WWTW)	S01154	-528	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Glenstall	S01109	-1506	Trade PE Updated for AIR12
Gulladuff (WWTW)	S01619	35	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Cookstown (WWTW)	S01582	-154	Trade PE Updated for AIR12
Magherafelt (WWTW)	S01621	-126	Trade PE Updated for AIR12
Kilrea	S01156	35	Trade PE Updated for AIR12
Knockloughrim	S01623	-20	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Maghera (L/Derry)	S01629	-35	Trade PE Updated for AIR12
Antrim (WWTW)	S01422	-279	Trade PE Updated for AIR12
Mullanahoe (WWTW)	S02043	20	Trade PE Updated for AIR12
Roughfort (WWTW)	S01470	14	Trade PE Updated for AIR12
Swatragh (WWTW)	S01637	-56	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Ballymena (WWTW)	S01456	4315	Trade PE Updated for AIR12
Annaghugh (WWTW)	S02602	-323	This WWTWs has been designated as having a numerical consent for the first time for AIR12
Annsborough	S02687	19	Trade PE Updated for AIR12
Banbridge (WWTW)	S02102	534	Trade PE Updated for AIR12
Blackwatertown (WWTW)	S02552	-134	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Coalisland	S02828	-106	Trade PE Updated for AIR12
Derryhale	S02570	38	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Donaghmore (WWTW)	S02840	203	
Dromore (Down)	S02127	30	Trade PE Updated for AIR12
Hilltown (WWTW)	S02701	5	Trade PE Updated for AIR12
Keady (Armagh)	S02553	1	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Markethill	S02591	325	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Moir	S02429	2	Trade PE Updated for AIR12
Moy (WWTW)	S02859	121	Trade PE Updated for AIR12
Dungannon	S02850	7448	Trade PE Updated for AIR12
Newry (WWTW)	S02685	-2547	Trade PE Updated for AIR12
Robinsonstown	S02419	-87	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Tamnamore (WWTW)	S02862	-13	Trade PE Updated for AIR12
Tandragee	S02174	-2453	Trade PE Updated for AIR12
Warrenpoint (WWTW)	S02720	-34	Trade PE Updated for AIR12
Artigarvan (WWTW)	S03002	102	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Ballykelly (L/Derry)	S03016	-1	Trade PE Updated for AIR12
Ballymagorry (WWTW)	S03018	58	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Belleek (Fermanagh)	S03024	-68	
Bonnanaboigh	S03031	31	
Carrickmore (WWTW)	S03039	-103	
Castlederg (WWTW)	S03042	25	Trade PE Updated for AIR12
Clabby (WWTW)	S03051	-100	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Omagh (WWTW)	S03999	1062	Trade PE Updated for AIR12
Culmore (WWTW)	S03071	898	Trade PE Updated for AIR12
Donnybrewer	S03080	-137	Trade PE Updated for AIR12
Dromore (Tyrone)	S03083	115	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Drumquin (WWTW)	S03098	83	
Drumturn	S03100	2	
Dungiven	S03101	-17	Trade PE Updated for AIR12
Donemana	S03103	-32	Trade PE Updated for AIR12
Enniskillen	S03218	-1257	Trade PE Updated for AIR12

Name of Works	CAR ID	PE Change	Comments
Fivemiletown (WWTW)	S03113	-974	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Gortnahey (WWTW)	S03126	-1	
Kesh (WWTW)	S03140	1	Trade PE Updated for AIR12
Lack	S03154	181	This WWTWs is no longer designated as having a numerical consent
Limavady (WWTW)	S03162	-505	Trade PE Updated for AIR12
Lisnarrick	S03170	-13	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Lisnaskea (WWTW)	S03171	-33	Trade PE Updated for AIR12
Newtownstewart (WWTW)	S03202	4	Trade PE Updated for AIR12
Newtownbutler (WWTW)	S03200	2	Trade PE Updated for AIR12
Nixons Corner (WWTW)	S03203	-285	WWTWs has been designated as having a numerical consent for the first time for AIR12
Spamount	S03221	115	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Strabane	S03223	2829	Trade PE Updated for AIR12
Tamnaherin	S03226	-82	PE updated following a population review consultants working on behalf of NIW. This was reviewed by APT prior to adoption
Tempo (WWTW)	S03229	-98	
Clady (Tyrone)	S04149	-4	Trade PE Updated for AIR12
North Coast (WWTWs)	S04150	-403	Trade PE Updated for AIR12
Total		9984	Change in Line 7 PE since AIR11

Difference between AIR12 and AIR11:

Line 7 for AIR11 -	1,718,570
Line 7 for AIR 12 -	1,708,580
Total Difference -	9,990

Line 8 - Number of sewage treatment works

The number of WWTWs of 1023, on this line differs from the total of 1036 as shown in Table 17c, as the former does not include the screened outfalls (3 No.) and the unscreened outfalls (10 No.), as per the definition for this line.

The table below shows the changes in numbers of WWTWs since AIR11 for Line 8. NB. Change in PE (-Ve AIR12 PE Higher)

Name of Works	CAR ID	Change in Nr of STWs	Comments
Ballyhalbert Old (Retention Tank)	S00215	Reduction	WWTW was upgraded during AIR11 and details adopted then. However new WWTWs is on a new site with a new name - Ballyhalbert Victoria, therefore this entry replaced with new one
Ballystrudder (Retention Tank)	S00264	Addition	WWTWs was upgraded during AIR12
Belfast Road(207-209)	S00856	Reduction	This is now a private WWTWs
Whitehead (WWTW)	S00452	Addition	WWTWs was upgraded during AIR12
Aird	S01171	Reduction	Now a pump away to Bushmills
Cranagh (WWTW)	S03065	Reduction	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet
Gosheden (1)	S03128	Reduction	WWTWs is now a gravity away
Jacksons Crescent (1-6)	S04106	Reduction	Now a pumpaway to Saintfield
Jacksons Crescent (7-8)	S04107	Reduction	Now a pumpaway to Saintfield
Jacksons Crescent (9-10)	S04108	Reduction	Now a pumpaway to Saintfield
Drumalig Road(9-11)	S04158	Reduction	This is now a private WWTWs
Legcloghfin Road Cranagh	S05369	Addition	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet.

Name of Works	CAR ID	Change in Nr of STWs	Comments
Ballyhalbert Victoria	SO5412	Addition	Ballyhalbert WWTWs was upgraded during AIR11 but upgraded works is on a new site and has a new name, Ballyhalbert Victoria and therefore is a new entry on spreadsheet.
		Net Reduction	5

Difference between AIR12 and AIR11:

Line 8 for AIR11 -	1,028
Line 8 for AIR 12 -	1,023
Total Difference -	5

Line 9 – Treatment capacity available

The table below shows the changes in Treatment Capacity Available at WWTWs since AIR11 for Line 9. NB. Change in PE (-Ve AIR12 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Ballyhalbert Old (Retention Tank)	S00215	8942	WWTW was upgraded during AIR11 and details adopted then. However new WWTWs is on a new site with a new name - Ballyhalbert Victoria, therefore this entry replaced with new one
Ballystrudder (Retention Tank)	S00264	-8459	WWTWs was upgraded during AIR12 and prior to upgrade design PE was unknown
Belfast Road(207-209)	S00856	6	Now a private WWTWs
Drumroad (WWTW)	S00312	-118	WWTWs was upgraded under the RWWIP project during AIR12
Dunmurry	S00346	-12479	WWTWs was upgraded during AIR12
Glassdrumman (Down)	S00302	29	WWTWs was upgraded during AIR12
Mullaghboy	S00259	-516	WWTWs was upgraded during AIR12
Newtownbreda (WWTW)	S00342	-4375	WWTWs was upgraded during AIR12
Whitehead (WWTW)	S00452	-4918	WWTWs was upgraded during AIR12
Aird	S01171	140	Now a pump away to Bushmills

Name of Works	CAR ID	PE Change	Comments
Ballycarry	S00267	752	WWTWs was upgraded during AIR12
Carnan	S01559	-36	WWTWs was upgraded under the RWWIP project during AIR12
Curran	S01613	-138	WWTWs was upgraded under the RWWIP project during AIR12
Drumullan	S01573	13	WWTWs was upgraded under the RWWIP project during AIR12
Longfield (Moorside Villas)	S01627	-44	WWTWs was upgraded under the RWWIP project during AIR12
Orritor (WWTW)	S01591	-227	WWTWs was upgraded under the RWWIP project during AIR12
Ardress (WWTW)	S02557	-160	WWTWs was upgraded during AIR12
Attical (WWTW)	S02688	-209	WWTWs was upgraded under the RWWIP project during AIR12
Corbet	S02123	-74	WWTWs was upgraded under the RWWIP project during AIR12
Dyan	S02842	30	WWTWs was upgraded under the RWWIP project during AIR12
Galbally	S02844	-380	WWTWs was upgraded under the RWWIP project during AIR12
Keady (Armagh)	S02553	-3123	WWTWs was upgraded during AIR12
Montieth	S02152	-112	WWTWs was upgraded under the RWWIP project during AIR12
Mountjoy (Dungannon)	S02849	-550	WWTWs was upgraded during AIR12
Newmills (WWTW)	S02852	-346	WWTWs was upgraded during AIR12
Camus	S03034	10	WWTWs was upgraded under the RWWIP project during AIR12
Cavanacaw	S03048	-102	WWTWs was upgraded under the RWWIP project during AIR12
Cranagh (WWTW)	S03065	150	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet
Donagh (WWTW)	S03078	21	WWTWs was upgraded under the RWWIP project during AIR12
Dooish	S03081	60	WWTWs was upgraded under the RWWIP project during AIR12
Douglas Bridge	S03082	-72	WWTWs was upgraded under the RWWIP project during AIR12

Name of Works	CAR ID	PE Change	Comments
Drumraighland	S03099	-79	WWTWs was upgraded under the RWWIP project during AIR12
Fivemiletown (WWTW)	S03113	-512	Design PE amended following a reverse engineering exercise carried out by AECOM, consultants working on behalf of NIW.
Garvaghy	S03116	-136	WWTWs was upgraded under the RWWIP project during AIR12
Gosheden (1)	S03128	41	WWTWs was upgraded under the RWWIP project during AIR12
Gosheden (2)	S03129	-65	WWTWs was upgraded under the RWWIP project during AIR12
Killylane (WWTW)	S03147	-146	WWTWs was upgraded under the RWWIP project during AIR12
Largy (WWTW)	S03155	-73	WWTWs was upgraded under the RWWIP project during AIR12
Letterbin (WWTW)	S03158	-41	WWTWs was upgraded under the RWWIP project during AIR12
Magheraveely	S03178	-90	WWTWs was upgraded under the RWWIP project during AIR12
Milltown (Burndennet)	S03184	46	WWTWs was upgraded under the RWWIP project during AIR12
Mountjoy (Omagh)	S03193	-27	WWTWs was upgraded under the RWWIP project during AIR12
Teemore (WWTW)	S03228	-210	WWTWs was upgraded under the RWWIP project during AIR12
Tully (WWTW)	S03232	-50	WWTWs was upgraded under the RWWIP project during AIR12
Jacksons Crescent (1-6)	S04106	18	Now a pumpaway to Saintfield
Jacksons Crescent (7-8)	S04107	6	Now a pumpaway to Saintfield
Jacksons Crescent (9-10)	S04108	6	Now a pumpaway to Saintfield
Drumalig Road(9-11)	S04158	6	Now a private WWTWs
Legcloghfin Road Cranagh	S05369	-150	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet.

Name of Works	CAR ID	PE Change	Comments
Ballyhalbert Victoria	SO5412	-8942	Ballyhalbert WWTWs was upgraded during AIR11 but upgraded works is on a new site and has a new name, Ballyhalbert Victoria and therefore is a new entry on spreadsheet.
	Total	-36683	Change in Line 9 PE since AIR11

The change in Pe equates to a reduction in load of 2.2 t BOD/day (i.e. $36683 \times 60 \text{ for } 60\text{g/hd/day} / 1000 / 1000$) from AIR11 to AIR12, allowing for rounding up and down and conversions.

Difference between AIR12 and AIR11:

Line 9 for AIR11 -	126.98
Line 9 for AIR 12 -	129.18
Total Difference -	2.2 increase

The confidence grade for line 8 remains as A2 (as for AIR11), as during the year a small number of WWTWs have been removed from the list due to realisation of 'private' ownership, or where individuals have installed their own septic tank, rendering the facility serving only one property. There may still be a number of small WWTWs which are perhaps under the ownership of the NI Housing Executive or have become private due to customers perhaps installing their own private septic tanks or converting 2 houses into 1. Hence a small reduction in confidence grade i.e. A2 is viewed as necessary to reflect this uncertainty, especially as 709 WWTWs are listed as having a PE of less than 100.

PPP Only

Line 2 Total load receiving secondary treatment

The total loads receiving secondary treatment have changed to reflect the load discharged from the NI Water sewer network to the PPP works.

Line 5 Total load entering the sewerage system

The change from last year's (N/A) figure reflects that the information has been separated out of the 'NIW Only' figure for the PPP related catchments and recorded in this cell to readily consider PPP Catchments to PPP Treatment Works. This information was not provided by the PPP Contractors as they do not operate these catchments.

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 C5 has been assigned to this line as the PPP sites utilise the analytical data captured from inlet flows to the works and not the Catchments.

Line 6 Equivalent population served (resident)

The change in the Equivalent Population Served (resident) receiving treatment reflects the change in load received from the NIW Catchments.

Line 7 Equivalent population served (resident numerical consents)

As all the PPP WwTW's have numerical consents, the change reflects the same change in Line 6 above for the same reasons

Lines 2-9 Total Confidence Grades

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 83% 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 83% of total value.

Line 6 – Maintain NIW's C5 as NIW's value contributes to 83% of total value.

Line 7 – Maintain NIW's C5 as NIW's value contributes to 81% 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.

Lines 14- 17 Sewage – Sludge Disposal**NIW Only****Line 14 Percentage unsatisfactory sludge disposal**

In addressing the reporter's recommendation from AIR11, elements of the methodology Table 15 Lines 14-17 (NIW Only) have been reproduced in the Company commentary.

Northern Ireland Water (NIW) continues to have zero unsatisfactory sludge disposals. NIW has again assigned a confidence grade of A1 to percentage unsatisfactory sludge disposal as the total is zero.

Line 15 Total sewage sludge produced

Sewage cake is produced from 8Nr. NIW sites and transported to PPP Contractor for incineration. Liquid sludge is also transported to the PPP Contractor (Ballynacor & Duncrue Street, Belfast) where the Contractor measures and processes same for disposal (including Belfast WwTW Indigenous).

For the purpose of AIR12 submission Table 15 (NIW Only) relates to sewage sludge produced for 2011/12 (tds) as recorded by PPP and monthly by WW Area Sludge Officers (reconciled using the SLS). This is presented in the monthly Sludge Management Report along with an estimated quantity of WwTW's grit & screenings which are routinely removed as part of the sewage treatment process and disposed of separately under Tender C480, (Collection, Transportation and Disposal of Waste by skip).

Line 16 Total sewage sludge transferred to PPP

Northern Ireland Water is contracted to transfer all sewage liquid and cake to PPP. NIW remains committed to compliance with the requirements of the "Safe Sludge Matrix" with a total of 98% of sewage sludge transferred to PPP during 2011/12. Sewage cake is produced from 8Nr. NIW sites and transported to PPP Contractor for incineration. Liquid sludge is also transported to the PPP Contractor (Ballynacor & Duncrue Street, Belfast) where the Contractor measures and processes same for disposal (including Belfast WwTW Indigenous).

Line 17 Total sewage sludge disposal by NI Water

This is the quantity of grit and screenings removed as part of the sewage treatment process and disposed to landfill in 2011/12.

PPP Only**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	AIR12	AIR11	AIR10
Armagh WWTW	0.570	0.759	0.84
Richhill WWTW	0.066	0.213	0.21
Ballynacor WWTW	3.330	2.468	2.29
Ballyrickard WWTW	1.225	1.627	1.717
NDA WWTW	1.559	1.753	1.654
Kinnegar WWTW	0.823	0.792	0.7
Totals	7.573	7.612	7.411

Line 16 - Total sewage sludge received from NI Water

This is a new line in AIR12.

Line 17 - Total sewage sludge disposal

In AIR11 the Omega Contractor reported a disposal of 37.5ttds sludge disposed of. This year the reported figure is 38.3ttds.

The variance of +0.8ttds is considered to be a combination of:

1. timing of data capture (sludges being collected and receipted for disposal)
2. more accurate measurement and records demanded under the Omega contract
3. variations in quantities of sludge produced across PPP and NIW STWs.

Total

Line 14 - Percentage unsatisfactory sludge disposal

The PPP Contractor has confirmed that all sludges were disposed of through authorised routes.

Line 15 - Total sewage sludge produced

The changes to the sludges produced are reflected in the commentary to Line 17 below.

Line 17 -Total sewage sludge disposal

In AIR11 the Omega Contractor reported a disposal of 37.5ttds sludge disposed of. This year the reported figure is 38.3ttds.

The variance of +0.8ttds is considered to be a combination of:

- (i) timing of data capture (sludges being collected and receipted for disposal),
- (ii) more accurate measurement and records demanded under the Omega contract,
- (iii) variations in quantities of sludge produced across PPP and NIW STWs.

There is no material change in the volume of grit and screenings reported from AIR11 for disposal by the Company as the other component of the sludge for disposal.

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 AIR12 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 as below, based on 52 treated effluent BOD₅ sample results per year.

1. Daily load is calculated applying the following formula:

$$\text{BOD Load (Kg/d)} = [\text{BOD}]_{\text{influent}} \text{ (mg/l)} \times \text{FFT (m}^3\text{/d)} \times 10^{-3} \text{ (units conversion factor)}$$

Where:

2. $[\text{BOD}]_{\text{influent}}$ is the BOD concentration measured in a 24h composite sample of the incoming sewage to the works.

The BOD results are provided by NI Water Analytical Services. The test is included in the UKAS Accreditation Schedule for Analytical Services. Certificates of Analysis are available on site.

Omega Samples for BOD analysis are only submitted on selected dates as per Sampling Schedule agreed with NIEA & NI Water Contract Management Team on a yearly basis (52 sample days in total for each WWTW Facility). Since BOD data is not available on a daily basis, the daily BOD load is calculated for the days in which BOD data is available. An average daily BOD Load to the works is then calculated. Finally this daily BOD Load calculated is multiplied by the number of days in the reporting period to obtain the total load received at the works over this period.

For Kinnegar the BOD is measured daily, and then converted into a daily loading; these daily loadings are collated over the year to give the actual Annual loading for BOD.

3. FFT is the flow to full treatment over a 24h period. Daily flow data is extracted from the operational records. The incoming flows are measured by a Magmeters or Flume flowmeters installed in the inlet channel at each WwTW. The correct operation of these flowmeters is validated on a regular basis. Details of the validation procedure and records of these validations are available on each site.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 16 NON FINANCIAL MEASURES
SEWERAGE SERVICE ACTIVITIES (NIW Only)

DESCRIPTION	UNITS	DP	1	2	3	4	5
			REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12
A ASSET BALANCE AT APRIL 1							
1 Total length of sewers	km	2	14,263.62	14,319.50 B3	14,465.23 B3	14,745.61 B3	14,904.68 B3
2 Total length of "critical" sewers	km	2	2,467.00	2,469.01 C4	2,889.10 C4	3,653.62 C3	3,622.52 C3
B CHANGES DURING REPORT YEAR							
3 New "critical" sewers	km	2	2.01 A2	13.04 D3	14.30 B2	16.18 B2	4.62 B2
4 "Critical" sewers - inspection by CCTV/man entry	km	2	5.47 A3	31.06 C4	40.43 C4	86.89 B3	53.18 C4
5 "Critical" sewers - renovated	km	2	1.82 A3	3.15 A3	0.81 A2	9.40 A2	2.86 B2
6 "Critical" sewers - replaced	km	2	3.61 A3	2.813 A3	5.07 A2	6.50 B3	2.64 B2
7 Abandoned "critical" sewers and other changes	km	2	0.00 A2	-407.05 C4	0.00 A2	0.05 A2	0.00 B2
8 New "non-critical" sewers	km	2	41.11 A3	135.88 B3	153.48 B2	195.62 B2	181.9 B2
9 "Non-critical" sewers - renovated	km	2	1.13 A3	0.75 A3	1.38 A2	6.26 A2	6.26 B2
10 "Non-critical" sewers - replaced	km	2	8.91 A3	5.42 A3	6.19 A2	4.58 B3	1.02 B2
11 Abandoned "non-critical" sewers and other changes	km	2	0.99 A3	410.24 A3	0.49 A2	0.09 A2	0.72 B2
12 Sewer collapses per 1,000km	nr	1	47.3 B4	96.3 C5	68.7 C5	84.9 B2	80.7 B4
13 Sewer blockages per 1,000km	nr	1	1,181.0 B4	1,936.4 C5	1,791.0 C5	1,759.8 B2	1,619.8 B4
13a Number of sewer blockage clearance which exceeds 6 hours	nr	0					N/C
13b Number of sewer blockage clearance which exceeds 12 hours	nr	0					N/C
13c Number of sewer blockage clearance which exceeds 24 hours	nr	0					N/C
C ASSET BALANCE AT MARCH 31							
14 Total length of sewers	km	2	14,319.5 B3	14,465.2 B3	14,745.6 B3	14,904.68 B3	15,090.35 B3
15 Total length of "critical" sewers	km	2	2,469.0 C4	2,889.1 C4	3,653.6 C3	3,622.52 C3	3,656.86 C3
D INTERMITTENT DISCHARGES							
16a Number of unsatisfactory intermittent discharges excluding CSOs (EHS)	nr	0	441 C4	85 A2	192 C2	218 C2	204 C2
16b Number of unsatisfactory intermittent discharges CSOs (EHS)	nr	0	408 C4	270 A2	381 C2	379 C2	349 C2
17a Number of intermittent discharges excluding CSOs	nr	0	1,377.0 B4	1,391.0 B4	1,455.0 B4	1,519 B4	1,591 B3
17b Number of CSOs	nr	0	799 B4	814 B4	751 B4	748 B4	780 B3
E DRAINAGE AREA PLANS							
18 Cumulative number of drainage area plans completed	nr	0	49 A1	54 A1	70 A1	71 A1	71 A1
19 Number of drainage area plan studies in progress at the report end of the report year	nr	0	30 A1	28 A1	26 A1	0 A1	0 A1
20 Total sewerage drainage areas	nr	0	109 A2	109 A2	269 A2	260 A2	261 A2
21 Cumulative % drainage area plan studies completed	%	1	45.0 A1	49.5 A1	26.0 A2	27.3 A2	27.2 A2
22 % population/properties covered by completed studies	%	1	43.0 A2	46.0 A2	49.6 C4	55.1 B3	54.7 B3
F NOMINATED SEWERAGE SERVICE OUTPUTS							
23 Delivery or improvements to nominated CSOs as part of a defined programme of work	nr	0				20 A1	44 A1
24 Delivery of improvements to WWTW through nominated schemes as part of a defined programme of work	nr	0				20 B3	7 B3
25 Investment in improvements to small wastewater treatment works as part of the rural wastewater investment programme	£m	1				8.1 A2	7.9 A2

Table 16 - Sewerage Service Activities**Introduction**

NIW has been endeavouring to ensure that GIS can provide a single source of data for lines such as 1, 2, 3, 7, 8, 11, 14 and 15 as recommended by the Reporter. Apart from lines 1 and 2 being extracted from the AIR11 Table 16 (lines 14 and 15); NIW has managed to populate lines 14 and 15 from GIS. However due to current software and NIW business procedures, other information for other lines such as 3, 7, 8 and 11 is sourced from others within the organisation.

It should be noted that the PPP Wastewater Contractors have not undertaken any sewerage activity (in the report year) covering the categories of new, renovated, replaced or abandoned sewers (critical or non-critical sewers)

Line 1 – Total length of sewers at 1 April

The value of 14,904.68 km has been extracted from line 14 of the AIR11 Table 16.

Line 2 – Total length of ‘critical’ sewers at 1 April

The value of 3,622.52 km has been extracted from line 15 of the AIR11 Table 16.

Line 3 – New ‘critical’ sewers

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	4.060	A2			0.562	B2			4.62	B2

There has been a decrease of new critical sewers both by EP and Developer Services. The Developer Services’ input to this line constitutes on-site and off-site sewers servicing new development and is dependant to a large degree on the housing market.

The decrease in new critical sewers is considered as a result of:

- A reduction in spend from the AIR 11 to AIR12 period
- EP had a number of Pumping Stations to construct during the AIR12 period, taking funding away from sewers
- Work done to facilitate first time services has dropped off due to the fall in construction within NI, as a result of the recession

An overall confidence grade of B2 has been allocated to line 3, as the data is a combination from 2 sources i.e. EP and Networks Sewerage. The AIR11 Reporter’s Report favoured the B2 confidence grade.

Line 4 ‘Critical’ sewers – inspection by CCTV/man entry

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	6.102	A2	31.470	C4			15.609	A2	53.18	C4

The reduction in this line from AIR11 is viewed as being business as usual. CCTV work is carried out on an “as needed” basis and may vary from year to year. It should be noted that the major part of this work is now executed by in-house CCTV crew rather than by external contractors. The surveys carried out by Asset Management are now targeted less at critical sewers and more at peripheral parts of the networks where the majority of performance failures occur, i.e. sewer blockages.

An overall confidence grade of C4 has been allocated to line 4, as the data is a combination from 3 sources, with the majority of the data from Networks Sewerage having C4. The grade C4 has been allocated as the information provided by the Networks Field Managers does not distinguish between critical and non-critical sewers.

Line 5 ‘Critical’ sewers – renovated

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	2.550	A2	0.310	B2					2.86	B2

The majority of work executed for lines 5 and 6 is by EP. ***The total lengths for lines 5 and 6*** have decreased from 15.9 km in 10/11 to 5.5 km in 11/12. It was intended that a number of sewerage rehabilitation projects, which focused on the rehabilitation of critical sewers, would be executed by means of the proposed Capital Delivery Alliance. The abandonment of the Alliance has produced consequent delays in the commencement of these projects.

The confidence grade for line 5 has been reduced from A2 in AIR11 to B2 in AIR12 due to the contribution to this line from Networks Sewerage, which has been allocated a B2 confidence grade.

Line 6 ‘Critical’ sewers – replaced

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	2.640	A2	0.0	B2					2.64	B2

The CSDD methodology for this line has completely changed. For AIR 11 the information was compiled from various Field Managers, but for AIR12 the information has been provided by the external contractor. As a result the confidence grade for the Networks Sewerage data has increased from a C2 in AIR11 to a B2 for AIR12.

The confidence grade for line 6 has been increased slightly from the B3 in AIR10 to the B2 in AIR12, as Networks Sewerage has indicated a zero contribution with a B2 confidence grade, as opposed to a C4 in AIR11.

Line 7 Abandoned ‘critical’ sewers and other changes

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	0.0	A2	0.0	B2					0.0	B2

The confidence grade for line 7 has been reduced from A2 in AIR11 to B2 in AIR12 due to the contribution to this line from Networks Sewerage, which has been allocated a B2 confidence grade, although zero.

Line 8 New 'non-critical' sewers

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	24.693	A2			157.203	B2			181.90	B2

Line 8 is predominantly adoptions of sewers within housing developments, which is dependent upon the housing market. The Developer Service's figure has decreased marginally from AIR11. The overall increase in the figure since the lower figure in AIR10 has been due to the pressure on Developers from Bond Security providers who are pressing for sewer adoptions and release of Bond Securities. The EP figure has also decreased marginally from AIR11.

The confidence grade of B2 has been maintained, since AIR11.

Line 9 'Non-critical' sewers - renovated

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	5.325	A2	0.938	B2					6.26	B2

There has been a slight decrease in the EP figure from AIR11. Networks Sewerage has contributed to a small extent for AIR12.

The confidence grade has been reduced from the A2 in AIR11 to the B2 in AIR12 as the contribution from Networks Sewerage has been allocated a B2.

Line 10 'Non-critical' sewers - replaced

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	1.020	A2	0.0	B2					1.02	B2

The CSDD methodology for this line has completely changed. For AIR 11 the information was compiled from various Field Managers, but for AIR12 the information has been provided by the external contractor.

The confidence grade for line 10 has been increased slightly from the B3 in AIR10 to the B2 in AIR12, as Networks Sewerage has indicated a zero contribution with a B2 confidence grade, as opposed to a C5 in AIR11.

Line 11 Abandoned 'non-critical' sewers and other changes

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	0.719	A2	0.0	B2		B2			0.72	B2

The confidence grade has been reduced from the A2 in AIR11 to the B2 in AIR12 as the contribution from Networks Sewerage has been allocated a B2, even though the contribution figure is zero.

Lines 3 – 11 General Commentary

Progress against PC10 Monitoring Plan

The renewal of sewers is represented in the Monitoring Plan as a target output. The target is 63.8 km for the PC10 period. The aggregate total for renewal after two of the three years is now 39.5 km. Clearly there is a significant risk that the 63.8 km target will not be met unless corrective action is taken. Analysis of Captrax for year 12/13 has indicated that projects will yield a renewal length of approximately 15km.

The renewal length achieved in 11/12 of 12.8 km (i.e. from AIR12 lines 5, 6, 9 and 10) is approximately half of the planned length of 25.9 km in the Monitoring Plan.

	10/11	11/12	12/13	Total
Output target in Monitoring Plan - km	24.0	25.9	13.9	63.8
Output achieved - km	26.74	12.78	-	-

Sewer Renewal (Renovation or Replacement) - Comparison of output achieved to Monitoring Plan targets

NIW is targeting investment in the sewerage infrastructure to maintain and achieve stable serviceability. The work carried out to date has been almost exclusively the repair of collapsed or partially collapsed sewers.

Critical sewers are identified using standard industry definitions – WRc Sewer Rehabilitation Manual Categories A, B and C. A drop down menu, based on the WRc Manual is incorporated into the sewerage infrastructure monthly return form on Captrax, to enable project managers to select the reason for a sewer being classified as critical.

The only sewer cleaning work carried out was what was considered necessary to allow CCTV surveys to be conducted or where a relining technique required it.

A mechanism exists to pick up any sewers laid during the AIR11 reporting period which were not received in time to enable inclusion in the AIR 11 submission. The figures would be included in the AIR12 totals to provide a true figure for the asset balance.

Confidence Grades

All information is compiled from EP sewerage infrastructure monthly returns. This is an accurate measurement of the actual lengths of critical and non-critical sewers laid, renovated or replaced, and abandoned, compiled from contractor's on-site records. The information is collated from each individual

contract on a monthly basis and aggregated into an overall annual figure. The overall confidence grade has been assessed as A2, to take account of inconsistent interpretation of the definition of a critical sewer and some very slight reservations as to the completeness of compliance with the reporting procedure.

The inputs from CSDD are extracted from a spreadsheet which is completed by an external contractor. The CSDD figures have generally been given a confidence grade of B2. The inputs from Developer Services section have a CG of B2 attached. As each line has an input from either CSDD or Developer Services then each line has generally been given a CG of B2.

Sewer Adoptions

Sewers are adopted under the provisions of Article 161 of the Water and Sewerage Services (Northern Ireland) Order 2006. The basis of this is that a developer i.e. any person constructing or proposing to construct a sewer, lateral drain or works can enter into an agreement under Article 161 for the future adoption of sewers, subject to the conditions of the Order. Existing sewers, lateral drains and works may also be considered for adoption under Article 159 of the Order.

Procedure for Agreeing Sewers for Future Adoption

The Company operates a 'sewers for adoption' procedure as set out in the Developers Guidance Notes, copies of which have been issued to most developers and developers agents. The information is also on the Company's web page. Sewer construction should comply with the current edition of the Sewers for Adoption manual used by the Company.

At the commencement of the process, a developer submits his drainage layout to Developers Services for assessment of the proposed system of sewers that will service the development and be offered for adoption at a later date. The hydraulic calculations are checked and the point of connection to the public sewerage system confirmed. When all aspects of the proposed drainage layout, including confirmation of any relevant approval to discharge to a watercourse and if appropriate a water order consent the Article 161 Agreement is authorised.

The sewerage system is constructed at the developer's own expense and vested in the Company. NI Water applies fees and charges in respect of the inspection and adoption process. Charges are in line with the rates set out by the Water Research Council (WRc) and adopted by the NI Utility Regulator.

Process for Adoption of Sewers, associated Lateral Drains and Works

When the sewers have been constructed to a prescribed standard, the developer will make a written request to NI Water to have the sewers adopted. Developers Services arrange an inspection of the sewerage system and if in order a Preliminary Certificate of Adoption is issued. The Company generally requires a 12 month maintenance period after which a Final Certificate of Adoption will be issued.

Length of Sewers and Associated Infrastructure for Adoption

The adoption process requires the developer to provide 'as built' drawings of the sewerage system. The length of sewers, number of manholes and any associated works such as waste water pumping stations or package waste water treatment works are recorded by regional teams.

The Final Adoption Certificate records the length and diameter of sewers that are at a suitable standard for adoption by the Company. The sewers and associated lateral drains and works are maintainable by the Company effective from the date of the adoption certificate.

Details are issued to the Asset Information Development for placing on the Geographical Information System (GIS).

Copies of Final Adoption Certificates are kept on the Developers Services file. Details are also recorded in a Final Adoptions book, and captured in a sewers Adopted spreadsheet.

Developers Services use a Technical Services Database which is being currently upgraded to meet the information needs of the 2006 Order legislation. This is under test and will electronically log all details including the length of sewers, lateral drains and works adopted by the Company.

Lines 12 & 13 - Sewer collapses and blockages**Changes during the report year**

Work has progressed during the year to identify critical and lateral sewers these layers have been recently added to NIW's Corporate Asset Register. Work is also progressing on identifying sewer repairs as a result of CCTV surveys. Because of this work NIW should be in a better position for AIR13 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

Calculation Process

Data gathering and calculation is as described below.

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 2012

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 2012 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.

Line 13: Table 16A: Line 3: Total number of sewer blockages

Table 16: Line 14: Total length of sewers at 31 March 2012

The number of sewer blockages is divided by the total length of sewers at 31 March 2012 to give the number of sewer blockages per kilometre. The number of sewer blockages per kilometre is multiplied by 1000 to give the number of sewer blockages per 1,000km.

Line 12 - Sewer Collapses per 1,000 Km

Due to the method of gathering the data on Sewer Collapses, the regulatory instructions for calculating figures for Table 16 Line 12 and Table 16a Lines 1 and 2 must be reversed.

Table 16 Line 12 has been calculated using the figure reported for table 16a Lines 1 and 2 and the total length of sewers figure reported for Table 16 Line 14.

Line 13 - Sewer Blockages per 1,000 Km

Due to the method of gathering the data on Sewer Collapses, the regulatory instructions for calculating figures for Table 16 Line 13 and Table 16a Line 3 must be reversed.

Table 16 Line 13 has been calculated using the figure reported for table 16a Line 3 and the total length of sewers figure reported for Table 16 Line 14.

Confidence Grading – Lines 12 & 13

NIW are using data from checked and paid invoices (B2) and total length of sewers (B3). Due to the fact that NIW are not able to assess the number of collapses/blockages occurring on lateral sewers a confidence grade of B4 has been allocated. NIW expects to improve the grade in AIR13.

Lines 13a, 13b and 13c

Line 13a: Number of blockage clearance which exceeds 6 hours

Line 13b: Number of blockage clearance which exceeds 12 hours

Line 13c: Number of blockage clearance which exceeds 24 hours

These are new lines and the data for AIR12 has not been collated therefore no confidence grade is being allocated.

Line 14 – Total length of sewers

There has been no change to the structure of the data reported on this year from the previous years that would directly affect the totals provided. The same queries have been used to extract the data from the Corporate Asset Register and have been checked to ensure that they are still relevant. The confidence grade of the data will remain the same as the previous year. The confidence grading B3 recognises that the GIS record is not complete, and that there are still some unmapped sewers. There have been no significant improvements in data quality since the AIR11 reports. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

Line 15 – Total length of critical sewers

There has been a slight increase in the estimated total critical sewer lengths this year compared to last year. The data indicates that the majority of this

increase relates to records submitted for existing infrastructure that was not recorded on GIS rather than new sewers laid. The same estimation techniques have been used as in previous years and are still dependent on 3rd party datasets. The analysis performed assesses the criticality of the sewers based on size, material and depth attributes of the sewer and its location in regards to structures, roads, railways and watercourses. This is a desktop exercise based on the location and attributes of each sewer as per the definition of critical sewers in the WRc Sewerage Rehabilitation Manual. As the result of the analysis is still estimation the confidence grade of C3 will remain in place.

Lines 16a - 16b – Unsatisfactory intermittent discharges

In AIR09 this line was reported as the number of UIDs which had been classified to date – and a query was submitted to NIAUR seeking confirmation that this was the correct interpretation. The reply from NIAUR stated that they instead would like the return to be an estimate of the number of UIDs following completion of the classification process by NIEA. As a consequence the current return complies with that interpretation.

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.

There is no long term target for the improvement of all UIDs however it is noted that extrapolation of the rate achieved in 11/12 will lead to completion by 2024 for CSOs, and 2027 for other UIDs.

Lines 17a -17b – Intermittent discharges

Table A - Differences between sewerage system overflows between AIR11 and AIR12

Intermittent Discharges	Preliminary AIR11 Nr	AIR11 Nr*	Preliminary AIR12 Nr	Nr** to be removed	AIR12 Nr*	Difference
Combined Storm Overflows (CSOs)	812	748	844	-64	780	32
Sewage Pumping Stations (SPSs)	977	961	1004	-16	988	27
Total	1789	1709	1848	-80	1768	59

*after removal of Dual, Duplicates and Bifurcation Assets

** Dual, Duplicates and Bifurcation Assets

Hence for AIR12 the total number of Sewerage System Overflows is 780+ 988 i.e. 1768

From the data used there has been a preliminary net increase of 32 No: CSOs since AIR11 (i.e. 812 to 844). This is made up of 45 No: new CSOs minus 13 No: CSOs that have been removed.

In addition there has been a preliminary net increase of 27 No: SPS overflows since AIR11 (i.e. 977 to 1004). This is made up of 57 No: new SPSs overflows minus 30 No: SPSs overflows that have been removed.

Preliminary net increase of 32 No: CSOs since AIR11

Preliminary net increase of 27 No: SPS overflows since AIR11

Preliminary total increase of 59 No: overflows since AIR11 (i.e. 1789 to 1848).

(For a further breakdown see Table B, C & D – Changes in Intermittent Discharges by Drainage Area below)

The preliminary number of consented assets held by NIW is 1848. However as in AIR11 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 59 No: Preliminary overflows since AIR11	
Plus:	<u>1789 No: Preliminary overflows identified in AIR11</u>
Sub Total:	1848 No: sewerage system overflows
Minus:	<u>80 No: O/Fs not included in the finalised number for AIR12</u>
Total:	1768 No: sewerage system overflows identified for AIR12

An exercise has been ongoing over the AIR 10, 11 & 12 reporting 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.

As reported in AIR 11, 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 and also assets which have overflows which are currently unconsented. For this information to be adopted by NIW it has to be signed off by the NIW Network Sewage Business Unit and any changes then updated on NIW's Geographical Information Service (GIS). It was hoped that this process would have been completed in AIR 12, but due to the large quantity of data to be verified the process is on-going, and is likely to continue over the next 2 years, at which stage the information held on GIS will mirror exactly the status of the assets on the ground.

Further to the on-going exercise previously discussed Network Sewage Business Unit has confirmed information updates for 36 catchments which have been included on GIS and submitted to NIEA in AIR12.

Table B – Preliminary changes in intermittent discharges by drainage area for AIR12

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	0	0	0	0	
Net decrease in CSO's since AIR11	0				
Net Increase in SPS's since AIR11			0		

Table C – Preliminary changes in Intermittent discharges by drainage area for AIR12

Drainage Area	No of CSO's added since AIR11	No of CSO's removed since AIR11	No of SPS's added since AIR11	No of SPS's removed since AIR11	Comments
Annhilt	1	0	0	-1	Removed SPS: Poundburn, CAR ID SP02870006 Additional CSO: Poundburn CSO, CAR ID CO002870011
Annsborough	1	0	1	0	Additional CSO: Castlewellan CSO, CAR ID CO000984453 Additional SPS: Castlewellan TWO, CAR ID SP002872009
Ardglass	5	-4	0	-1	Removed SPS: Harbour PS CAR ID SP002022483 Removed CSO's: Strangford Road ID NM001306743, Quay Brea No 1 ID NM001309286, Crew Hill Court ID NM001308016, Seaview ID NM001306725 Additional CSO's: Kildares Court CSO CAR ID CO003049210, Quay Brae Upper CSO CAR ID CO003049182, Seaview Strangford Road CSO CAR ID CO002969335, The Quay Ardglass CSO CAR ID CO002969286, Ardglass Harbour CSO CAR ID CO000984424.
Armoy	0	0	1	0	Additional SPS: The Park WWPS CAR ID SP002023014
Aughil	0	0	1	0	Additional SPS: Aughil One WWPS CAR ID SP002021693
Aughnacloy	2	0	2	0	Additional SPS's: Hillcrest Aughnacloy WWPS CAR ID SP002021668, Mill Road WWPS CAR ID SP002021667. Additional CSO's: Tully Manor CSO CAR ID CO002989294, Hillcrest Aughnacloy CSO CAR ID CO000984138
Ballycranbeg	0	0	1	0	Additional SPS: Rubane 1 WWPS CAR ID SP002022305
Ballygawley	0	0	2	0	Additional SPS: Grange Park WWPS CAR ID SP002021666, Tullybryan Road WWPS CAR ID SP002021664
Ballygowan	0	0	2	-1	Additional SPS's: Station Lane WWPS CAR ID SP002022753, Ravara WWPS CAR ID SP002022752, Removed SPS: Oakdale WWPS CAR ID SP002022740,
Ballyhalbert	0	-2	4	-2	Additional SPS's: New Close WwPS CAR ID SP002022316, Westlands WwPS CAR ID SP002022315, Castleveiw WwPS CAR ID SP002022298, Ballyhalbert Longfield WwPS CAR ID SP002989994 Removed CSO's: Junction New Road and Harbour Road ID NM001111897, Opp No 18 New Road ID NM001112107 Removed SPS's: Portavogie North PS CAR ID SP002022296, Ratalla PS CAR ID SP002022295

Drainage Area	No of CSO's added since AIR11	No of CSO's removed since AIR11	No of SPS's added since AIR11	No of SPS's removed since AIR11	Comments
Ballynahinch	2	0	1	-1	Additional SPS: Riverside Meadows WWPS CAR ID SP003036489 Additional CSO's: Antrim Road Factories CAR ID CO003042650, Downhill Terrace CSO CAR ID CO002932802 Removed SPS: Town WWPS CAR ID SP002022751
Ballyronan	0	0	2	-1	Additional SPS: Ronan Manor WWPS CAR ID SP002022907, Oaklea Road WWPS CAR ID SP002022898 Removed SPS: Ballyronan (SPS) CAR ID SP002022709
Ballywalter	2	-1	1	0	Additional SPS: Greyabbey Road Ballywalter WWPS CAR ID SP002021873 Additional CSO's: Ballywalter CSO 2 CO003083289, Ballywalter CSO 1 CAR ID CO003083288 Removed CSO: Main Street ID NM001103934
Banbridge	5	0	2	-1	Removed SPS: Grove Hill CAR ID SP002022180 Additional CSO's: Townsend Street Car Park CSO CAR ID CO000984413, Castlewellan Road CSO CAR ID CO000984549, Iveagh Drive CSO CAR ID CO002939437, Newry Road Banbridge CSO CAR ID CO002932793, Gospel Lane CSO CAR ID CO000984412 Additional SPS's: Meadowbank WwPS CAR ID SP002022457, Oaklands Loughbrickland WwPS CAR ID SP002912102
Bushmills	2	0	3	0	Additional SPS's: Portballintrea Storm WWPS CAR ID SP003043088, Runkerry Road WWPS CAR ID SP003061286, Main Street Bushmills WWPS CAR ID SP002022976 Additional CSO's: Coastguard Road Lissanduff CSO CAR ID CO000984757, Portballintrea Retention CSO CAR ID CO003043060
Carrickergus	2	-1	2	-2	Additional SPS's Minorca Drive WWPS CAR ID SP002022796, Carrickfergus Harbour WWPW CAR ID SP002022862 Additional CSO's: Northland CSO CAR ID CO000984640, Joymount Carrickfergus CSO CAR ID CO002943343 Removed CSO's: Woodburn Road CAR ID CO000984646 Removed SPS's: Harbour Flyght WWPS CAR ID SP002022775, Shaftesbury WWPS CAR ID SP002022780
Dromara	0	0	1	0	Additional SPS: Woodvale Dromara WWPS CAR ID SP002983258
Dungannon	3	0	2	-1	Additional CSO's: Killyman CSO CAR ID CO003065036, Woodlawn Park CSO CAR ID CO002974458, Perry Street CSO CAR ID CO002974463 Additional SPS's: St Andrews View WWPS CAR ID SP003008859, Gortmerron Link Road WWPS SP002021680 Removed SPS: Killyman SPS CAR ID SP002885011

Drainage Area	No of CSO's added since AIR11	No of CSO's removed since AIR11	No of SPS's added since AIR11	No of SPS's removed since AIR11	Comments
Dungiven	0	0	1	0	Additional SPS: Kevin Lynch Park WwPS CAR ID SP002021717
Glenavy	0	0	1	0	Additional SPS: Millers Lane Glenavy WWPS CAR ID SP002903910
Killinchy	0	0	3	0	Additional SPS's: Whitecherry Hill WWPS CAR ID SP002950830, Inisharoon WWPS CAR ID SP002022774, Whiterock Road WWPS CAR ID SP002022374
Killyleagh	3	0	2	0	Additional CSO's: Osbourne Drive CSO CAR ID CO003040618, Shrigley Road CSO CAR ID CO002989227, St Marys Killyleagh CSO CAR ID CO002989209, Additional SPS's: The Moorings WWPS CAR ID SP002577004, Inishmore Killyleagh WWPS CAR ID SP002022380
Moirá	0	0	1	0	Additional SPS: Beechwood Park WWPS CAR ID SP002022214
Newtownbreda	3	-3	3	-1	Additional CSO's: Church Road Knockbreda CAR ID CO000984355, Mill Road West CSO CAR ID CO003026103, Carryduff Shops CSO CAR ID CO003073872 Removed CSO's: Mill Road ID NM001317395, Knockbracken ID NM001317757, Church Road ID NM001316149 Additional SPS's: Queensfort Park South WWPS CAR ID SP003007931, Garland Heights WWPS CAR ID SP002022128, Long Acre WWPS CAR ID SP002022133 Removed SPS: Milltown PS CAR ID SP002022127
North Coast	6	0	3	-9	Removed SPS's: Ardina (Upper) CAR ID SP002022947, Blackrock PS CAR ID SP002022971, Dhu Varren SPS CAR ID SP002023017, Hezlett School SPS CAR ID SP002022978, Riversdale SPS CARD ID SP002022943, Articlave SPS CAR ID SP002023020, Lougestown SPS CAR ID SP002022927, Kilmaconnell CAR ID SP002022960, Bogtown CAR ID SP002022951 Additional SPS's: Agherton Road WWPS CAR ID SP002022967, Ardina Lower WWPS CAR ID SP002023021, Glenara Woods WWPS CAR ID SP002952974 Additional CSO's: Articlave CSO CAR ID CO002965836, Portstewart Road Portrush CSO CAR ID CO002997934, Berne Road CSO CAR ID CO000984566, Portstewart Golf Links CSO CAR ID CO000984793, Loughan Road CSO CAR ID CO000984575, Hezlett Primary School CSO CAR ID CO002966071
Portglenone	0	0	2	0	Additional SPS's: Portglenone WWPS CAR ID SP002022684, Inishrush WWPS CAR ID SP002022686
Seahill	1	0	2	-2	Removed SPS's: Crawfordsburn Country Park SPS CAR ID SP002022272, Coastguard Cottages SPS CAR ID SP002022278 Additional SPS's: Ben Vista WWPS CAR ID SP002022280, Helens Bay WWPS CAR ID SP002022323 Additional CSO: Main Street Old Mill House CSO CAR ID CO000984285

Drainage Area	No of CSO's added since AIR11	No of CSO's removed since AIR11	No of SPS's added since AIR11	No of SPS's removed since AIR11	Comments
Tandragee	0	-1	5	-2	Removed CSO: Old Mill Manor CSO CAR ID CO000984394 Removed SPS's: Tullyhugh Park PS CAR ID SP002022390, Rose Garden WwPS CAR ID SP002022395 Additional SPS's: Velton Lawns WWPS CAR ID SP002022394, Canal Court WWPS CAR ID SP002022468, Scarvagh Locks WWPS CAR ID SP002896281, Richmond Drive WWPS CAR ID SP002582018, Glebe Hill WWPS CAR ID SP002022464
Upperlands	0	0	2	-1	Additional SPS's: Tirgarvii Road WWPS CAR ID SP002023007, Culnady WWPS CAR ID SP002023008 Removed SPS: Railway View (Upperlands) CAR ID SP002023011
Waringstown	0	0	1	-3	Additional SPS: Murraywood WWPS CAR ID SP002022433 Removed SPS: Oak Grange No 1 CAR ID SP002022203, Oak Grange No 2 CAR ID SP002022202, Tudor Lodge CAR ID SP002022205
Whitehouse	7	0	1	-1	Additional SPS: Dermont Lane WwPS CAR ID SP002927340 Removed SPS: Mallusk WWPS CAR ID SP002022794 Additional CSO's: Mill Road Newtownabbey CSO CAR ID CO002914133, Fernagh CSO CAR ID CO002987846, Whitewell Upper CSO CAR ID CO002988722, Shore Road Whiteabbey CSO CAR ID CO002987839, Shore Road Whitehouse CSO CAR ID CO002987847, Shore Road Jordanstown CAR ID CO002987854, Ballyclare Road CAR ID CO002974924
Whiterock	0	-1	0	0	Removed CSO: Whiterock Bay CSO CAR ID CO000984624
Mullartown	0	0	1	0	Additional SPS: Glassdrumman Road WWPS CAR ID SP003043596
Cranagh	0	0	1	0	Additional WWPS: Glenelly WWPS CAR ID SP002974283
Total Number of intermittent discharges added or removed since AIR11	45	-13	57	-30	
AIC Net Increase in CSO's since AIR11	32				There has been a net increase of 32 No: CSO's since AIR11. This is made up of 45 No: new CSOs minus 13 No: CSOs that have been removed.
AIC Net Increase in SPS's since AIR11			27		There has been a net increase of 27 No: SPS O/Fs since AIR11. This is made up of 57 No: new SPS O/Fs minus 30 No: SPS O/Fs that have been removed.

Table D – Combined Totals of APT & AIC Preliminary changes in Intermittent discharges by drainage area for AIR12

	No of CSO's added since AIR11	No of CSO's removed since AIR11	No of SPS's added since AIR11	No of SPS's removed since AIR11
Preliminary APT number of intermittent discharges added or withdrawn since AIR11	0	0	0	0
Preliminary AIC number of intermittent discharges added or withdrawn since AIR11	45	-13	57	-30
Subtotals	45	-13	57	-30
Preliminary net increase or decrease in SPS & CSO's since AIR11	32		27	
Preliminary total increase in sewage system overflows for AIR12	59			

Table E - Dual Manholes not included in the finalised number for AIR12

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	15
Lurgan	NM001229426	CSO 35	Y	
Lurgan	NM001230688	CSO 31	Y	
Lurgan	NM001231354	CSO 34	Y	
Lurgan	NM001231355	CSO 33	Y	
Lurgan	NM001231583	CSO 32	Y	
Lurgan	NM001232930	CSO 36	Y	
Lurgan	NM001234366	CSO 39	Y	
Lurgan	NM001278775	CSO 38	Y	
Lurgan	NM001278776	CSO 37	Y	
Lurgan	NM001280565	CSO 41	Y	
Lurgan	NM001281577	CSO 54	Y	
Lurgan	NM001282390	CSO 42	Y	
Lurgan	NM001282868	CSO 45	Y	
Lurgan	NM001283755	CSO 46	Y	
Whitehouse	NM001339615	Whitehouse CSO UH 02	Y	17
Whitehouse	NM001339619	Whitehouse CSO UH01	Y	
Whitehouse	NM001340884	Whitehouse CSO UH 03	Y	
Whitehouse	NM001340886	Whitehouse CSO TG01	Y	
Whitehouse	NM001340887	Whitehouse CSO TG02	Y	
Whitehouse	NM001345599	CSO 18 Manse Road HA04 CSO (2)	Y	
Whitehouse	NM001345603	Whitehouse CSO HP01	Y	
Whitehouse	NM001346012	Whitehouse CSO GP01	Y	
Whitehouse	NM001347238	Whitehouse CSO GO10	Y	
Whitehouse	NM001348440	CSO 12 Manse Road EM05 CSO(1)	Y	

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	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 AIR12				44

Table F - Bifurcation Manholes not included in the finalised number for AIR12

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 AIR12				10

Table G - Duplicate Manholes not included in the finalised number for AIR12

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 (Eglinton)	SP002021880	SPS 4a	Y	5
Donnybrewer (Eglinton)	SP002021886	SPS 3a	Y	
Donnybrewer (Eglinton)	SP002021887	SPS 2a	Y	
Donnybrewer (Eglinton)	SP002021888	SPS 5a	Y	
Donnybrewer (Eglinton)	SP002021891	SPS 1a	Y	

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	SP002021939	PS 01	Y	2
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 AIR12				26

Lines 17a -17b Above Ground Overflows from within WWTWs**Table H - Total number of Overflows within WWTWs**

	AIR11 Number	AIR12 Number
Total number of Overflows from within WWTWs	558	603

Hence for AIR12 the total number of overflows within WWTWs is 603

The overall number of WWTW overflows from AIR11 to AIR12 has had a net increase of 45 overflows. With regards to the number of additional and withdrawn overflows and further changes to the designation of the type of overflow listed (see Tables H to P below). The increase in WWTW overflows in AIR12 is mainly due to works being upgraded in the PC10 period and the roll out of the Rural Wastewater Investment Plan (RWWIP), which has resulted in numerous small works now having an overflow facility.

The changes in the number of overflows within WWTWs since AIR11 are as follows:

- 8 No: overflows within WWTWs withdrawn since AIR11.
(See Table I, J, K, & L below)
- 53 No: Additional overflows within WWTWs since AIR11.
(See Table M, N & O below)
- A net increase of 45 overflows since AIR11.

Table I - Overflows within WWTWs withdrawn since AIR11 due to works becoming a pump away in AIR12

Name of Works	Site ID	Status in AIR12	Withdrawn O/Fs Since AIR11
Aird	S01171	Pump away to Bushmills WWTW	-1
Total No of overflows withdrawn since AIR11 due to the WWTWs becoming a pump away			-1

Table J - Overflows within WWTWs withdrawn since AIR11 due to works being upgraded

Name of Works	Site ID	Status in AIR12	Withdrawn O/Fs Since AIR11
Ballycarry	S00267	Works Upgraded	-1
Douglas Bridge	S03082	Works Upgraded	-2
Total No of overflows withdrawn since AIR11 due to the works being upgraded			-3

Table K – Withdrawn Overflows within WWTWs due to incorrect designation in AIR11

Name of Works	Site ID	Status in AIR12	Withdrawn O/Fs Since AIR11
Richill	S02597	PPP site previously reported in AIR11. Therefore removal of 1 No FFT O/F	-1
Ballyhalbert Old (Retention Tank)	S00215	Removal of 1 No FFT O/F with Storm Retention due to the works being upgraded on a new site called Ballyhalbert Victoria.	-1
Cranagh (WWTW)	S03065	Removal of 1 No FA O/F Removal of 1 No FTT O/F with Storm due to the works being upgraded on a new site called Legcloghfin Cranagh	-2
Total No of Withdrawn Overflows due to incorrect designation in AIR11			-4

Table L– Summary of the total number of Overflows withdrawn since AIR11

Total No of overflows withdrawn since AIR11 due to the works becoming a pump away	-1
Total No of overflows withdrawn since AIR11 due to the works being upgraded	-3
Total No of Withdrawn Overflows due to incorrect designation in AIR11	-4
Combined Total No: of overflows within WWTWs withdrawn since AIR11	-8

Table M - Additional overflows within WWTWs since AIR11 due to WWTW upgrades

Name of Works	Site ID	Status in AIR12	Overflows for AIR12 from Process Info	Additional O/Fs Since AIR11
Address (WWTW)	S02557	Works Upgraded	1 No FA O/F 1 No additional FFT O/F to integral Storm Tank	2
Ballystrudder (Retention Tank)	S00264	Works Upgraded	1 No additional FA O/F to Storm. Storm Tank will also receive Emergency Overflow from Final Effluent Pumping Station	1
Camus	S03034	Works Upgraded	1 No additional FA O/F	1
Carnan	S01559	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Cavanacaw	S03048	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Corbet	S02123	Works Upgraded	1 No additional FFT O/F - Storm capacity within all in One unit	1
Curran	S01613	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Donagh (WWTW)	S03078	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Dooish	S03081	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Douglas Bridge	S03082	Works Upgraded	1 No additional FFT O/F to integral Storm Tank Removal of 1 No FA O/F Removal of 1 No interstage PS O/F	1
Drumaroad (WWTW)	S00312	Works Upgraded	1 No additional FFT to Storm & 1 No additional Final Effluent Pumping Station Emergency Overflow	2
Drumraighland	S03099	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1

Name of Works	Site ID	Status in AIR12	Overflows for AIR12 from Process Info	Additional O/Fs Since AIR11
Drumullan	S01573	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Dunmurry	S00346	Works Upgraded	1 No additional FA O/F Change in designation of FFT O/F now to provide Storm retention	1
Dyan	S02842	Works Upgraded	1 No FA O/F 1 No additional FFT O/F - Storm capacity within all in One unit	2
Galbally	S02844	Works Upgraded	1 No FA O/F 1 No additional FFT O/F - Storm capacity within all in One unit	2
Garvaghy	S03116	Works Upgraded	1 No additional FA O/F 1 No additional FFT O/F to integral Storm Tank	2
Glassdrumman (Down)	S00302	Works Upgraded	1 No additional FA O/F & 1 No FFT O/F to Storm	2
Gosheden (2)	S03129	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Keady (Armagh)	S02553	Works Upgraded	1 No additional FA O/F Change in designation of FFT O/F to provide integral Storm retention	1
Killylane (WWTW)	S03147	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Largy (WWTW)	S03155	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Letterbin (WWTW)	S03158	Works Upgraded	1 No additional FA O/F 1 No additional FFT O/F to integral Storm Tank	2
Lisnahall	S01587	Works Upgraded	1 No additional FA O/F & 1 No additional FFT O/F to integral Storm Tank	2
Longfield (Moorside Villas)	S01627	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Magheraveely	S03178	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Milltown (Burndennet)	S03184	Works Upgraded	1 No additional FA O/F	1
Montieth	S02152	Works Upgraded	1 No additional FA O/F Change in designation of FFT O/F to provide integral Storm retention	1

Name of Works	Site ID	Status in AIR12	Overflows for AIR12 from Process Info	Additional O/Fs Since AIR11
Mountjoy (Dungannon)	S02849	Works Upgraded	1 No additional Inlet PS E/O. 1 No additional FFT O/F with storm retention	2
Mountjoy (Omagh)	S03193	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Mullaghboy	S00259	Works Upgraded	1 No additional FA O/F	1
Newmills (WWTW)	S02852	Works Upgraded	1 No additional Inlet PS E/O.	1
Orritor (WWTW)	S01591	Works Upgraded	1 No FA O/F Change in designation of FFT O/F to provide integral Storm retention	1
Silverbridge	S02285	Works Upgraded	1 No additional FA O/F 1 No additional FFT O/F	2
Teemore (WWTW)	S03228	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Tully (WWTW)	S03232	Works Upgraded	1 No additional FFT O/F to integral Storm Tank	1
Whitehead (WWTW)	S00452	Works Upgraded	1 No additional FA O/F to Storm. Storm Tank will also receive Emergency Overflow from Final Effluent Pumping Station	1
Total No: of additional overflows since AIR11 due to WWTWs being upgraded				47

Table N - Additional overflows within WWTWs due to incorrect designation in AIR11

Name of Works	CAR ID	Status in AIR12	Changes in Overflows for AIR11 from Process Info	Additional O/Fs Since AIR12
Ballyhalbert Victoria	SO5412	Ballyhalbert WWTWs was upgraded during AIR11 but upgraded works is on a new site and has a new name, Ballyhalbert Victoria	1 No additional FFT O/F with Storm Retention	1
Legcloghfin Road Cranagh	S05369	Cranagh WWTWs was upgraded during AIR10. The upgraded works is on a new site and has a new name, Legcloghfin Cranagh & a new Site ID	1 No additional FA O/F 1 No additional FTT O/F with Storm	2

Name of Works	CAR ID	Status in AIR12	Changes in Overflows for AIR11 from Process Info	Additional O/Fs Since AIR12
Mountfield (WWTW)	S03192	WOC application updated for Mountfield. Nigel Armstrong has confirmed position of overflows onsite	1 No Additional FA O/F 1 No Addition Interstage PS E/O (to Reed beds) 1 No Additional Final Effluent PS E/O	3
Totals No: of additional overflows within WWTWs due to incorrect designation in AIR11				6

Table O – Summary of additional overflows within WWTWs since AIR11

Total No: of additional overflows since AIR11 due to works being upgraded	47
Totals No: of additional overflows within WWTWs due to incorrect designation in AIR11	6
Combined Total: of Additional overflows within WWTWs since AIR11	53

For AIR12 - 4 No: Overflows has been withdrawn (see Table K) and 6 No: additional overflow has been included (see Table N above). This is result of overflows being incorrectly being designated in AIR11. This equates to net increase 2 No: overflows due to incorrect designation in AIR11.

Table P – Summary of Overflow type within WWTWs

Overflow Type	AIR11 Overflows from WWTWs	AIR11 Overflows listed for comparison purposes with AIR10	AIR12 Overflows from WWTWs	AIR12 Overflows listed for comparison purposes with AIR11	Difference between AIR11 & AIR12
Formula "A" O/Fs only	143	156	157	174	18
Formula "A" O/Fs (which also act as PS E/O)	12		12		
Formula "A" O/Fs with Storm (which also act as PS E/O)	1		5		
FFT O/Fs only	134	271	124	295	24
FFT O/Fs (which also act as PS E/O)	18		18		
FFT O/Fs with Storm Retention	108		142		

Overflow Type	AIR11 Overflows from WWTWs	AIR11 Overflows listed for comparison purposes with AIR10	AIR12 Overflows from WWTWs	AIR12 Overflows listed for comparison purposes with AIR11	Difference between AIR11 & AIR12
FFT O/Fs with Storm Retention (which also act as PS E/O)	11		11		
3 DWF	18	18	18	18	0
Additional Overflows-storm	7	113	6	116	3
Additional Overflows-other structures	6		6		
Additional Overflows-pumping station E/O	100		104		
Total No of WWTWs Overflows	558	558	603	603	45

Since AIR11 the Asset Performance Team has continued to review their WWTW overflow summary information from Water Order Consent (WOC) applications. This provides further refinement and greater confidence in the designation of overflow type. Therefore for the purpose of these lines APT has not endeavoured to use AIC data due to the on-going AIC process of subscribing WOC information across onto GIS. Hence the value for line 17a i.e. 'Number of intermittent discharges excluding CSOs' (i.e. number of PS overflows in Sew. System 988, and the total number of overflows within WWTWs of 603) is 1591.

Comparison between AIR11 & AIR12 - Intermittent discharges excluding CSOs

The number of intermittent discharges excluding CSOs in AIR11 was 1519. This was made up 558 WWTW O/Fs + 961 SPS O/Fs.

In comparison the number of intermittent discharges excluding CSOs in AIR12 has increased by 72 No: intermittent discharges to 1591.

The net increase in the number of intermittent discharges excluding CSOs is due to a net increase of 45 No: WWTW overflows and a net increase of 27 No: SPS overflows since AIR11. 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 780.

Comparison between AIR11 & AIR12– CSOs in the Sewerage System

The number of CSOs in the sewerage system has had a net increase of 32 No: CSOs since AIR11 i.e. (748 in AIR11 - 780 in AIR12).

This net increase previously discussed is mainly due to the ongoing project by AIC in conjunction with the Networks Sewerage field managers and business unit

to verify the number of assets within drainage areas that actually need consented.

PPP Section – Intermittent Discharges

It is noted that there have been no changes during AIR12.

Lines 18, 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.

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 11/12.

An 'Asset Performance – Wastewater Networks' section was established within NIW in April 2010, the principal function of the section is the identification of needs for capital investment within the networks. It is intended that an 'in-house' network modelling function will be established in year 2012 which will have responsibility for the maintenance of models that have been updated through a prioritised process of DAS reviews, and also for the assessment of development.

In anticipation of a new procurement mechanism for external consultants becoming available, NI Water intends to implement a review of the current Drainage Area Study format – the review to be informed by our acquired knowledge of the regulatory process, and by the development of the Asset Performance section within NI Water. In particular, it is envisaged that greater emphasis will be placed upon:

- The recently established DG5 Register;
- A formal classification of UIDs by NIEA;

- The incorporation of the principles within the new Sewerage Risk Management (WRc).

Line 20 – Total sewerage drainage areas

All networks with population equivalent greater than 250 i.e. 261 no have been included. The number of such networks has increased from 260 in AIR11 to 261 in AIR12 as a result of the Glassdrumman (Down) – S00302 catchment, increasing in size as a result of a pumpaway from Dunmore Cottages WWTWs, following the upgrade at Glassdrumman (Down) WWTWs.

Line 22 – Percentage population/properties covered by completed studies

The confidence grade is necessarily that which is attached to the input population i.e. B3.

The following is a table of the DAS which have been carried out, with an indication of the domestic population and DAP date. It should be noted that updates to initial studies have not yet been carried out.

DRAINAGE AREA STUDY PROGRAMME STATUS AT APRIL 2010

CATEGORY A - DAS's COMPLETED SINCE 2003

Initial DAS	Catchment	Domestic population	DAP date
	Magheralin	2163	Jul-05
	Tandragee	5512	Jun-05
	Waringstown	5388	Jun-05
	Draperstown	2256	Jun-06
	Maghera	4492	Jun-06
	Moneymore	1833	Jun-06
	Greyabbey	1079	Feb-06
	Kircubbin	1347	Feb-06
	Portaferry	2870	Feb-06
	Ballyhalbert	1511	Aug-06
	Ballywalter	2197	Aug-06
	Cloughey	1194	Aug-06
	Portavogie	2624	Aug-06
	Castledawson	792	Nov-06
	Magherafelt	10,952	Nov-06
	Portglenone	2819	Oct-06
	Castlewellan	3570	Oct-06
	Dromore	6084	Nov-06
	Maghaberry	2163	Nov-06
	Donaghadee*	6470	Mar-06
	Millisle*	2331	Mar-06
	Whitehead	3862	Mar-06
	Newcastle	9577	Dec-05
	Annalong	2430	Jun-06
	Dundrum	1936	Jul-06
	Kilkeel	6807	Jul-06
	Downpatrick	11,974	Sep-05
	Ardglass	1874	Oct-06
	Upper Falls*	27683	Apr-09
	Bushmills*	2015	Apr-09
	Portballintrae*	1785	Apr-09
	Ballyrickard (Newtownards)	39165	Nov-08

	REVISITED DAS		
	Catchment	Domestic population	DAP date
	East Belfast*	100,000	Feb-10
	Greencastle*	8500	Apr-10
	Lisburn	40,769	Oct-09
	Ballymoney (Glenstall)	12894	Oct-04
	Seahill*	2831	Apr-06
	Dunmurry	35,856	Nov-03
	Hillsborough	3284	Aug-03
	Ballyclare	14,612	Jul-04
	Coleraine*	22,730	Nov-06
	Moir	4342	Apr-03
	Lurgan*	26512	Apr-03
	Rathfriland	2724	Nov-03
	Bessbrook*	3000	Feb-04
	Richhill	2927	Feb-04
	Limavady	13,869	Sep-03
	Strabane	15,463	Sep-03
	Londonderry	75529	Nov-06
	Carrickfergus	28,170	Aug-03
	Randalstown*	5734	Mar-08
	Antrim*	31983	Mar-08
	Ballycastle	10,592	Jun-05
	Portadown*	30,154	Nov-06
	Craigavon*	16,281	Nov-06
	Armagh	17,568	Apr-09
	Warrenpoint*	6000	Apr-09
	Bangor*	59813	Oct-10
	770892		

CATEGORY B - CATCHMENTS SUBJECT TO COMPLETED SCOPING STUDIES

	Catchment	Domestic population	
	Annahilt	1550	
	Saintfield	3852	
	Crossgar*	1892	
	Ballykelly	2091	
	Dungiven	3624	

	Catchment	Domestic population	
	Eglinton (Donnybrewer)	4130	
	Greysteel	1977	
	Ballygowan	3029	
	Killyleagh*	3276	
	Fintona	1858	
	Fivemiletown	1569	
	Irvinestown	2240	
	Lisnaskea	4029	
CATEGORY B POPULATION		34634	

CATEGORY C - DAS STAGE 1 COMPLETE

Initial DAS	Catchment	Domestic population	
	Coalisland	6576	
	Gilford	2028	
	Markethill	2276	
	Castleberg	3561	
	Newbuildings*	4500	
	Newtownstewart	1748	
	Sion Mills	3118	
	Castlerock	1883	
	Bellaghy	1261	
	Garvagh	2159	
	Kilrea	1785	
	Ballycarry	1280	
	Ballystrudder	1026	
	Crossmaglen	2235	
	Dungannon	15,486	
	Keady	3339	
	Glenavy	1434	
	Ballynahinch	6052	
	REVISITED DAS		
	Ballymena	43,620	
	Omagh	22,784	
	Cookstown	12,724	

CATEGORY D – DAS YET TO COMMENCE

	Catchment	Domestic population	
	Newtownbreda	31,785	

CATEGORY E - DASs WHICH WERE IMPLEMENTED

	Catchment	Domestic population	
	Larne	21,749	
	Cushendall	2750	
	Glenarm	757	
	Cushendun	564	
	Portrush	7588	
	Portstewart	9563	
	Newry	35,558	
	Banbridge	17,033	
	Rostrevor	2500	
	Enniskillen	15,458	
	Helens Bay	1410	

CATEGORY F - DASs REQUIRING REVISIT

	Catchment	Domestic population	
	Crumlin*	4260	
	Hollywood*	12000	
	Whitehouse	66,885	
	Belfast*	239,457	
	Greenisland	8275	

Domestic population extracted from Asset Performance "Master List of AIR 12" spreadsheet for NIW WWTWs, except those asterisked. Asterisked catchments are those which are conveyed to a common treatment centre: populations for these have been extracted from NIAMP 2 (2002).

The above domestic PEs have been updated where possible from the 'Master List of AIR12' spreadsheet.

Please note the following colour codes:

- Blue – PE has been updated according to AIR12 residential PEs
- Green – Indicates that a WWTWs is no longer present at that location and the PE has not been updated
- Red – Indicates a PPP catchment and PE has not been updated

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

The PC10 Monitoring Plan includes a target of 68 UID improvements for the 3-year period. Progress achieved to date is 20 UID improvements in 10/11 and 44 in 11/12. The target of 68 will be exceeded by end of 12/13.

The target for year 11/12 within the Monitoring Plan is 33 UID improvements – which has been exceeded.

It should be noted that one of the 44 claimed UID improvements – Seacliff Rd CSO in Bangor - was not included within the Monitoring Plan. This is indicated on the UID spreadsheet at Appendix by the fact that it has no FD number.

UIDs Delivered during the first year of PC10 – AIR11 Period

	Catchment	UID Address	FD Reference	Project Id	Comments	Operational Date
1	Draperstown	CSO 02 Derrynoyd Rd	UID098	KB428	Closed	02/07/2010
2	Draperstown	CSO 01 St Patrick's St.	UID099	KB428	Closed	02/07/2010
3	Londonderry Sewer Imps Stage 2 - Duke St PS	CSO 28 Duke St RAB	UID100	KL428	Formula A and 6mm screening	28/03/2011
4	Londonderry Sewer Imps Stage 2 - Duke St PS	CSO 29 Duncreggan Road	UID101	KL428	Formula A and 6mm screening	28/03/2011
5	Londonderry Sewer Imps Stage 2 - Duke St PS	CSO 30 Dunfield Terrace	UID102	KL428	Formula A and 6mm screening	28/03/2011
6	Londonderry DAP Victoria Rd Work Package	CSO 13 Victoria Road	UID107	KL445	New CSO Chamber and 6mm screening	11/10/2010
7	Londonderry DAP Victoria Rd Work Package	CSO 53 Sunningdale Drive	UID108	KL448	Closed	29/10/2010
8	Londonderry DAP Strathfoyle & Drumahoe Work Package Drumahoe Old PS	Formula A at PS New CSO 07 Chamber, 6mm screens	UID112	KL449	Formula A at PS, New CSO chamber and 6mm screening	02/09/2010
9	Londonderry DAP _ Strathfoyle/Drumahoe WP : Caw PS	CSO 05 Caw PS	UID113	KL450	New CSO Chamber and 6mm screening at new location also upgrade of overflow pipe	01/07/2010
10	Gilford Road, Portadown, Sewerage Upgrades	Levaghery Close CSO 09	UID115	KG153	Closed	10/08/2010
11	Gilford Road, Portadown, Sewerage Upgrades	Princess Way CSO 10	UID116	KG153	Closed	10/08/2010
12	Gilford Road, Portadown, Sewerage Upgrades	Edan Avenue SPS CSO 05	UID117	KG153	Increased storage and pass forward Formula A. Extension of EO to river Bann.	10/08/2010
13	Ballywalter	Ballywalter DAP - Stage 1 Main St CSO	UID029	KR440	Closed	30/09/2010
14	Londonderry DAP Victoria Rd Work Package	CSO 46 Prehen Park	UID143	KL448	Closed	29/10/2010
15	Londonderry DAP Victoria Rd Work Package	CSO 47 Prehen Road	UID142	KL448	Closed	29/10/2010
16	Carrickfergus	Shaftsbury park SPS JOYMOUNT		KR402	Increased storage close sea outfall. New overflow to Sullatober Water Culvert.	01/06/2010
17	Whitehouse	Camross Park CSO		KR403	New CSO chamber with 6mm screening.	13/04/2010
18	Whitehouse	Merville Mews CSO		KR403	New CSO chamber with 6mm screening.	13/04/2010
19	Whitehouse	Manse Road CSO		KR403	Increase height of weir walls	13/04/2010
20	Bangor	Lukes Point		KR400	Extra storage and 6mm screening	23/06/2010

UIDs Delivered during the second year of PC10 – AIR12 Period

	Catchment	UID Address	FD Reference	Project Id	Comments	Operational Date
1	Londonderry DAP	Caw Park CSO23	UID114	KL450	CSO upgraded with 6mm screening	01/07/2010
2	Belfast	CSO 73 - Annadale Flats	UID096	KR434	Closed	30/03/2012
3	Belfast	CSO 72 - Sunnyside St closure	UID097	KR434	Reduction in spill Frequency.	30/03/2012
4	Belfast	Annadale PS - CSO	UID140	KR434	Abandon Annadale PS Closure of CSO.	30/03/2012
5	Belfast	Sunnyside St. SPS CSO	UID141	KR434	Upgrade PS with increased storage, also 6mm screening and new overflow pipe to River Lagan	30/03/2012
6	Londonderry DAP Duke St Work Package :	Fountain Hill CSO 031	UID104	KL443	Closed	02/12/2011
7	Londonderry DAP Duke St Work Package :	Duke Street PS CSO41	UID105	KL443	Upgrade PS with increased storage and new pumping main to pass forward Formula A. Close CSO.	02/12/2011
8	Londonderry DAP Duke St Work Package :	Queens Quay PS CSO14	UID103	KL443	Pass forward Formula A and 6mm screening.	02/12/2011
9	Londonderry DAP Duke St Work Package :	Duke Street New Storm PS CSO63	UID106	KL443	New storm PS to pass forward 280 l/s with 6mm screens and new CSO	02/12/2011
10	Londonderry DAP Duke St Work Package : Flood Alleviation	Victoria Road Old CSO 58	UID109	KL446	Closed	13/12/2011
11	Londonderry DAP Duke St Work Package : Flood Alleviation	Victoria Road New CSO 57	UID110	KL446	Closed	13/12/2011
12	Londonderry DAP Duke St Work Package : Flood Alleviation	King Street RAB CSO 35	UID111	KL446	Restrict pass forward to Formula A , also provide 6mm screening	13/12/2011
13	Belfast	Baroda Street CSO 77	UID144	KR452	New CSO chamber with 6mm screens also weir level in chamber to be increased.	07/09/2011
14	Belfast	Ormeau Park CSO 78	UID145	KR452	New CSO chamber and 6mm screens also new overflow pipe to River Lagan	07/09/2011
15	Newcastle	Murlough SPS - Bonnys Caravan	UID077	KS379	Closed	29/04/2011
16	Newcastle	Murlough SPS CSO 21	UID128	KS379	6mm screens and upgrade of WWPS	29/04/2011
17	Newcastle	Burrendale Hotel CSO 03	UID129	KS379	Closed	29/04/2011
18	Newcastle	Burrendale Hotel No 1 CSO 02	UID130	KS379	Closed	29/04/2011
19	Newcastle	Mourneview CSO 04	UID131	KS379	Closed	29/04/2011
20	Newcastle	Burrenview CSO 05	UID132	KS379	Closed	29/04/2011
21	Newcastle	Shan Slieve Drive CSO 16	UID133	KS379	Closed	29/04/2011
22	Newcastle	South Promenade CSO 18	UID134	KS379	Closed	29/04/2011

	Catchment	UID Address	FD Reference	Project Id	Comments	Operational Date
23	Belfast	Beechmount Ave/Gortfin St Hydraulic Upgrade CSO 53	UID030	KR432	New CSO chamber and 6mm screens	02/12/2011
24	Belfast	Beechmount Ave/Gortfin - CSO 46	UID118	KR432	New CSO chamber and 6mm screens	02/12/2011
25	Belfast	Beechmount Ave/Gortfin - CSO 47	UID119	KR432	Rebuild and raise outfall pipe level also 6mm screens	02/12/2011
26	Belfast	Fort Street - CSO 50	UID120	KR432	New CSO chamber with 6mm screens. Reconnect outfall pipe from CSO 50 to Clowney River.	02/12/2011
27	Coleraine (Old A0 Coleraine DAP)	Queen St CSO	UID039	KC404	New CSO chamber and 6mm screens and tank sewer for storage	31/01/2012
28	Coleraine (Old A0 Coleraine DAP)	Strand Road PS	UID042	KC404	Upgrade CSO chamber and install 6mm screens	31/01/2012
29	Coleraine (Old A0 Coleraine DAP)	Rose Gardens CSO	UID121	KC404	Closed	31/01/2012
30	Coleraine (Old A0 Coleraine DAP)	Millburn Road CSO	UID122	KC404	Closed	31/01/2012
31	Coleraine (Old A0 Coleraine DAP)	Andersons Park CSO	UID123	KC404	Closed	31/01/2012
32	Belfast	Allexander Road/Castlereagh College CSO 21	UID051	KR441	Upgrade CSO chamber and install 6mm screens	2011/12
33	Belfast	Carnamena Ave/Merok Crescent CSO 28	UID055	KR441	Closed	2011/12
34	Belfast	Clonduff Drive CSO 29	UID160	KR441	Closed	2011/12
35	Belfast	Merok Crescent CSO 27	UID161	KR441	Closed	2011/12
36	Lisburn	Beechlaw PS Hillsborough	UID127	KT138	Upgrade CSO chamber and install 6mm screens also increase storage	30/11/2011
37	Downs Rd/Castle Park	Downs Rd CSO	UID078	KS377	New WWPS to pump forward storm flows to Castlepark system. 6mm screens on the ERO	23/01/2012
38	Downs Rd/Castle Park	Castlepark SPS CSO 13	UID135	KS377	Closed	23/01/2012
39	Downs Rd/Castle Park	Valenta Place CSO 11	UID136	KS377	Closed	23/01/2012
40	Downs Rd/Castle Park	Castlepark CSO 12	UID137	KS377	New pumping station and 1900cu m storm attenuation tank with 6mm screens on overflow.	23/01/2012
41	Ballyclare	Ballyeaston SPS	UID159	KA201	Upsize WWPS and install 6mm screens on the overflow	2011/12
42	Bangor (A0 : 5/8/09 Bangor DAP Stage 1 - mentions 18 UIDs) KS878	Sandell Lane SPS	UID024	KS878	Upgrade CSO chamber and install 6mm screens	28/03/2012
43	Bangor (A0 : 5/8/09 Bangor DAP Stage 1 - mentions 18 UIDs) KS878	Coastguard Lane SPS	UID025	KS878	Upgrade CSO chamber and install 6mm screens	28/03/2012
44	Bangor (A0 : 5/8/09 Bangor DAP Stage 1 - mentions 18 UIDs) KS878	Seacliff Rd CSO 21		KS878	Upgrade CSO chamber and install 6mm screens	28/03/2012

Line 24 – Delivery of improvements to WwTW through nominated schemes as part of a defined programme of work

NIW delivered 7 improvements to WwTW listed within the PE10 monitoring plan within the period, which is in line with the delivery required in this area within the PE10 monitoring plan.

Programme 15 Carryover WwTW – projects delivered

Project Code	Project Name	PE10 Monitoring Plan Code
KA195	Mullaghboy WwTW	STW023
KT102	Dunmurry WwTW	STW011
KL363	Feeny WWTWs	STW013
KB436	Whitehead Ballystruder Ballycarry	STW030
KR389	Ballyhalbert interim solution	STW002

One carryover project, KS225 Ardglass WwTW has just resolved the lands issues and has received approval to start construction, with a minor scope change required by NIEA to address IPPC requirements. KR389 Ballyhalbert interim solution has been delivered with the Long Sea Outfall required to deliver the final solution scheduled for delivery in 12/13. KR391 Portavogie interim solution has been substantially modified to deliver the final solution for Portavogie after lands and planning issues. This will be delivered in 12/13.

KL363 Feeny WwTW achieved full Beneficial Use in 11/12 including the scope changes at the request of NIEA. However to the phasing of the construction of the project this was not picked up as complete prior to the reporter audit. NIW is claiming this completion within AIR12.

These projects have been cross checked with the commissioning and completion information to support the CIM.

Programme 16 New Starts WwTW

NIW has not delivered any PC10 programme 16 WwTW in 11/12 – the three projects within the CIM with BU dates in the period on review had yet to achieve beneficial use after cross checking commissioning and completion information.

With the exceptions of KB314 Gulladuff, KB459 Maghera and KC302 Ballintoy which have been programmed for PC13 (subject to budgets) all other projects in this programme have moved to construction.

Programme 21 Additional Outputs

Project Code	Project Name	PE10 Monitoring Plan Code
KC338	Causeway Aird	STW051
KS857	Glassdrumman WwTW	STW053

A number of additional outputs are underway, with Keady WwTW due for completion in 12/13. Project KS853 Dundrum Stormwater Outfall after review by NIEA is no longer required and has been dropped from the nominated outputs.

Projects not mentioned in the monitoring plan

In addition to the projects mentioned in the monitoring plan two other wastewater treatment works projects were completed.

Project Code	Project Name	PE10 Monitoring Plan Code
KS216	Dunmore Sewerage – EC Compliance	N/A
KF329	Ardsall WwPS (Ardsall WwTW completed)	N/A

The outputs have been reconciled with a number of other data sources and a number of projects with beneficial use dates within time period have been removed after review of the CIM.

The projects removed from the CIM completions after review of completion, commissioning and discussion with the project managers are:-

Project Code	Project Name	Reason
KB315	Pomeroy WwTW	SBP output – final payments
KR310	Newtownbreda WwTW	Claimed in 10/11 – delivered earlier than stated
KR391	Portavogie interim solution	Not completed - Final solution now in delivery after lands delays.
KS853	Dundrum Stormwater Outfall	Project not required in current form by NIEA
KC416, KN622, KL465	Glenstall WwTW Omagh WwTW Limavady WwTW	BU planned early 12/13
KF028	Keady WwTW	BU planned summer 12/13

Confidence grades

NIW has improved the reporting process and the cross checking process for this line for the 11/12 AIR submission. The confidence grades for this line were determined using the reporting guidance and were assessed as B3 – based on the evidence within the methodology and the small number of sites claimed.

WWTWs Delivered during the first year of PC10 – AIR11 Period

Capital Investment Project ID Reference Code	Project Name	Project Code	Beneficial Use Date	AIR11 Comments
STW/003	Ballymonie WWTW	KL393	18/03/2011	Programme 15 Carryover WwTW – projects delivered
STW/005	Bushmills Portballintrae WWTW	KC299	06/12/2010	Programme 15 Carryover WwTW – projects delivered
STW/006	Cargan WWTW	KB333	30/11/2010	Programme 15 Carryover WwTW – projects delivered
STW/007	Cloughmills WWTW	KC284	30/11/2010	Programme 15 Carryover WwTW – projects delivered
STW/008	Coagh WWTW	KB284	10/11/2010	Programme 15 Carryover WwTW – projects delivered
STW/009	Coalisland WWTW	KF005	01/12/2010	Programme 15 Carryover WwTW – projects delivered
STW/010	Downpatrick WWTW	KS224	14/12/2009	Programme 15 Carryover WwTW – projects delivered
STW/014	Hook's Corner WWTW	KT125	28/03/2011	Programme 15 Carryover WwTW – projects delivered
STW/016	Loughries WWTW	KS307	25/01/2011	Programme 15 Carryover WwTW – projects delivered
STW/017	Lurganare WWTW	KV064	30/09/2010	Programme 15 Carryover WwTW – projects delivered
STW/018	Maghera WWTW	KB281	03/02/2011	Programme 15 Carryover WwTW – projects delivered. Majority of work to be carried out and completed within PC10 despite PE funding restrictions.
STW/019	Magherafelt WWTW	KB282	28/03/2011	Programme 15 Carryover WwTW – projects delivered
STW/021	Money more WWTW	KB278	18/08/2010	Programme 15 Carryover WwTW – projects delivered
STW/024	Newtownbreda WWTW	KR310	04/02/2011	Programme 15 Carryover WwTW – projects delivered
STW/026	Rousky Sewerage Scheme	KN533	09/09/2010	Programme 15 Carryover WwTW – projects delivered
STW/028	Stewartstown WWTW	KB279	10/11/2010	Programme 15 Carryover WwTW – projects delivered
STW/029	Toome (Creagh) Sewerage Scheme [PE's Toome – 1349 Creagh – 605]	KB269	22/03/2011	Programme 15 Carryover WwTW – projects delivered
STW/031	Bush WWTW	KF320	03/06/2010	New starts WwTW programme - delivered early
STW/038	New Holland WWTW	KT377	28/03/2011	Programme 15 Carryover WwTW – projects delivered. Majority of work to be carried out and completed within PC10 despite PE funding restrictions.
	Darragh Cross WwTW	KS374	07/09/2010	Programme 15 Carryover WwTW – projects delivered This is not listed in the Annex N1

WWTWs Delivered during the second year of PC10 – AIR12 Period

Capital Investment Project ID Reference Code	Project Name	Project Code	Beneficial Use Date	AIR12 Comments
STW/002	Ballyhalbert WWTW	KR389		Programme 15 project delivered Ballyhalbert interim solution has been delivered with the Long Sea Outfall required to deliver the final solution scheduled for delivery in 12/13
STW/011	Dunmurry WWTW Modifications	KT102		Programme 15 project delivered
STW/023	Mullaghboy WWTW	KA195	04/04/2011	Programme 15 project delivered
STW/030	Whitehead, Ballystudder & Ballycarry Rationalisation	KB436	16/02/2012	Programme 15 project delivered
STW013	Feeny WWTWs	KL363	25/11/2011	Programme 15 project delivered
STW051	Causeway Aird	KC338	23/08/2011	This is not listed in the Annex N1 Programme 21 Additional Outputs
STW053	Glassdrumman WwTW	KS857	23/12/2011	This is not listed in the Annex N1 Programme 21 Additional Outputs
N/A	Dunmore Sewerage	KS216	30/06/2011	Dunmore Sewerage - EC Compliance This is not listed in the Annex N1
N/A	Ardress WwPS	KF329	31/03/2012	Ardress WwPS (Ardress WwTW completed) This is not listed in the Annex N1

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 11/12, KI463 which spent £42k and the main project KI486 which spent £8.011m. In addition to this spend there were accountancy adjustments on previous programme which totalled -£46k.

In 11/12 NIW completed 23 upgrades under project KI486 to works under 250PE. The works covered are; Drummullan, Corbet, Camus, Cavanacaw, Douglas Bridge, Magheraveely, Teemore, Killylane, Longfield (Moorside Villas), Largy, Drumraighland. Gosheden 1 and 2, Drumaroad, Mountjoy, Milltown (Burndennet), Carnan, Donagh, Dyan, Tully, Curran, Dooish, and Attical Tullyframe.

In addition a further 3 upgrades for works under 250PE were completed in 11/12 as a carryover from project KI463. The works delivered are; Lisnahall, Silverbridge, Letterbin and Montieth (installed capacity of 300PE). There were two larger works over 250PE completed in 11/12 as a carryover from KI463, Orritor and Garvaghy.

The total delivery for this programme so far in PC13 is 43 works – 38 under 250 PE and 5 over 250 PE. 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 £8.0m nominal to try to accommodate the reduction in funding in 12/13

However at the lower levels of funding in 12/13 NIW is likely to invest around £1m in this programme, which will deliver 3 small works, plus preparation for PC13. This funding reduction will lead to NIW not deliver the 50 total small WwTW outputs for this programme noted in Annex N of the Final Determination.

COPI was applied to the figures as required by NIAUR in the reporting requirements for AIR 12, reducing the totals to £7.9m 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.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 16A NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (TOTAL)

DESCRIPTION				1	
				2011-12	CG
A SEWERS - MAINTENANCE					
1	Total number of rising main failures	nr	0	26	B2
2	Total number of gravity sewer collapses	nr	0	1,191	B4
3	Total number of sewer blockages	nr	0	24,444	B4
4	Total number of equipment failures repaired	nr	0	11,476	B2

Table 16a – Sewerage Service Serviceability Indicators**Lines 1-3 – Sewer maintenance**

Data gathering and calculation is as described below

The data required for Table 16a Lines 1-3 is gathered by Networks Sewerage Field managers using checked and paid invoices from the Sewer Maintenance Contractor and submitted through their line management (Area Managers), for quality control on an excel spreadsheet to Networks Sewerage Business Unit on a monthly basis.

This information per area is transferred to a composite Excel spreadsheet to enable a Networks Sewerage total to be calculated and the information to be presented in the format as required for the AIR12 return.

Because of nature of the collecting of the information for lines 2 and 3 the data for these lines is purely input and not calculated.

Changes during report year

Work has progressed during the year to identify critical and lateral sewers these layers have been recently added to NIW's Corporate Asset Register. Work is also progressing on identifying sewer repairs as a result of CCTV surveys. Because of this work NIW should be in a better position for AIR13 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

Line 4 - Total number of equipment failures**Reporting Restrictions**

The MWM records do not incorporate instances of non-electromechanical devices such as storage tanks or hydrobrakes.

The failure of a pump, for example, on MWM will be recorded but not the outcome associated with this failure. It is therefore not possible to identify in isolation those equipment failures which resulted in "a detrimental impact on service to customers or the environment" since the vast majority of pumping stations possess an acceptable level of redundancy which mitigates the impact of failure on the customer.

These figures need not relate directly to equipment failures associated with M&E Services. In the vast majority of cases, for example, in SPS jobs the attendance is due to unblocking of pumpsets rather than pumpset failure. There is therefore a danger that the figures are incorrectly perceived as M&E equipment failures rather than as a result of external circumstances e.g. flash-flooding leading to blockages.

The return has been allocated a confidence grading of B2. This is due to two main factors i.e.

- Data is manually filtered to remove duplicate entries associated with “two-man” jobs. Given the manual element of this exercise there is some potential for error and
- Out of hours work may not all be captured using the current system which relies on all jobs being recorded on the MWM system. Given the company’s current operating model this does not occur in all instances.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 16b NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (NIW Only)

DESCRIPTION		UNITS	DP	1		2		3		4		
				NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO BOD EVENTS FORECAST FOR THE CURRENT YEAR						CG
				UNITS	DP	UNITS			DP			
				nr	0	%			1			
						EVENT (a) Max > 2		EVENT (b) 95%ile > 1		EVENT (c) Mean > 0.5		
				180		93.6		87.9		89.9		A2
				66								
				246								

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			
							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										
						</										

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 16b NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (Total)

DESCRIPTION			UNITS	DP	1		2		3		4		
					NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO BOD EVENTS FORECAST FOR THE CURRENT YEAR						CG
UNITS		DP	UNITS		DP								
nr		0	%		1								
A	SEWAGE TREATMENT WORKS - BOD PERFORMANCE					EVENT (a) Max > 2		EVENT (b) 95%ile > 1		EVENT (c) Mean > 0.5			
	1 Equivalent population band 3 to 6					186		93.0		87.4		89.3	A2
	2 Excluded STWs			nr	0	66							
	3 Total STWs			nr	0	252							
					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					186		94.0		90.4		91.4	A2
	5 Excluded STWs			nr	0	66							
	6 Total STWs			nr	0	252							
					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					110		91.9		86.6		94.5	A2
	8 Excluded STWs			nr	0	34							
	9 Total STWs			nr	0	144							

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 AIR12 Northern Ireland Water (NIW) has reported on the previous 3 year results as with the delivery of the Capital Works Program, the numbers and compliance of many of the major Waste Water Treatment Works (WWTWs) has stabilised. For example, over the last several years, a significant number of the major WWTWs and numerous smaller WWTWs have been constructed to meet Environmental Needs Standards – these works serving approximately 25% of the Northern Ireland total population. A second group of WWTWs are subject to interim standards until the Capital Works Program is complete, at which time Environmental Needs Standards will apply. The works are currently passing the interim standards, so there should be no impact on results prediction.

Derivation of Data

Unlike the AIR08 return which used only 2 years data, the calculations for the AIR returns since have been based on the full 3 years data as this is now representative of future compliance and more accurately reflects the sites/schemes in place. Using only 2 years data for AIR08 meant that the final submission figures were not replicable against AIR09 onwards. As such, the AIR08 figures have not been included in the year-on-year performance graphs herein.

The methodology for statistical calculations produced involved the use of the analytical results that are used for reporting to the Environmental Regulator. These samples are held in NI Water's LIMS (Laboratory Information Management System) and are representative, scheduled audit samples. No operational results were used for calculations. The calculations were carried out in accordance with the guidance notes for Table 16b.

For 2011 the Population Equivalents (PEs) used for scheduling were the PEs agreed between NIW's Asset Management section (AMS), Environmental Regulation section and Northern Ireland Environment Agency (NIEA). These PEs were used for the scheduling of samples for 2011. In accordance with the AIR09's reporter recommendation however, the works for the AIR11 onwards submission have been assessed using the information (PEs and PE Bands) supplied by NIW's AMS for its AIR return.

This however can lead to anomalies where the sites are reported for AIR on the resident PEs, while NIW calculates its overall compliance based on the maximum PE at the site e.g. S47BI Castle Archdale has a resident population of 29 and as such is assessed by AMS as Band 1. However, as a caravan park it has a maximum PE of 809 and this figure is used by NIW for calculating population served by compliant WWTWs.

For each of the lines a number of sites held on LIMS with available results were excluded for a variety of reasons ranging from their PE being in Bands 1-2 or the site being out of service at 31st March 2012 due to the consent for that parameter having been revoked during the reporting period or the site pumped away to another WWTW. These reasons are detailed herein.

A number of sites exist in the AMS data set which are not held in the NIW LIMS, mainly as they are too small to fall into the sampling requirements or are small sea outfalls. These sites have no analytical data to determine likelihood of failure and as such have not been included in this submission. These sites are detailed separately at the end of this commentary.

Lines 1, 2, 3 – BOD Performance – Equivalent Population Bands 3 – 6

For the reporting period 180 NIW Sites were identified, 6 PPP sites were identified with 66 sites being excluded from the assessment.

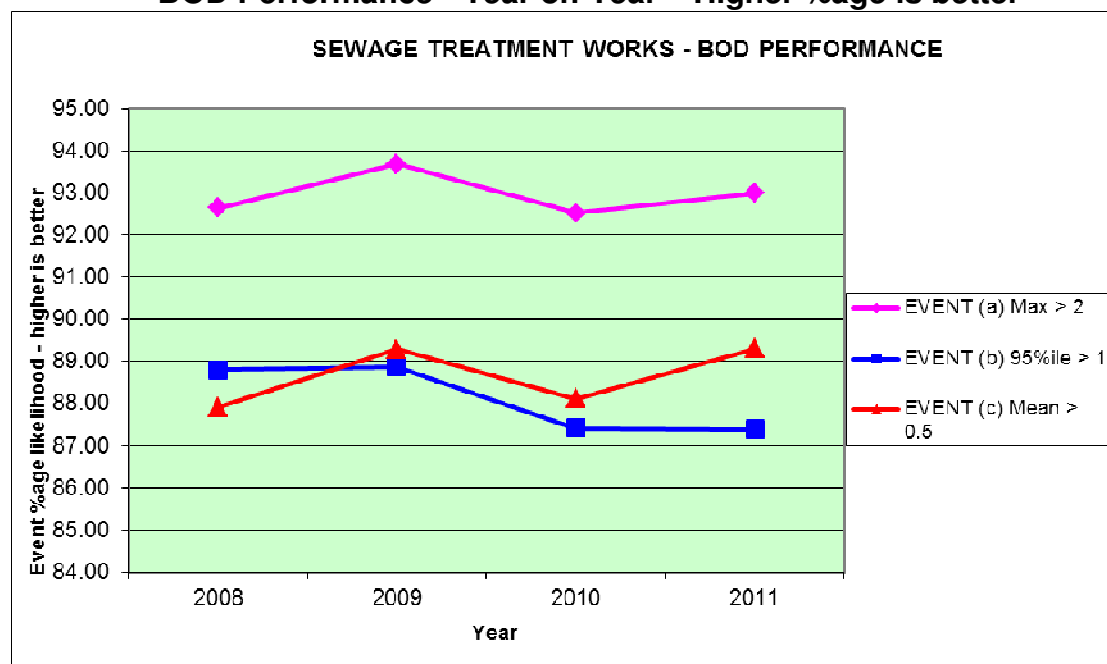
2010 NIW Sites Excluded from BOD Assessment

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
S15AT	Roughfort WWTW	Band 2
S15AW	Toome WWTW	Out of service @ 31/03/12
S17BC	Liscolman WWTW	Band 2
S17CM	Clarehill WWTW	Band 2
S17EF	Ballyvoy WWTW	Band 2
S17ES	Mosside WWTW	Band 2
S23AK	Blackskill WWTW	Band 2
S23AN	Derrytrasna WWTW	Band 2
S23AR	Maghera WWTW	Band 2
S23AW	Upper Ballinderry WWTW	Band 2
S23BK	Derrymore WWTW	Band 2
S25AL	Annaghmore WWTW	Band 2
S25AN	Annaghugh WWTW	Band 2
S25AY	Darkley WWTW	Band 2
S25BD	Galbally WWTW	Band 2
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
S34MB	Mulloughbuoy	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 2
S36BI	Maghera (Down) WWTW	Band 2
S37AI	Gravel Hill (Hooks Corner) WWTW	Out of service @ 31/03/12
S37AO	Drumlough WWTW	Band 1
S37AP	Edenderry WWTW	Band 2
S43BA	Foreglen WWTW	Band 2
S43BF	Bonnaboigh WWTW	Band 2
S43BG	Benone WWTW	Band 1
S43DA	Dernaflaw WWTW	Band 2
S43DK	Tamnaherin WWTW	Band 2
S43EJ	Gortnaghey WWTW	Band 2
S43IB	Nixons Corner 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

No PPP sites were excluded.

BOD Performance - Year on Year – Higher %age is better**Lines 4, 5, 6 – SS Performance – Equivalent Population Bands 3 – 6**

For the reporting period 180 NIW Sites were identified, 6 PPP sites were identified with 66 sites being excluded from the assessment.

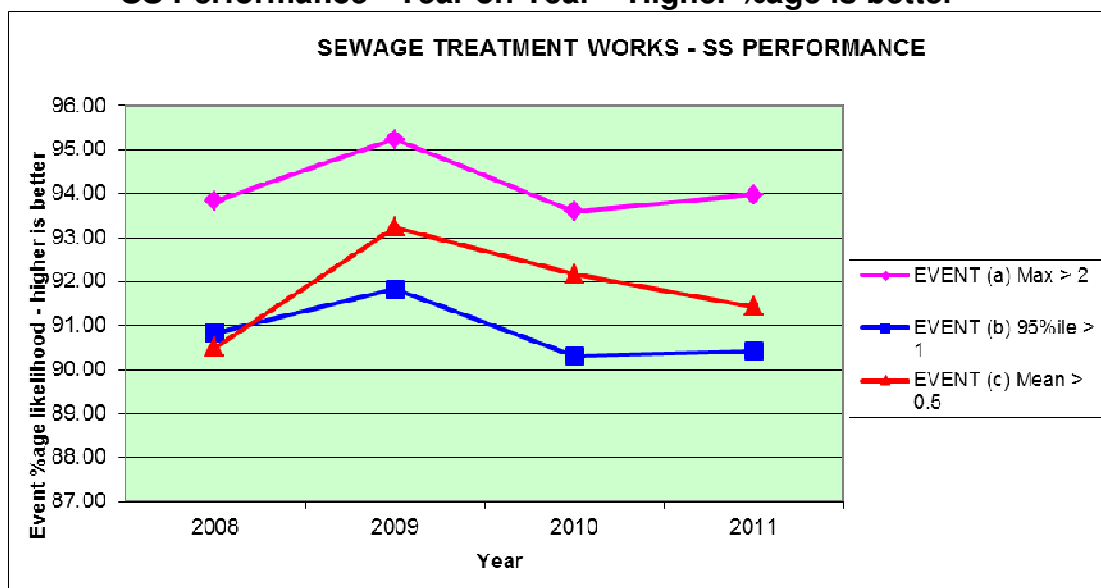
2011 NIW Sites Excluded from SS Assessment

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
S15AT	Roughfort WWTW	Band 2
S15AW	Toome WWTW	Out of service @ 31/03/12
S17BC	Liscolman WWTW	Band 2
S17CM	Clarehill WWTW	Band 2
S17EF	Ballyvoy WWTW	Band 2
S17ES	Mosside WWTW	Band 2
S23AK	Blackskull WWTW	Band 2
S23AN	Derrytrasna WWTW	Band 2
S23AR	Maghery WWTW	Band 2
S23AW	Upper Ballinderry WWTW	Band 2
S23BK	Derrymore WWTW	Band 2
S25AL	Annaghmore WWTW	Band 2
S25AN	Annaghugh WWTW	Band 2
S25AY	Darkley WWTW	Band 2
S25BD	Galbally WWTW	Band 2
S25BP	Redford WWTW	Band 2

Site Code	Site Name	Reason for Exclusion
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
S34MB	Mulloughbuoy	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 2
S36BI	Maghera (Down) WWTW	Band 2
S37AI	Gravel Hill (Hooks Corner) WWTW	Out of service @ 31/03/12
S37AO	Drumlough WWTW	Band 1
S37AP	Edenderry WWTW	Band 2
S43BA	Foreglen WWTW	Band 2
S43BF	Bonnaboigh WWTW	Band 2
S43BG	Benone WWTW	Band 1
S43DA	Dernaflaw WWTW	Band 2
S43DK	Tamnaherin WWTW	Band 2
S43EJ	Gortnaghey WWTW	Band 2
S43IB	Nixons Corner 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

2011 PPP Sites Excluded from SS Assessment

No PPP sites were excluded.

SS Performance - Year on Year – Higher %age is better**Lines 7, 8, 9 – Ammonia Performance – Equivalent Population Bands 3 – 6**

For the reporting period 104 NIW Sites were identified, 3 PPP sites were identified with 34 sites being excluded.

2011 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
S23AN	Derrytrasna WWTW	Band 2
S25AN	Annaghugh WWTW	Band 2
S25AY	Darkley WWTW	Band 2
S25BD	Galbally WWTW	Band 2
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
S35AM	Loughries WWTW	Band 2
S36AI	Annacloy WWTW	Band 2
S36AM	Kilmore (Down) WWTW	Band 2
S36BI	Maghera (Down) WWTW	Band 2
S37AI	Gravel Hill (Hooks Corner) WWTW	Out of service @ 31/03/12
S43DK	Tamnaherin WWTW	Band 2
S43EJ	Gortnaghey WWTW	Band 2
S43IB	Nixons Corner WWTW	Band 2
S45EF	Garvaghey WWTW	Band 1
S45FD	Greencastle WWTW	Band 2

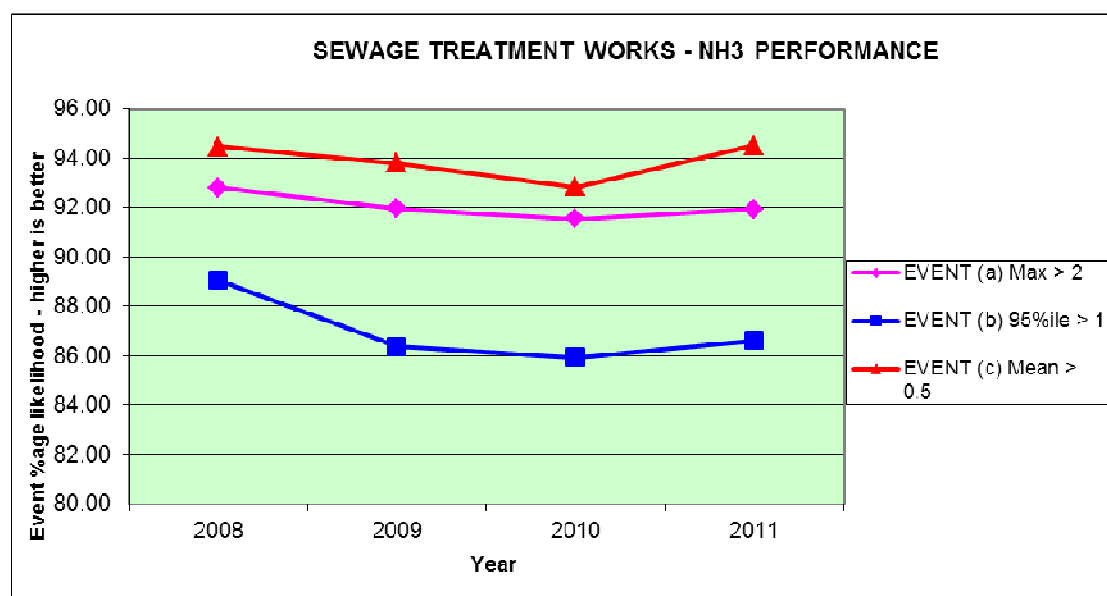
Site Code	Site Name	Reason for Exclusion
S45FJ	Killen WWTW	Band 2
S45KG	Bready WWTW	Band 2
S47CA	Clabby WWTW	Band 2
S47FE	Kinawley WWTW	Band 2
S47FH	Lack WWTW	Band 1
S47GC	Lisnarrick WWTW	Band 2
S47GI	Monea WWTW	Band 2
S47HJ	Tamlaght WWTW	Band 2

2011 PPP Sites Excluded from Ammonia Assessment

No PPP sites were excluded.

Year on Year

NH3 Performance - Year on Year – Higher %age is better



AIR12 Active AMS Sites not on NIW's LIMS and not reported on

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S00003	Forked Bridge WTW (Septic Tank)	1	3
S00011	Woodburn/Dorisland WTW (Septic Tank)	1	3
S00115	Drumaroad (WTW)	1	3
S00174	Silent Valley (Septic Tank 1)	1	3
S00174	Silent Valley (Septic Tank 2)	1	3
S00174	Silent Valley (Septic Tank 3)	1	3
S00174	Silent Valley (Septic Tank 4)	1	3
S00174	Silent Valley (Septic Tank 5)	1	3
S00207	Tubber Road (10-16)	1	12
S00210	Inishargy Road(10-12)	1	6
S00211	Inishargy Road(36-48)	1	29
S00212	Inishargy Road(2-8)	1	12
S00213	Whitechurch Road (45-53)	1	15
S00219	Blackstaff (Septic Tank)	1	30
S00220	Ballyfrench Road(1-3)	1	6
S00221	Ballyeastborough Road (15-17)	1	6
S00222	Quarter Road	1	9
S00223	Main Road Cloughy (103-111)	1	15
S00225	Kearney(Retention Tank)	1	66
S00227	Craigaroddan Road(6-8)	1	6
S00228	Ballygarvigan	1	42
S00229	Bar Hall	1	27
S00231	Portaferry Road(96-100)	1	9
S00232	Movilla Road(136-140)	1	9
S00234	Woburn Road (63-69)	1	12
S00235	Windmill Road(24-32)	1	15
S00238	Ballydrain Road (39-43)	1	12
S00240	Ringneill Road(1-5)	1	9
S00242	Ravara Road (9-19)	1	18
S00243	Ballygowan Road(41-47)	1	12
S00244	Moss Road(76-78)	1	6
S00245	Lisbarnet Road (47-53)	1	12
S00246	Drumhirk	1	24
S00248	Drumreagh Road(9-11)	1	6
S00249	Clattering Ford Road (12-16)	1	9
S00250	Kilcarn Road(7-9)	1	6
S00251	Ballygowan Road(102-104)	1	6
S00254	Craigaruskey Road (66-68)	1	6
S00255	Kilmood	1	169
S00256	Ballymiscaw road (37-41)	1	9
S00258	Tullyhubbert Road(75-81)	1	12
S00260	Ballylumford Cottages	1	61
S00274	Coneyisland (WWTW)	1	99
S00276	Ballytrim	1	33
S00280	Donard View	1	37
S00281	Lessans	1	18
S00283	Carricknaveagh (WWTW)	1	17
S00284	Thorney Glen	1	50
S00287	Lisowan	1	51

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S00289	The Demesne	1	6
S00291	Bells Hill	1	17
S00306	Blackrock Retention Tank (Down)	1	249
S00308	Craignasasonagh	1	17
S00314	Carrigenagh (WWTW)	1	12
S00324	Glenavy Road (Antrim)	1	6
S00332	Bresagh	1	30
S00333	Ballycreelly Road (38-40)	1	12
S00336	Ballycairn (Down)	1	37
S00338	Moneyreagh Road (51-55)	1	9
S00340	Old Holywood Road(190-196)	1	12
S00776	Ballybarnes Road (80-82)	1	3
S00829	Gransha Road(26-28)	1	3
S00830	New Road(37-39)	1	6
S00831	Parsonage Road(110-120)	1	18
S00832	Carrowdore Road(38-40)	1	6
S00833	Ballycrochan Road	1	6
S00834	Ballykeel Cottages(1-4)	1	13
S00835	Glen Cottages (1-6)	1	17
S00836	Craigdarragh Road(85-87)	1	8
S00837	Killaughey Road(252-254)	1	6
S00839	Lisbane Road(38-40)	1	6
S00840	Ballygalget Road(1)	1	6
S00841	Newcastle Road(18-20)	1	6
S00845	Upper Ballygelagh Road(12-18)	1	12
S00847	Ballyrainey Road (65-67)	1	6
S00848	Comber Road(102-106)	1	9
S00849	Ballyalton Rd (20-22)	1	6
S00850	Murdocks Lane(1-6)	1	17
S00852	Moneyreagh Road(139-141)	1	6
S00853	Moss Road(36-38)	1	3
S00854	Station Road(155-157)	1	6
S00857	Middle Braniel Road(80-90)	1	18
S00902	Rathlin (Retention Tank)	1	150
S00931	Ballinrees WTW(Septic Tank)	1	6
S01089	Ballymacormick	1	18
S01090	Ballyveely	1	6
S01093	Benvardin Road	1	6
S01094	Burnquarter	1	42
S01098	Coolkeeran	1	9
S01100	Dempsey Park	1	69
S01103	Donnelly Park	1	36
S01104	Drones	1	48
S01106	Drumreagh	1	6
S01107	Dungorbery	1	6
S01110	Gortereghy	1	17
S01111	Hillcrest (Antrim)	1	24
S01112	Killoque	1	18
S01114	Knockans (WWTW)	1	6
S01119	Navery Road	1	12

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S01121	Rornashane	1	42
S01124	Craigmore Road(18-20)	1	6
S01125	Shinny Road(20-22)	1	6
S01126	Ballyrashane Road(37-39)	1	6
S01127	Boghill Road(52-54)	1	6
S01128	Newmills Road(70-72)	1	6
S01131	Ballinteer	1	24
S01132	Ballyagan	1	24
S01133	Ballyhacket	1	18
S01134	Ballyhome (WWTW)	1	77
S01135	Ballylintagh (New)	1	59
S01136	Ballyrock	1	47
S01138	Boghill (WWTW)	1	12
S01139	Boveedy	1	75
S01141	Caheney	1	12
S01143	Coole Glebe	1	24
S01144	Craigavole (WWTW)	1	21
S01145	Culbane (WWTW)	1	21
S01147	Cullyramer	1	6
S01149	Drumagarner	1	18
S01150	Drumane	1	18
S01151	Drumcroon (WWTW)	1	6
S01155	Greenhill (WWTW)	1	12
S01157	Lisnagalt	1	6
S01158	Lisnamuck (Coleraine)	1	24
S01159	Lisnisk	1	15
S01160	Longs Glebe	1	78
S01162	Managher	1	15
S01164	Mayoghill (WWTW)	1	6
S01165	McCleary	1	6
S01166	Moneycarrie (WWTW)	1	15
S01167	Moneydig	1	61
S01169	Priestland	1	85
S01170	Ringsend	1	76
S01173	Ballynagard (Antrim)	1	9
S01175	Ballycleagh	1	6
S01176	Coolnagoppoge (WWTW)	1	37
S01179	Capecastle	1	55
S01180	Carnduff (Retention Tank)	1	79
S01181	Castlenagree	1	33
S01182	Churchfield Road	1	21
S01184	Deffrick	1	71
S01185	Dunserverick (Retention Tank)	1	89
S01187	Glasmullen (WWTW)	1	9
S01188	Glenmakeeran	1	6
S01189	Greenans	1	9
S01190	Knocknatavanna	1	22
S01192	Lisnagunogue	1	95
S01193	Maghernarhar	1	12
S01195	Toberkeagh	1	27

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S01196	Torr Head	1	6
S01197	Tromra	1	33
S01198	Tureagh	1	27
S01199	Turraloskin	1	23
S01207	Oaklands (Broughshane)	1	3
S01317	Killylane WTW(Septic Tank)	1	3
S01322	Cargin Road	1	30
S01417	Ballyutoag	1	6
S01420	Farranflugh	1	6
S01421	Lisnevanagh	1	31
S01426	Staffordstown Road	1	6
S01430	Ballymarlagh	1	39
S01431	Ballynafie	1	70
S01432	Buckna (WWTW)	1	40
S01434	Carnbeg	1	15
S01435	Carnlough Road	1	9
S01438	Crankill	1	9
S01439	Crosskeys Road	1	9
S01440	Duneany (WWTW)	1	72
S01443	Grove Park	1	27
S01444	Killygore	1	50
S01448	Old Green	1	17
S01450	Procklis	1	73
S01451	Racavan	1	37
S01452	Skerry View	1	33
S01455	Straid (Ballymena)	1	53
S01457	Tullygrawley	1	33
S01459	Carnalbanagh	1	60
S01464	Magheramourne (WWTW)	1	85
S01466	Munie (WWTW)	1	33
S01468	Ballycorr Grove	1	28
S01472	Dungonnell WTW (Septic Tank)	1	3
S01557	Ballygruby	1	17
S01560	Clare	1	47
S01563	Corchoney Lane (2-4)	1	6
S01565	Corvanaghan (WWTW)	1	18
S01566	Curglasson	1	62
S01568	Donaghey (1)	1	6
S01569	Donaghey (2)	1	51
S01570	Doorless	1	12
S01571	Drapersfield (WWTW)	1	96
S01572	Drumshambo	1	12
S01575	Gortaclady (WWTW)	1	17
S01576	Gortatray	1	12
S01577	Gortnacross	1	15
S01578	Keenaghan (1)	1	12
S01579	Keenaghan (2)	1	12
S01580	Kildress Terrace	1	18
S01584	Kinturk	1	18
S01585	Knockanroe	1	12

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S01592	Orritor Craigs	1	6
S01596	Sherrigrim	1	18
S01597	Skernahergney	1	12
S01598	Edendoit Road(107-109)	1	6
S01600	Tullyreavy	1	18
S01604	Ballynease	1	18
S01605	Beagh	1	36
S01607	Broagh	1	33
S01608	Carmean	1	51
S01616	Drumard (Antrim)	1	15
S01617	Fallahogy	1	27
S01622	Kilross	1	74
S01624	Lislea Terrace	1	18
S01625	Lismoyle	1	24
S01626	Lisnamuck (Magherafelt)	1	49
S01627	Longfield (Moorside Villas)	1	93
S01628	Luney	1	17
S01630	Milltown (Maghera)	1	20
S01632	Noones Vale	1	53
S01634	Ritchies Villas	1	12
S01635	Rocktown	1	17
S01710	Manse Road (Antrim)	1	6
S01711	Oakland Villas	1	18
S01713	Springhill Road(1)	1	14
S01715	Garryduff Road(112- 122)	1	18
S01718	Annaghquinn Road(49)	1	6
S01719	Straid Road(111)	1	6
S01720	Gortin Road(12)	1	6
S01721	Straid Road(12)	1	6
S01723	Causeway Road(122)	1	6
S01724	Glenshesk Road(127)	1	3
S01725	Craigmore Road(139 - 145)	1	12
S01726	Causeway Road(15)	1	6
S01727	Pharis Road(15)	1	12
S01728	Movenis Road(17)	1	6
S01729	Moyarget Road(178)	1	6
S01730	Causeway Road(180)	1	6
S01731	Ballyrashane Road(21)	1	6
S01732	Whitepark Road(211)	1	6
S01733	Glenleary Road(22)	1	3
S01734	Ballyvelton Road(23)	1	15
S01736	Causeway Road(30)	1	6
S01737	Glenbush Road(31)	1	6
S01738	Lisnagat Road(34)	1	6
S01739	Mullan Road(35)	1	6
S01740	Culramoney Road(5)	1	6
S01741	Whitepark Road(56)	1	12
S01742	Bregagh Road(56-58)	1	6
S01743	Bregagh Road(60-62)	1	6
S01744	Bregagh Road(68-70)	1	6

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S01745	Lisnagat Road(64)	1	6
S01746	Whitepark Road(71)	1	6
S01747	Dunboe Road(75-77)	1	6
S01748	Ballinlea Road(81)	1	9
S01749	Drumavoley Road(83)	1	6
S01750	Gorran Road(84)	1	6
S01751	Kinneyglass Road(87-89)	1	6
S01753	Magheramore Road(89)	1	9
S01754	Moneybrannon Road(89)	1	6
S01755	Agivey Road(199-201)	1	6
S01757	Moneynick Road(118)	1	12
S01760	Ballybentragh(66-72)	1	6
S01761	Moneynick Road(94)	1	12
S01763	Ballydonaghy Cottages (1-4)	1	12
S01764	Ballynamullan Road(32-34)	1	6
S01765	Ballynashee Road(71-77)	1	12
S01766	Cherryvalley Road(24)	1	9
S01767	Cogry Road(25-27)	1	6
S01768	Connaught Road(21)	1	15
S01769	Coolsythe Road(23)	1	6
S01770	Creggan Road(27)	1	6
S01771	Deerpark Road(92)	1	18
S01772	Diamond cottages(1)	1	30
S01773	Drennans Road(6)	1	6
S01774	Hollybank Road(10)	1	6
S01775	Hollybank Road(54)	1	15
S01776	Largy Cottages(1)	1	30
S01777	Gortnagallon Cottages(1-4)	1	12
S01779	Oldstone Terrace(8)	1	24
S01780	Rickamore Road(36-38)	1	6
S01781	Seven Mile Straight(177)	1	12
S01782	Shaneoguestown Road(38)	1	6
S01783	Cushleake Road(37-39)	1	6
S01785	Railway view(3)	1	6
S01787	Glenstaghey Road(11)	1	10
S01791	Backlower Road(111-115)	1	9
S01792	Ballydermot Road(7-9)	1	6
S01793	Ballynease Road(160-164)	1	9
S01794	Bellshill Road(83-85)	1	6
S01795	Bells hill(63-65)	1	6
S01796	Carmean Road(42-46)	1	9
S01797	Shore Road (Castle View)	1	12
S01798	Culnady Road(46-50)	1	9
S01799	Moyagall Road(115-117)	1	6
S01800	Drumbolg Road(98-100)	1	6
S01801	Drumconvis Road(16-18)	1	6
S01802	Battery Road(43-45)	1	6
S01803	Drumnacannon Road(20-22)	1	6
S01804	Dunronan Road(25-27)	1	6
S01805	Edendoit Road(22-32)	1	18

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S01806	Ford Road(27)	1	6
S01807	Gortnaskea Road(45-47)	1	6
S01808	Hillhead Road(127-131)	1	9
S01809	Killyneese Road(14-16)	1	6
S01810	Lisnamorrow	1	15
S01811	Lower Grange Road(20-26)	1	12
S01812	Mullaghboy Road(136-138)	1	6
S01813	Point Road(29-33)	1	15
S01814	Pomeroy Road(47-49)	1	6
S01815	Stranagard	1	6
S01816	Tamnadeese Road(7-9)	1	6
S01817	Tobermore Road(144-146)	1	6
S01818	Tullaghmore Road(41-43)	1	6
S01819	Tullyveagh Road(2-4)	1	6
S01820	Tulnacross Road(44-46)	1	6
S02016	Annaghmore Road(28)	1	18
S02017	Orritor Road(182)	1	12
S02018	Seven Mile Straight(78)	1	6
S02019	Seven Mile Straight(82)	1	6
S02020	Seven Mile Straight(86)	1	6
S02021	Corbally Road(45)	1	6
S02022	Drumavoley Road(39-41)	1	6
S02023	Chatham Road	1	6
S02024	Garryduff Church	1	9
S02026	Drumagarner Road(148-150)	1	6
S02027	Drumagarner Road(212-218)	1	12
S02028	Dreenan Road(38-40)	1	6
S02029	Riverside(16-20)	1	12
S02030	Davagh Park	1	18
S02031	Ballymaguire Road(33-35)	1	6
S02032	Corkill (Tyrone)	1	6
S02033	Coagh Road(20-22)	1	6
S02034	Drumenny Road(120-128)	1	9
S02049	Breaside Cottages(1-6)	1	18
S02057	Dunore WTW (Septic Tank No1)	1	3
S02057	Dunore WTW (Septic Tank No2)	1	3
S02057	Dunore WTW (Septic Tank No3)	1	3
S02059	Boleran Road (Garvagh)	1	12
S02110	Katesbridge Road(79-85)	1	12
S02113	Castlevannon Road(49-51)	1	6
S02114	Aughnavallog	1	36
S02115	Ballybrick	1	18
S02117	Ballymore	1	15
S02118	Ballyrone Road (WWTW)	1	18
S02119	Ballyvarley (WWTW)	1	18
S02120	Ballyward	1	6
S02121	Castlevannon	1	3
S02122	Balleevy	1	12
S02124	Diamond Road(73-79)	1	12
S02125	Dree Hill	1	12

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S02126	Dromara Road (Lacken)	1	12
S02128	Dronehill Road	1	12
S02129	Drumaran Road	1	9
S02131	Drumgooland	1	6
S02132	Edentirooory	1	9
S02133	Glenhead Road	1	12
S02134	Hazelbank	1	24
S02135	Hillhead Road (Down)	1	6
S02137	Killysavan	1	30
S02139	Knock Terrace	1	36
S02140	Laurelvale Road	1	12
S02147	Maglion Terrace	1	36
S02148	Manse Road (Down)	1	12
S02149	Marlacoo Road	1	28
S02150	McCandless Terrace	1	36
S02153	Mossvale Terrace	1	36
S02154	Mount Ida	1	6
S02157	Rathfriland Road	1	12
S02158	Ringsend Road	1	6
S02163	The Skeagh	1	9
S02164	Dougan place	1	36
S02165	Sentry Box Road (20-22)	1	6
S02167	Whitegate Road	1	9
S02169	Ballykelly (DOWN)	1	21
S02171	Greenan	1	12
S02172	Rock Cottages	1	21
S02175	Portadown Road (Tandragee)	1	12
S02176	Rosevale Road	1	12
S02243	Ballintemple WTW (Septic Tank)	1	3
S02249	Armagh Road(144-146)	1	6
S02250	Armagh Road(202-206)	1	9
S02251	Armagh Road(189-193)	1	9
S02252	Ballymoyer	1	42
S02254	Carrig Place	1	18
S02255	Carnally	1	9
S02256	Carran Hill (WWTW)	1	3
S02257	Carrickrovaddy	1	23
S02258	Ballsmill	1	12
S02259	Glenanne	1	9
S02260	Concession Road	1	21
S02261	Corrinure	1	6
S02262	Aughanduff	1	12
S02263	Oneill Terrace	1	33
S02267	Dorsy	1	39
S02268	Drumilly	1	60
S02274	Lisnalea	1	75
S02276	McKinley Park	1	45
S02278	Mountain View (Drumintee)	1	70
S02283	Orahilly Park	1	37
S02284	Oliver Plunkett Park	1	84

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S02286	St Bridgids Villas	1	27
S02287	Goragh Road	1	6
S02292	Magee Terrace	1	15
S02294	Killeen (Armagh)	1	97
S02297	Jerrettspass (WWTW)	1	39
S02299	Demoan Villas	1	18
S02369	Ballymaconaghy WTW (Septic Tank)	1	3
S02380	Castor Bay	1	24
S02389	Liscorran Road(3-5)	1	6
S02391	Anville Crescent	1	42
S02392	Corbrackey Road	1	12
S02399	Charlestown	1	76
S02403	Diviny	1	19
S02404	Drumard Primate (WWTW)	1	37
S02406	Feumore (WWTW)	1	74
S02408	Jennys Lane	1	17
S02409	Knocknagore (WWTW)	1	15
S02418	Mullahead Road (WWTW)	1	9
S02421	Tartaraghan	1	50
S02427	Cross Lane(9-22)	1	25
S02428	Clarehill Road	1	12
S02430	Legatirriff	1	23
S02431	Soldierstown	1	32
S02432	Knocknarea Road	1	15
S02433	Gallrock	1	17
S02530	Seagahan	1	24
S02531	Clay Lake	1	3
S02547	Aghory	1	65
S02557	Ardress (WWTW)	1	123
S02560	Ballymacawley	1	22
S02561	Ballymacnab	1	30
S02562	Ballynagalliagh (Armagh)	1	27
S02565	Cavanagrow	1	38
S02568	Crossnamoyle	1	18
S02571	Derryhaw	1	10
S02572	Derrymagowan	1	6
S02573	Doogary	1	17
S02574	Drumhillery	1	71
S02576	Dundrum (Armagh)	1	23
S02578	Eglish (Armagh)	1	87
S02579	Farmacaffley	1	62
S02580	Grangemore	1	42
S02581	Grange Blundel	1	18
S02583	Kilmachugh	1	27
S02585	Lisdown	1	22
S02586	Lisnadill (WWTW)	1	22
S02588	Kiltubbrid (WWTW)	1	33
S02589	Magheraville	1	12
S02590	Manor House	1	12
S02598	Teeraw	1	12

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S02599	Tullyelmer (WWTW)	1	6
S02600	Tullyroan	1	52
S02605	Derrynoose	1	18
S02670	Lough Island Reavy WTW (Septic Tank)	1	3
S02677	Fofanny WTW(Septic Tank)	1	3
S02678	Foffanybane WTW (Septic Tank)	1	3
S02682	Carneyhough	1	6
S02686	Burren Road	1	12
S02689	Ballycoshone	1	6
S02690	Ballymaconaghy Road	1	6
S02691	Ballyrussell	1	24
S02692	Bankside Shinn	1	71
S02696	Corcreechy Road	1	9
S02697	Drumgreavagh	1	6
S02698	Drumnascamph	1	38
S02699	Fourmile	1	18
S02700	Glen View (Down)	1	12
S02702	Hilltown Road	1	15
S02707	Lurgancahone Road(35-39)	1	9
S02708	Lurgancahone Road(57-59)	1	6
S02710	Moneyscalp	1	21
S02712	Mountain View (Tullymurry)	1	36
S02715	Saval More Cottages	1	19
S02716	Shinn Road	1	18
S02717	St Johns Terrace (Kilcoo)	1	30
S02718	St Marys Terrace	1	18
S02719	St Patricks Villas	1	27
S02722	St Annes Terrace	1	18
S02724	Corgary Cottages (New)	1	18
S02725	Kilbroney Park(1-4)	1	12
S02726	Newry Road Rathfriland (80-83)	1	6
S02727	Ballyardel	1	12
S02728	Ballymaderphy	1	66
S02778	Altmore WTW (Septic Tank)	1	3
S02793	Bovean	1	30
S02832	Bantry	1	26
S02837	Derrygortrevy	1	24
S02839	Doan Place	1	18
S02841	Drumkee	1	17
S02845	Inishmagh	1	15
S02851	Mullyroddan	1	21
S02854	Stangmore (WWTW)	1	18
S02855	Tullyleek	1	24
S02856	Kinego Cottages	1	12
S02858	Edencrannon (WWTW)	1	90
S02860	Drumard (Tyrone)	1	12
S02861	Kilnacart	1	12
S02887	Glascar Road(28-30)	1	6
S02889	Gortnagola Road	1	6
S02890	Ballygowan Road (140-142)Banbridge	1	6

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S02892	Castlewellan Road (Dromore)	1	6
S02893	Upper Cranlome Road	1	6
S02897	Commons School Road(8-10)	1	6
S02903	Crilly	1	9
S02993	Altishane	1	12
S02995	Ardess	1	66
S03009	Ballee Road	1	15
S03011	Ballynamullan	1	12
S03014	Ballygowans	1	12
S03017	Ballymacallion (WWTW)	1	18
S03021	Ballyquinn (WWTW)	1	101
S03025	Beltrim (WWTW)	1	15
S03028	Blaney	1	18
S03029	Bohulkin	1	9
S03030	Bolea (WWTW)	1	93
S03036	Carnalea Road	1	15
S03037	Carnanbane	1	42
S03040	Carrontreemall	1	39
S03043	Castlemellan Lower	1	18
S03044	Castlemellan Upper	1	18
S03046	Castletown (WWTW)	1	15
S03047	Caugh Hill (WWTW)	1	9
S03050	Church Hill	1	69
S03058	Coragh	1	18
S03059	Corkill (Fermanagh)	1	18
S03060	Cornakessagh	1	9
S03061	Cornamuck	1	27
S03062	Corickmore	1	18
S03063	Corry (WWTW)	1	12
S03066	Creaghcor	1	30
S03067	Crebarkey	1	24
S03068	Creevangar	1	12
S03069	Crew Bridge	1	18
S03070	Cullion (Bready)	1	79
S03073	Derryaghna	1	18
S03085	Dromore Highlands	1	126
S03088	Drumenny	1	98
S03090	Drumgay (1)	1	11
S03091	Drumgay (2)	1	39
S03093	Drumlegagh Road South	1	12
S03094	Drummack	1	16
S03095	Drummond	1	22
S03096	Drumnakilly	1	122
S03097	Drumneechy	1	24
S03102	Dunmullan	1	58
S03104	Edenderry (Tyrone)	1	58
S03105	Edenmore Road	1	12
S03107	Ervey Road	1	15
S03109	Faughan	1	9
S03111	Fincarn	1	85

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S03117	Garvetagh	1	81
S03119	Glenabbey (WWTW)	1	45
S03120	Glenagoorland	1	18
S03127	Gortscreagan	1	82
S03130	Gransha Park(25-27)	1	6
S03131	Stradreagh (Septic Tank)	1	12
S03133	Greenville	1	24
S03136	Hunter Bungalows	1	18
S03138	Keady (Fermanagh)	1	18
S03139	Keenaghan (Tyrone)	1	18
S03141	Kilgarrett	1	12
S03142	Killaloo	1	92
S03148	Kilskeery	1	91
S03151	Knockbrack	1	22
S03152	Knockmoyle	1	95
S03153	Knockonny	1	18
S03156	Legacurry (Tyrone)	1	19
S03157	Legaghory	1	30
S03158	Letterbin (WWTW)	1	59
S03161	Letterkeen	1	12
S03163	Limestone (2)	1	6
S03166	Lisdoart (1)	1	58
S03167	Lisdoart (2)	1	16
S03168	Lisnakilly	1	33
S03169	Lisnaragh	1	24
S03175	Loughan Road (Tyrone)	1	27
S03176	Magheracoltan	1	21
S03183	Milltown(Artigarvan)	1	12
S03185	Molenan	1	36
S03188	Moneycanon	1	37
S03189	Monmurry	1	24
S03190	Moorfield	1	18
S03191	Mountcastle	1	12
S03194	Mulderg (WWTW)	1	55
S03196	Mullans (Fermanagh)	1	6
S03197	Mullynaburtlan	1	18
S03201	Eskragh	1	33
S03206	Owenbeg (WWTW)	1	30
S03211	Rosscolban	1	3
S03212	Rosscor	1	15
S03214	Rousky	1	33
S03216	Scribbagh (WWTW)	1	14
S03222	Springfield	1	83
S03227	Tattysallagh	1	70
S03230	Tirquin	1	24
S03233	Tullyard(Tyrone)	1	12
S03234	Tummery	1	24
S03235	Tursallagh	1	18
S03239	Woaghternerry	1	30
S03277	Donnybrewer Road(99)	1	6

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S03278	Donnybrewer Road(98)	1	6
S03334	Culmore Point	1	18
S03494	Belleek (WTW) Septic Tank	1	3
S03499	Derg (WTW) Septic Tank	1	3
S03504	Glenhordial WTW (Septic Tank)	1	3
S03505	Killea WTW(Septic Tank)	1	3
S03507	Lough Bradan WTW (Septic Tank)	1	3
S03509	Lough Macrory WTW (Septic Tank)	1	3
S03911	Derryanvil	1	12
S03947	Abbacy Road	1	42
S03975	Tully Road Headworks	4	2130
S03987	Drumlegagh Church Road	1	92
S04026	Upper Malone Road	1	24
S04027	3 Sisters	1	18
S04037	Ballyvelton Road(45-51)	1	12
S04084	Ferris Bay (50)	1	15
S04086	Horse Park (5-7)	1	6
S04087	Lough Fea (WwTW)	1	3
S04088	Glaskerbeg Road (11)	1	3
S04090	Ballyhornan Outfall	3	914
S04091	Ballee Road (75-83)	1	9
S04092	Leeke Road	1	32
S04093	Carricklongfield Road (21-23)	1	6
S04094	Edenreagh Road(39-41)	1	15
S04095	Ardlough Road (40-42)	1	6
S04096	Priestland Road (51-53)	1	6
S04097	Foreglen Road (51-53)	1	6
S04098	Drumlegagh Church Road (63-65)	1	6
S04099	Bonds Glen Road (65-67)	1	6
S04100	Carrowreagh Road(68-70)	1	6
S04101	Drumflugh Road (75-77)	1	6
S04102	Kilclean Road (80-82)	1	6
S04103	Dunnyboe Road (85-93)	1	12
S04104	Edergoole Road (87-89)	1	6
S04105	Bonds Glen Road (149-151)	1	6
S04111	Victoria Road (277-279)	1	6
S04112	Ballyheather Road (121-123)	1	6
S04113	Duncastle Road (52-60)	1	15
S04114	Gortnagross Road (38-40)	1	6
S04115	Ballynahaye Road(3)	1	6
S04116	Glenedra Road (109-111)	1	6
S04117	Scotstown Road (7-9)	1	6
S04118	Trench Road (66-70)	1	9
S04119	Tullymore Road (43-45)	1	6
S04120	Drumturn Road (234-238)	1	9
S04121	Bovevagh Road (37-41)	1	6
S04122	Whin Road (21-23)	1	6
S04123	Ballyavelin Road (133-135)	1	12
S04124	McNally Park(1-6)	1	18

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S04127	Tibaran Cottages	1	24
S04134	Minterburn Road(115-117)	1	6
S04135	Springwell Crescent(1-6)	1	21
S04136	Corickbeg Road(15-17)	1	6
S04137	Whitelough Road(29-31)	1	6
S04138	Killycurry Road(30-32)	1	6
S04139	Lough Road(29-31)	1	9
S04140	Derryork Road(33-35)	1	6
S04141	Brisland Road(3-5)	1	6
S04142	Belfast Road(56-58)	1	6
S04143	Bearney Road(55-61)	1	12
S04144	Rehaghy Road(64-66)	1	6
S04145	Hillside Road(7-9)	1	6
S04146	Killinchy Road(96-100)	1	9
S04159	Windmill Road(71-73)	1	6
S04161	Drumalig Road (62-64)	1	6
S04162	Carnteel Road (122-124)	1	6
S04873	Grove Road(21-23)	1	6
S04875	Ballybogie Road(7-9)	1	6
S04877	Ballinderry Road (45-49) Antrim	1	9
S04884	Conthem Rd	1	29
S05182	Beech Hill South	1	54
S05186	Letterbreen	1	88
S05188	Lower Rashee Road (15-21)	1	12
S05189	Ballywalter(Retention Tank)	4	2383
S05286	Reaskmore Road	1	12
S05369	Legcloghfin Road Cranagh	1	63
SO5412	Ballyhalbert Victoria	3	1744

ANNUAL INFORMATION RETURN - TABLE 17a SEWERAGE EXPLANATORY FACTORS
SEWERAGE SUB - AREA EXPLANATORY FACTORS (TOTAL)

[illegible]

**Table 17a Sewerage Explanatory Factors- Sewerage Sub-Area
Explanatory Factors**

Line 1 - Annual average resident connected population (Total)

AIR11	Confidence Grade	AIR12	Confidence Grade
1,439.5 x 10 ³	C3	1,454.5 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 1, 'total' column) plus annual average non-resident population in table 17a (line 2, 'total' column) should equal the total connected population in table 13 (line 10)”*

NI Water has not calculated the Total Annual Average Resident Connected Population independently of the Total Annual Average Non-Resident Population and the Total Connected Population. Instead, the Company has used the consistency check (above) to derive the Total Annual Average Resident Connected Population.

- According to AIR12: Table 13: Line 10, the total connected population (comprising resident and non-resident population) was 1,472.568 x 10³.
- According to AIR12: Table 17a: Line 2, the annual average non-resident population was 18.088 x 10³.
- By calculation, the annual average resident connected population = 1,472.568 x 10³ – 18.088 x 10³ = **1,454.480 x 10³**.

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

The AIR12 figure of 1,454.5 x 10³ is 15.0 x 10³ higher than the AIR11 figure of 1,439.5 x 10³. This represents an increase of 1.0% and is attributed to an increase in total connected sewerage population of 13.1 x 10³ and a decrease in annual average non-resident connected sewerage population of 1.9 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)

AIR11	Confidence Grade	AIR12	Confidence Grade
20.0 x 10 ³	C3	18.1 x 10 ³	C3

NI Water has included holiday and tourist population connected to the sewerage system, averaged over the year.

NI Water has not included any allowance for daily commuters or day visitors.

Statement detailing estimation method used including date of data on which estimate is made

NI Water obtained a copy of the annual statistics bulletin *“Results from the Northern Ireland Passenger Survey 2011”*, published by DETINI on 22 March 2012.

- According to the publication, the estimated number of nights spent in Northern Ireland in 2011 by overseas non-resident visitors (excluding those whose country of residence was the Republic of Ireland) was 5,285,000.

NI Water also obtained a copy of the quarterly statistics bulletin *“Household Travel (HOTRA) Survey Quarter 1 2010”*, published on 17 November 2010 by CSO and copies of the annual statistics bulletins *“Overseas Visitor Estimates for Northern Ireland”*, published by NITB.

The company used the information to establish the historical relationship between RoI and total non-resident annual visitors to Northern Ireland. This relationship was then used to estimate the number of nights spent in Northern Ireland in 2011 by RoI non-resident visitors and hence, the estimated total number of non-resident visitor nights.

- The total number of non-resident visitor nights was estimated as follows:
 $5,285,000 + 1,317,000 = 6,602,000$
- The annual average non-resident population was estimated as follows:
 $6,602,000 / 365 \text{ nights} = \mathbf{18,088}$.

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”.

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 (including RoI visitor nights), 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 & 2010, NI Tourist Board published the actual number of non-resident visitor nights (Jan-Aug 09 and Jan-Sep 10) in their *“GB and Overseas Visitors to Northern Ireland Summaries”* and NI Water estimated the annual numbers on the basis of the percentages of bed-spaces sold for hotel, guesthouse and bed and breakfast establishments during the same periods.

In 2011, the source of the information used to calculate the Winter Population, Resident Sewerage Population and Non-Resident Population has changed as the NI Tourist Board is no longer involved in conducting the NI Passenger Survey (NIPS). Instead, this task has been passed to the Department of Enterprise, Trade and Investment (DETINI). Details of the actual survey and how it is conducted are available at www.detini.gov.uk/deti-stats-index/tourism-statistics/stats-accomm-6. The administration of the survey is carried out by the Northern Ireland Statistics & Research Agency (NISRA), Central Survey Unit.

In addition to this change, the estimated annual number of RoI non-resident visitor nights must now be sourced direct from the Central Statistics Office (CSO), Ireland as the NI Passenger Survey only covers the value and volume of overseas visitors whose country of residence is outside the RoI. The recommended publication is the *“Household Travel (HOTRA) Survey”* but the bulletin has not been updated since the first quarter of 2010, hence the need for extrapolation.

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 2010 (7,296,922) and 2011 (6,602,000) reveals there has been a decrease in tourism.

Confidence Grade

It is assumed that the NI Passenger Survey is of a similar format to the survey conducted by NI Tourist Board and that there has been no change in the accuracy of the published results.

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

1. The publication *“Results from the Northern Ireland Passenger Survey”* provides only an estimate of the annual number of overseas non-resident visitor nights based on surveys conducted by DETINI.

2. The publication *“Household Travel (HOTRA) Survey”* provides only an estimate of the annual number of RoI non-resident visitor nights and a figure for 2011 is only available through extrapolation.
3. The publication *“Statistics on Accommodation”* provides only an estimate of the numbers of bed-spaces sold, based on the extrapolation of data for a representative sample group of establishments.

NI Water has assigned a confidence grade of **C3** to account for known deficiencies in the reliability and accuracy of the reported figure.

Line 3 – Volume of Sewerage Collected

This figure has been copied from AIR12 Table 14 Line 7 – Volume Waste Water Returned.

Line 4 – Total Connected Properties

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

In terms of Table 17a, we are currently analysing the data to achieve greater understanding of the movement within data sets and alignment with the figures for newly connected properties.

It was NIW's intention to automate the production of this report via the DIAMOND database reporting tool during the 2011/2012 year although this piece of the DIAMOND project has not yet been taken forward by our ICT department. This year we introduced an automated tool to populate the figures within Table 17a Line 4 from the Rapid Property Summary.

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 AIR11 reports. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

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 2012. Work is on-going, through the Cost to Serve Project, on the sewerage areas the costs will be split between. Cost to Serve is not fully implemented and therefore could not be used for AIR12. The figures populated in Column 9 have been taken from Table 22 (NIW only).

Line 7 – Direct Costs

It is not yet possible to split the costs into areas, however, work is on-going in this area. A total figure has been supplied in Column 9 which agrees to the direct sewerage costs in Table 22, Line 9 Column 1. See Table 22 commentary. Direct Costs have reduced by circa £1.1M from AIR11. This is driven by a £0.6M reduction in Hired & Contracted costs and a £0.3M reduction in Power costs.

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 £0.3M.

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 £1.8M lower than AIR11 due to the overall decrease in the total NI Water unallocated General and Support costs. 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 £2.8M from AIR11. This is primarily driven by the reduction in General & Support costs discussed above.

ANNUAL INFORMATION RETURN - TABLE 17b SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LARGE WORKS INFORMATION DATABASE (NIW Only)

[illegible]

Table 17b – Sewage 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 AIR12 are:

AIR12 Table 17b Band 6 Sites for Submission

LIMS Code	LIMS Name	Confirmed PE from AMS	AIR11 Band
S34AG	Carrickfergus WWTW	32029	Band 6
S34AK	Belfast WWTW	354507	Band 6
S37AB	Dunmurry WWTW	45798	Band 6
S37AA	Lisburn (New Holland) WWTW	65714	Band 6
S34AD	Newtownbreda WWTW	40031	Band 6
S15BS	Larne WWTW	27967	Band 6
S34AE	Whitehouse WWTW	87943	Band 6
S15AO	Antrim (Milltown) WWTW	65789	Band 6
S13BE	Ballymena (Tullaghgarley) WWTW	80361	Band 6
S25AC	Dungannon (Moygashel) WWTW	52319	Band 6
S27AC	Newry WWTW	62490	Band 6
S45IB	Omagh WWTW	39432	Band 6
S43CI	Culmore WWTW	131457	Band 6
S47HK	Enniskillen WWTW	25490	Band 6
S17HF	North Coast WWTW	76266	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 95%ile limits.

The PE information and confidence grading was provided by Asset Performance Team, as part of their AIR12 return as at 31st March 2012.

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:

AIR12 Table 17b Band 5 Sites for Reference

LIMS Code	LIMS Name	Confirmed PE from AMS	AIR11 Band
S36AA	Downpatrick	17472	Band 5
S36BB	Kilkeel	10857	Band 5
S36BO	Newcastle	16263	Band 5
S17ED	Ballycastle	14019	Band 5
S15AA	Ballyclare	18148	Band 5
S17BP	Ballymoney (Glenstall)	22030	Band 5
S13CH	Cookstown	19688	Band 5
S13GK	Magherafelt	14674	Band 5
S27AA	Banbridge	22680	Band 5
S27AN	Tandragee	11074	Band 5
S27AD	Warrenpoint	14952	Band 5
S43GI	Limavady	16669	Band 5
S45JA	Strabane	20197	Band 5

Costs

This table was populated in the same way as AIR11. 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 2012 as at 22nd May 2012. The Population Equivalent (PE) information used to complete this table was received by management accounts on 31st May 2012. No PPP costs are included in this table.

Line 9 – Direct Costs

Direct Costs include Power 521X, Contractors 531X, Other Contractors 532X, Materials 541X, Chemicals 548X and Cost Reallocations 611X (this includes direct labours costs and & overhead charges).

15 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 AIR12 an additional site Enniskillen falls into this size band and is included in Column 14.

Direct costs have increased by circa £0.3M from AIR11. £0.2M of this is due to the inclusion of an additional works, Enniskillen in this table. The remaining £0.1M is due to an increase in Dungannon WWTW's (Column 11) power costs which are included in this line. Through the cost to serve project all power costs are allocated to individual sites and a report was taken from EAM to get the full year power cost per WWTW's. In AIR 11 power costs were incorrectly coded for Dungannon WWTW's.

Line 10 – Power Costs

Through the cost to serve project all power costs are allocated to individual sites and a report was taken from EAM to get the full year power cost per WWTW's. This is an improvement from AIR11 and the total power costs have

increased in AIR12 by £0.2M due to the inclusion of Enniskillen in this table and more accurate coding of power costs through EAM.

There is one electric meter at each site and all the power costs are coded to each individual works to sewage treatment. The Field Managers responsible for each WWTW's estimated the percentage use for sludge treatment and sewage treatment at each WWTW's. This was multiplied by the Power costs at the site to calculate the portion relating to sewage treatment. Belfast WWTW's was treated separately as there is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTW's and the two PPP Incinerators. The power team supplied a split between the Incinerators and Belfast WWTW's which was used apportion a cost to the works. The split for this in AIR11 was 42:58 and in AIR12 was 36:64 for the Belfast and Incinerators. No costs for the Incinerator have been included in this table in AIR12.

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 £0.3M from AIR11, primarily due to the overall reduction in the general & support costs and the improved allocation of labour costs between sludge and sewage treatment. See Table 22 commentary for further breakdown and explanation.

Line 13 – Functional Expenditure

This is a calculated line and is the total of Line 9 and Line 12. The total in the workings agrees to Table 22 (NIW Only) Column 2 Line 11. Costs have remained consistent since AIR11.

Line 14 – Terminal Pumping Costs

This information was populated in the same way as AIR11. Ballymena is the only works where the pumping station costs can be separately identified and have been included as part of direct costs. These have been identified separately in Column 3 Line 14.

Line 15 – Sludge Costs

Sludge treatment is a separate activity in the accounts and the direct costs are not included in Line 9 to Line 13.

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (NIW Only)

			1	2	3	4	5	6	7	8	9	10	11	
DESCRIPTION	UNITS	DP	TREATMENT CATEGORY										TOTAL	
			PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS				
				ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED		
A SMALL WORKS														
1	Number of STWs in size band 1	nr	0	241	33	501	1	0	1	2	0	0	6	785
2	Number of STWs in size band 2	nr	0	0	9	36	4	0	8	1	0	1	0	59
3	Number of STWs in size band 3	nr	0	2	22	58	5	3	9	5	3	0	4	111
4	Number of STWs in size band 4	nr	0	1	27	11	2	3	2	2	3	2	0	53
5	Number of STWs in size band 5	nr	0	0	6	0	1	4	0	1	1	0	0	13
B LARGE WORKS														
6	Number of STWs in size band 6	nr	0	0	7	0	2	6	0	0	0	0	0	15
7	Total numbers of STWs	nr	0	244	104	606	15	16	20	11	7	3	10	1036
C SMALL WORKS WITH AMMONIA CONSENTS														
8	Number of small STWs with NH ₃ consent (5 - 10mg/l)	nr	0	43										
9	Number of small STWs with NH ₃ consent (<= 5mg/l)	nr	0	54										

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (PPP Only)

[illegible]

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (Total)

[illegible]

Table 17c- Sewage Treatment Works Numbers**NIW Only**

It should be noted that the banding of the WWTWs is based on the latest Populations Equivalents minus tourist PEs (i.e. hotels and caravan parks only as information does not exist on proportion of PE to commuters). Since AIR11, PEs for 134 WWTWs have been updated.

Changes regarding WWTWs from the AIR11 period are as follows:

- 7 WWTWs have been rationalised and pumped away to larger WWTWs in last financial year.
- 4 WWTWs have been decommissioned.
- 2 WWTWs have been commissioned

This is a net decrease of 9 WWTWs from AIR11 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. 1,036 including the screened outfalls (3 No.) and the unscreened outfalls (10 No). The number of WWTWs in Table 15 line 8 is 1,023 as the screened and unscreened outfalls are not to be included in the total for this line.

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 AIR12 comparison between the two figures.

Total Residential Population used to Calculate Table 17c for AIR12	1,209,756
Total Population connected to the sewerage system based on Table 13 Line 10	1,471,217
Difference	261,461

As can be seen there is a difference of 261,461. However the Table 17c information does not include the residential population within PPP catchments. An exercise was carried out during February 2012 to establish a Theoretical Desktop PE for the PPP sites. The non-residential aspect of these PEs have been subtracted from the AIR12 PPP PEs (based on the reported PPP BOD Load and divided by 60g/head/day).

Name of WWTWs	Equivalent Population (From PPP Section)	Non-Residential PE held against PPP Catchments (Includes Non-Residential, Trade, Schools, Large water Consumers)	Residential Population (Based on PPP Equivalent Population)
North Down WWTW	65038	9410	55628
Armagh WWTW	23400	5244	18156
Richhill WWTW	2617	239	2378
Newtownards (Ballyrickard)	27200	10845	16355
Ballynacor WWTW	157750	52095	105655
Kinnegar	80767	32153	48614
Total	356,772	109,986	246,786

As can be seen the residential population for the PPP sites is now approximated to be 246,786. If this is added to the 17c figure (1,209,756) then the total is 1,456,542 which is 14,675 less than the figure held in Table 13, approximately 1% less.

It should be noted that the Residential PE for most of the NIW WWTWs has been derived from GIS pointer data and that inaccuracies do exist with the latter in that some residential properties are labelled as commercial or industrial, and visa-versa.

The AIR11 Reporter's Report stated '***The Asset Performance team collates all information into the central spreadsheet from which Band Size for each WwTW can be assessed and any changes highlighted. The size banding of each works is added manually. For AIR12, we consider this process should be automated, for the avoidance of any misrepresentation.***' Hence NIW has incorporated a means within the central spreadsheet to automate this process.

The Reporters report for AIR09 recommended that a consistent approach for population figures used in the 17 series tables should be adopted. The population figures used in Table 17c are the same as in 17d. These figures have also been supplied to the other parts of the business which populate Tables 17a, 17b & 17f etc, so population figures should be consistent.

With reference to the WWTWs in Size Band 1:

- the number of WWTWs with a PE less than or equal 100 (excluding tourist PE) is 703, and
- the number of WWTWs with a PE greater than 100 but less than or equal to 250 (excluding tourist PE) is 82.

The table below highlights the changes in band sizes from AIR11 to AIR12

Name of Works	CAR ID	AIR11 Band Sizes	AIR12 Band Sizes	Comment
Ballyhalbert Old (Retention Tank)	S00215	Band 3		This WWTW was upgraded during AIR11 and details adopted then. However new WWTWs is on a new site with a new name - Ballyhalbert Victoria, therefore this entry replaced with new one
Belfast Road(207-209)	S00856	Band 1		This is now a private WWTWs
Glassdrumman (Down)	S00302	Band 1	Band 2	Dunmore Cottages now pumps to this site
Aird	S01171	Band 1		This site is now a pump away to Bushmills
Giants Causeway (Retention Tank)	S01186	Band 1		Giants Causeway is now a pumpaway to Bushmills
Robinsonstown	S02419	Band 2	Band 3	PE updated following a population review by AECOM, consultants working on behalf on NIW. This was reviewed by APT prior to adoption
Tandragee	S02174	Band 4	Band 5	Trade PE Updated for AIR12
Cranagh (WWTW)	S03065	Band 1		Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet
Dromore (Tyrone)	S03083	Band 4	Band 3	PE updated following a population review by consultants working on behalf on NIW. This was reviewed prior to adoption
Enniskillen	S03218	Band 5	Band 6	Trade PE Updated for AIR12
Fivemiletown (WWTW)	S03113	Band 3	Band 4	PE updated following a population review by consultants working on behalf of NIW. This was reviewed prior to adoption
Gosheden (1)	S03128	Band 1		This WWTWs is now a gravity away
Jacksons Crescent (1-6)	S04106	Band 1		This site is now a pumpaway to Saintfield
Jacksons Crescent (7-8)	S04107	Band 1		This site is now a pumpaway to Saintfield
Jacksons Crescent (9-10)	S04108	Band 1		This site is now a pumpaway to Saintfield
Drumalig Road(9-11)	S04158	Band 1		This is now a private WWTWs
Dunmore Cottages	S00806	Band 1		This site is now a pump away to Glassdrumman Down
Legcloghfin Road Cranagh	S05369		Band 1	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet.

Name of Works	CAR ID	AIR11 Band Sizes	AIR12 Band Sizes	Comment
Ballyhalbert Victoria	SO5412		Band 3	Ballyhalbert WWTWs was upgraded during AIR11 but upgraded works is on a new site and has a new name, Ballyhalbert Victoria and therefore is a new entry on spreadsheet.

The table below highlights the changes in treatment category from AIR11 to AIR12.

Name of Works	CAR ID	AIR11 Treatment Category	AIR12 Treatment Category	Comment
Ballyhalbert Old (Retention Tank)	S00215	Prim	Out of Service	This WWTW was upgraded during AIR11 and details adopted then. However new WWTWs is on a new site with a new name - Ballyhalbert Victoria, therefore this entry replaced with new one
Ballystrudder (Retention Tank)	S00264	Sea Out Screen	Sea Out Prel	This WWTWs was upgraded during AIR12
Belfast Road(207-209)	S00856	Prim	Private	This is now a private WWTWs
Glassdrumman (Down)	S00302	Sec Act	Ter B1	This WWTWs was upgraded during AIR12
Mullaghboy	S00259	Sea Out Prel	Sec Bio	This WWTWs was upgraded during AIR12
Lisnaskea	S03171	Sec Act	Ter A2	It was confirmed that P dosing is present at this site
Newtownbreda (WWTW)	S00342	Ter A1	Sec Act	This WWTWs was upgraded during AIR12. Microstrainer was decommissioned but P dosing still exists.
Saintfield (WWTW)	S00290	Sec Act	Ter A2	Ter Treatment added to the site during AIR12
Whitehead (WWTW)	S00452	Sea Out Unscreen	Sea Out Prel	This WWTWs was upgraded during AIR12
Aird	S01171	Sec Bio	Pumpaway	This site is now a pump away to Bushmills
Drumullan	S01573	Sec Act	Sec Bio	This WWTWs was upgraded under the RWWIP project during AIR12
Giants Causeway (Retention Tank)	S01186	Sea Out Unscreen	Pumpaway	Giants Causeway is now a pumpaway to Bushmills
Limestone (2)	S03163	Sec Bio	Prim	Following a review of assets at small WWTWs carried out by APT the details of this site were amended
Bankside Shinn	S02692	Sec Bio	Sec Act	Following a review of assets at small WWTWs carried out by APT the details of this site were amended
Corbet	S02123	Ter B1	Sec Bio	This WWTWs was upgraded under the RWWIP project during AIR12
Dyan	S02842	Ter A1	Sec Bio	This WWTWs was upgraded under the RWWIP project during AIR12

Name of Works	CAR ID	AIR11 Treatment Category	AIR12 Treatment Category	Comment
Galbally	S02844	Sec Act	Ter B2	This WWTWs was upgraded under the RWWIP Project during AIR12
Gilford (WWTW)	S02162	Ter B1	Sec Bio	Ter treatment no longer in operation on site
Keady (Armagh)	S02553	Sec Bio	Ter B2	This WWTWs was upgraded during AIR12
Mountjoy (Dungannon)	S02849	Sec Act	Sec Bio	This WWTWs was upgraded during AIR12
Newmills (WWTW)	S02852	Sec Act	Sec Bio	This WWTWs was upgraded during AIR12
Cranagh (WWTW)	S03065	Sec Bio	Out of Service	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet
Donagh (WWTW)	S03078	Sec Act	Sec Bio	This WWTWs was upgraded under the RWWIP project during AIR12
Dooish	S03081	Sec Act	Sec Bio	This WWTWs was upgraded under the RWWIP project during AIR12
Gosheden (1)	S03128	Sec Bio	Gravity Away	This WWTWs is now a gravity away
Magheraveely	S03178	Sec Act	Sec Bio	This WWTWs was upgraded under the RWWIP project during AIR12
Spamount	S03221	Sec Act	Sec Bio	This WWTWs was upgraded under Base Maintenance during AIR12
Teemore (WWTW)	S03228	Sec Act	Sec Bio	This WWTWs was upgraded under the RWWIP project during AIR12
Tully (WWTW)	S03232	Sec Act	Sec Bio	This WWTWs was upgraded under the RWWIP project during AIR12
Jacksons Crescent (1-6)	S04106	Prim	Pumpaway	This site is now a pumpaway to Saintfield
Whin Road (21-23)	S04122	Sec Bio	Prim	
Jacksons Crescent (7-8)	S04107	Prim	Pumpaway	This site is now a pumpaway to Saintfield
Jacksons Crescent (9-10)	S04108	Prim	Pumpaway	This site is now a pumpaway to Saintfield
Drumalig Road(9-11)	S04158	Sec Bio	Private	This is now a private WWTWs
Dunmore Cottages	S00806	Sea Out Unscreen	Pumpaway	This site is now a pump away to Glassdrumman Down
Legcloghfin Road Cranagh	S05369		Sec Bio	Cranagh WWTWs was upgraded during AIR10 but upgraded works is on a new site and has a new name, Legcloghfin Cranagh and therefore is a new entry on spreadsheet.
Ballyhalbert Victoria	SO5412		Prim	Ballyhalbert WWTWs was upgraded during AIR11 but upgraded works is on a new site and has a new name, Ballyhalbert Victoria and therefore is a new entry on spreadsheet.

**Difference between AIR11 and AIR12 for total in Table 17c
(column 11, row 7)**

Total Number of Works for AIR 11 -	1,045
Total Number of Works for AIR 12 -	1,036
Total Difference -	9

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 AIR11 to present are summarised below:

Line	Nr AIR11	Nr AIR12	Difference	Comment
8	46	43	3	2 new sites- Robinsonstown, Garvaghy 5 sites removed- Dromara, Coalisland, Enniskillen, Lack, Mountfield
9	46	54	8	9 new sites- Dromara, Loughries, Saintfield, Cloughmills, Coalisland, Mountjoy (Dungannon), Bready, Mountfield, Nixons Corner 1 site removed – Robinsonstown

**PPP Only
Lines 1-9**

There are no changes to the PPP sewage works treatment categories.

Specific required commentary

- There are no doubts about the classification of any of the PPP works.
- The data is consistent with the data provided on Table 15 Line 8 (PPP Only) table.
- Based on the calculated loads treated at the PPP sewage works in the AIR 12 Reporting period, there are no size band 1 PPP works on which to provide extra detail.

ANNUAL INFORMATION RETURN - TABLE 17d SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LOADS (NIW Only)

DESCRIPTION			UNITS			DP			1	2	3	4	5	6	7	8	9	10	11			
									TREATMENT CATEGORY											TOTAL		CG
									PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS						
							ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED							
A SMALL WORKS																						
1	Load received by STWs in size band 1	kg BOD ₅ /day	0	142	210	1,526	3	0	7	25	0	0	60	1,973	C3							
2	Load received by STWs in size band 2	kg BOD ₅ /day	0	0	205	781	89	0	186	23	0	68	0	1,351	C3							
3	Load received by STWs in size band 3	kg BOD ₅ /day	0	200	1,588	3,408	311	261	503	337	348	0	244	7,200	C3							
4	Load received by STWs in size band 4	kg BOD ₅ /day	0	190	6,854	2,450	726	1,167	336	579	642	383	0	13,328	C3							
5	Load received by STWs in size band 5	kg BOD ₅ /day	0	0	6,058	0	1,048	4,295	0	880	841	0	0	13,123	C3							
B LARGE WORKS																						
6	Load received by STWs in size band 6	kg BOD ₅ /day	0	0	47,047	0	6,691	17,517	0	0	0	0	0	71,256	C3							
7	Total loads rec'd (daily average all size bands)	kg BOD ₅ /day	0	531	61,963	8,165	8,868	23,241	1,032	1,845	1,831	451	303	108,230	C3							
C SMALL WORKS WITH AMMONIA CONSENTS																						
8	Load rec'd by small STW w. NH ₃ consent (5 - 10mg/l)	kg BOD ₅ /day	0	5,859																		
9	Load rec'd by small STW w. NH ₃ consents (< = 5mg/l)	kg BOD ₅ /day	0	12,650																		

ANNUAL INFORMATION RETURN - TABLE 17d SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LOADS (PPP Only)

[illegible]

ANNUAL INFORMATION RETURN - TABLE 17d SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LOADS (Total)

[illegible]

Table 17d - Sewage Treatment Works Loads**NIW Only**

It should be noted that the banding of the WWTWs for this table is on the same basis as that used for Table 17c. It is based on the latest set of Population Equivalents minus the allowance for the tourist population. Since AIR11, PEs for 134 WWTWs have been updated.

The allowance for the tourist population, which has been deducted for the purposes of band size determination, has been the proportion of PE allocated to hotels, and caravan and tent pitches only. No deduction has been made for commuters as such information has not been captured.

The loads reported in this table are the sums of the loads received by each WWTWs or outfall in each particular category, and hence include the proportion of PE allocated to hotels, and caravan and tent pitches. Hence the loads reported in this table include the non-resident population.

1,045 WWTWs were reported on in Table 17d for AIR11. Hence there has been an overall net reduction of 9 in the number of WWTWs being reported in AIR12, which is summarised as follows:

- 6 WWTWs (Aird, Giants Causeway, Jacksons Crescent (1-6), Jacksons Crescent (7-8), Jacksons Crescent (9-10) & Dunmore Cottages) were pumped to other works,
- 4 WWTWs (Ballyhalbert Old, Belfast Road (207-209), Cranagh, Drumalig (9-11)) have been decommissioned,
- 1 WWTWs (Gosheden (1)) is now a gravity away to another WWTWs,
- 2 WWTWs (Legcloghfin Road Cranagh, Ballyhalbert Victoria) have been commissioned,

Trade effluent information was obtained from NIW's Trade Effluent Section, for each individual consented trader, which enabled easy conversion to PEs. The COD: BOD conversion factor of 2:1 was not used as more accurate flow based information was available to the Trade Effluent Section.

The Water and Sewerage Services (NI) Order 2006 designated that the discharge from hospitals, nursing homes & clinics should no longer be considered as Trade Effluent. Therefore for AIR12 these have been removed from the Trade Effluent Submission. 5% of hospital discharges has been included due to discharges from x-ray departments and bathing pools. However the AIR11 Trade Information, for these nursing homes and clinics, has been maintained for AIR12 in order to allow for this proportion of the influent entering the WWTWs. Similarly the PEs for the hospitals have been factored up to 100% of their total discharge to give a more accurate figure of load discharging to the sewage network.

Information received from the Trade Effluent Section, for the first time, has depicted trade effluent (equating to 88,095PE) being discharged from the Incinerator to Belfast WWTWs. The Asset Performance Team liaised with the Operational Staff, the Operational Technical Support Team (OTST) and the Process Scientist in an attempt to understand the true value of loading on Belfast WWTWs. Although flow and load measurement has been ongoing at Belfast WWTWs this information was portraying widely differing values, which had not been validated by the Operational or OTST staff. Hence it was agreed that the Belfast WWTWs AIR12 theoretical PE (updated to 354,507), computed by APT, should be used as the Operational staff are of the opinion that the Incinerator's trade effluent is reflected in this figure.

We have assumed the Bands to be:

Small works

- a. size band 1 $\leq 15\text{kg BOD5/day}$ (population equivalent: 0 - 250)
- b. size band 2 >15 but $\leq 30\text{kg BOD5/day}$ (population equivalent: 251 - 500)
- c. size band 3 >30 but $\leq 120\text{kg BOD5/day}$ (population equivalent: 501 - 2,000)
- d. size band 4 >120 but $\leq 600\text{kg BOD5/day}$ (population equivalent: 2,001 - 10,000)
- e. size band 5 >600 but $\leq 1500\text{kg BOD5/day}$ (population equivalent: 10,001 - 25,000)

Large Works

- f. size band 6 $> 1500\text{kg BOD5/day}$. (population equivalent: $> 25,000$)

The total number of WWTWs in Table 17c line 7 is the total of all works in this table i.e. 1,036 including the screened outfalls (3 No.) and the unscreened outfalls (10 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 AIR11, 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 AIR11 Reporter's report stated '***We suggest that NI Water consider comparing the results from the ongoing programme of flow and load surveys against the previous assumptions for each site to determine if there is a statistically significant difference which should be extrapolated into the larger population of WwTW sites.***' Although NIW to date has produced a number of flow and load studies at WWTWs, outputs from only two have been agreed for use to date. Due to the lack of understanding of flow and load survey output interpretation within NIW a Flow and Load Survey Group has been established to discuss and agree on the outputs from the backlog of surveys carried out to date and those to be carried out in the future. The experience held by the individuals involved in the Group (with process, operational, engineering and procurement and asset performance backgrounds) will enable sound decisions to be made regarding the adoption of the Flow and Load Survey outputs. The F&L Survey Group will review the outputs from existing F&L surveys during the course of 2012/13, and beyond, to achieve agreement on the outputs, which will hence improve the data set for future AIR returns, and will build on the knowledge of F&L analysis and interpretation within NIW.

During the AIR12 period outputs have only been adopted from 2 Flow and Load Surveys. The details are listed below:

Name of WWTWs	Adopted Actual PE Output from F&L Survey	AIR11 Actual PE
Garvagh WWTWs	2773	2,245
Clabby WWTWs	408	308

Hence NIW is not presently in a position to commence comparing the results from the ongoing programme of flow and load surveys against the previous assumptions for each site, to determine if there is a statistically significant difference which should be extrapolated into the larger population of WwTW sites.

Actual PEs have been adopted from a number of theoretical PE appraisals which have been carried out during the AIR 12 period.

The reporter also recommended in AIR11 that for AIR12 significant variances in load of WWTWs (i.e. greater than 15%) should be investigated. Below is a table detailing these sites and the reason for the change in PEs. There are 18no. WWTWs included in the table.

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	Difference*	Comments
Ardglass (WWTW)	S00268	2694	3167	-473	Trade PE Updated for AIR12
Glassdrumman (Down)	S00302	209	260	-51	Dunmore Cottages now pumps to this site
Killyleagh (WWTW)	S00273	7233	8556	-1323	Trade PE Updated for AIR12
Curran	S01613	189	154	35	PE updated following a population review consultants working on behalf of NIW. This was reviewed prior to adoption.
Garvagh (WWTW)	S01154	2245	2773	-528	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Blackwatertown (WWTW)	S02552	620	754	-134	PE updated following a population review consultants working on behalf of NIW. This was reviewed prior to adoption.
Robinsonstown	S02419	494	581	-87	
Tandragee	S02174	8621	11074	-2453	Trade PE Updated for AIR12
Tullyroan	S02600	36	52	-16	Trade PE Updated for AIR12
Clabby (WWTW)	S03051	308	408	-100	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Douglas Bridge	S03082	147	196	-49	PE updated following a population review consultants working on behalf of NIW. This was reviewed prior to adoption.
Fivemiletown (WWTW)	S03113	1693	2659	-966	
Gosheden (2)	S03129	67	92	-25	PE updated following a population review consultants working on behalf of NIW. This was reviewed prior to adoption. Gosheden (1) is also now a gravity away to this site
Killylane (WWTW)	S03147	136	103	33	PE updated following a population review consultants working on behalf of NIW. This was reviewed prior to adoption.
Magheraveely	S03178	118	89	29	
Mountjoy (Omagh)	S03193	239	143	96	
Tamnaherin	S03226	311	393	-82	
Teemore (WWTW)	S03228	201	233	-32	

*(-ve indicates AIR12 figure larger)

The total load of 1,08,230 kg BOD/day from all NIW (only) WWTWs reconciles with the Total load entering sewerage system (BOD/year) of 39,504.1 t BOD/year, from Table 15 line 5.

The Total load receiving primary treatment in table 17d (line 7, column 1) of 531.4 kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving primary treatment in table 15 (line 3) of *194 t BOD/yr*.

The Total load receiving secondary and tertiary treatment in table 17d (line 7, sum of columns 2–7) i.e. 105,113.4 kg BOD/day is consistent with total load receiving secondary treatment in table 15 (line 2) i.e. *38,366.4 t BOD/yr*.

The Total load receiving preliminary treatment in table 17d (line 7, column 8) of 1,831.2 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 *668.4 t BOD/yr*.

The table below depicts changes in PEs at WWTWs from AIR11 to AIR12.

It is presently difficult to state significant changes in WWTWs loads which will occur in the near future, as NIW 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 NIW.

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, 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	AIR11 Actual PE	AIR12 Actual PE	Difference*	AIR11 Band	AIR12 Band	Band Size Change
Annalong (WWTW)	S00300	3044	3266	-222	Band 4	Band 4	
Ardglass (WWTW)	S00268	2694	3167	-473	Band 4	Band 4	
Ballygowan	S00247	3358	3363	-5	Band 4	Band 4	
Ballyhalbert Old (Retention Tank)	S00215	2719	Out of Service	2719	Band 3		Y
Ballykinler (WWTW)	S00299	2245	2258	-13	Band 4	Band 4	
Ballynahinch (Down)	S00311	7954	7944	10	Band 4	Band 4	
Belfast Road(207-209)	S00856	6	Private	6	Band 1		Y
Carrickfergus (WWTW)	S00261	32035	32029	6	Band 6	Band 6	
Clough (WWTW)	S00296	1128	1060	68	Band 3	Band 3	
Downpatrick (WWTW)	S00771	17153	17472	-319	Band 5	Band 5	
Dromara (WWTW)	S00316	1385	1379	6	Band 3	Band 3	
Drumroad (WWTW)	S00312	237	217	20	Band 1	Band 1	
Belfast (WWTW)	S00345	358525	354507	4018	Band 6	Band 6	
Dunmurry	S00346	45727	45798	-71	Band 6	Band 6	
Glassdrumman (Down)	S00302	209	260	-51	Band 1	Band 2	Y
Greenisland (WWTW)	S00263	9574	9599	-25	Band 4	Band 4	
Kilkeel (WWTW)	S00313	10362	10857	-495	Band 5	Band 5	
Killinchy (WWTW)	S00252	2767	2922	-155	Band 4	Band 4	
Killyleagh (WWTW)	S00273	7233	8556	-1323	Band 4	Band 4	
Lisburn (New Holland)	S00329	65704	65714	-10	Band 6	Band 6	
Newcastle (WWTW)	S00303	16236	16263	-27	Band 5	Band 5	
Newtownbreda (WWTW)	S00342	40011	40031	-20	Band 6	Band 6	
Portavogie(Retention Tank)	S00209	3233	3115	118	Band 4	Band 4	
Larne (WWTW)	S02044	28040	27967	73	Band 6	Band 6	
Saintfield (WWTW)	S00290	5057	5082	-25	Band 4	Band 4	
Whitehouse	S00265	87947	87943	4	Band 6	Band 6	
Aird	S01171	134	Pumpaway	134	Band 1		Y

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	Difference*	AIR11 Band	AIR12 Band	Band Size Change
Ballycastle (WWTW)	S01071	14016	14019	-3	Band 5	Band 5	
Ballyclare	S01467	18527	18148	379	Band 5	Band 5	
Ballyronan (WWTW)	S01558	986	1107	-121	Band 3	Band 3	
Ballyvoy	S01177	289	288	1	Band 2	Band 2	
Bushmills (WWTW)	S01178	5342	5545	-203	Band 4	Band 4	
Carnan	S01559	71	74	-3	Band 1	Band 1	
Castledawson	S01609	1329	1305	24	Band 3	Band 3	
Curran	S01613	189	154	35	Band 1	Band 1	
Derrycrin	S01567	403	456	-53	Band 2	Band 2	
Derrykeighan	S01101	120	133	-13	Band 1	Band 1	
Drumullan	S01573	180	190	-10	Band 1	Band 1	
Garvagh (WWTW)	S01154	2245	2773	-528	Band 4	Band 4	
Giants Causeway (Retention Tank)	S01186	70	Pumpaway	70	Band 1		Y
Glenstall	S01109	20524	22030	-1506	Band 5	Band 5	
Gulladuff (WWTW)	S01619	552	517	35	Band 3	Band 3	
Cookstown (WWTW)	S01582	19534	19688	-154	Band 5	Band 5	
Magherafelt (WWTW)	S01621	14548	14674	-126	Band 5	Band 5	
Kilrea	S01156	2814	2779	35	Band 4	Band 4	
Knockloughrim	S01623	269	289	-20	Band 2	Band 2	
Maghera (L/Derry)	S01629	6555	6590	-35	Band 4	Band 4	
Antrim (WWTW)	S01422	65510	65789	-279	Band 6	Band 6	
Mullans (Antrim)	S01118	261	260	1	Band 2	Band 2	
Mullanahoe (WWTW)	S02043	1158	1138	20	Band 3	Band 3	
Roughfort (WWTW)	S01470	453	439	14	Band 2	Band 2	
Swatragh (WWTW)	S01637	659	716	-57	Band 3	Band 3	
Ballymena (WWTW)	S01456	84676	80361	4315	Band 6	Band 6	
Annsborough	S02687	5939	5920	19	Band 4	Band 4	

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	Difference*	AIR11 Band	AIR12 Band	Band Size Change
Attical (WWTW)	S02688	186	201	-15	Band 1	Band 1	
Banbridge (WWTW)	S02102	23214	22680	534	Band 5	Band 5	
Blackwatertown (WWTW)	S02552	620	754	-134	Band 3	Band 3	
Coalisland	S02828	9823	9929	-106	Band 4	Band 4	
Corbet	S02123	153	140	13	Band 1	Band 1	
Cross Lane(9-22)	S02427	24	25	-1	Band 1	Band 1	
Derryhale	S02570	1158	1120	38	Band 3	Band 3	
Donaghmore (WWTW)	S02840	1825	1622	203	Band 3	Band 3	
Dromore (Down)	S02127	7523	7493	30	Band 4	Band 4	
Dyan	S02842	63	64	-1	Band 1	Band 1	
Hilltown (WWTW)	S02701	2151	2146	5	Band 4	Band 4	
Keady (Armagh)	S02553	4574	4573	1	Band 4	Band 4	
Markethill	S02591	2851	2526	325	Band 4	Band 4	
Moirá	S02429	5085	5083	2	Band 4	Band 4	
Moy (WWTW)	S02859	3327	3206	121	Band 4	Band 4	
Dungannon	S02850	59767	52319	7448	Band 6	Band 6	
Newry (WWTW)	S02685	59943	62490	-2547	Band 6	Band 6	
Robinsonstown	S02419	494	581	-87	Band 2	Band 3	Y
Tamnamore (WWTW)	S02862	621	634	-13	Band 3	Band 3	
Tandragee	S02174	8621	11074	-2453	Band 4	Band 5	Y
Tullyroan	S02600	36	52	-16	Band 1	Band 1	
Warrenpoint (WWTW)	S02720	14918	14952	-34	Band 5	Band 5	
Artigarvan (WWTW)	S03002	1051	949	102	Band 3	Band 3	
Ballykelly (L/Derry)	S03016	4818	4819	-1	Band 4	Band 4	
Ballymagorry (WWTW)	S03018	896	838	58	Band 3	Band 3	
Belleek (Fermanagh)	S03024	1682	1755	-73	Band 3	Band 3	
Bonnanaboigh	S03031	286	255	31	Band 2	Band 2	

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	Difference*	AIR11 Band	AIR12 Band	Band Size Change
Carrickmore (WWTW)	S03039	1183	1286	-103	Band 3	Band 3	
Castlederg (WWTW)	S03042	4880	4855	25	Band 4	Band 4	
Cavanacaw	S03048	149	140	9	Band 1	Band 1	
Clabby (WWTW)	S03051	308	408	-100	Band 2	Band 2	
Omagh (WWTW)	S03999	40494	39432	1062	Band 6	Band 6	
Cranagh (WWTW)	S03065	63	Out of Service	63	Band 1		Y
Cullion (Bready)	S03070	83	79	4	Band 1	Band 1	
Culmore (WWTW)	S03071	132355	131457	898	Band 6	Band 6	
Donagh (WWTW)	S03078	221	234	-13	Band 1	Band 1	
Donnybrewer	S03080	5149	5286	-137	Band 4	Band 4	
Dooish	S03081	142	128	14	Band 1	Band 1	
Douglas Bridge	S03082	147	196	-49	Band 1	Band 1	
Dromore (Tyrone)	S03083	2032	1917	115	Band 4	Band 3	Y
Drumquin (WWTW)	S03098	976	893	83	Band 3	Band 3	
Drumraighland	S03099	95	81	14	Band 1	Band 1	
Drumsurn	S03100	594	592	2	Band 3	Band 3	
Dungiven	S03101	4760	4777	-17	Band 4	Band 4	
Donemana	S03103	814	846	-32	Band 3	Band 3	
Enniskillen	S03218	24233	25490	-1257	Band 5	Band 6	Y
Fivemiletown (WWTW)	S03113	1693	2659	-966	Band 3	Band 4	Y
Glack (WWTW)	S03118	233	235	-2	Band 1	Band 1	
Greysteel (WWTW)	S03123	2175	2177	-2	Band 4	Band 4	
Gortnahey (WWTW)	S03126	370	395	-25	Band 2	Band 2	
Gosheden (1)	S03128	30	Gravity Away	30	Band 1		Y
Gosheden (2)	S03129	67	92	-25	Band 1	Band 1	
Kesh (WWTW)	S03140	2679	2678	1	Band 3	Band 3	

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	Difference*	AIR11 Band	AIR12 Band	Band Size Change
Killylane (WWTW)	S03147	136	103	33	Band 1	Band 1	
Largy (WWTW)	S03155	161	151	10	Band 1	Band 1	
Limavady (WWTW)	S03162	16164	16669	-505	Band 5	Band 5	
Lisnarrick	S03170	277	290	-13	Band 2	Band 2	
Lisnaskea (WWTW)	S03171	6393	6426	-33	Band 4	Band 4	
Magheraveely	S03178	118	89	29	Band 1	Band 1	
Milltown (Burndennet)	S03184	45	49	-4	Band 1	Band 1	
Mountjoy (Omagh)	S03193	239	143	96	Band 1	Band 1	
Newtownstewart (WWTW)	S03202	2175	2171	4	Band 4	Band 4	
Newtownbutler (WWTW)	S03200	1734	1732	2	Band 3	Band 3	
Nixons Corner (WWTW)	S03203	296	285	11	Band 2	Band 2	
Spamount	S03221	1022	907	115	Band 3	Band 3	
Strabane	S03223	23026	20197	2829	Band 5	Band 5	
Tamnaherin	S03226	311	393	-82	Band 2	Band 2	
Teemore (WWTW)	S03228	201	233	-32	Band 1	Band 1	
Tempo (WWTW)	S03229	823	921	-98	Band 3	Band 3	
Tully (WWTW)	S03232	46	52	-6	Band 1	Band 1	
Jacksons Crescent (1-6)	S04106	18	Gravity Away	18	Band 1		Y
Jacksons Crescent (7-8)	S04107	6	Gravity Away	6	Band 1		Y
Jacksons Crescent (9-10)	S04108	6	Gravity Away	6	Band 1		Y
Drumalig Road(9-11)	S04158	6	Private	6	Band 1		Y
Ballyhornan Outfall	S04090	911	914	-3	Band 3	Band 3	
Clady (Tyrone)	S04149	757	761	-4	Band 3	Band 3	
North Coast (WWTWs)	S04150	75863	76266	-403	Band 6	Band 6	
Dunmore Cottages	S00806	51	Pumpaway	51	Band 1		Y
Legcloghfin Road Cranagh	S05369		63	-63		Band 1	Y
Ballyhalbert Victoria	SO5412		2719	-2719		Band 3	Y

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	Difference*	AIR11 Band	AIR12 Band	Band Size Change
			Total	8,058			

*(-ve indicates AIR12 figure larger)

The change in PE equates to a reduction in load of 483.48kg BOD/day (i.e. 57,101 x 0.06 for 60g/hd/day) from AIR11 to AIR12

Difference between AIR12 and AIR11 for the total load entering WWTWs as shown in Table 17d - column 11, row 7

Total Load Received at WWTWs for AIR11 -	108,713.8
Total Load Received at WWTWs for AIR 12 -	108,230.3
Total Difference -	483.5

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 AIR11 to AIR12.

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	PE Change*	Comments
Dromara (WWTW)	S00316	1385	1379	1385	This WWTWs no longer has an ammonia consent within this band
Ballyronan (WWTW)	S01558	986	1107	-121	PE updated following a population review by consultants working on behalf of NIW. This was reviewed prior to adoption.
Gulladuff (WWTW)	S01619	552	517	35	
Magherafelt (WWTW)	S01621	14548	14674	-126	Trade PE Updated for AIR12
Maghera (L/Derry)	S01629	6555	6590	-35	
Swatragh (WWTW)	S01637	659	716	-57	PE updated following a population review by consultants working on behalf of NIW. This was reviewed prior to adoption.
Coalisland	S02828	9823	9929	9823	This WWTWs no longer has an ammonia consent within this band
Derryhale	S02570	1158	1120	38	PE updated following a population review by consultants working on behalf of NIW. This was reviewed prior to adoption.
Donaghmore (WWTW)	S02840	1825	1622	203	
Hilltown (WWTW)	S02701	2151	2146	5	Trade PE Updated for AIR12

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	PE Change*	Comments
Markethill	S02591	2851	2526	325	PE updated following a population review by consultants working on behalf of NIW. This was reviewed prior to adoption.
Robinsonstown	S02419	494	581	-581	This WWTWs has an ammonia consent with this band for the first time for AIR12
Dromore (Tyrone)	S03083	2032	1917	115	PE updated following a population review by consultants working on behalf of NIW. This was reviewed prior to adoption.
Drumquin (WWTW)	S03098	976	893	83	
Drumsumn	S03100	594	592	2	
Enniskillen	S03218	24233	25490	24233	This WWTWs no longer has an ammonia consent within this band
Garvaghy	S03116	266	266	-266	This WWTWs has an ammonia consent with this band for the first time for AIR12
Gortnahey (WWTW)	S03126	370	395	-25	PE updated following a population review by consultants working on behalf of NIW. This was reviewed prior to adoption.
Kesh (WWTW)	S03140	2679	2678	1	Trade PE Updated for AIR12

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	PE Change*	Comments
Lack	S03154	181	181	181	This WWTWs no longer has an ammonia consent within this band
Lisnaskea (WWTW)	S03171	6393	6426	-33	Trade PE Updated for AIR12
Mountfield (WWTW)	S03192	521	521	521	This WWTWs no longer has an ammonia consent within this band
Newtownstewart (WWTW)	S03202	2175	2171	4	Trade PE Updated for AIR12
Strabane	S03223	23026	20197	2829	Trade PE Updated for AIR12
			Total	38,539	

*(-ve Indicates AIR12 PE Higher)

The change in PE equates to a reduction in load of 2312.34kg/d (i.e. 38539 x 0.06 for 60g/hd/day) from AIR11 to AIR12, for line 8.

Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR11-	8171.5
Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR12-	5859.1
Total Difference -	2312.4

Changes in Line 9 - Small Works with Ammonia Consent (between 0 and 5) from AIR11 to AIR12.

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	PE Change	Comments
Ballynahinch (Down)	S00311	7954	7944	10	Trade PE Updated for AIR12
Clough (WWTW)	S00296	1128	1060	68	A PE Count was carried out by APT during AIR12
Downpatrick (WWTW)	S00771	17153	17472	-319	Trade PE Updated for AIR12
Dromara (WWTW)	S00316	1385	1379	-1379	This WWTWs has an ammonia consent with this band for the first time for AIR12

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	PE Change	Comments
Killinchy (WWTW)	S00252	2767	2922	-155	Trade PE Updated for AIR12
Loughries	S00230	262	262	-262	This WWTWs has an ammonia consent with this band for the first time for AIR12
Saintfield (WWTW)	S00290	5057	5082	-5082	This WWTWs has an ammonia consent with this band for the first time for AIR12
Ballyclare	S01467	18527	18148	379	Trade PE Updated for AIR12
Cloughmills (WWTW)	S01096	1711	1711	-1711	This WWTWs has an ammonia consent with this band for the first time for AIR12
Garvagh (WWTW)	S01154	2245	2773	-528	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Cookstown (WWTW)	S01582	19534	19688	-154	Trade PE Updated for AIR12
Annsborough	S02687	5939	5920	19	Trade PE Updated for AIR12
Banbridge (WWTW)	S02102	23214	22680	534	Trade PE Updated for AIR12
Coalisland	S02828	9823	9929	-9929	This WWTWs has an ammonia consent with this band for the first time for AIR12
Dromore (Down)	S02127	7523	7493	30	Trade PE Updated for AIR12
Moirá	S02429	5085	5083	2	Trade PE Updated for AIR12
Mountjoy (Dungannon)	S02849	489	489	-489	This WWTWs has an ammonia consent with this band for the first time for AIR12
Robinsonstown	S02419	494	581	494	This WWTWs no longer has an ammonia consent within this band

Name of Works	CAR ID	AIR11 Actual PE	AIR12 Actual PE	PE Change	Comments
Tandragee	S02174	8621	11074	-2453	Trade PE Updated for AIR12
Bready (WWTW)	S03971	305	305	-305	This WWTWs has an ammonia consent with this band for the first time for AIR12
Clabby (WWTW)	S03051	308	408	-100	A Flow & Load was carried out by NIW at this site and adopted for AIR12
Dungiven	S03101	4760	4777	-17	Trade PE Updated for AIR12
Limavady (WWTW)	S03162	16164	16669	-505	Trade PE Updated for AIR12
Mountfield (WWTW)	S03192	521	521	-521	This WWTWs has an ammonia consent with this band for the first time for AIR12
Newtownbutler (WWTW)	S03200	1734	1732	2	Trade PE Updated for AIR12
Nixons Corner (WWTW)	S03203	296	285	-285	This WWTWs has an ammonia consent with this band for the first time for AIR12
Tamnaherin	S03226	311	393	-82	PE updated following a population review by AECOM, consultants working on behalf of NIW. This was reviewed by APT prior to adoption.
			Total	-22738	

***(-ve Indicates AIR12 PE Higher)**

The change in PE equates to an increase in load of -1364.28kg/d (i.e. -22738 x 0.06 for 60g/hd/day) from AIR11 to AIR12 for line 9.

Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR11-	11285.8
Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR12-	12650.1
Total Difference -	-1364.3

PPP Only

Lines 1 – 7

The variation in load data from AIR12 is solely due to the variation in influent loads received by the same PPP works from the NI Water catchments over the AIR12 Period.

Line 9

The variation in load data is due to the variation in influent loads received by the Richhill STW and Armagh STW over the AIR12 Period.

Specific Company Commentary;

- There have been no changes to the number of PPP operated STW's in each Treatment Category.
- There are currently no Capital Works Project plans to close, or divert flows arriving to, PPP operated works.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17/ SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - COSTS (NIW Only)

DESCRIPTION			UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
					TREATMENT CATEGORY										TOTAL
					PRIMARY	SECONDARY ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SEA OUTFALLS SCREENED	UNSCREENED	
A SMALL WORKS															
1	Direct costs of STWs in size band 1	£000	3	102.270	141.008	472.596	6.193	0.000	2.350	9.617	0.000	0.000	11.085	745.119	
2	Direct costs of STWs in size band 2	£000	3	0.000	74.323	252.628	26.235	0.000	54.924	5.934	0.000	11.019	0.000	425.063	
3	Direct costs of STWs in size band 3	£000	3	41.605	703.276	816.694	118.827	124.030	135.622	108.712	72.496	0.000	44.330	2,165.593	
4	Direct costs of STWs in size band 4	£000	3	34.392	2,157.294	505.348	141.063	284.223	68.854	158.829	97.416	40.012	0.000	3,487.432	
5	Direct costs of STWs in size band 5	£000	3	0.000	777.893	0.000	323.123	959.521	0.000	163.607	198.331	0.000	0.000	2,422.476	
B LARGE WORKS															
6	Direct costs of STWs in size band 6	£000	3	0.000	2,906.565	0.000	858.114	2,047.786	0.000	0.000	0.000	0.000	0.000	5,812.464	
C ALL WORKS															
7	Total direct costs of STWs - all sizes	£000	3	178.267	6,760.359	2,047.267	1,473.555	3,415.561	261.749	446.700	368.243	51.031	55.415	15,058.146	
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	178.267	6,760.359	2,047.267	1,473.555	3,415.561	261.749	446.700	368.243	51.031	55.415	15,058.146	
10	Sewage Treatment: Power costs	£000	3	67.748	4,108.367	585.541	653.967	1,993.388	62.280	135.791	59.569	0.826	0.263	7,667.740	
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	156.554	2,904.807	1,775.655	764.635	1,253.928	226.443	338.358	266.946	47.205	47.638	7,782.171	
13	Sewage Treatment: Functional Expenditure	£000	3	334.821	9,665.166	3,822.922	2,238.190	4,669.489	488.193	785.059	635.189	98.237	103.053	22,840.318	

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17/ SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - COSTS (PPP only)

DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
			TREATMENT CATEGORY										TOTAL
			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				38.130						38.130
5	Direct costs of STWs in size band 5	£000	3					139.558					139.558
B LARGE WORKS													
6	Direct costs of STWs in size band 6	£000	3					2,014.611					2,014.611
C ALL WORKS													
7	Total direct costs of STWs - all sizes	£000	3	0.000	0.000	0.000	38.130	2,154.169	0.000	0.000	0.000	0.000	2,192.299
8	Sludge Treatment and Disposal Adjustments	£000	3										
9	Sewage Treatment: Direct costs	£000	3	0.000	0.000	0.000	38.130	2,154.169	0.000	0.000	0.000	0.000	2,192.299
10	Sewage Treatment: Power costs	£000	3	0.000	0.000	0.000	38.130	2,154.169	0.000	0.000	0.000	0.000	2,192.299
11	Sewage Treatment: service charges	£000	3										
12	Sewage Treatment: General and Support (NIW)	£000	3		35.954		31.531	126.122					193.607
13	Sewage Treatment: Functional Expenditure	£000	3	0.000	35.954	0.000	69.661	2,280.291	0.000	0.000	0.000	0.000	2,385.906

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - COSTS (Total)

			1	2	3	4	5	6	7	8	9	10	11	
DESCRIPTION	UNITS	DP	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	102.270	141.008	472.596	6.193	0.000	2.350	9.617	0.000	0.000	11.085	745.119
2	Direct costs of STWs in size band 2	£000	3	0.000	74.323	252.628	26.235	0.000	54.924	5.934	0.000	11.019	0.000	425.063
3	Direct costs of STWs in size band 3	£000	3	41.605	703.276	816.694	118.827	124.030	135.622	108.712	72.496	0.000	44.330	2,165.593
4	Direct costs of STWs in size band 4	£000	3	34.392	2,157.294	505.348	179.193	284.223	68.854	158.829	97.416	40.012	0.000	3,525.562
5	Direct costs of STWs in size band 5	£000	3	0.000	777.893	0.000	323.123	1,099.079	0.000	163.607	198.331	0.000	0.000	2,562.034
B LARGE WORKS														
6	Direct costs of STWs in size band 6	£000	3	0.000	2,906.565	0.000	858.114	4,062.397	0.000	0.000	0.000	0.000	0.000	7,827.075
C ALL WORKS														
7	Total direct costs of STWs - all sizes	£000	3	178.267	6,760.359	2,047.267	1,511.685	5,569.730	261.749	446.700	368.243	51.031	55.415	17,250.445
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	178.267	6,760.359	2,047.267	1,511.685	5,569.730	261.749	446.700	368.243	51.031	55.415	17,250.445
10	Sewage Treatment: Power costs	£000	3	67.748	4,108.367	585.541	692.097	4,147.557	62.280	135.791	59.569	0.826	0.263	9,860.039
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	156.554	2,940.761	1,775.655	796.166	1,380.050	226.443	338.358	266.946	47.205	47.638	7,975.778
13	Sewage Treatment: Functional Expenditure	£000	3	334.821	9,701.120	3,822.922	2,307.851	6,949.780	488.193	785.059	635.189	98.237	103.053	25,226.224

Table 17f – Sewage Treatment Works – Costs**NIW only**

An updated Population Equivalent (PE) database with treatment type by WWTW's from Asset management on the 30th May 2012 which was used to populate Line 1-13. No PPP sites are included in this table. Ballycastle WWTW's falls into Band 5 – Line 5. Ballycastle does not have a separate W finance location code so in AIR11 these costs were apportioned. This has improved in AIR 12 as the power costs could be separately identified and the remaining direct costs where apportioned.

Table 17f has been completed based on the figures available at for the year ended 31st March 2012 as at 22nd May 2012 for sewage treatment – Activity 510 less M & E expenditure which is treated as general & support.

Lines 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 in AIR12, through the cost to serve project, all power costs were allocated directly to individual WWTW's. The remaining direct 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).

Through the cost to serve project all power costs are allocated to individual sites and a report was taken from EAM to get the full year power cost per WWTW's. There is one electric meter at each site and all the power costs are coded to each individual works to sewage treatment. The Field Managers responsible for each WWTW's estimated the percentage use for sludge treatment and sewage treatment at each WWTW's. This was multiplied by the Power costs at the site to calculate the portion relating to sewage treatment.

The type of treatment at each WWTW's was provided by Asset Management and this was used to assign costs to Column 1-10.

In total the costs have decreased in Lines 1 - 4 from AIR11 by circa £0.2M primarily due to the reduction in power costs, a new contract was negotiated midway in 2010-11 and the full benefit of this was received in 2011-12. The use of EAM to record power costs at each individual WWTW's is a significant improvement from AIR11 where power costs were apportioned based on total costs. This will also have had an impact on the total power costs against lines 1 -4.

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. This is an improvement from AIR12.

The costs against this line have increased by circa £0.1M primarily due to the improved allocation of power costs across all sites through EAM as discussed earlier.

Line 6 – Size band 6

This line agrees with Line 9 in Table 17b. No PPP sites have been included.

The costs have increased from AIR11 by circa £0.3M primarily due to the inclusion of Enniskillen WWTW's which is now included in size band.

Belfast WWTW's was treated separately as there is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTW's and the two PPP Incinerators. The power team supplied a split between the Incinerators and Belfast WWTW's which was used apportion a cost to the works. The split for this in AIR11 was 42:58 and in AIR12 was 36:64 for the Belfast and Incinerators. No costs for the Incinerator have been included in this table in AIR12. A new power contract was negotiated midway through 2010/11 which resulted in a price decrease. AIR12 power costs have reduced by £0.2M as this reduction was in place for a full year.

Power costs for TPS that are intrinsically connected to the works cannot be separately identified as there is only one electric metre. Ballymena has been noted separately and is included in the power costs in this table.

The further implementation of cost to serve has resulted in improved coding of direct labour between sewage treatment and sludge treatment. Direct Labour postings are used to make apportionments of admin activities across all the sites, and this has resulted in a more accurate allocation to all columns.

PPP only

Lines 1- 3 – Size bands 1- 3

There are no PPP sites sized within these categories. Therefore, this is a nil return for these size bands.

Line 4 – Size band 4

Direct costs associated with Richhill (TA1) include power costs only derived from the Oracle system using the appropriate location code.

Line 5 – Size band 5

Direct costs associated with Armagh (TA2) include power costs only derived from the Oracle system using the appropriate location code.

Line 6 – Size band 6

No costs are reported for Kinnegar (SAS) direct costs as Kinnegar power costs are part of the Concessionaire's payment to the Operating Company.

Costs for North Down, Ballyrickard and Ballinacor (all TA2) include power costs only derived from the Oracle system using appropriate location codes.

Line 9 - Direct Costs:

This refers to power only. See comments on Line 10 below.

Line 10 - Power

Kinnegar (SAS) remains unreported as power costs are not incurred by NIW directly but through the Concessionaire payments. This is consistent between AIR11 and AIR 12.

Power costs have increased from AIR11 as a result of the inclusion of costs associated with the Carbon Reduction Commitment.

The total of this line reconciles to Table 22 Line 2 Column 2.

Line 12 – General & Support

General and support costs have been calculated using all staff and overhead costs for the contracts management team together with PPP related 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 higher in AIR 12 as the 2010/11 Omega consultancy costs were low as a result of the release of an over accrual from 2009/10. The total on this line reconciles to the total included in Table 22 Line 10 Column 2.

Total

Table 17f has been completed based on the figures available for the year ended 31st March 2012 as at 22nd May 2012.

The figures in Column 11 in the NIW Total table agree with Table 22(NIW Total) Column 2.

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)

			1	2	3	4	5	6	7	8	9	10		
DESCRIPTION		UNITS	DP	FARMLAND UNTREATED	FARMLAND CONVENTIONAL	FARMLAND ADVANCED	INCINERATION	TO PPP	LANDFILL	COMPOSTED	LAND RECLAMATION	OTHER	TOTAL	
				CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	
1	Resident population served	000	1					1,422.9	C3	31.5	C3		1,454.5	C3
2	Amount of sewage sludge	ttds	1					30.7	B2	0.7	B2		31.4	B2
3	Sludge treatment: direct costs	£000	3									2,177.620	2177.620	
4	Sludge disposal: direct costs	£000	3					3,131.608		29.560			3161.168	
5	Sludge treatment & disposal: direct costs	£000	3					3,131.608		29.560		2,177.620	5338.788	
6	Sludge treatment & disposal: power costs	£000	3									1,285.026	1285.026	
7	Sludge treatment & disposal: service charges	£000	3											
8	Sludge treatment & disposal: general & support exp.	£000	3					1,546.777				1,810.490	3357.266	
9	Sludge treatment & disposal: functional expenditure	£000	3					4,678.384		29.560		3,988.110	8696.054	

Table 17g – Sewerage Explanatory Factors - Sludge Treatment and Disposal Information**NIW Only****Line 1 - Resident population served**

The resident population served is that reported in Table 17a Line 1 as required in the Utility Regulator's guidance documentation.

Columns 5 & 6 have been estimated using a pro-rata value based on the total sewage sludge disposal data from SLS and the WW Sludge Management monthly report. The pro-rata population figures have been assigned CGs of C3 accordingly based on the C3 CG of the base population data.

Line 2 - Amount of sewage sludge

This is the total sewage sludge produced (NIW Only) for 2011/12 (tds) as recorded by PPP and monthly by WW Area Sludge Officers (reconciled using the SLS) and presented in the monthly Sludge Management Report along with an estimated quantity of WwTW's grit & screenings removed as part of the treatment process and disposed of under Tender C480.

Column 5 has been based on the total sewage sludge disposal (NIW Only) data from SLS and the WW Sludge Management monthly report. Column 6 is an estimated quantity of WwTW's grit & screenings removed as part of the treatment process and disposed of under Tender C480.

The methodology has not changed from AIR11. All Sludge is transported and disposed of at the Incinerator or another PPP site.

The costs in Table 17g are populated with the information available for the year ended 31st March 2012 as at 22nd May 2012.

Line 3 – Sludge Treatment - Direct Costs

Expenditure has been input in Column 9.

There is an increase in sludge treatment costs from AIR11 to AIR12 of circa £0.5M. This is mainly due to the increase in employment costs driven from further implementation of the cost to serve project. In AIR11 the majority of labour costs were coded to sewage treatment. Now the appropriate sludge facilities and jobs have been created on MWM so that labour costs can be recorded more accurately.

Sludge treatment costs for WWTW's are coded using activity 621 and can be separately identified to populate Column 9.

Power costs in AIR12 do not include the Incinerator or any PPP sites. There was a new power contract negotiated midway through 2010/11 which resulted in a price decrease. AIR12 costs have reduced as this reduction was in place for a full year. Power costs relating to sludge treatment have decreased by circa £0.1M from AIR11.

Line 4 - Sludge Disposal - Direct Costs

Column 5 and 6 have been populated in this line. Total Direct Costs have increased by circa £0.3M from AIR11. This is due to the increase in the cost of the sludge transportation contract in AIR12 and in AIR11 there was a reduction in sludge transportation costs over the period of the freeze/thaw.

There is a small cost in Column 6 which relates to grit & screening and has been based on volumes disposed of to Landfill through the C018 contract. There is no variation between the cost in AIR11 and AIR12.

Line 5 - Sludge Treatment & Disposal - Direct Costs

This is a calculated line and is the total of Line 3 and Line 4. The figure agrees with Table 22 (NIW only) Column 3 Line 9. Costs have increased by circa £0.8M from AIR11, primarily due to further implementation of the cost to serve project and therefore more accurate labour costs and also due to the increase in the cost of the sludge transportation contract.

Line 6 – Sludge Treatment & Disposal - Power Costs

Power costs associated with Sludge Treatment are used to populate Column 9. Power costs have been allocated to every site through cost to serve. There is only one electric metre at each WWTW's so an estimate was received for each WWTW's from the wastewater field managers so that a split could be calculated at each works between sludge and sewage treatment at the sites where both activities occur. The power team supplied a split between the Incinerators and Belfast WWTW's which was used apportion a cost to the works. The split for this in AIR11 was 42:58 and in AIR12 was 36:64 for the Belfast and Incinerators. No costs for the Incinerator have been included in this table in AIR12. A new power contract was negotiated midway through 2010/11 which resulted in a price decrease. AIR12 power costs have reduced by £0.1M.

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 AIR11 however due to further implementation of cost to serve, labour costs are more fully split between sludge & sewage treatment. This has change the percentage split across the columns in Table 22. The reduction in costs from AIR11 of circa £0.1M is primarily due to the overall reduction in total general & support costs. A detailed breakdown of general & support is included in the commentary for Table 21 & 22.

Line 9 – Sludge treatment & disposal: Functional Expenditure

This is a calculated line and is the total of Line 5 and Line 8. Total costs have increased by circa £0.6M from AIR11 for all the reasons mentioned in the lines above.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 18 REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
PROFIT AND LOSS ACCOUNT FOR YEAR ENDING 31 MARCH

				1	2	3	4	
DESCRIPTION			UNITS	DP	2008-09	2009-10	2010-11	2011-12
1	Turnover	£m	3	327.395	347.569	345.740	354.819	
2	Operating costs (excluding HCD)	£m	3	-241.458	-234.938	-212.643	-200.677	
3	Historical cost depreciation	£m	3	-17.767	-25.055	-41.689	-46.216	
4	Operating income	£m	3	0.094	0.264	0.108	0.212	
5	Operating profit	£m	3	68.264	87.840	91.516	108.138	
6	Other income	£m	3	0.000	0.000	0.000	0.000	
7	Net interest receivable less payable	£m	3	-20.142	-37.716	-47.520	-50.468	
8	Profit on ordinary activities before taxation	£m	3	48.122	50.124	43.996	57.670	
9	Current tax	£m	3	0.000	0.000	0.000	0.000	
10	Deferred tax	£m	3	-13.531	-14.273	-31.433	-18.472	
11	Profit on ordinary activities after taxation	£m	3	34.591	35.851	12.563	39.198	
12	Extraordinary items	£m	3	0.000	0.000	0.000	0.000	
13	Profit for the year	£m	3	34.591	35.851	12.563	39.198	
14	Dividends	£m	3	0.000	-34.537	-35.570	-25.604	
15	Retained profit for the year	£m	3	34.591	1.314	-23.007	13.594	

Table 18 – HC Profit and Loss account for the year ending 31 March 2012

- 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 2011/12 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	17.669*	0.000	(3.632)	(0.236)	4.548	18.349*
Omega	24.464	(2.978)	0.000	0.000	0.000	21.486
Kinnegar	2.213	(0.243)	0.000	0.000	0.000	1.970
Total	44.346	(3.221)	(3.632)	(0.236)	4.548	41.805

* includes lease interest of £11.750m – shown in line 7 of Table 18.

- PPP elements of line 2 'Operating Costs' are £25.507m.
Additionally within Line 3 'HCD' there are depreciation costs for the Alpha Project of £4.548m.
- The current tax charge is zero and this is explained as follows:

Factors affecting the tax charge for the current period

The company adopted International Financial Reporting Standards (IFRS) for the first time in its statutory accounts for the year end 31st March 2011. The regulatory accounts will continue to be produced under UK generally accepted accounting policies (UK GAAP). However as the corporation tax computation for the company will be based on the IFRS statutory accounts it has been agreed with the Regulator that the tax charge and provision in the regulatory accounts should be the same as those shown in the statutory accounts.

The deferred tax charge in the statutory accounts for the period of £18.795m is higher than the charge based on the standard rate of corporation tax in the UK (26%). The differences are explained below:

Reconciliation of effective tax rate	£m
Profit for the year	114,604
Income tax expense	<u>18,795</u>
Profit before income tax	<u>133,399</u>
Income tax using the Company's domestic tax rate (26%)	(34,684)
Reduction in tax rate	13,771
Non deductible expenses	(2,363)
Adjustment to prior years	<u>4,481</u>
Under provided in prior years	<u>(18,795)</u>

The deferred tax charge in line 10 of £18.472m is based on the statutory accounts charge of £18.795m less an allocation of £0.323m deferred tax to unappointed activities.

The statutory accounts deferred tax charge of £18.795m can be shown as follows:

Deferred tax

	£m
Origination/ reversal of timing differences	(37.047)
Adjustment to prior years	4.481
Effect of change in tax rate	<u>13.771</u>
 Total deferred tax charge	<u>(18.795)</u>
Tax charge on profit on ordinary activities	(18.795)

Table 19 shows a deferred tax liability on the balance sheet of £162.493m. This reconciles to the statutory accounts balance at 31 March 2012 of £163.792m after an allocation of £1.299m of the final balance to unappointed activities. The statutory balance of £163.792m can be summarised as follows:

	2012 £m Excluding FRS 17	2012 £m FRS 17	2012 £m Total
Opening liability	145.258	1.611	146.869
Adjustment for adopted assets – now all treated as non-qualifying – previously treated as partly qualifying for Industrial Buildings Allowances.	(0.001)	0.000	(0.001)
Revised opening (asset) / liability	145.257	1.611	146.868
Current year deferred tax charge/ (credit) to profit and loss account	36.665	0.382	37.047
Current year deferred tax charge/ (credit) to profit and loss account (effect of tax rate)	(13.649)	(0.121)	(13.770)
Prior year deferred tax (credit)/charge to P&L	(4.481)	-	(4.481)
Current year deferred year tax charge to the Statement of Total Recognised Gains and Losses	0.000	0.419	0.419
Closing liability	<u>163.792</u>	<u>2.291</u>	<u>166.083</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:

	2012
	£m
Benefit obligation at end of year	(120.652)
Fair value of plan assets at end of year	<u>130.195</u>
Surplus	9.543
Less deferred tax	<u>(2.291)</u>
Pension asset after deferred tax	<u>7.252</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-12	31-Mar-11
Discount rate	5.00%	5.50%
Rate of compensation increase	4.25%	4.50%
Rate of increase in pensions in payment	3.25%	3.50%
Rate of increase in pensions in deferment	3.25%	3.50%
Inflation	3.25%	3.50%

**Weighted average assumptions
used to determine net pension
cost for year ended:**

	31-Mar-12	31-Mar-11
Discount rate	5.50%	5.75%
Expected long-term return on plan assets	6.19%	6.13%
Rate of compensation increase	4.50%	4.75%
Rate of increase in pensions in payment	3.50%	3.75%
Inflation	3.50%	3.75%

Any changes to the assumptions from 2011 to 2012 have been advised by the independent actuaries.

There is a pension asset at 31 March 2012 of £7.252m (after deferred tax) and therefore there are currently no contributions relating to funding a deficit position. Contributions to the fund in 2011/12 were 26.9% of pensionable pay. (2010/11: 26.9%).

A dividend of £25.964m was proposed, approved and paid in 2011/12 and thus there is a dividend in Table 18 for the current year.

The full dividend for 2011/12 was £25.964m with £25.604m apportioned to appointed activities and £0.360m 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	(200.677)
Add back HC amortisation of grants and contributions	(0.713)
CC amortisation of grants and contributions	3.974
CC depreciation	(157.761)
Table 20 line 2	(355.177)

Cost components in Operating Costs

The following cost components of Line 2 (£200.677m) exceed £5m in 2011-12:

Wages and Salaries	41.690m*
Other pension costs	10.310m*
Electricity	29.476m*
Rates	13.434m*
Contractors	19.492m*
Out sourced billing	6.422m
PPP Operating Charges –Omega	21.486m
Total	142.310m
	(70.9% of total Operating Costs)

* includes an amount relating to unappointed activities.

Interest

Interest received and payable can be summarised as follows:

	£m	£m
Interest received		
Bank Interest	0.109	
Other finance income	1.156	
Total Interest received		1.265
Interest Payable:		
On bonds held as security	(0.059)	
On all other loans	(39.924)	
On PPP finance lease	(11.750)	
Total Interest Payable		(51.733)
Net Interest		(50.468)

Capitalisation of costs

During 2011/12 £8.990m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	£m
Staff Costs	7.646
Labour charge	0.011
Vehicles and plant	0.004
Overheads capitalised	1.329
Total	8.990

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 2010/11 and to the PC10 can be shown as follows:

	Actual	Actual	PC10
	2011 -2012	2010 -2011	2011 -2012
	£m	£m	£m
Sales	354.819	345.740	366.539
Expenditure	(246.681)	(254.224)	(252.375)
Net Operating Profit	108.138	91.516	114.164
Operating Margin	30.5%	26.5%	31.1%
Interest payable	(50.468)	(47.520)	(56.702)
Deferred tax	(18.472)	(31.433)	(16.114)
Profit for the year	39.198	12.563	41.348
Net Profit Margin	11.1%	3.6%	11.3%

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.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 18c REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES

DESCRIPTION				UNITS	DP	1	2	3	4
						2008-09	2009-10	2010-11	2011-12
A	CAPITAL EXPENDITURE CATEGORIES								
1	Profit for the year	£m	3		34.591	35.851	12.563	39.198	
2	Actuarial gains/losses on post employment plans	£m	3		1.666	-9.255	1.160	1.456	
3	Other gains and losses	£m	3		0.000	0.000	0.000	0.000	
4	Total recognised gains and losses for the year	£m	3		36.257	26.596	13.723	40.654	

Table 18c – STRGL (HCA)

Line 2 shows £1.456m of actuarial gains/losses on post employment plans.

Line 3 is nil as there are no other recognised gains or losses for the year.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 18d REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
ANALYSIS OF DIVIDENDS AND INTEREST CHARGES

DESCRIPTION			1	2	3	4
			2008-09	2009-10	2010-11	2011-12
UNITS	DP					
A DIVIDEND ANALYSIS						
1	Dividends in respect of a financial re-organisation	£m 3	0.000	0.000	0.000	0.000
2	Other ordinary dividends	£m 3	0.000	-34.537	-35.570	-25.604
3	Total dividends	£m 3	0.000	-34.537	-35.570	-25.604
B INTEREST ANALYSIS						
4	Interest receivable/payable on intercompany balances	£m 3	0.000	0.000	0.000	0.000
5	Interest receivable/payable in respect of a financial re-organisation	£m 3	0.000	0.000	0.000	0.000
6	Indexation element of index-linked bonds	£m 3	0.000	0.000	0.000	0.000
7	Preference share dividends	£m 3	0.000	0.000	0.000	0.000
8	Other interest receivable	£m 3	1.813	0.249	0.214	0.109
9	Other interest payable	£m 3	-17.899	-26.928	-35.519	-39.983
10	Other finance charges - post employment costs	£m 3	0.137	0.288	0.000	1.156
11	Other finance charges	£m 3	-4.193	-11.325	-12.215	-11.750
12	Total net interest	£m 3	-20.142	-37.716	-47.520	-50.468

Table 18d – Analysis of dividends and interest charges

There has been no financial reorganisation during the year.

A dividend was proposed and approved in 2011/12 and this is shown on line 2. The full dividend for 2011/12 was £25.964m with £25.604m apportioned to appointed activities and £0.360m apportioned to unappointed activities (based on turnover).

Interest receivable (£0.109m) relates to monies held on deposit.

Interest payable of £39.983m is comprised of £39.894m relating to the loan notes held with DRD, £0.059m relating to interest payable on cash bonds and £0.030m relating to an accrual for a claim (not yet settled) for interest charged by a supplier on late invoices. The interest on loan notes has increased from last year by £4.414m (12.4%) primarily due to the drawdown of £70m additional loan notes in 2011/12. 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 £1.156m for a finance credit relating to post employment plans calculated by the actuaries of the pension fund at year end. (In 2010/11 this income was included in operating costs and was £0.676m).

During 2011/12 an amount of £11.750m (2010/11: £12.215m) 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 2011/12 budget and PC10:

	Actual	Budget	PC10
	£m	£m	£m
Net Interest payable	39.894	41.046	43.691
Loan notes	807.560	837.560	880.785

The drawdown of loans is £73.225m less than the PC10 projected for 2011/12. This is primarily driven by a lower working capital requirement than was anticipated particularly for capital creditors.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 19 REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
BALANCE SHEET AS AT 31 MARCH (Total)

DESCRIPTION			UNITS	DP	1	2	3	4
					2008-09	2009-10	2010-11	2011-12
A FIXED ASSETS								
1	Tangible fixed assets	£m	3	1435.239	1619.770	1713.802	1822.992	
2	Investment - loan to group company	£m	3	0.000	0.000	0.000	0.000	
3	Investment - other	£m	3	0.106	0.106	0.106	0.106	
4	Total fixed assets	£m	3	1435.345	1619.876	1713.908	1823.098	
B CURRENT ASSETS								
5	Stocks	£m	3	1.896	1.864	1.863	2.177	
6	Debtors	£m	3	29.706	40.885	28.797	33.783	
7	Cash	£m	3	3.554	0.349	-3.272	-2.340	
8	Short term deposits	£m	3	19.000	10.000	15.000	0.000	
9	Infrastructure renewals prepayment	£m	3	0.091	1.452	0.000	2.734	
10	Total current assets	£m	3	54.247	54.550	42.388	36.354	
C CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR								
11	Overdrafts	£m	3	0.000	0.000	0.000	0.000	
12	Infrastructure renewals accrual	£m	3	0.000	0.000	-3.044	0.000	
13	Creditors	£m	3	-131.461	-136.701	-113.610	-120.598	
14	Borrowings	£m	3	0.000	0.000	0.000	0.000	
15	Corporation tax payable	£m	3	0.000	0.000	0.000	0.000	
16	Ordinary share dividends payable	£m	3	0.000	0.000	0.000	0.000	
17	Preference share dividends payable	£m	3		0.000	0.000	0.000	
18	Total creditors	£m	3	-131.461	-136.701	-116.654	-120.598	
19	Net current assets	£m	3	-77.214	-82.151	-74.266	-84.244	
D CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR								
20	Borrowings	£m	3	-457.560	-627.560	-737.560	-807.560	
21	Other creditors	£m	3	-110.808	-106.137	-102.624	-98.978	
22	Total creditors	£m	3	-568.368	-733.697	-840.184	-906.538	
E PROVISION FOR LIABILITIES AND CHARGES								
23	Deferred tax provision	£m	3	-30.653	-42.713	-144.282	-162.493	
24	Deferred income - grants and contributions	£m	3	-15.099	-15.730	-17.723	-18.657	
25	Post employment asset / (liabilities)	£m	3	5.942	2.286	4.586	7.253	
26	Other provisions	£m	3	-20.638	-32.884	-19.349	-20.679	
F PREFERENCE SHARE CAPITAL								
27	Preference share capital	£m	3	0.000	0.000	0.000	0.000	
28	Net assets employed	£m	3	729.315	714.987	622.690	637.740	
G CAPITAL AND RESERVES								
29	Called up share capital	£m	3	500.000	500.000	500.000	500.000	
30	Share premium	£m	3	0.000	0.000	0.000	0.000	
31	Profit and loss account	£m	3	57.625	43.297	-49.000	-33.950	
32	Other reserves	£m	3	171.690	171.690	171.690	171.690	
33	Capital and reserves	£m	3	729.315	714.987	622.690	637.740	

Table 19 – HC Balance Sheet as at 31 March 2012

The balance sheet in the published regulatory accounts includes a separate analysis of unappointed activities.

There are no Group companies.

The retained profit for the year is £13.594m (post dividend).

The P&L reserves in the Balance Sheet decreased by £15.050m and this movement can be shown as follows:

Retained profit for the year	£13.594m
Pension scheme gain net of deferred tax	£ 1.456m
Movement in P&L Account	£15.050m

The company has adopted International Financial Reporting Standards (IFRS) in its statutory accounts for the year end 31st March 2012. The regulatory accounts will continue to be produced under UK generally accepted accounting policies (UK GAAP). As the corporation tax computation for the company will be based on the IFRS statutory accounts it has been agreed with the Regulator that the tax charge and provision in the regulatory accounts should be the same as those shown in the statutory accounts.

No minority interests exist.

The elements of PPP included in the table are as follows:

Line 1 - Tangible Fixed Assets

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	£m
Gross	116.250 *	9.412	2.466	128.128
Acc. Deprec	(13.410)	-	-	(13.410)
NBV	102.840	9.412	2.466	114.718

* Includes the original capital value of Alpha PPP (£111.708m), the NIW assets transferred to and utilised by the concessionaire and subsequent additions of capital maintenance.

Line - 13 Creditors falling due within one year

	Alpha	Omega	Kinnegar	Other PPP expense	Total
	£m	£m	£m	£m	£m
Lease obligation due < 1 yr	3.274	-	-	-	3.274
Accruals	2.988	9.568	0.491	-	13.047
Total	6.262	9.568	0.491	-	16.321

Line 21 - Other creditors falling due after more than one year

	Alpha
	£m
Lease obligation due > 1 yr	97.934

Line 26 - Other provisions

	Omega
	£m
Provisions	16.176

Significant features and movements**Fixed Assets**

Increase of £109m in line with in year additions of approximately £243.3m, capital contributions of £51.9m, depreciation of £76.3m and other movements.

Debtors

Increased by £4.986m from £28.797m to £33.783m (17.3%). This is primarily due to:

- Measured, unmeasured and TE debtors decrease by £1.6m
- Accrued income from measured customers increased by £3.6m.
- Rechargeable debtors increased by £1.1m in 2011-12
- VAT receivable debtors increase of £0.735m.
- Measured, unmeasured and TE bad debt provision decreased by £1.3m.

Cash and Short term deposits

Cash has increased by £0.932m from (£3.272m) to (£2.340m) (28.5%) and Short term deposits have decreased by £15m from £15m to nil (100.0%).

The cashflow statement in Table 28 illustrates the uses of these cash and deposit monies in contributing to meeting the non opex expenditure needs for the year. This can be summarised as follows:

Non opex expenditure

Capex	£183m
Net Interest paid	£ 51m
Dividend paid	£ 26m
PPP Lease payments	£ 3m
Total	£263m

Funded by:

Generated from operations	£179m
Loans	£ 70m
Increase of cash	(£ 1m)
Decrease in deposit monies	£ 15m
Total	£ 263m

Deferred tax

The deferred tax balance has increased from £144.282m to £162.493m. An explanation for this has been included in the commentary to Table 18.

Borrowings > 1 year

Borrowings have increased by £70m from £737.56m to £807.56. The additions to capital expenditure during the year were £243.3m. The increase in borrowings were used to partly fund these additions to capital expenditure with the balance of capital being financed through capital contributions and working capital.

Post employment asset/(liabilities)

Pension asset increased from £4.586m to £7.253 (58.2%).

This can be shown as follows:

	£m
Opening balance at 1.4.11	4.586
Current Service Costs	(10.310)
Past Service Costs	(0.695)
Contributions	11.320
Finance Credit	1.156
Actuarial Gain	1.875
Increase in Deferred tax on asset	(0.679)
Closing balance 31.3.11	7.253

Other provisions

Increased from £19.349m to £20.679 (6.9%).

This increase of £1.33m can be summarised as follows:

Decrease in Public and Employer Liability claims	(1.6m)
Increase in Contractor claims (opex and capex)	3.0m

Total **1.4m**

PPP – Infrastructure renewals charge (IRC) and expenditure (IRE)
– Capital Maintenance

The table below summarises the IRC, IRE and capital maintenance during 2011/12 in relation to the PPP projects:

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	£m
IRE	-	-	-	-
IRC	-	-	-	-
Capital maintenance	0.236	-	-	0.236

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 2011-12 this is confirmed by the operator to be £236k. 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 2011-12 (2010-11: nil). There has therefore been no apportionment of IRC in 2011-12 (2010-11: 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	15	807.560	12113.400	1.68%	5.25%	42.397	42.397	807.560
350									
C2	Floating rate instruments								
351									
400									
C3	Index linked instruments								
401									
450									
	TOTAL FOR OTHER BORROWINGS		807.560	12113.400			42.397	42.397	807.560
D	TOTALS		807.560	12113.400			42.397	42.397	807.560
E	RPI assumption	3.57%							
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 debt								
G2	Fixed rate debt as percentage of total debt		100%						
G3	Index linked debt as percentage of total debt								
G4	Fixed rate debt and index linked debt as percentage of total debt		100%						
G5	Weighted average years to maturity		15						

Table 19a – Analysis of Borrowings due after more than One Year

At 31 March 2012 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 30 March 2012 (note: 31 March 2012 was a non-business day for gilt trading) the gilt reference rate was 2.8328% (31 March 2011: 4.2042%) equating to an equivalent borrowing rate of 3.6828% (31 March 2010: 5.0542%).

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 2011/12 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 5.09% (31 March 2011: 5.21%).

In 2011/12 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 2012.

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
			2009-10	2010-11	2011-12
1 Turnover	£m	3	347.569	345.740	354.819
2 Current cost operating costs (including CCD & IRC)	£m	3	-328.924	-341.824	-355.177
3 Operating income	£m	3	0.005	0.079	-0.285
4 Working capital adjustment	£m	3	4.313	4.898	2.824
5 Current cost operating profit	£m	3	22.963	8.893	2.181
6 Other income	£m	3	0.000	0.000	0.000
7 Net interest receivable less payable	£m	3	-37.716	-47.520	-50.468
8 Financing adjustment	£m	3	25.217	40.427	30.450
9 Current cost profit before taxation	£m	3	10.464	1.800	-17.837
10 Current tax	£m	3	0.000	0.000	0.000
11 Deferred tax	£m	3	-14.273	-31.433	-18.472
12 Current cost profit on ordinary activities	£m	3	-3.809	-29.633	-36.309
13 Extraordinary items	£m	3	0.000	0.000	0.000
14 Current cost profit attributable to shareholders	£m	3	-3.809	-29.633	-36.309
15 Dividends	£m	3	-34.537	-35.570	-25.604
16 Current cost profit retained	£m	3	-38.346	-65.203	-61.913

Table 20 – CC Profit and Loss account for year ending 31 March 2012

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	17.669*	0.000	(3.632)	(0.236)	11.198	24.999*
Omega	24.464	(2.978)	0.000	0.000	0.000	21.486
Kinnegar	2.213	(0.243)	0.000	0.000	0.000	1.970
Total	44.346	(3.221)	(3.632)	(0.236)	11.198	48.455

* includes lease interest of £11.750m.

Line 7 Net interest receivable less payable includes £11.750m interest payable on Alpha PPP finance lease.

Comparison with prior year results

	2011-2012	2010-2011	Variance
	£m	£m	%
Turnover	354.819	345.740	2.6%
CC Operating profit	2.181	8.893	(75.5)%
CC (loss) / profit attributable to shareholders	(36.309)	(29.633)	22.5%
Dividends	(25.604)	(35.570)	(28.0)%
CC loss retained	(61.913)	(65.203)	(5.0)%

Sales have increased in 2012 by £9.079m (2.6%) due to:

- Increase in unmeasured household income £6.700m
- Decrease in unmeasured non-household income (£0.338m)
- Increase in measured non-household income £4.151m
- Decrease in trade effluent income (£0.065m)
- Increase in road drainage income £0.267m
- Decrease in large user income (£0.673m)
- Decrease in other income (£0.963m)
- Total increase £9.079m**

(see Table 23 for detail on water and sewerage income changes)

Operating costs have risen by £13.4m (3.9%) over the same period and the overall impact is that the CC operating profit margin has fallen from 2.6% to

0.6%. As in previous years the overall focus on cost reduction throughout the business has continued during 2011-12 and operating costs before taking account of IRC, CCD and amortisation have fallen by £12.6m from £183.9m to £171.3m (6.9%). However the rise in CCD of £25.6m (from £132.1m to £157.8m) has led to an overall fall in the operating margin. Some of the main changes in operating costs in 2012 include:

- Power costs have fallen by £2.4m (7.2%).
- Employment costs have fallen by £0.57m (2.3%)
- Rates costs have risen by £1.7m (14.1%)
- General and support costs have fallen by £9.5m (20.1%)
- Hired and contracted costs have fallen by £1.1m (5.3%).
- Doubtful debts have fallen by £3m (106.3%)
- CCD up £25.6m (19.4%).

The loss attributable to shareholders has increased by approximately £6.676m due mostly to:

- Sales increased by £9.1m with operating costs up £6.0m.
- Working capital and financing adjustments decreased by £12.1m (remain credit items).
- Profit /loss on disposal decreased by £0.4m (profit to a loss).
- Net interest payable up by £2.9m.
- Deferred tax decrease by £13.0m.

There was a dividend declared and approved for 2010/11 of £25.964m (accounted for in 2011-12) with £25.604m attributed to appointed activities.

Cost components in Operating Costs

The following cost components of Line 2 (£m) exceed £5m in 2011-12:

Wages and Salaries	41.690m*
Other pension costs	10.310m*
Electricity	29.476m*
Rates	13.434m*
Contractors	19.492m*
Out sourced billing	6.422m
PPP Operating Charges –Omega	21.486m
IRC	30.069m
Current cost depreciation	157.761m
Total	330.140m
	(93.0% of total Operating Costs)

* includes an amount relating to unappointed activities that cannot be extracted out for the summary above.

Voluntary Early Retirement and Pension

The VER schemes in 2008/09, 2009/10, 2010/11 and 2011/12 can be summarised as follows:

	2011-2012	2010-2011	2009-2010	2008-2009
Number	11*	8*	34	89
Non pension element	£0.130m	£0.136m	£0.409m	£0.770m
Pension element	£0.695m	£1.073m**	£3.207m	£6.773m
Total	£0.825m	£1.209m	£3.616m	£7.543m

* including 2 ill health retirees (2010/11- 5).

** including cost of 2 retirees carried forward from 2009/10 scheme.

The above figures are for VER only and do not include the impact of the Voluntary Severance (VS) scheme in 2011/12, 2010/11, 2009/10 or 2008/09.

The future schemes are still being finalised.

The total costs, payments and accruals for VER are as follows:

	2011-2012	2010-2011	2009-2010	2008-2009
Total Cost	£0.825m	£1.209m	£3.616m	£7.543m
Payments in year	£0.092m	nil	nil	£0.234m
Accrual at year end due to employees	£0.130m	£0.136m	£0.409m	£0.536m
Accrual at year end due to pension fund	£0.603m	£1.073m	£3.207m	£6.773m

The entries for the pension related elements of VER and the change in the pension asset (before deferred tax) over the year can be summarised as follows:

	BS	BS	BS	P&L	P&L	P&L	P&L	P&L
	A/C	A/C	A/C	A/C	A/C	A/C	A/C	TOTAL
	2956	1752	3119	5117	5155	5140	4511	
	£m	£m	£m	£m	£m	£m	£m	£m
Opening Surplus-pension	6.197							
Current Service Costs	(10.310)			3.385	6.925			10.310
Past Service Costs	(0.695)					0.695		0.695
Paid	11.320	(11.320)						
Net Finance income	1.156				(1.156)			(1.156)
Actuarial Gain	1.875		1.875					
Closing Surplus-pension	9.543							9.849

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 2011/12 are as follows:

Dr 5140 Retirement movement in provision	£0.130m
Cr 2313 Accruals	£0.130m

(ignoring any opening accrual from 2010/11).

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 2012 (Note 21) and 31 March 2011 (Note 20) 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 2012	Total year to 31 March 2011
	£000	£000
At the beginning of the year	113,342	97,289
<i>Movement in year</i>		
Expected return on assets	7,284	6,350
Contributions by plan participants	837	796
Contributions by employer	11,320	13,120
Actuarial gain/(loss)	458	1,501
Benefits paid	(2,628)	(2,797)
Settlement in relation to the Omega bulk transfer	(191)	-
Settlement in relation to adjustment to PCSPS bulk transfer	276	-
Settlement in relation to the admission of Northgate as a participating employer	(503)	-
Experience adjustment following receipt of bulk transfer	-	(2,917)
	130,195	113,342

Movement in present value of defined benefit obligations

	Total year to 31 March 2012	Total year to 31 March 2011
	£000	£000
At the beginning of the year	107,145	94,114
<i>Movement in year</i>		
Current service cost	10,310	11,269
Interest on scheme liabilities	6,128	5,675
Past service costs	695	1,073
Actuarial (gain)/loss	(1,417)	(68)
Contributions by plan participants	837	796
Benefits paid	(2,628)	(2,797)
Settlement in relation to the Omega bulk transfer	(191)	-
Settlement in relation to adjustment to PCSPS bulk transfer	276	-
Settlement in relation to the admission of Northgate as participating employer	(503)	-
Experience adjustment following receipt of bulk transfer	-	(2,917)
	120,652	107,145

Scheme assets and liabilities

	Total at 31 March 2012	Total at 31 March 2011
	£000	£000
Equities	60,488	52,410
Corporate bonds	24,443	21,301
Gilts	38,880	34,581
Other	6,384	5,050
Total market value of assets	130,195	113,342
Actuarial value of liabilities	(120,652)	(107,145)
Surplus/ (deficit) in the scheme - pension asset / (liability)	9,543	6,197
Related deferred tax asset / (liability)	(2,291)	(1,612)
Net pension asset / (liability)	7,252	4,585

The year end pension asset as shown above before deferred tax is £9.543m.

There have been no pension costs directly allocated to non appointed costs as management consider that the cost of obtaining this

information would outweigh any benefits of it being available. However the operating costs attributed to non appointed activities would include an apportionment of pension costs.

Business Improvement costs

Business improvement costs are not analysed through the Oracle financial system but are separately identified at month end for reporting purposes only. These costs are included within line 2 – current cost operating costs and can be summarised as follows:

	£m
Salaries	0.827
Other staff costs	0.135
Hired and contracted	0.559
Materials and equipment	0.001
Other costs of employment	0.014
Other expenses	0.004
Total	1.540

Reprofiling of costs may occur during the year as part of the quarterly reforecasting process.

Capitalisation of costs

During 2011/12 £8.990m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	£m
Staff Costs	7.646
Labour charge	0.011
Vehicles and plant	0.004
Overheads capitalised	1.329
Total	8.990

The majority of costs capitalised relate to staff costs and overheads. These costs relate to the NIW staff who spend their time on capital projects e.g. Engineering Procurement or Asset Management staff. These costs will add to the value of the completed asset.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 21 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - WATER SERVICE (NIW Only)

DESCRIPTION			UNITS	DP	1 WATER RESOURCES & TREATMENT	2 WATER DISTRIBUTION	3 WATER SERVICE TOTAL
SERVICE ANALYSIS - WATER							
A DIRECT COSTS							
1	Employment costs	£m	3		3.882	11.791	15.673
2	Power	£m	3		5.222	3.372	8.594
3	Agencies	£m	3		0.000	0.000	0.000
4	Hired and contracted services	£m	3		2.479	5.856	8.334
5	Associated companies	£m	3		0.000	0.000	0.000
6	Materials and consumables	£m	3		3.622	0.505	4.128
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		0.005	0.009	0.013
10	Total direct costs	£m	3		15.210	21.533	36.742
11	General and support expenditure	£m	3		9.232	10.259	19.491
12	Functional expenditure	£m	3		24.441	31.792	56.234
B OPERATING EXPENDITURE							
13	Customer services	£m	3				4.546
14	Scientific services	£m	3				1.438
15	Other business activities	£m	3				0.991
16	Total business activities	£m	3				6.975
17	Rates	£m	3				4.118
18	Doubtful debts	£m	3				0.088
19	Exceptional items	£m	3				0.000
20	Total opex less third party services	£m	3				67.415
21	Third party services - opex	£m	3				-0.009
21a	PPP Unitary Charges (Opex element)	£m	3				
22	Total operating expenditure	£m	3				
22a	Payment by concessionaire to operator	£m	3				
C REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)							
23	Reactive and planned maintenance infrastructure	£m	3		0.000	9.932	9.932
24	Reactive and planned maintenance non-infrastructure	£m	3		1.809	5.051	6.860
D CAPITAL MAINTENANCE							
25	Infrastructure renewals charge (excluding third party services)	£m	3		19.454	0.000	19.454
26	Current cost depreciation (allocated)	£m	3		32.818	17.880	50.698
27	Amortisation of deferred credits	£m	3				-1.600
28	Amortisation of intangible assets	£m	3				0.000
29	Business activities current cost depreciation (non-allocated)	£m	3				0.172
30	Capital maintenance excluding third party services	£m	3				68.724
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				68.724
34	Total operating costs	£m	3				

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 21 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)

ACTIVITY COSTING ANALYSIS - WATER SERVICE - (PPP Only)

DESCRIPTION		UNITS	DP	1 WATER & TREATMENT	2 WATER DISTRIBUTION	3 WATER SERVICE TOTAL
SERVICE ANALYSIS - WATER						
A	DIRECT COSTS					
1	Employment costs	£m	3			
2	Power	£m	3	5.440		5.440
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
10	Total direct costs	£m	3	5.440	0.000	5.440
11	General and support expenditure (NIW Only)	£m	3	0.100		0.100
12	Functional expenditure	£m	3	5.540	0.000	5.540
B	OPERATING EXPENDITURE					
13	Customer services	£m	3			
14	Scientific services	£m	3			
15	Other business activities	£m	3			
16	Total business activities	£m	3			
17	Rates	£m	3			3.143
18	Doubtful debts	£m	3			
19	Exceptional items	£m	3			
20	Total opex less third party services	£m	3			8.683
21	Third party services - opex	£m	3			
21a	PPP Unitary Charges (Opex element)	£m	3			
22	Total operating expenditure	£m	3			
22a	Payment by concessionaire to operator	£m	3			
C	REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)					
23	Reactive and planned maintenance infrastructure	£m	3			
24	Reactive and planned maintenance non-infrastructure	£m	3			
D	CAPITAL MAINTENANCE					
25	Infrastructure renewals charge (excluding third party services)	£m	3	0.000	0.000	0.000
26	Current cost depreciation (allocated)	£m	3	11.198	0.000	11.198
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			11.198
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			11.198
34	Total operating costs	£m	3			

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 21 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - WATER SERVICE - (TOTAL)

DESCRIPTION			UNITS	DP	1 WATER RESOURCES & TREATMENT	2 WATER DISTRIBUTION	3 WATER SERVICE TOTAL
SERVICE ANALYSIS - WATER							
A	DIRECT COSTS						
1	Employment costs	£m	3		3.882	11.791	15.673
2	Power	£m	3		10.662	3.372	14.034
3	Agencies	£m	3		0.000	0.000	0.000
4	Hired and contracted services	£m	3		2.479	5.856	8.334
5	Associated companies	£m	3		0.000	0.000	0.000
6	Materials and consumables	£m	3		3.622	0.505	4.128
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		0.005	0.009	0.013
10	Total direct costs	£m	3		20.650	21.533	42.182
11	General and support expenditure	£m	3		9.332	10.259	19.591
12	Functional expenditure	£m	3		29.981	31.792	61.774
B	OPERATING EXPENDITURE						
13	Customer services	£m	3				4.546
14	Scientific services	£m	3				1.438
15	Other business activities	£m	3				0.991
16	Total business activities	£m	3				6.975
17	Rates	£m	3				7.261
18	Doubtful debts	£m	3				0.088
19	Exceptional items	£m	3				0.000
20	Total opex less third party services	£m	3				76.098
21	Third party services - opex	£m	3				-0.009
21a	PPP Unitary Charges (Opex element)	£m	3				
22	Total operating expenditure	£m	3				
22a	Payment by concessionaire to operator	£m	3				
C	REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)						
23	Reactive and planned maintenance infrastructure	£m	3		0.000	9.932	9.932
24	Reactive and planned maintenance non-infrastructure	£m	3		1.809	5.051	6.860
D	CAPITAL MAINTENANCE						
25	Infrastructure renewals charge (excluding third party services)	£m	3		19.454	0.000	19.454
26	Current cost depreciation (allocated)	£m	3		44.016	17.880	61.896
27	Amortisation of deferred credits	£m	3				-1.600
28	Amortisation of intangible assets	£m	3				0.000
29	Business activities current cost depreciation (non-allocated)	£m	3				0.172
30	Capital maintenance excluding third party services	£m	3				79.922
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				79.922
34	Total operating costs	£m	3				

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (NIW Only)

DESCRIPTION	UNITS	DP	1	2	3	4	
			SEWERAGE	SEWAGE TREATMENT	SLUDGE TREATMENT & DISPOSAL	SEWERAGE SERVICE TOTAL	
SERVICE ANALYSIS - SEWERAGE							
A DIRECT COSTS							
1	Employment costs	£m	3	3.574	4.879	1.161	9.614
2	Power	£m	3	4.463	7.668	1.285	13.416
3	Agencies	£m	3	0.000	0.000	0.000	0.000
4	Hired and contracted services	£m	3	6.526	1.669	2.669	10.865
5	Associated companies	£m	3	0.000	0.000	0.000	0.000
6	Materials and consumables	£m	3	0.146	0.839	0.222	1.207
7	Service charges	£m	3	0.000	0.000	0.000	0.000
8	Other direct costs	£m	3	0.010	0.004	0.001	0.015
9	Total direct costs	£m	3	14.720	15.058	5.339	35.117
10	General and support expenditure	£m	3	6.831	7.782	3.357	17.970
11	Functional expenditure	£m	3	21.551	22.840	8.696	53.087
B OPERATING EXPENDITURE							
12	Customer services	£m	3				4.208
13	Scientific services	£m	3				1.268
14	Other business activities	£m	3				0.917
15	Total business activities	£m	3				6.394
16	Rates	£m	3				5.220
17	Doubtful debts	£m	3				-0.268
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				64.433
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	4.673	0.000	0.000	4.673
23	Reactive and planned maintenance non-infrastructure	£m	3	9.958	4.815	0.000	14.773
D CAPITAL MAINTENANCE							
24	Infrastructure renewals charge (excluding third party services)	£m	3	10.615		0.000	10.615
25	Current cost depreciation (allocated)	£m	3	3.236	83.415	8.867	95.518
26	Amortisation of deferred credits	£m	3				-2.373
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities current cost depreciation (non-allocated)	£m	3				0.175
29	Capital maintenance excluding third party services	£m	3				103.935
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				103.935
33	Total operating costs	£m	3				

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (PPP Only)

DESCRIPTION	UNITS	DP	1	2	3	4	
			SEWERAGE	SEWAGE TREATMENT	SLUDGE TREATMENT & DISPOSAL	SEWERAGE SERVICE TOTAL	
SERVICE ANALYSIS - SEWERAGE							
A DIRECT COSTS							
1	Employment costs	£m	3				
2	Power	£m	3		2.192	1.827	4.019
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	2.192	1.827	4.019
10	General and support expenditure (NIW Only)	£m	3	0.000	0.194	0.063	0.257
11	Functional expenditure	£m	3	0.000	2.386	1.890	4.276
B OPERATING EXPENDITURE							
12	Customer services	£m	3				
13	Scientific services	£m	3				0.063
14	Other business activities	£m	3				
15	Total business activities	£m	3				0.063
16	Rates	£m	3				0.952
17	Doubtful debts	£m	3				
18	Exceptional items	£m	3				
19	Total opex less third party services	£m	3				5.291
20	Third party services - opex	£m	3				
20a	PPP Unitary Charges (Opex element)	£m	3				
21	Total operating expenditure	£m	3				
21a	Payment by concessionaire to operator	£m	3				
C REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)							
22	Reactive and planned maintenance infrastructure	£m	3				
23	Reactive and planned maintenance non-infrastructure	£m	3				
D CAPITAL MAINTENANCE							
24	Infrastructure renewals charge (excluding third party services)	£m	3	0.000		0.000	0.000
25	Current cost depreciation (allocated)	£m	3	0.000	0.000	0.000	0.000
26	Amortisation of deferred credits	£m	3				0.000
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities current cost depreciation (non-allocated)	£m	3				0.000
29	Capital maintenance excluding third party services	£m	3				0.000
30	Third party services - current cost depreciation	£m	3				0.000
31	Third party services - infrastructure renewals charge	£m	3				0.000
32	Total capital maintenance	£m	3				0.000
33	Total operating costs	£m	3				

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (Total)

DESCRIPTION			UNITS	DP	1	2	3	4
					SEWERAGE	SEWAGE TREATMENT	SLUDGE TREATMENT & DISPOSAL	SEWERAGE SERVICE TOTAL
SERVICE ANALYSIS - SEWERAGE								
A DIRECT COSTS								
1	Employment costs	£m	3		3.574	4.879	1.161	9.614
2	Power	£m	3		4.463	9.860	3.112	17.435
3	Agencies	£m	3		0.000	0.000	0.000	0.000
4	Hired and contracted services	£m	3		6.526	1.669	2.669	10.865
5	Associated companies	£m	3		0.000	0.000	0.000	0.000
6	Materials and consumables	£m	3		0.146	0.839	0.222	1.207
7	Service charges	£m	3		0.000	0.000	0.000	0.000
8	Other direct costs	£m	3		0.010	0.004	0.001	0.015
9	Total direct costs	£m	3		14.720	17.250	7.166	39.136
10	General and support expenditure	£m	3		6.831	7.976	3.420	18.227
11	Functional expenditure	£m	3		21.551	25.226	10.586	57.363
B OPERATING EXPENDITURE								
12	Customer services	£m	3					4.208
13	Scientific services	£m	3					1.331
14	Other business activities	£m	3					0.917
15	Total business activities	£m	3					6.457
16	Rates	£m	3					6.172
17	Doubtful debts	£m	3					-0.268
18	Exceptional items	£m	3					0.000
19	Total opex less third party services	£m	3					69.724
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		4.673	0.000	0.000	4.673
23	Reactive and planned maintenance non-infrastructure	£m	3		9.958	4.815	0.000	14.773
D CAPITAL MAINTENANCE								
24	Infrastructure renewals charge (excluding third party services)	£m	3		10.615		0.000	10.615
25	Current cost depreciation (allocated)	£m	3		3.236	83.415	8.867	95.518
26	Amortisation of deferred credits	£m	3					-2.373
27	Amortisation of intangible assets	£m	3					0.000
28	Business activities current cost depreciation (non-allocated)	£m	3					0.175
29	Capital maintenance excluding third party services	£m	3					103.935
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					103.935
33	Total operating costs	£m	3					

Tables 21 & 22 Activity Costing Analysis – Water & Sewerage Service

The costs in Tables 21 & 22 are populated with the updated information available at 4 May 2012 for the year ended 31 March 2012.

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 AIR12. This is consistent with past years.

Fixed assets comprise:

- **Infrastructure assets**

Infrastructure assets comprise a network of systems consisting of mains and sewers, impounding and pumped raw water storage reservoirs, sludge pipelines and sea outfalls. The infrastructure renewals charge for infrastructure assets is included in Tables 21 and 22 and is the estimated level of annual expenditure required to maintain the operating capability of the network, which is based on the Company's Asset Management Plan.
- **Other assets**

Other assets comprise:

 - a) Land and non operational buildings,

- b) Operational assets (consisting of sites used for water and wastewater treatment, pumping or storage where not classified as infrastructure), and
- c) Vehicles, mobile plant and equipment.

Allocation of costs between service areas

All costs entered to NI Water's Oracle General Ledger (GL) have a 5-segment coding combination (account, cost centre, service activity, location and project). For the purpose of Tables 21 & 22 Opex costs from the General Ledger have been allocated between Water and Sewerage services and between service areas within the Water and Sewerage activities by mapping NI Water's Oracle General Ledger to the tables using the coding structure.

Expense Groups are mapped to the NIAUR cost categories – **Appendix 1** provides details of this mapping. The Services Activities segment is mapped to the NIAUR service areas – **Appendix 2** provides details of this mapping.

The only exception to this is indirect General & Support expenditure, which can relate to more than one service area or activity. These costs are collated into 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 reduced significantly from AIR11 to AIR12 (by circa £10M). This is explained in the General & Support section further on in the commentary. The table below shows the basis of apportionment of 'indirect' General & Support expenditure between service activities.

Allocation of General and Support	Water		Sewerage			Comments
	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp	
G&S Overhead Pot 1	25.4%	26.5%	18.1%	21.2%	8.8%	Non ops general spend. Excludes CS, SS & Regulation
G&S Overhead Pot 2a - Water	49.0%	51.0%	0.0%	0.0%	0.0%	Water related activities only
G&S Overhead Pot 2b - Sewerage	0.0%	0.0%	37.6%	44.1%	18.3%	Sewerage activities only
G&S Overhead Pot 3	25.4%	26.5%	18.1%	21.2%	8.8%	Water and sewerage networks spend only

The percentage splits in AIR12 allocate less costs to Water and more cost to Sewerage than AIR11. The allocation to Water from General & Support Overhead Pot 1, which contains the vast majority of the cost, has decreased from 54.1% in AIR11 to 51.9% in AIR12. This is due to the relative decrease of direct costs in Water as a percentage of total costs. This is primarily driven by the impact of the freeze/thaw increasing Water costs in AIR11.

Further explanation is detailed later in the commentary.

The costs of the CRC Energy Efficiency Scheme are included within Power.

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 decreased from 54.3% in AIR11 to 51.9% in AIR12.

The table below shows the basis of apportionment for AIR12.

Apportionment of business activities	Water		Sewerage		
Description	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp
BASIS - Total spend (includes general & Support)	25.1%	26.8%	18.0%	21.3%	8.7%
Apportionment					
Water / Sewerage split	51.9%		48.1%		

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 AIR12 overall rates are split 54% Water and 46% Sewerage compared to 56% and 44% respectively in AIR11.

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

During 2010/11 the prolonged adverse weather conditions resulted in a major incident for NI Water. This resulted in substantial additional expenditure in AIR11, and combined with the resultant release of overprovided costs in AIR12, results in a significant swing in Opex costs from AIR11 to AIR12.

Reorganisation costs

Reorganisation costs included within reported totals on Tables 21 and 22 are provided in the table below:

Description	Amount	Table 21/22 location
Business Improvement Programme	£1.5M	General & Support – all activities
Voluntary Early Retirement Scheme \ Voluntary Severance (VER \ VS)	£2.9M	Employment Costs and General & Support – all activities
Total	£4.4M	

Business Improvement Programme

The Business Improvement Programme (“BIP”) seeks to address four strategic strands:

- Improve services to Customers;
- Develop the NI Water people;

- Build a more efficient and effective organisation; and
- Exceed, where possible, quality compliance standards.

The BIP operating expenditure in 2011/12 continued to focus primarily on Data Quality, which ultimately led to the release from the Legal Undertakings in March 2012. Total Opex on the BI Programme in 2011/12 was £1.5M, compared to £2.0M in 2010/11. Expenditure has decreased reflecting both the lower external expenditure for the Data Quality Programme, and the reduced personnel within the Programme Management Office.

Voluntary Early Retirement

During 2011/12 NI Water further reduced the workforce through 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 £2.9M can be broken down as follows:

Description	Amount
Pension related VER past service costs	£0.7M
Non pension lump sum	£0.1M
VS scheme payments	£2.1M
Total	£2.9M

The corresponding charge for AIR11 was £2.6M.

Of the above costs relating to the 2011/12 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.

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 £52M as detailed below. These costs include the £2.9M VER\VS costs outlined above. Only circa £25M is included in Employment Costs (Line 1) in Tables 21 & 22 (AIR11 circa £25M).

The table below provides the reconciliation between these amounts:

Description	Amount	Table 21/22 location
Industrial Wages	£19.4M	
Salaries	£27.8M	
Temporary Staff	£0.5M	
Other Costs of Employment	£3.1M	
Staff Expenses	£1.1M	
Total NI Water staff costs	£51.9M	
<u>Less:</u>		
Customer Services	(£4.1M)	Customer Services
Scientific Services	(£1.5M)	Scientific Services
Regulation	(£0.5M)	Other Business Activities
Unallocated	(£20.5M)	General & Support
Total Employment Costs	£25.3M	£15.7M Table 21 and £9.6M Table 22

The unallocated amount of circa £20M is included in General & Support and has been apportioned between Table 21 and 22, across each of the columns, based on total direct costs.

Total NI Water staff costs have decreased by approximately £1M from AIR11 due to a reduction in Industrial wages of £0.6M; Salaries of £0.3M and £0.3M in temporary support staff. The reduction in Industrial wages from AIR12 to AIR11 is primarily due to a reduction in the overtime paid (£0.4M). Overtime was exceptionally high in AIR11 due to the Freeze Thaw. The main reason for the reduction in salaries in AIR12 is due to a reduction in headcount as a result of the VER scheme implemented in AIR11. The reduction in temporary staff is as a result of staff being permanently recruited to the Work Control Centre in this financial year.

Customer Services employment costs have increased by £0.8M from AIR11. On 1st December 2010 the Accounts Service function was in-sourced to NI Water from Echo so in AIR12 the staff costs represents the full year impact of this change.

Hired & Contracted

Hired and Contracted Services of circa £19M in Table 21 and Table 22 are split out in the table below. The corresponding charge in the AIR11 was circa £20M.

Hired & Contracted Services:	Table 21	Table 22	TOTAL
Operational Contractors	£7.6M	£10.5M	£18.1M
Other Contractors	£0.7M	£0.4M	£1.1M
Consultants	£0.0M	£0.0M	£0.0M
TOTAL	£8.3M	£10.9M	£19.2M

Within the Operational Contractors costs of £7.6M in Table 21, circa £2M relates to the cost of contractors for Water Treatment with the balance being the cost for the hire of plant and contractors to facilitate the maintenance of the networks. Within the Operational Contractors cost of £10.5M in Table 22, circa £3M is for the cost of the various Sludge Disposal Routes, circa £6M is for the maintenance of the Sewerage network and the balance relates to the costs of Sewage Treatment (including the costs of Skip Hire etc.).

There is a minor element of Consultants Fees within Hired and Contracted within Table 21 (<£0.1M).

Hired and Contracted Services have decreased by £1.1M from AIR11. In Table 21 Operational Contractors costs have decreased by £1.9M while in Table 22 Operational Contractors costs have increased by £0.9M. The main reduction in Table 21 is under Water Distribution which has reduced by £1.8M. The costs in AIR11 were driven by the Freeze Thaw in 2010/11 which was a major incident for NI Water. Operational Contractor costs in Table 22 have mainly increased due to an increase in costs in Sewage Treatment and in Sludge Treatment and Disposal. These increases are primarily driven by MBR cleaning in AIR12 and the release of an accrual in AIR11.

General & Support Costs

General & Support costs have reduced greatly from AIR11 (£47.4M) to AIR12 (£37.8M).

The principal costs in this expenditure line are:

Description	Amount	Table 21/22 location
Unallocated Employment Costs	£20.5M	Included in General & Support (Removed from Employment Costs)
Unallocated Power	£0.0M	Included in General & Support (Removed from Power Costs)
Unallocated Hired & Contracted Costs	£6.3M	Included in General & Support (Removed from Hired & Contracted)
Unallocated Materials & Consumables	£1.5M	Included in General & Support (Removed from Materials & Consumables)
Unallocated Other Direct Costs	£3.7M	Included in General & Support (Removed from Other Direct Costs)
Communication	£1.1M	General & Support
Mobile V&P Charges & Repairs	£2.3M	General & Support
Audit & Environmental Regulatory Costs	£1.8M	General & Support
Other	£0.6M	General & Support
Total	£37.8M	£19.6M Table 21 and £18.2M 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 AIR11 and AIR12. See the **Allocation of costs between service areas** section at the start of the commentary.

The main decreases from AIR 11 are in Unallocated Hired & Contracted Costs (£4.2M reduction), Unallocated Other Direct Costs (£3.3M reduction) and Unallocated Employment Costs (£2.4M reduction).

Table 21 – NI Water Total

A - Direct Costs

Table 21 Total Functional Expenditure has decreased by circa £10M from AIR11 to AIR12. This is primarily due to the decrease in the allocation of General & Support expenditure (£6.6M), the decrease in Power (£2.1M) and Hired and Contracted Services of (£1.8M) which are explained on a line by line basis below;

- Line 1: Employment costs have increased in Water Resources & Treatment (WRT) by circa £0.2M and in Water Distribution (WD) by circa £0.6M, primarily due to an increase in VER costs.
- Line 2: Power costs include electricity costs, fuel costs for power generation and costs for the CRC Energy Efficiency Scheme. Overall the costs have decreased by circa £2.1M in AIR12 from AIR11. There has been circa £3M reduction in electricity and fuel costs offset by the CRC Energy Efficiency Scheme of £0.9M. The reduction in electricity was primarily due to the cessation of NIW's fixed price contract for the supply of electricity. The contract ended on 30 September 2010 and a full year benefit has been realised in AIR12. Power costs include £5.4M related to PPP.
- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted Services have decreased by circa £1.8M, with the majority of the decrease in WD. This is primarily due to the increased costs for the Freeze Thaw incident in AIR11.
- Line 5: Associated companies– there are no costs in this line.
- Line 6: Materials & Consumables have reduced by circa £0.3M from AIR11.
- 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 are immaterial and in line with AIR11.
- Line 10: Total Direct Costs – this is a calculated line and is the total of Line 1-9. AIR12 direct costs are £3.5M lower than AIR11. This is driven by Power costs and Hired & Contracted Services as detailed above.
- Line 11: General & Support expenditure has reduced by circa £6.6M from AIR11 to AIR12 (£3.3M in WRT and £3.3M in WD). The reason for the decrease in the costs in Table 21 is the decrease in the overall General & Support expenditure (as already discussed), combined with the reduction in the percentages used to allocate General & Support costs to Table 21. The percentages used are calculated on the total of Direct Costs and in AIR12 the total of the Direct Costs of Table 21 have reduced by circa £3.5M whilst the Direct Costs for Table 22 have remained broadly static. This results in a decreased allocation in Table 21 of 51.9% (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 £0.1M for PPP.
- Line 12: This is the calculated total line for functional expenditure which has decreased by circa £10M mainly due to the £6.6M decrease in

General & Support expenditure and £2.1M decrease in Power costs. Line 12 includes £5.5M of costs associated with PPP.

B - Operating Expenditure

- Line 13: Customer Services costs have increased by circa £1M compared to AIR11 in Table 21. This is primarily due to an increase in Outsourcing and Employment Costs. On 1st December 2010 the Accounts Service function was in-sourced to NI Water from Echo so in AIR12 the staff costs represents the full year impact of this change. Outsourcing has increased in AIR12 primarily due to the partial release of a provision in AIR11 for a commercial claim settled during that year. Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR12 the percentage split was calculated at 51.9% Table 21 and 48.1% Table 22. In AIR11 the percentage split was 54.3% and 45.7% between Table 21 & 22 respectively.
- Line 14: Scientific Services costs have decreased marginally from AIR11. Scientific Services costs have been split using the same percentage basis as Customer Services as detailed above in line 13.
- Line 15: Other Business Activities – Regulatory costs have decreased from AIR11 by circa £0.4M. AIR11 included some provision for costs relating to the Freeze Thaw Major Incident. These costs are apportioned on the same basis as Line 13 and Line 14.
- Line 16: Total Business Activities – this is a calculated line and is the total of Line 13, 14 and 15. The increase from AIR11 of circa £0.4M is driven by the increase in Customer Services costs as detailed above.
- Line 17: Local authority rates have increased in AIR12 from £6.6M in AIR11 to £7.3M in AIR12. [REDACTED]
[REDACTED] The rates charge for Water treatment can be specifically identified from the rates bill. Rates include £3.1M relating to PPP sites.
- Line 18: Doubtful debts have decreased from the AIR11 position of £2.0M to £0.1M in AIR12.

At a total NI Water level doubtful debts have reduced by circa £3M. This reduction is primarily driven by the following three factors.

1. In AIR11, a one-off increase of £1.1M was made to bad debts to recognise the increased risk of default from debtors within specific industries;
2. In AIR12, the bad debt provision was calculated on a reduced debtor base, on the assumption that a proportion of the debt would be eliminated through credit notes thereby impacting upon income, rather than written off as a bad debt. This led to a £1.0M decrease in the bad debt charge; and
3. In AIR12 the provision set aside for debt from specific industries (as mentioned above) was revised, leading to a drop in bad debt of £0.4M.

The total NI Water doubtful debts have then been split between Table 21 and 22 on a specific line by line basis as provided by Financial

Accounts (consistent with AIR11). This results in a £1.9M reduction in Table 21 and a £1.2M reduction in Table 22.

- Line 19: Exceptional items– there are no costs in this line.
- Line 20: Total Opex less third party services – this is a calculated line and is the total of line 12,16,17,18 and 19. This has decreased by circa £10.8M from AIR11 driven by the decreases in General and Support, Power costs and Hired and Contracted Services.
- Line 21: Third party services are immaterial and have reduced by circa £0.1M. This is due to a change in accounting treatment during AIR12.
- 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 decreased by around £11M from AIR11 mainly due to the decreases in General and Support, Power costs and Hired and Contracted Services. This agrees to Table 35 line 24.
Total operating expenditure includes circa £11M relating to PPP.
- Line 22a: This figure has increased by £0.8M from AIR11 and varies from year to year depending upon volumes of water dispatched, changes in the volumetric charge, deductions incurred and indexation. See Table 42 commentary for details.

C Reactive & Planned Maintenance

- Line 23: Infrastructure, this figure has decreased marginally (£0.2M) from AIR11.
- Line 24: Non-infrastructure, this figure has also reduced marginally (£0.3M) from AIR11.

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:

- In 2011/12 the net charge to the profit and loss account in respect of the service element of the Alpha unitary payments was [REDACTED]
- In 2011/12 the charge to the profit and loss account in respect of the finance charge element of the Alpha unitary payments was [REDACTED]
- In 2011/12 an amount of [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 2011/12 an amount of [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 £11.2M (2010/11 £4.0M).

Leakage costs

Operating costs relating to leakage have decreased slightly from £5.7M in AIR11 to £5.3M in AIR12. This is primarily due to the Freeze Thaw major incident in AIR11. Capital expenditure has remained consistent from AIR11 to AIR12.

Table 22 – NI Water Total

A - Direct Costs

Total Functional Expenditure in Table 22 has decreased by circa £3M from AIR11 to AIR12. This is primarily due to the decrease in General & Support expenditure and is explained on a line by line basis below:

- Line 1: Employment costs have decreased marginally by £0.2M from AIR11.
- Line 2: Power costs include electricity costs and fuel costs for power generation and costs for the CRC Energy Efficiency Scheme. Overall the costs have decreased by £0.3M in AIR12 from AIR11. There has been a £1.4M reduction in electricity and fuel costs offset by the CRC Energy Efficiency Scheme of £1.1M. The reduction in electricity was primarily due to the cessation of NIW's fixed price contract for the supply of electricity. The contract ended on 30 September 2010 and a full year benefit has been realised in AIR12.

In AIR12 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 AIR11.

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 2011/12. The power team supplied an estimated 36:64 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 AIR11 (based on an estimated KWhr usage at each of the sites). The AIR11 split was 42:58.

Power costs include £4.0M for PPP.

- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted have increased by £0.8M, with £0.9M in Sewage Treatment, £0.5M in Sludge Treatment & Disposal offset by a reduction of £0.7M in Sewerage. These increases are primarily driven by MBR cleaning in AIR12, the release of an accrual in AIR11 and increases in transportation costs due to the increased price of diesel.
- Line 5: Associated companies– there are no costs in this line.
- Line 6: Materials & Consumables have increased marginally by £0.1M from AIR11 to AIR12.
- Line 7: Service Charges– there are no costs in this line.
- Line 8: Other Direct Costs are immaterial and have remained virtually unchanged from AIR11.
- Line 9: Total Direct Costs – this is a calculated line and is the total of lines 1-8. AIR12 direct costs are £0.4M higher than AIR11. This is driven by Hired and Contracted Services as detailed in line 4 above.
- Line 10: General & Support expenditure has reduced by circa £3M from AIR11 to AIR12 (£1.8M in Sewerage; £1.1M in Sewage Treatment

and £0.1M in Sludge Treatment & Disposal). Overall General and Support costs have reduced significantly in AIR12 (as already discussed). The percentages used to allocate General & Support expenditure for Table 22 has increased from 45.9% in AIR11 to 48.1% in AIR12. Service Activities are mapped to the NIAUR service areas in **Appendix 2**. See the **Allocation of costs between service areas** section at the start of the commentary.

The NI Water Total costs include circa £0.3M for PPP. This is consistent with AIR11.

- Line 11: This is the calculated total line for Functional Expenditure which has decreased by £2.6M. This reduction is driven by the £3M reduction in General & Support expenditure. Line 11 includes costs of [REDACTED] associated with PPP.

B - Operating Expenditure

- Line 12: Customer Services costs have increased by circa £1M compared to AIR11. This is primarily due to an increase in Outsourcing and Employment Costs. On 1st December 2010 the Accounts Service function was in-sourced to NI Water from Echo so in AIR12 the staff costs represents the full year impact of this change. Outsourcing has increased in AIR12 primarily due to the partial release of a provision in AIR11 for a commercial claim settled during that year. Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR12 the percentage split was calculated at 51.9% Table 21 and 48.1% Table 22. In AIR11 the percentage split was 54.3% and 45.7% between Table 21 & 22 respectively.
- Line 13: Scientific Services costs have increased marginally from AIR11. Scientific Services costs have been split using the same percentage basis as Customer Services as detailed above in line 12.
- Line 14: Other Business Activities have decreased by circa £0.3M from AIR11. AIR11 included some provision for costs relating to the Freeze Thaw Major Incident. 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 increase from AIR11 is £0.9M and is driven by the increase in Customer Services, see line 12.
- Line 16: Local authority rates have increased by circa £1M from AIR11. There was a significant credit recovered in 2010/11 for rates on Waste Water Treatment Works which was reflected in AIR11. Line 16 includes £1.0M for PPP rates.
- Line 17: Doubtful debts have decreased from the AIR11 position of circa £0.9M to a credit of circa £0.3M.

At a total NI Water level doubtful debts have reduced by circa £3M. This reduction is primarily driven by the following three factors.

1. In AIR11, a one-off increase of £1.1M was made to bad debts to recognise the increased risk of default from debtors within specific industries;
2. In AIR12, the bad debt provision was calculated on a reduced debtor base, on the assumption that a proportion of the debt

would be eliminated through credit notes thereby impacting upon income, rather than written off as a bad debt. This led to a £1.0M decrease in the bad debt charge; and

3. In AIR12 the provision set aside for debt from specific industries (as mentioned above) was revised, leading to a drop in bad debt of £0.4M.

The total NI Water doubtful debts have then been split between Table 21 and 22 on a specific line by line basis as provided by Financial Accounts (consistent with AIR11). This results in a £1.9M reduction in Table 21 and a £1.2M reduction in Table 22.

- Line 18: Exceptional items– there are no costs in this line.
- Line 19: Total Opex less third party services – this is a calculated line and is the total of Line 11, 15, 16, 17 and 18. This has reduced by £1.8M from AIR11. This is driven by the £2.9M reduction in General & Support expenditure (line 10) and the £1.2M reduction in Doubtful Debts (line 17), offset by a £1.2M increase in Customer Services (line 12) and £1.0M in Rates (line 16).
- Line 20: Third party services have remained constant.
- Line 20a: Total PPP Unitary Charge has remained constant with AIR11. 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 £1.8M from AIR11. This is driven by the £3M reduction in General & Support expenditure (line 10) and the £1M reduction in Doubtful Debts (line 17), offset by an £1M increase in Customer Services (line 12) and £1M in Rates (line 16).
Total operating expenditure includes £28.7M of costs associated with PPP.
- Line 21a: Payments to Operators for Sewerage Services has increased by £0.7M to £9.2M in AIR12.

C - Reactive & Planned Maintenance

- Line 22: Infrastructure, this figure has reduced by circa £0.6M from AIR11 to £4.7M.
- Line 23: Non-infrastructure, this figure has reduced by circa £0.5M from AIR11 to £14.8M.

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 2011/12 the charge to the Operating Costs Statement in respect of Kinnegar was [REDACTED] The

gross charge was [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 2011/12 the charge to the Operating Costs Statement in respect of Omega was [REDACTED]

[REDACTED] The gross charge was [REDACTED]
[REDACTED] capitalised in relation to the residual interest asset.

Reactive and planned maintenance

The overall approach and allocation process for Tables 21 and 22 has remained consistent with AIR11. However there still remain some limitations to the coding which means that some expenditure, for example building and ground maintenance, cannot be split separately.

Pensions

Pension costs per the actuarial information at 31st March 2012 were £9.8M (AIR11 £11.7M) which amounts to £11.0M net of interest credit (AIR11 £12.4M) and these were charged to the profit and loss account. This is made up of current service costs of £10.3M (AIR11 £11.3M) and past service costs of £0.7M (AIR11 £1.1M). These costs have been included in general and support costs and employment costs in Tables 21 and 22 on the basis outlined in the cost allocation section above.

The total employer pension contributions for the year were £11.3M (AIR11 £13.1M) including £1.0M relating to payment of 2010/11 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.

Pensions 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 2012.

Third party costs

Third party costs are negligible in AIR12 and relate primarily to services recharged to third parties. The associated income is reported in Table 23 as third party income.

Infrastructure Renewals Charge (IRC)

See Commentary for Table 33.

Table 21 – Water Service (PPP only)

Line 2 Power Costs

Power costs have fallen by 13% from the AIR11 reported figure of £6.275m. This results from a full year impact of the reduced prices negotiated in 2010/11 offset by increased costs of £349k associated with the Carbon Reduction Commitment.

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 AIR11. Costs have fallen by £0.064m from AIR 11.

As the Alpha contract is now in a steady state of operation staff time within the Contracts Management Team spent on this project has reduced as have consultancy costs. Consultancy costs for the year have also reduced as a result of the release of an over accrual from 2010/11.

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

Rates costs have increased in AIR 12 as the AIR 11 figure was reduced by the release of an accrual from 2009/10.

Line 21a PPP Unitary Charges (Opex)

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

Table 22 - Sewerage Service (PPP only)

Line 2 - Power Costs

Power costs have increased by 10% from AIR11 as a result of the inclusion of costs associated with the Carbon Reduction Commitment of £258k.

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). Costs in this column have increased in AIR12 as a larger proportion of the Duncrue site power costs are allocated to PPP as the second incinerator has become functional.

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.

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 AIR11 reflecting all costs associated with P101 cost centre. These costs are slightly higher in AIR12 as there was a release of an over accrual from 2009/10 in the AIR 11 consultancy costs.

Total general and support costs associated with the Omega contract were calculated at £221k and two sevenths of this has been allocated to column 3 to reflect costs associated with Duncrue and Ballynacor sludge facilities, the remaining five sevenths are associated with the 5 Omega WWTW facilities.

Line 13 - Scientific Services

Scientific Services costs reflect the contract sampling and analysis costs borne by the Company in providing its sampling and analytical contractual obligations to the Kinnegar and Omega Facilities in Service: Kinnegar, North Down, Richhill, Ballyrickard, Ballynacor and Armagh. This cost has remained static from AIR 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 increase in rates cost in AIR12 is 2.5%.

Line 20a - PPP Unitary Charges (Opex)

[REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

Appendix 1 – Expense group mapping

Expense Group	Desc	Table 21 & 22 mapping
511X	Industrial Wages	Employment
513X	Other Wage Costs	Employment
514X	Other Costs of Employment	Employment
515X	Salaries	Employment
516X	Non-Industrial Expenses	Employment
517X	Temporary Support Staff	Employment
611X	Cost Reallocations	Employment
612X	N/A	Employment
613X	N/A	Employment
614X	N/A	Employment
521X	Power	Power
531X	Operational Contractors	Hired and Contracted
532X	Other Contractors	Hired and Contracted
534X	Out sourcing	Hired and Contracted
538X	Consultants Fees	Hired and Contracted
541X	Materials and Equipment	Materials & consumables
544X	Non Operations Materials	Materials & consumables
547X	Stock Adjustments	Materials & consumables
548X	Chemicals	Materials & consumables
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	Sewerage - Sewage Treatment
591	Waste Water Function Activity - Query	
620	Sludge Treatment - Tankering Between Works	Sewerage - Sludge Treatment
621	Sludge Treatment	
630	Sludge Disposal to Agricultural Land Transportation	
631	Instrumental Control Activity M & E WasteWater	
632	Sludge Cake Transportation to Landfill	
633	Sludge Cake Disposal to Landfill	
635	Sludge Logger Maintenance (Contract)	
636	Incinerator Sludge Treatment	
637	Sludge Disposal Tankering from Strategic Collection Centres to Dewatering Centres	
638	Sludge Cake Disposal to Incinerator	
639	Incinerator Ash Disposal to Landfill	
640	Private Septic Tank Desludging	Customer Services
710	General	
711	Customer Services (Meter Read & Customer Queries)	
712	Disconnection / Reconnection	
714	Consumer Meters Repair And Maintenance	
790	Customer Services Function Activity	
730	Water Analysis	Scientific Services
731	Sewerage General	
732	Labs Water & Sewerage General	
733	Sampling	
734	Labs Sewage Sampling	
003	Rates DRC - Water	Rates
013	Rates DRC - Sewerage	
910	Rechargeable Work	Third Party Opex
000	Default	Overhead Pot 1 - General
021	GAE	
023	Invest to Save Revenue	
810	Vehicle & Plant Maintenance	
811	Vehicle & Plant Accident Repair	
812	Garage Overheads	
813	Roads Service	
820	Telemetry	
890	TMG Function Activity	
050	Ops & Maint General (Water)	Overhead Pot 2 - Water
055	Ops & Maint General (Sewerage)	Overhead Pot 2 - Sewerage
585	Health & Safety - WW	
590	Waste Water Function Activity	
735	Trade Effluent	
821	Radio & Monitoring Wastewater	Overhead Pot 3 - Networks Water & Sewerage
390	Networks Function Activity	

ANNUAL INFORMATION RETURN - TABLE 23 REGULATORY ACCOUNTS
ANALYSIS OF TURNOVER AND OPERATING INCOME

			1	2	3	4	5	6	7	8	9	10	11	12	13	14		
DESCRIPTION	UNITS	DP	2008-09			2009-10			2010-11			2011-12						
			WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	SUBSIDY WATER INCLUDED	SUBSIDY SEWERAGE INCLUDED	CG	
A TURNOVER																		
1	Unmeasured - household	£m	3	114.083	104.945	219.028	118.127	122.227	240.354	118.368	128.232	246.600	119.300	134.000	253.300	119.300	134.000	A2
2	Unmeasured - non- household	£m	3	1.699	1.637	3.336	3.431	3.436	6.867	2.495	2.721	5.216	2.287	2.591	4.878	1.175	1.325	A2
3	Unmeasured	£m	3	115.782	106.582	222.364	121.558	125.663	247.221	120.863	130.953	251.816	121.587	136.591	258.178	120.475	135.325	A2
4	Measured - household	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2
5	Measured - non- household	£m	3	39.768	36.965	76.733	42.101	25.466	67.567	37.791	20.997	58.788	40.761	22.178	62.939	7.862	3.602	A2
6	Measured	£m	3	39.768	36.965	76.733	42.101	25.466	67.567	37.791	20.997	58.788	40.761	22.178	62.939	7.862	3.602	A2
7	Trade effluent	£m	3		4.712	4.712		2.831	2.831		3.608	3.608		3.543	3.543	0.000	0.000	A2
7a	Roads Drainage Revenue	£m	3	0.000	17.150	17.150	0.000	19.670	19.670	0.000	19.867	19.867	0.000	20.134	20.134	0.000	0.000	A2
8	Large user and special agreement	£m	3	5.352	0.000	5.352	5.594	3.413	9.007	5.927	4.180	10.107	5.553	3.881	9.434	0.000	0.000	A2
9	Revenue grants	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2
10	Non potable water large user and special agreements	£m	3	0.000		0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	0.000	A2
11	Rechargeable works	£m	3	0.192	0.192	0.384	0.330	0.330	0.660	0.492	0.492	0.984	0.073	0.074	0.147	0.000	0.000	A2
12	Bulk supplies/inter company payments	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2
13	Other appointed business (third party)	£m	3	0.000	0.000	0.000	0.379	0.234	0.613	0.329	0.241	0.570	0.216	0.228	0.444	0.000	0.000	A2
14	Third party services (excluding non-potable water)	£m	3	0.192	0.192	0.384	0.709	0.564	1.273	0.821	0.733	1.554	0.289	0.302	0.591	0.000	0.000	A2
15	Other sources (excluding large users, third parties and special agreements)	£m	3	0.407	0.293	0.700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2
16	Total turnover	£m	3	161.501	165.894	327.395	169.962	177.607	347.569	165.402	180.338	345.740	168.190	186.629	354.819	128.337	138.927	A2
B OPERATING INCOME																		A2
17	Current cost profit or loss on sale of fixed assets	£m	3	-0.072	0.022	-0.050	0.120	-0.115	0.005	0.035	0.044	0.079	0.181	-0.466	-0.285			A2
18	Exceptional items	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			A2
19	Other operating income	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			A2
20	Total operating income	£m	3	-0.072	0.022	-0.050	0.120	-0.115	0.005	0.035	0.044	0.079	0.181	-0.466	-0.285			A2
C WORKING CAPITAL ADJUSTMENT																		A2
21	Working capital adjustment	£m	3	-0.292	0.000	-0.292	4.313	0.000	4.313	4.898	0.000	4.898	2.824	0.000	2.824			A2
D REVENUE CORRECTION MECHANISM																		A2
22	Net revenue movement out of the tariff basket	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2

Table 23 – Analysis of turnover and operating income**Working Capital Adjustment**

The commentary to Table 27 outlines the methodology for the Working Capital Adjustment.

Monthly Non-domestic Income Monitoring Process

The process for monitoring income is laid out in the flow diagram in Appendix A.

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 also analyses billed income each month by volume and consumption, in what is termed the "Actuals Report". A monthly meeting is held to review this.

Movements in Income against budget

Following on from the monitoring process detailed above, the 2011/12 year-end position of income against budget was as follows:

Income	Actual Income 2011/12 £m	Budget Income 2011/12 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	119.3	119.0	0.3
Domestic phasing subsidy - sewerage	134.0	134.3	(0.3)
Non-domestic phasing subsidy - water	1.2	1.2	0.0
Non-domestic phasing subsidy - sewerage	1.3	1.3	0.0
Domestic allowance - water	7.9	8.2	(0.3)
Domestic allowance - sewerage	3.6	3.6	0.0
Septic tank subsidy	1.9	1.9	0.0
Total subsidy	269.2	269.5	(0.3)
Non-domestic income:			
Measured water	38.4	39.1	(0.7)
Measured sewerage	20.2	23.8	(3.6)
Unmeasured water	1.1	1.2	(0.1)
Unmeasured sewerage	1.3	1.3	0.0
Trade effluent	5.8	4.4	1.4
Total non domestic income	66.8	69.8	(3.0)
Road drainage income	20.1	20.1	0.0
Other	3.7	2.9	0.8
TOTAL INCOME	359.8	362.3	(2.5)

The above table includes both appointed and un-appointed income.

As can be seen, total income was £2.5m under budget for 2011/12, with measured water and measured sewerage £4.3m under budget. This has arisen because of the following:

- A reduction in billed income over the year amounting to £7.0m (£2.7m for measured water and £4.3m for measured sewerage). For instance, since August 2010, measured water has seen a 14% reduction in billed income.
- A further £1.2m was set aside to cover future system adjustments.
- This reduction in consumption has been compensated for by a £2.3m release in the provisions made at 31 March 2011 e.g. pipe size provision, major incident provision, Magilligan and Coca Cola.
- The budget included a £2.0m reduction in income.

Trade effluent was £1.4m greater than budget, mainly due to the budget being set at a reduced level.

Movements in Income between 2011/12 and 2010/11

The table below details the income for the year ended 31 March, for both 2012 and 2011:

Income	Actual Income 2011/12 £m	Actual Income 2010/11 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	119.3	118.4	0.9
Domestic phasing subsidy - sewerage	134.0	128.2	5.8
Non-domestic phasing subsidy - water	1.2	1.3	(0.1)
Non-domestic phasing subsidy - sewerage	1.3	1.4	(0.1)
Domestic allowance - water	7.9	7.6	0.3
Domestic allowance - sewerage	3.6	3.2	0.4
Inflation correction subsidy	0.0	1.3	(1.3)
Septic tank subsidy	1.9	1.8	0.1
Total subsidy	269.2	263.2	6.0
Non-domestic income:			
Measured water	38.4	35.4	3.0
Measured sewerage	20.2	19.3	0.9
Unmeasured water	1.1	1.1	0.0
Unmeasured sewerage	1.3	1.3	0.0
Trade effluent	5.8	5.8	0.0
Total non domestic income	66.8	62.9	3.9
Road drainage income	20.1	19.9	0.2
Other	3.7	4.2	(0.5)
TOTAL INCOME	359.8	350.2	9.6

The income for measured water and measured sewerage has increased by £9.6m. This is due to:

- An increase in the subsidy of £6.0m, mainly within sewerage where there was a 4.7% increase in the tariff.
- Further reductions in billed income (as mentioned above).
- A £6.5m swing in provisions (pipe size, major incident, system adjustments), where £4.4m was set up in 2010/11, and £2.3m released in 2011/12.

The tables below detail, for both measured/unmeasured income and for trade effluent, how the income billed reconciles to the income reported at 31 March 2012:

Measured and unmeasured income						
				£m		
Invoiced income				56.7		
System adjustments				3.1		
Billed income				59.8		
Movement in accrued income				0.1		
Movement in referred bills				(0.1)		
Release of Pipe size provision				1.3		
Release of major incident provision				0.5		
Release of Magilligan and Coca-Cola provision				0.5		
Reduction in test meter accrual				(0.1)		
Correcting refunds in bank rec				0.2		
Future system adjustments				(1.2)		
Total income per accounts				61.0		
Accrued income at 31 March 2012 represented				22% of billed income in the year		
Trade effluent						
				£m		
Invoiced income				5.9		
System adjustments				(0.1)		
Total income per accounts				5.8		
Accrued income at 31 March 2012 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:

- Release of major incident provision – the provision was reduced to zero as at 31 March 2012.
- Release of Magilligan and Coca-Cola provision – this relates to one-off system adjustments, which went through income in April 2011.
- Correcting refunds in bank rec – there is very little extra refunds to be corrected in 2012/13.

The following adjustments may recur in future years:

- Movement in accrued income – there will always be a small variance over a period of a year.
- Movement in referred bills – there will always a small difference, depending on the level of bills held back at the year-end.
- Release of pipe size provision – a provision is still being held in the accounts as at 31 March 2012.
- Reduction in test meter accrual – the final test meter batch is to be issued in June 2012, thereby releasing the accrual in 2012/13.
- Future system adjustments – there will always be the need to provide for estimated future system adjustments.

Reconciliations and Controls carried out

A number of reconciliations are carried out on the income information sent by Echo:

- The Day 3 income information received from Echo is reconciled back to what has been entered on Oracle (see Appendix C). This reconciliation is signed off monthly by both Management Accounts (MA) and Financial Accounts (FA) within F&R.
- The debtor account in the balance sheet is reconciled each month, and signed off by MA and FA (see Appendix D).
- The accrued income account is reconciled each month by FA (see Appendix E).
- The number of meters to be billed is reconciled to what has actually been billed (see Appendix F).
- The 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 2011/12 year, Internal Audit carried out a review of the work done to satisfy the Management Letter Points raised by KPMG in its 2011/12 audit. These points were cleared by the required dates.

Balance Sheet Nominal Ledger Accounts

The table below gives details of the relevant balance sheet accounts as at 31 March 2012, together with a comparison to the balances as at 31 March 2011.

	Balance 2011/12 £m	Balance 2010/11 £m	Variance £m
Debtors (water and sewerage)	12.4	13.8	(1.4)
Debtors (trade effluent)	0.8	1.0	(0.2)
Unreconciled receipts	0.0	(0.3)	0.3
Bad debt provision	(5.2)	(6.5)	1.3
Bad debt provision (trade effluent)	(0.1)	(0.1)	0.0

The £1.4m movement in the trade debtors balance for water and sewerage can be explained by various differences:

- The debtors at 31 March 2012 included £2.9m of unmeasured annual billing, which has been raised in the past in April;
- The debtors at 31 March 2012, aside from the 2012/13 unmeasured billing, had decreased by £1.6m from the previous year, due to reduced billing in March 2012, improved collection and an increased write-off.
- The debtors at 31 March 2012 included a reduction of £2.2m for future system adjustment charges;
- The debtors at 31 March 2011 included £0.3m for accrued test meters and unmeasured voids, which was in accrued income at 31 March 2012.
- At 31 March 2012, the level of referred bills had increased by £0.1m from the previous year.

The £1.3m decrease in the bad debt provision reflects:

- The belief that a proportion of old debt will disappear as a result of system adjustments, rather than be written off as bad debt.
- The reduced level of debt at 31 March 2012.

Accrued Income

In essence, there has been no change in how income has been accrued from the previous year. There are two reports which Echo uses for accrued income, both in the form of Excel spreadsheets included within the Day 5 data: the Dynamic Consumption Report (DCR), and a separate report for Trade Effluent, which is an excel spreadsheet model.

Measured customers are billed either every month (mainly larger customers) or every six months, in arrears, and income needs to be accrued for them for a period of up to six months. Therefore, there are seven “bill frequency” periods:

- Monthly
- Jan/Jul six monthly
- Feb/Aug six monthly
- Mar/Sep six monthly
- Apr/Oct six monthly
- May/Nov six monthly
- Jun/Dec six monthly

The DCR takes information directly from the RAPID system, and is based on the latest reading date (as opposed to billing date) and the average consumption of previous bills. If estimated readings have been made, these are used in the calculation. If there is not the necessary information available, the report will use the industry average consumption (for the industry sector which the customer has been assigned to). Any system adjustments made to the original bill meter reading will automatically over-ride the original bill, and it will be system adjustment readings which are used for the calculation of the accrual.

Accruals for trade effluent income are based on an excel spreadsheet model built by Xansa. This takes billing data from 1 April of the previous year i.e. close to 2 years of data when March accrual is being calculated, and a year is shut down at the start of April each year. The model contains a price tariff percentage to either increase or decrease the accrual, depending on the % uplift/reduction in prices from the previous year. The other parameter which has been built into the model is that the report will not create an accrual, if either:

- A monthly customer has not been billed for 3 months; or
- A six monthly customer has not been billed for 500 days;

The model designates customers as monthly or six-monthly, but does not break six-monthly down into the relevant month in which the six monthly bills are issued.

A high level reconciliation is performed by Echo each month, looking for any major differences in the month from the previous month.

Each month, the DCR is reviewed by Customer Services for any unusual items, and an adjustment made for those. The adjustment made in March 2012 is shown in Appendix G.

Unlike 2010/11, a number of adjustments have been switched to the accrued income account, rather than the debtors account. Thus, the accrued income in the balance sheet has increased by £3.6m for measured water and sewerage and by £0.1m for trade effluent (see table below).

	Accrued Income 2011/12 £m	Accrued Income 2010/11 £m	Variance £m
Accrued income:			
Measured water and sewerage	11.7	8.1	3.6
Trade effluent	0.7	0.6	0.1
TOTAL ACCRUED INCOME	12.4	8.7	3.7

This rise of £3.7m can be explained as follows:

- The level of accrued income at 31 March 2012 within the DCR, following the £0.2m reduction made to it, has increased over the 2010/11 level by £0.1m.
- The accrued income in 2010/11 contained the following reductions, amount to £3.4m, which are not present in 2011/12:
 - Pipe size reduction of £1.3m;
 - System adjustment provision of £1.0m;
 - Major incident provision of £0.6m;
 - Magilligan and Coca-Cola provisions of £0.5m.
- Accruals for test meters and unmeasured voids, totalling £0.2m, are included within accrued income in 2011/12.

Subsidy Income

In 2011/12, NI Water had total subsidy income of £269.2m. This was broken down as follows:

- £253.3m for domestic phasing subsidy for water and sewerage, in lieu of domestic charges.
- £2.5m for non-domestic phasing subsidy, representing 50% of unmeasured non-domestic income.
- £11.5m for domestic allowance subsidy, representing the domestic allowance claimed by customers for both water and sewerage.
- £1.9m 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 2011/12 was based on the projections of NI Water's costs of operation (see the table below). The basis for the calculation has been approved by both the Regulator and by DRD. A total of £20.1m was invoiced in 2011/12 to Roads Service, compared to £19.9 in 2010/11. A more detailed breakdown of the assumptions behind the calculation is provided in Appendix H.

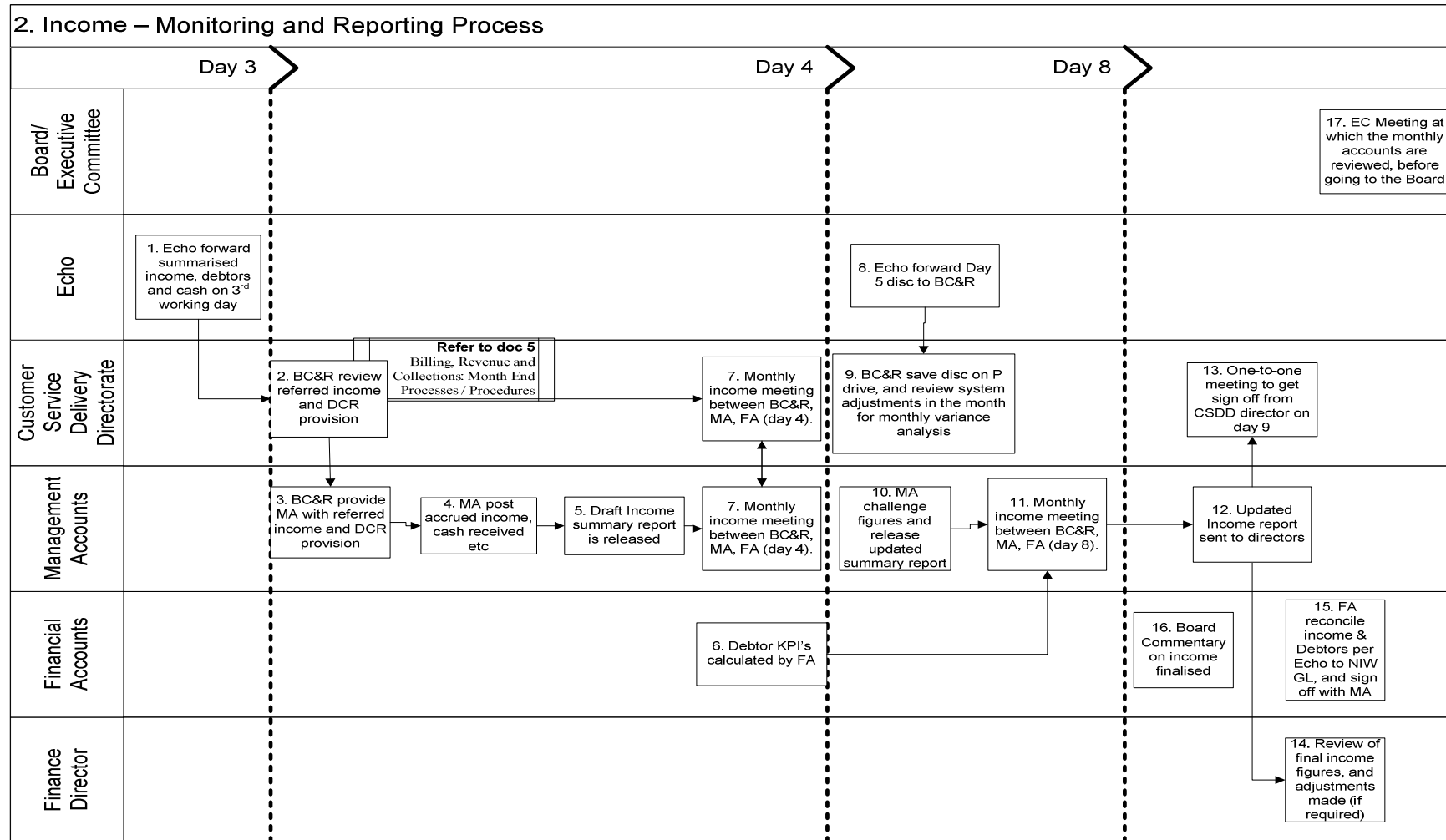
	Combined	Storm Water	Total
Split of sewers for run off from roads and footpaths	50.35%	49.65%	100%
Total volume of Water (Cubic metres)	32,325,198	31,874,802	64,200,000
Mogden Formula element	R+V	R	
Cost of Element	0.42560	0.20004	
Cost of Run off	13,757,604	6,376,235	20,133,839

Non tariff Basket Income

There is no net income movement out of the tariff basket for either water or sewerage.

Other Income

Other income was £3.7m for the 2011/12 year, against a budget of £2.9m, largely as a result of increased income from vehicle maintenance, aerial sites and the sale of ROCs.

Appendix A - Monthly Process for Monitoring Income

Appendix B – Day 5 Data received from Echo

<u>File Name</u>	<u>Output</u>	<u>Reconciliations & Checks</u>
CA_BSD_02 MMM xx Financial Summary Information_v1.0.xls	Day 3 Summary of Day 5 Files	ensure all 23 tabs relate to files for day 5 CD
CA_BSD_MMM xx Bank rec_V1.0.xls	Bank Reconciliation	Ensure reconciliation to FN012 Cash, FN012 credit card, FN012 refunds and Suspense
CA_BSD_0211 Refunds_MMM xx_v1.0.xls	Details of refunds	
CA_BSD_AccrualdetailMMM xx_v1.0.xls	Details of accruals by customer	Analysis performed to examine changes in meters, consumption and summary given in Day 3 of income analysis
CA_BSD_AccrualexceptionsDCMMM xx_v1.0.xls	Details of meters not accrued	Ensure No of meters corresponds to Accrual Summary file
CA_BSD_AccrualsummaryDCMMM xx_v1.0.xls	Summary by Pipesize of accruals	Ensure that totals correspond to detailed file
CA_BSD_Aged Cash MMM xx_v1.0.XLS	Cash received aging	Reconciliation to FN012
CA_BSD_Aged Returned Payments MMM xx_v1.0.XLS	Returned Payments aging	Reconciliation to FN012
CA_BSD_VAT EC Sales List		
CA_BSD_FN012 Summary Split Extended MMM xx_v1.1.xls	Summary of FN012 by category with monthly summary and journals	Reconciliation to FN012, reconciliation of journal files to FN012
CA_BSD_FN012 Summary Split OLD - MMM xx_v1.0.xls	Summary of FN012 with VAT summary	Reconciliation to FN012
CA_BSD_FN012 Summary Total MMM xx_v1.0.xls	Summary by month of billing and cash received	Reconciliation to FN012
CA_BSD_FN015 Aged Debt By Industry MMM xx_v1.0.xls	Aged debt	Reconciliation to FN012 and FN016,FN017,FN018
CA_BSD_FN016 Aged Debt By Payment Plan MMM xx_v1.0.xls	Aged debt	Reconciliation to FN012 and FN015,FN017,FN018
CA_BSD_FN017 Aged Debt By Recovery Stage MMM xx_v1.0.xls	Aged debt	Reconciliation to FN012 and FN015,FN016,FN018
CA_BSD_FN018 Aged Debt By Recovery Profile MMM xx_v1.0.xls	Aged debt	Reconciliation to FN012 and FN015,FN016,FN017
CA_BSD_Manual Adjustments MMM xx_v1.0.xls	details of manual adjustment transactions	reconciles to FN012
CA_BSD_N-Stop Aging - MMM xx_v1.0.xls	Summary of N-Stops by age	Reconciles to GL99 - Ordinary Customers
CA_BSD_Referred Bills Summary MMM xx_v1.0.xls	N-Stops and Bill Ceilings	Reconciles to GL99 and CTLPRT04
CA_BSD_Summary Suspense Report MMM xx incl aged_v1.0.xls	Summary of FN013 (aged)	Reconciles to FN013 / Bank Rec
CA_BSD_TE FN012 Aged Debt Rec MMM xx_v1.0.xls	Reconciliation of TE FN012 to aged debt	n/a - this is a reconciliation
CA_BSD_TE_AI_MMM xx_V1.xls	Details of accruals by customer (TE)	Spot check on calculation sheets. Income test for TE accruals and invoices
CA_BSD_Transaction Report MMM xx_v1.0.xls	Full transactional detail of FN012 amounts	Reconciled to FN012
CA_BSD_VAT EC Sales List		
CA_BSD_VAT Invoice Summary	All VAT bill transactions for period	Reconciles to FN012 and summary split (old)
SIC movement		
2 VAT reports		

Appendix C – Reconciliation of Echo Day 3 Information at 31 March 2012

		31-Mar-12																									
YTD income 1st Apr to end of Previous Month		from Echo	Accrued Income	Accrued Income	Referred Income	Referred Income	Deferred Income	Deferred Income	Monthly					DIFFERENCES		DIFFERENCES		DIFFERENCES		DIFFERENCES		DIFFERENCES		DIFFERENCES		DIFFERENCES	
		Disc	Reverse Previous	For this month	Reverse Previous	For this month	Reverse Previous	For this month	Movement	Closing Balance	GL01 report	Diff	Vic Square accrual	(Increased) / Decreased DCR provision	C Hurst release	Pipe size provision release	Adj in accrued income	Major incident release	Refund adj in bank rec	Future sys adjis reduction		Diff					
		Dr/(Cr)	Dr/(Cr)	Dr/(Cr)	Dr/(Cr)	Dr/(Cr)	Dr/(Cr)	Dr/(Cr)																			
4211 Measured Water	35,484,251	3,052,181	(8,561,878)	8,269,387	102,597	(133,406)		2,728,880	38,213,131	38,438,412	225,281	2,530	31,684		200,958	(6,242)		196,351	(200,000)		0						
4311 Measured Sewerage	19,815,754	1,658,200	(5,650,557)	5,375,670	83,873	(97,508)		1,369,678	21,185,432	20,156,698	(1,028,734)	4,386	22,066	50,000		(17,648)	50,000	7,823	(1,300,000)		1						
4251 Unmeasured Water	1,050,771	1,253,384					66,965	(1,258,849)	61,496	1,112,270	1,112,270	(0)								(0)	0						
4351 Unmeasured Sewerag	1,192,639	1,564,119					82,706	(1,573,871)	72,953	1,265,592	1,265,592	(0)								(0)	0						
4411 Trade Effluent	5,371,594	359,669	(551,572)	661,817	0			469,913	5,841,507	5,844,337	2,830		2,829							1	0						
	62,915,009	7,887,552	(14,764,008)	14,306,874	186,470	(230,914)	149,671	(2,832,721)	4,702,925	67,617,934	66,817,309	(800,625)	6,916	56,579	50,000	355,596	(23,890)	50,000	204,174	(1,500,000)	0						

Appendix D – Reconciliation of Debtors account on Oracle

NORTHERN IRELAND WATER LIMITED AS AT 31 March 2012	
Summary of Debtors	
Water & Sewerage Debtors GL code 1210	March 2012
Opening Balance	£12,238,558.10
Take on Bills/New Bills- TOTAL	£7,307,884.13
Take on Bills/New Bills- Sewerage	1,720,011.69
Take on Bills/New Bills- Water	2,606,640.01
Take on Bills/New Bills- VAT	98,637.89
Annual Billing	2,832,720.75
Annual Billing - VAT	49,873.79
Discounts	735.94
System Adjustments- Total	£477,119.31
System Adjustments- Sewerage	(47,156.48)
System Adjustments- Water	465,376.64
System Adjustments- VAT	58,899.15
Manual Adjustments- Total	-£87,735.36
Manual Adjustments- Sewerage	(32,470.91)
Manual Adjustments- Water	(48,654.89)
Manual Adjustments- VAT	(6,609.56)
Write Off Adjustments Total	£30,403.25
Write Off Adjustments- Sewerage	8,063.57
Write Off Adjustments- Water	23,227.31
Write Off Adjustments- VAT	(887.63)
NIWS Bad Debt Authorised Write Off- Total	-£132,397.68
NIWS Authorised Write Off- Sewerage	(52,457.61)
NIWS Authorised Write Off- Water	(74,461.36)
NIWS Authorised Write Off- VAT	(5,478.71)
Net Cash	(5,214,416.75)
Refunds	153,189.60
Water & Sewerage GL code 1210 Closing Balance	£14,773,340.54
Check	
Metered & Unmetered Water & Sewerage Debtors	£14,773,340.54
(AS per Crystal)	
Per Tb GL code 1210	12,342,128.35
Variance	£2,431,212.19
Due to:	
Variance (Oct = w/off Income 0708 in Oct08)	
Referred Bills NOT Recognised NET	(230,914.00)
System Adjustment Reduction	(2,200,000.00)
Unknown	-£298.19
Trade Effluent Debtors GL code 1213	
Opening Balance	£1,333,664.15
Take on Bills/New Bills	372,495.54
Referred Bills	
Annual Billing	
System Adjustments	-£7,204.25
Manual Adjustments	-£5,622.52
Write Off Adjustments	
NIWS Authorised Bad Debt Write Off	-£82.81
Net Cash	-£862,153.10
Refunds	
Trade Effluent GL code 1213 Closing Balance	£831,097.01
Variance	£0.00
Per Trial Balance general ledger code 1213	831,097
Referred Bills	
Total Opening Balance GL code 1213 & 1210	£13,572,222.25
Take on Bills/New Bills	£4,847,658.92
Annual Billing	£2,832,720.75
Discounts	£735.94
System Adjustments	£469,915.06
Manual Adjustments	-£93,357.88
Write Off Adjustments	£30,403.25
NIWS Authorised Bad Debt Write Off	-£132,480.49
Net Cash	-£6,076,569.85
Refunds	£153,189.60
Total Closing Balance GL code 1213 & 1210	£15,604,437.55
Balance as per FN012 Summary	£15,603,967.97
Difference	£469.58

Appendix E – Reconciliation of Accrued Income Account

NIW Accrued Income	
	Mar-12
	£'000
Per Echo	
Measured Water	8,269
Measured Sewerage	5,376
Trade Effluent	662
Accrued income	14,307
Accrued income adjustments	
Test Meter (net accrued income)	88
Voids not billed in unmeasured	82
DCR Provision	-404
DCR Further	-1,000
System Adjustment Provision	0
Pipe Size Provision	-500
Victoria Square	33
Accrued Income provision	-212
Accrued income posted	12,393
Per TB	12,393
Difference	0
Miscellaneous accrued Income	205
Interest Received Accrual	6
Total Accrued Income	12,605
Signed:	
TB Check	
1420 - Metered Water Accrued Income	11,730,620.95
1423 - Trade Effluent Accrued Income	662,794.35
1426 - Miscellaneous Accrued Income	205,096.35
1451 - Interest Received Accrual	6,407.89
	12,604,919.54

2011/12 - Meter Reconciliation Analysis												
Meters to be read	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Estimated	810	2,084	841	700	1,148	1,656	1,933	2,762	2,670	2,757	2,668	3,647
No Read	589	389	293	233	256	432	636	355	429	462	451	607
Read	12,329	12,202	9,125	9,534	10,740	12,318	11,083	11,575	7,199	7,329	9,075	10,117
Total Meters	13,728	14,675	10,259	10,467	12,144	14,406	13,652	14,692	10,298	10,548	12,194	14,371
No Reads to be investigated - Code Red	34	14	15	27	17	44	78	40	41	38	34	20
Apr figs adj to exclude 1,807 domestic meters												
Meters to be billed	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Billable Meters	13,589	14,548	10,139	10,341	11,926	14,152	13,279	14,348	10,083	10,291	11,882	14,040
Non-Billable Meters	139	127	120	126	218	254	373	344	215	257	312	331
Total Meters	13,728	14,675	10,259	10,467	12,144	14,406	13,652	14,692	10,298	10,548	12,194	14,371
Total Meters Billed	13,074	14,213	9,888	10,135	11,747	13,824	12,898	13,960	9,806	10,016	11,652	13,660
Meters to be investigated	2,322	335	251	206	179	328	381	388	277	275	230	380
Billable Meters	15,396	14,548	10,139	10,341	11,926	14,152	13,279	14,348	10,083	10,291	11,882	14,040
Meters to be investigated - Code Red	12	8	7	14	4	11	17	36	11	12	5	9
Apr figs adj to exclude 1,807 domestic meters												

Appendix G – DCR Adjustments at 31 March 2012

	Customer F	Meter Refe	Customer / Comp	Industry C	Pipe Size	Read Freq	Accrual D	Read Hist	Water volu	Water volu	Sewerage	Sewerage	Water Sta	Water Voli	Total Water	Sewerage	Sewerage V	Total Sewer	Total accn	Total accrual	Total Accrual
Per DCR	94821	853743		Metal Man	>225mm/9	Monthly	30	READINGS	6,542	218.05	6,215	218.05	134.51	6,802.70	6,937.21	145.41	9,813.64	9,959.05	279.92	16,616.34	16,896.26
Correction	94821	853743		Metal Man	>225mm/9	Monthly	30	READINGS	2,400	80	2,280	80	134.51	2,501.76	2,636.27	145.41	3,609.47	3,754.88	279.92	6,111.23	6,391.15
														Variance	(£4,301)		Variance	(£6,204)		Variance	(£10,505)
Per DCR	8481498	1110250		Business	20mm/.75i	Six Monthl	93	READINGS	9215	99.08	8754	99.08	17.28	8,281.87	8,299.15	18.55	11,947.66	11,966.21	35.83	20,229.53	20,265.36
Correction	8481498	1110250		Business	20mm/.75i	Six Monthl	93	READINGS	930	10	884	10	17.28	969.43	986.71	18.55	1,398.67	1,417.22	35.83	2,368.10	2,403.93
														Variance	(£7,312)		Variance	(£10,549)		Variance	(£17,861)
Per DCR	8364996	924732		Co Car Dealer	20mm/.75i	Six Monthl	0	READINGS	0	105.18	0	105.18	0	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
Correction	8364996	924732		Co Car Dealer	20mm/.75i	Six Monthl	0	READINGS	0	20	0	20	0	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
														Variance	£0		Variance	£0		Variance	£0
Per DCR	8551285	298359		Business	20mm/.75i	Six Monthl	67	READINGS	4,020	60	3,819	60	12.45	4,151.88	4,164.33	13.36	5,990.45	6,003.81	25.81	10,142.33	10,168.14
Correction	8551285	298359		Business	20mm/.75i	Six Monthl	67	READINGS	67	1	64	1	12.45	69.84	82.29	13.36	100.76	114.12	25.81	170.61	196.42
														Variance	(£4,082)		Variance	(£5,890)		Variance	(£9,972)
Per DCR	8520751	293629		Business	40mm/1.5i	Six Monthl	167	READINGS	8,795	52.67	8,355	52.67	93.99	8,692.57	8,786.56	101.3	12,541.32	12,642.62	195.29	21,233.89	21,429.18
Correction	8520751	293629		Business	40mm/1.5i	Six Monthl	167	READINGS	167	1	159	1	93.99	174.08	268.07	101.3	251.16	352.46	195.29	425.24	620.53
														Variance	(£8,518)		Variance	(£12,290)		Variance	(£20,809)
Per DCR	217103	476183		arms Dor	15mm/.50i	Six Monthl	156	READINGS	5	0.03	0	0.03	28.98	93,761.80	93,790.78	0	0.00	0.00	28.98	93,761.80	93,790.78
Correction	217103	476183		arms Dor	15mm/.50i	Six Monthl	156	READINGS	120	1	114	1	28.98	125.21	154.19	0	0.00	0.00	28.98	125.21	154.19
														Variance	(£93,637)		Variance	£0		Variance	(£93,637)
Per DCR	3725747	914593		ther Retz	20mm/.75i	Six Monthl	91	IND AVE	68	0.74	0	0.74	16.91	11,847.91	11,864.82	0	0.00	0.00	16.91	11,847.91	11,864.82
Correction	3725747	914593		ther Retz	20mm/.75i	Six Monthl	91	IND AVE	70	1	67	1	16.91	73.04	89.95	0	0.00	0.00	16.91	73.04	89.95
														Variance	(£11,775)		Variance	£0		Variance	(£11,775)
Per DCR	8551070	534052		restaurant	15mm/.50i	Six Monthl	129	READINGS	19,092	148	18,137	148	23.97	19,828.53	19,852.50	25.73	28,606.62	28,632.35	49.70	48,435.15	48,484.85
Correction	8551070	534052		restaurant	15mm/.50i	Six Monthl	129	READINGS	258	2	245	2	23.97	268.94	292.91	25.73	388.02	413.75	49.70	656.96	706.66
														Variance	(£19,560)		Variance	(£28,219)		Variance	(£47,778)
Total Accrual Adj														(£149,185)			(£63,152)			(£212,337)	

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)	0.20004	Run off into Storm water sewers
V (Volumetric)	0.22556	Run off into Combined sewers
R+V	0.42560	

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)**

			1	2	3	4
DESCRIPTION			2008-09	2009-10	2010-11	2011-12
UNITS	DP					
A FIXED ASSETS						
1	Tangible assets	£m 3	6958.883	7389.297	7825.616	8147.759
2	Third party contributions	£m 3	-114.399	-141.602	-198.736	-255.418
B OTHER OPERATING ASSETS AND LIABILITIES						
3	Working capital	£m 3	-96.960	-91.609	-79.116	-80.503
4	Cash	£m 3	3.554	0.349	-3.272	-2.340
5	Short term deposits	£m 3	19.000	10.000	15.000	0.000
6	Overdrafts	£m 3	0.000	0.000	0.000	0.000
7	Infrastructure renewals prepayment/(accrual)	£m 3	0.091	1.452	-3.044	2.734
8	Net operating assets	£m 3	-74.315	-79.808	-70.432	-80.109
C NON-OPERATING ASSETS AND LIABILITIES						
9	Borrowings	£m 3	0.000	0.000	0.000	0.000
10	Non-trade debtors	£m 3	1.486	1.491	0.010	0.006
11	Non-trade creditors due within one year	£m 3	-4.385	-3.833	-3.844	-4.141
12	Investment - loan to group company	£m 3	0.000	0.000	0.000	0.000
13	Investment - other	£m 3	0.106	0.106	0.106	0.106
14	Corporation tax payable	£m 3	0.000	0.000	0.000	0.000
15	Ordinary share dividends payable	£m 3	0.000	0.000	0.000	0.000
16	Preference share dividends payable	£m 3	0.000	0.000	0.000	0.000
D CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR						
17	Borrowings	£m 3	-457.560	-627.560	-737.560	-807.560
18	Other creditors	£m 3	-110.808	-106.136	-102.624	-98.978
E PROVISION FOR LIABILITIES AND CHARGES						
19	Deferred tax provision	£m 3	-30.653	-42.713	-144.282	-162.493
20	Post employment asset / (liabilities)	£m 3	5.942	2.286	4.586	7.253
21	Other provisions	£m 3	-20.638	-32.884	-19.349	-20.679
F PREFERENCE SHARE CAPITAL						
22	Preference share capital	£m 3	0.000	0.000	0.000	0.000
23	Net assets employed	£m 3	6153.659	6358.444	6553.491	6725.746
G CAPITAL AND RESERVES						
24	Called up share capital	£m 3	500.000	500.000	500.000	500.000
25	Share premium	£m 3	0.000	0.000	0.000	0.000
26	Profit and loss account	£m 3	-39.058	-93.045	-227.538	-287.995
27	Current cost reserve at 31 March	£m 3	5521.027	5779.799	6109.339	6342.051
28	Other reserves	£m 3	171.690	171.690	171.690	171.690
29	Total capital and reserves	£m 3	6153.659	6358.444	6553.491	6725.746

Table 24 – CC Balance Sheet as at 31 March 2012

The retained current cost loss for the year is £61.913m. The P&L reserves in the balance sheet decreased by £60.457m. The difference of £1.456m represents the gain on the pension fund net of deferred tax, as shown below:

Retained loss for the year	£ (61.913m)
Pension scheme profit net of deferred tax	£ 1.456m
Movement in P&L Account	£ (60.457m)

- 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	*140.389	9.914	2.790	153.093
Acc. Deprec	(21.907)	-	-	(21.907)
NBV	118.482	9.914	2.790	131.186

* Includes original capital value of Alpha PPP, assets passed to the concessionaire at the commencement of the contract and subsequent additions of capital maintenance all elements indexed to give a current cost value.

Line 3 - Working Capital

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	£m
Accruals	2.988	9.568	0.491	13.047

Line 11 - Non-trade creditors due within one year

	Alpha
	£m
Lease obligation due < 1 yr	3.274

Line 18 - Other Creditors

	Alpha
	£m
Lease obligation due > 1 yr	97.934

Line 21 - Other provisions

	Omega
	£m
Provisions	16.176

Significant features and movements**Line 1 - Tangible assets**

See commentary to Table 19.

Line 2 - Third party contributions

Increased by approximately £56.7m shown as follows:

	£m
Infrastructure contributions (including £47.9 m sewers adopted)	51.9
Non Infrastructure contributions	1.7
Amortisation of non- infrastructure contributions and government grants	(4.0)
Indexation	<u>7.1</u>
	<u>56.7</u>

Line 3 - Working capital

See commentary to Table 26.

Line 4 - Cash

See commentary to Table 19.

Line 5 - Short term deposits

See commentary to Table 19.

Line 17 - Borrowings

See commentary to Table 19.

Line 19 - Deferred tax provision

See commentary to Table 19.

Line 20 - Post employment asset / (liability)

See commentary to Table 19.

Line 21 - Other provisions

See commentary to Table 19.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 25 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)

ANALYSIS OF FIXED ASSETS BY ASSET TYPE (TOTAL)

DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9
			WATER SERVICE				SEWERAGE SERVICE				TOTAL
			INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	SUBTOTAL	INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	SUBTOTAL	
A GROSS REPLACEMENT COST											
1 Gross replacement cost at 1 April	£m	3	2992.961	908.789	29.487	3931.237	2944.656	1295.740	40.863	4281.259	8212.496
2 AMP adjustment	£m	3									
3 RPI adjustment	£m	3	108.339	21.610	11.316	141.265	104.666	40.275	3.820	148.761	290.026
4 Disposals	£m	3	-0.023	-0.009	-0.588	-0.620	-20.478	-13.685	-0.219	-34.382	-35.002
5 Additions	£m	3	31.462	21.844	4.110	57.416	69.744	77.296	2.952	149.992	207.408
6 Gross replacement cost at 31 March	£m	3	3132.739	952.234	44.325	4129.298	3098.588	1399.626	47.416	4545.630	8674.928
B DEPRECIATION											
7 Depreciation at 1 April	£m	3		146.493	13.618	160.111		202.374	24.395	226.769	386.880
8 AMP adjustment	£m	3									
9 AMP adjustment - gross MEA revaluation	£m	3									
10 AMP adjmt - amendment to remaining useful econ. life	£m	3									
11 RPI adjustment	£m	3		-1.575	10.052	8.477		5.655	2.809	8.464	16.941
12 Disposals	£m	3	-0.023	-0.005	-0.579	-0.607	-20.478	-13.119	-0.209	-33.806	-34.413
13 Charge for year	£m	3	11.706	46.288	4.074	62.068	20.478	69.373	5.842	95.693	157.761
14 Depreciation at 31 March	£m	3	11.683	191.201	27.165	230.049	0.000	264.283	32.837	297.120	527.169
15 Net book amount at 31 March	£m	3	3121.056	761.033	17.160	3899.249	3098.588	1135.343	14.579	4248.510	8147.759
16 Net book amount at 1 April	£m	3	2992.961	762.296	15.869	3771.126	2944.656	1093.366	16.468	4054.490	7825.616

Table 25 – Analysis of Fixed Assets by Asset Type (Total)

The following asset categories have been analysed in the table as follows:

‘Infrastructure assets’ include infrastructure assets only.

‘Non-specialised operational assets’ include active market value land, buildings and civils.

‘Specialised operational assets’ include land, buildings, civils and fixed plant.

‘Other tangible assets’ include surplus land, buildings and civils, mobile plant and IT.

Gross Replacement Cost at 1 April and Depreciation at 1 April

The total opening balances for gross replacement cost and depreciation at 1 April 2011 have been brought forward from the total closing balances for gross replacement cost and depreciation at 31 March 2011. The analysis across asset categories is based on analysis within the fixed asset register.

AMP Adjustment

There was no AMP adjustment during the year. The next AMP adjustment is planned to report in PC13.

RPI Adjustment

In April 2011, 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 2011, if there were any, as they were not indexed.

Impairment

There was an impairment of surplus lands, buildings and civils during the year totalling £3.139m following a review of assets for disposal by McKibbin & Co.

Disposals

Disposals during the year mainly consisted of surplus land, civil structures and mobile plants (lorries and vans). All disposals have depreciation in the month of disposal.

Decommissioned Assets

A number of assets (NCRC - £64,538,146) 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.

During the year, there was an element of accelerated depreciation relating to Omega PPP assets totalling £31.502m. An exercise was done during the year to identify all those assets within NIW which was transferred over to the Omega PPP operator as part of the PPP project. Under UK GAAP, Omega

assets are off-balance sheet and therefore they have been decommissioned and disposed of through the disposal line.

There was an element relating to dams totalling £11,683k which were decommissioned as they were no longer operational and sit under the infrastructure column.

Additions

Additions consisted of capital expenditure incurred during the year plus adopted sewers and sewage pumping stations and PPP assets (see below). When the assets created by the capital expenditure are commissioned they are put onto the fixed asset register and depreciation commences the following month.

In accordance with the regulatory accounting guidelines, fixed asset additions are stated gross of capital contributions but net of IRE. This gives rise to the reconciliation with the capital works programme and statutory accounts below:

	£'000
Total expenditure in CWP (incl.) Operations)	189,382
Add: Water and sewer connections	2,899
Add: Capital maintenance Omega and Kinnegar	1,475
Add: adopted assets – infrastructure	46,946
Add: adopted assets – non-infrastructure	1,087
Less: de-capitalised assets	(186)
Add: capitalised interest	1,775
Less: expenditure classified as opex under IFRS	(1,084)
Other adjustments	1
Total additions per statutory accounts	242,295
Less Capital maintenance Omega and Kinnegar	(1,475)
Add back: IRE treated as opex repairs under IFRS	1,084
Less: interest capitalised	(1,775)
Less: IRE	(35,847)
Add: PPP residual interest	3,221
Other adjustments – Adopted assets	(95)
Total additions per regulatory accounts	207,408

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 £236k, relating to the Alpha capital maintenance fund.

There is also additional residual interest for PFI Kinnegar asset and Omega asset of £3,221,000 which is included in Table 25 under specialised operational civil. The total residual interest at 31 March 2012 is £12,704,000 (31 March 2011: £8,851,000).

Depreciation Charge for Year

Current cost depreciation charge during the year was calculated based on the opening GCRC at 1 April 2011. Additions and disposals during the year were taken into account in calculating the depreciation charge.

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 £100,560,469.28 (10/11: £97,311,111) as at 31 March 2012, could not be readily identified as water and sewerage services and have been split as per IFM: Water 41% and Sewerage 59%.

Table 25 has also been adjusted to include only the appointed business and exclude the unappointed business relating to vehicle maintenance carried out for third parties. This has been adjusted through Water Services – Other Assets.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 26 REGULATORY ACCOUNTS
WORKING CAPITAL

DESCRIPTION				1	2	3	4
				2008-09	2009-10	2010-11	2011-12
UNITS	DP						
1	Stocks	£m	3	1.896	1.865	1.863	2.177
2	Trade debtors - measured household	£m	3	0.000	0.000	0.000	0.000
3	Trade debtors - unmeasured household	£m	3	0.000	0.000	0.000	0.000
4	Trade debtors - measured non household	£m	3	6.991	13.587	10.908	7.191
5	Trade debtors - unmeasured non household	£m	3	0.584	0.296	0.000	3.084
6	Other trade debtors	£m	3	0.710	2.907	1.021	2.084
7	Measured income accrual	£m	3	12.594	16.197	8.761	12.393
8	Prepayments and other debtors	£m	3	7.341	6.407	8.097	9.025
9	Trade creditors	£m	3	-18.030	-14.989	-9.498	-11.711
10	Deferred income - customer advance receipts	£m	3	-1.509	-1.677	-1.342	-3.768
11	Short term capital creditors	£m	3	-64.335	-72.643	-52.697	-56.206
12	Accruals and other creditors	£m	3	-43.201	-43.559	-46.229	-44.772
13	Total working capital	£m	3	-96.959	-91.609	-79.116	-80.503

Table 26 – Working Capital**Lines 2 – 6 - Trade Debtors**

Trade debtors are split into the five categories shown in lines 2-6 using the information from the General Ledger and the aged debtors analysis provided in the Echo pack.

The elements of PPP included in the table are as follows:

Line 12 - Accruals and other creditors

Alpha	Omega	Kinnegar	Total
£m	£m	£m	£m
2.988	9.568	0.491	13.047

Significant movements from last year**Line 4 - Trade debtors - measured non household**

This has decreased from £10.9m to £7.2m (33.9%). This is partly due to the adoption of a different approach to accounting for estimated future system adjustments within debtors as opposed to bad debts.

Line 5 - Trade debtors - unmeasured non household

This has increased from nil in 2010-11 to £3.1m. The billing run for the unmeasured customers for 2012-13 was completed before the 31st March 2012 and this has led to a debtors balance at year end in this category for the first time.

Line 6 - Other trade debtors

This has increased from £1.0m to £2.1m (110.0%) primarily due to an increase in the level of rechargeable invoicing.

Line 7 - Measured income accrual

This has increased by £3.6m (41.5%) over the period.

Line 9 - Trade creditors

Trade creditors have risen by £2.213m (23.3%) in the period. This is partly reflected in a fall in accruals and other creditors shown in line 12 of £1.457m and also an increase in capital invoices received.

Line 10 - Deferred income – customer advance receipts

Deferred income – customer advance receipts have risen by £2.426m (180.8%) in the period. Similarly to line 5 above, this is primarily due to the fact that the billing run for the unmeasured customers for 2012-13 was completed before the 31st March 2012. These bills are for 12 months in advance and the income is deferred and released uniformly during 2012-13.

Line 11 - Short term capital creditors

Capital accruals have risen by approximately £3.509m (6.7%). This is consistent with the rise in relevant* capital additions of 19.0% from £159.1m in

2011 to £189.4m in 2012 although additional capital invoicing is also apparent in Line 9 through trade creditors.

*relevant additions for the capital creditor account exclude those relating to connections, PPP residual interest assets and adopted assets.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 27 REGULATORY ACCOUNTS
MOVEMENT ON CURRENT COST RESERVE (TOTAL)

				1	2	3	4
DESCRIPTION				2008-09	2009-10	2010-11	2011-12
1	Current cost reserve at 1 April	£m	3	5542.782	5519.900	5779.799	6109.339
2	AMP adjustment	£m	3	0.000	0.000	0.000	0.000
A RPI ADJUSTMENTS							
3	Fixed assets	£m	3	-23.438	294.518	382.447	273.081
4	Working capital adjustment	£m	3	0.292	-4.313	-4.898	-2.824
5	Financing adjustment	£m	3	1.044	-25.217	-40.427	-30.450
6	Grants and third party contributions	£m	3	0.347	-5.089	-7.582	-7.095
7	Current cost reserve at 31 March	£m	3	5521.027	5779.799	6109.339	6342.051

Table 27 – Movement on current cost reserve**Working capital adjustment**

The working capital adjustment includes opening stock at 1st April 2011 plus all the opening short – term debtors and creditors at 1st April 2011, with the following exclusions from the calculation:

• Stock	
Stock relating to unappointed activities	£0.006m
• Debtors	
Interest receivable	£0.006m
Debtors relating to unappointed activities	£0.327m
• Creditors	
Interest payable	£0.757m
Cash bond interest payable	£0.110m
Creditors relating to unappointed activities	£0.435m
Deferred grants and contributions < 1yr	£1.075m
PPP Finance lease creditor < 1yr	£3.274m

The following indices have been used and applied to the opening working capital balance at 1 April 2011:

RPI	2012	2011
Year end RPI	240.8	232.5
Change in 2011-12	3.56989%	

Working capital adjustment = opening working capital at 1 April 2011 x change in RPI 2011-2012 = £79,116k x 3.56989% = £2,824k

Financing adjustment

The financing adjustment is calculated using opening balances at 01.04.12 as follows:

	£m
Opening net assets	6,553.491
Less Opening net fixed assets	7,626.880
	<u>-1,073.389</u>
Add back: working capital	<u>79.116</u>
=Opening net finance	-994.273
Less:	
Ordinary share dividends payable	0.000
Deferred tax provision	144.282
Less:	
Pension asset	-4.586
Add back:	
Deferred tax liability on pension asset	1.612
= Revised opening net finance	-852.965
X RPI	<u>3.57%</u>
Financing Adjustment	<u>30,450</u>

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 28 REGULATORY ACCOUNTS
CASH FLOW STATEMENT FOR YEAR ENDING 31 MARCH (TOTAL)

DESCRIPTION	UNITS	DP	1	2	3	4
			2008-09	2009-10	2010-11	2011-12
1 Net cashflow from operating activities	£m	3	133.052	137.968	151.177	179.166
A RETURN ON INVESTMENTS & SERVICING OF FINANCE						
2 Interest received	£m	3	1.840	0.247	0.212	0.114
3 Interest paid	£m	3	-18.012	-26.905	-34.640	-39.337
4 Interest in finance lease rentals	£m	3	-4.193	-11.325	-12.215	-11.750
5 Non-equity dividends paid	£m	3	0.000	0.000	0.000	0.000
6 Net cashflow from returns on investments & servicing of finance	£m	3	-20.365	-37.983	-46.643	-50.973
B TAXATION						
7 Taxation (paid)/received	£m	3	0.000	0.000	0.000	0.000
C CAPITAL EXPENDITURE AND FINANCIAL INVESTMENT						
8 Gross cost of purchase of fixed assets	£m	3	-226.011	-213.359	-156.548	-153.100
9 Receipts of grants and contributions	£m	3	6.270	6.514	6.887	5.618
10 Infrastructure renewals expenditure	£m	3	-44.058	-38.396	-24.897	-35.847
11 Disposal of fixed assets	£m	3	0.790	0.494	0.251	0.304
12 Movements on long term loans to group companies	£m	3	0.000	0.000	0.000	0.000
13 Net cashflow from investing activities	£m	3	-263.009	-244.747	-174.307	-183.025
D ACQUISITIONS AND DISPOSALS						
14 Acquisitions and disposals	£m	3	0.000	0.000	0.000	0.000
E EQUITY DIVIDENDS						
15 Equity dividends paid	£m	3	-33.538	-34.537	-35.570	-25.604
F MANAGEMENT OF LIQUID RESOURCES						
16 Net cashflow from management of liquid resources	£m	3	35.000	9.000	-5.000	15.000
17 Net cashflow before financing	£m	3	-148.860	-170.299	-110.343	-65.436
G FINANCING						
18 Capital in finance lease rentals	£m	3	-0.430	-2.906	-3.278	-3.632
19 New bank loans taken out	£m	3	150.000	170.000	110.000	70.000
20 Repayment of bank loans	£m	3	0.000	0.000	0.000	0.000
21 Proceeds from share issues	£m	3	0.000	0.000	0.000	0.000
22 Net cash inflow from financing	£m	3	149.570	167.094	106.722	66.368
23 Increase/(decrease) in cash in the year	£m	3	0.710	-3.205	-3.621	0.932

Table 28 – Cashflow statement**Significant movements from last period****Line 1 - Net cashflow from operating activities**

This has increased by £27.989m (18.5%). The reconciliation of operating profit to net cashflow from operating activities is shown in Table 29.

Line 3 - Interest paid

Interest paid has increased by 13.6% from £34.640m to £39.337. This is consistent with an additional loan drawdown of £70m in 2011-2012. The balance on loans can be summarised as follows:

At 1 April 2007	£150m
At 31 March 2008	£307.56m (average for year £228.78m)
At 31 March 2009	£457.56m (average for year £382.56m)
At 31 March 2010	£627.56m (average for year £542.56m)
At 31 March 2011	£737.56m (average for year £682.56m)
At 31 March 2012	£807.56m (average for year £772.56m)

Line 4 - Interest in finance lease rentals

The Alpha project during 2011-2012 gave rise to £11.750m (2010: £12.215m) interest payable on the associated finance lease.

Line 8 - Gross cost of purchase of fixed assets

These have decreased by £3.448m (2.2%). This is consistent with capital expenditure plans for 2011-12 and the movement in capital creditors across the period.

Line 10 - Infrastructure Renewals Expenditure

IRE for 2011-2012 compared to 2010-2011 can be shown as follows:

IRE	2011-2012	2010-2011	Increase/(Decrease) in period	Increase/(Decrease) in period
		£m	£m	%
Water	26.803	18.844	7.959	42.2
Sewerage	9.044	6.053	2.991	49.4
Total	35.847	24.897	10.950	44.0

Both Water and Sewerage IRE have increased over the period. This is consistent with the planned level of base maintenance agreed with the Regulator within PC10.

Line 16 - Net cashflow from management of liquid resources

Management of liquid resources represents the movement in monies held on short-term deposit accounts.

Monies on deposit have decreased by £15m from the end of 2010-2011 to the end of 2011-2012 with a consequent increase in cashflow. The balance on deposit at the end of 31st March 2012 is nil.

Line 18 - Capital in finance lease rentals.

An amount of £3.632m was made in payment against the Alpha PPP finance lease.

Line 19 - New bank loans taken out

In 2011-2012 £70m of additional loan notes were drawn down from DRD. These new loans were required to part finance the ongoing capital expenditure programme with the balance of capital expenditure financed by working capital.

PPP

The elements of PPP included in the cashflow are as follows:

Line 1 - Net cashflow from operating activities.

This is summarised in Table 29 as follows:

1	Current cost operating profit	£m	2.181
2	Working capital adjustment	£m	(2.824)
3	Movement in working capital	£m	(2.122)
4	Depreciation	£m	157.761
5	Current cost profit on sale of fixed assets	£m	0.285
6	Infrastructure renewals charge	£m	30.069
7	Other non-cash profit and loss items	£m	(6.184)
8	Net cash flow from operating activities	£m	179.166

The commentary to Table 20 (Current Cost P&L Account) outlines the PPP element contained within operating costs that contributed to the current cost operating profit within Line 1 and depreciation Line 5.

The commentary for Table 26 (Working Capital) outlines the elements of PPP that are contained within working capital that feed into the movement in working capital above.

The PPP aspect to lines 4 and 18 in Table 28 are outlined in 'significant movements from last period' in this commentary.

Included in Line 8 - Gross cost of purchase of fixed assets in Table 28 is £0.236m in respect of capital maintenance additions for Alpha PPP paid for via the unitary payments. All other capital expenditure for Alpha is accounted for through the repayment of the finance lease.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 29 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
RECONCILIATION OF OPERATING PROFIT TO NET CASH FLOW FROM OPERATING ACTIVITIES (TOTAL)**

				1	2	3	4		
DESCRIPTION			UNITS	DP	2008-09	2009-10	2010-11	2011-12	
1	Current cost operating profit			£m	3	11.626	22.963	8.893	2.181
2	Working capital adjustment			£m	3	0.292	-4.313	-4.898	-2.824
3	Movement in working capital			£m	3	7.258	-13.701	7.453	-2.122
4	Receipts from other income			£m	3	0.000	0.000	0.000	0.000
5	Depreciation			£m	3	76.184	96.202	132.147	157.761
6	Current cost profit on sale of fixed assets			£m	3	0.050	-0.005	-0.079	0.285
7	Infrastructure renewals charge			£m	3	34.272	37.035	29.393	30.069
8	Other non-cash profit and loss items			£m	3	3.370	-0.213	-21.732	-6.184
9	Net cash flow from operating activities			£m	3	133.052	137.968	151.177	179.166

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 32 FINANCIAL MEASURES

ANALYSIS OF FIXED ASSET ADDITIONS AND ASSET MAINTENANCE BY ASSET TYPE (CURRENT COST ACCOUNTING) (NIW Only)

DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7
			WATER SERVICE			SEWERAGE SERVICE			
			INFRASTRUCTURE ASSETS	NON-INFRASTRUCTURE ASSETS	SUBTOTAL	INFRASTRUCTURE ASSETS	NON-INFRASTRUCTURE ASSETS	SUBTOTAL	TOTAL
A NIW ADDITIONS-NEW ASSETS (ENHANCEMENT)									
1 Water resource facilities	£m	3	0.731	0.893	1.624				1.624
2 Water treatment works	£m	3		0.371	0.371				0.371
3 Water distribution mains	£m	3	30.119	1.206	31.325				31.325
4 Service reservoirs and water towers	£m	3		0.831	0.831				0.831
5 Pumping stations	£m	3		1.524	1.524				1.524
6 Water management and general	£m	3	0.612	0.947	1.559				1.559
7 Sewerage	£m	3				65.704	0.299	66.002	66.002
8 Sea outfalls and headworks	£m	3				4.054	-0.060	3.995	3.995
9 Sewage treatment works	£m	3					21.667	21.667	21.667
10 Sludge treatment works	£m	3					0.065	0.065	0.065
11 Sludge disposal	£m	3				0.000	0.000	0.000	0.000
12 In-line pumping stations	£m	3					3.942	3.942	3.942
13 Terminal pumping stations	£m	3					2.011	2.011	2.011
14 Sewerage management and general	£m	3				0.080	1.167	1.247	1.247
15 Total infrastructure additions (Enhancement)	£m	3	31.462		31.462	69.838		69.838	101.300
16 Total non-infrastructure additions (Enhancement)	£m	3		5.772	5.772		29.091	29.091	34.863
17 Total additions (Enhancement)	£m	3	31.462	5.772	37.234	69.838	29.091	98.929	136.164
B NIW BASE SERVICE PROVISION									
18 Water resource facilities	£m	3	1.958	0.043	2.001				2.001
19 Water treatment works	£m	3		6.899	6.899				6.899
20 Water distribution mains	£m	3	23.369	2.882	26.251				26.251
21 Service reservoirs and water towers	£m	3		1.115	1.115				1.115
22 Pumping stations	£m	3		1.026	1.026				1.026
23 Water management and general	£m	3	1.444	8.097	9.541				9.541
24 Sewerage	£m	3				8.211	0.080	8.292	8.292
25 Sea outfalls and headworks	£m	3				0.007	0.000	0.007	0.007
26 Sewage treatment works	£m	3					37.248	37.248	37.248
27 Sludge treatment works	£m	3					0.122	0.122	0.122
28 Sludge disposal	£m	3				0.000	0.000	0.000	0.000
29 In-line pumping stations	£m	3					4.925	4.925	4.925
30 Terminal pumping stations	£m	3					0.870	0.870	0.870
31 Sewerage management and general	£m	3				0.826	4.761	5.587	5.587
32 Total infrastructure renewals (Base)	£m	3	26.771		26.771	9.044		9.044	35.815
33 Total non-infrastructure expenditure (Base)	£m	3		20.062	20.062		48.006	48.006	68.068
34 Total expenditure (Base service provision)	£m	3	26.771	20.062	46.833	9.044	48.006	57.051	103.883

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 2011/12 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 £236k.

General

The main types of new assets constructed in the year were distribution mains, sewerage assets and waste water treatment works to ensure compliance with obligations to improve quality standards as agreed with the Drinking Water Inspectorate and the Northern Ireland Environment Agency.

The majority of asset maintenance expenditure related to water distribution mains (Water rehabilitation projects), sewerage assets (Drainage Area Plan projects), wastewater treatment works and water treatment works in order to maintain the serviceability of the asset base for customers.

The Capital Investment Driver Allocation methodology has remained as per the 2010/11 approach reflecting the Reporter Recommendations from AIR10. This is different from that adopted in PC10 and affects the allocation to both Trunk Mains and Sewers. This change is discussed in more detail in Chapter 34.

The allocation methodology for Management and General expenditure is reflective of the individual projects and in some cases will differ from that allocation assumed in the PC10 FD. These changes are further discussed in Chapter 34. No apportionment has taken place during the analysis and table population stage as this was completed by Project Managers at the initiation of the project, and reviewed at appropriate gateways for EP projects.

Expenditure for Zonal Study investigations has been allocated to Water M & G/ Base/Infrastructure Expenditure and Drainage Area studies have been allocated to Sewerage M & G/Base/Infrastructure/ for 11/12 reporting. Expenditure in these two areas has been separately identified within Asset Management Directorate expenditure since 10/11 and is not confused with the resultant delivery projects managed within Engineering Procurement Directorate. 2010/11 was the last year in which the same project code was used for the Study stage and subsequent project delivery.

Sewer adoptions paid by third parties of £46.946m are included in column 4, line 7 of Table 32 within Sewerage infrastructure enhancements. Sewerage Pumping Stations paid by third parties of £1.087m are included in Col 5, line 12 within Sewerage non infrastructure enhancements.

There has been a small increase (c3%) in the asset adoptions in 2011/12. The primary reasons for the increase in the Asset Adoptions in 2011/12 are consistent with the significant increases in 2010/11 reported 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 there 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 11/12 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 £240.047m (net of grants and contributions on infrastructure maintenance expenditure which totalled £32k and inclusive of sewerage adoptions), £103.883m (43%) related to base service position. This is a considerable increase on previous years and is as a result of the focused Capital Maintenance programme on non-infra assets within the Capital expenditure programme. Further detail can be found in commentary to Table 40.

Backlog Base as applied during the SBP years is not longer adopted. All former Backlog Base expenditure is now treated as Base Maintenance.

Infrastructure Renewals expenditure has been reported net of any grants and contributions in this table.

Reconciliation between Table 32, 35 and 36

Table 32 - Line 17 + Line 34 in col 7	<u>£240.047m</u>
Table 35 – line 28 col 4	£ 84.067m
Table 36 – line 25 col 4	£107.946m
Assets adopted at nil cost	£ 48.034m
Reconciliation total	<u>£240.047m</u>

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)

DEPRECIATION CHARGE BY ASSET TYPE (NIW Only)

DESCRIPTION	UNITS	DP	1	2	3	4	CG	5	6	7	8	CG	9	10	11	12	CG	
			Water Service					Sewerage Service					Total					
			As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12		
A	DEPRECIATION CHARGE FOR THE YEAR																	
1	CCD as at 31 March 2010	£m	3	95.838	102.89		B3	96.796	126.442			B3	192.634	229.332			B3	
2	CCD on additions (enhancement assets) post 1 April 2010	£m	3			0.192	1.16	B3			1.506	7.906			1.698	9.066	B3	
3	CCD on additions (MNI assets) post 1 April 2010	£m	3			0.243	3.29	B3			0.902	5.46			1.145	8.75	B3	
4	Total depreciation charge for the year	£m	3			0.435	4.45	B3			2.408	13.366			2.843	17.816	B3	
5	Total depreciation charge	£m	3	95.838	102.89	41.613	50.87	B3	96.796	126.442	87.103	95.693	B3	192.634	229.332	128.716	146.563	B3
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 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12		
B	INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION																	
6	Infrastructure renewals expenditure	£m	3	69.105	79.215	18.844	26.803	B2	35.019	24.288	6.053	9.044	B2	104.124	103.503	24.897	35.847	B2
7	Infrastructure renewals charges	£m	3	85.962	76.948	19.017	19.454	C5	28.535	26.622	10.376	10.615	C5	114.497	103.57	29.393	30.069	C5
8	Infrastructure renewals prepayment/ (accrual)	£m	3	-16.857	2.267	2.094	9.443	C5	6.484	-2.334	-6.657	-8.228	C5	-10.373	-0.067	-4.563	1.215	C5

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)

DEPRECIATION CHARGE BY ASSET TYPE (PPP Only)

DESCRIPTION			UNITS	DP	1	2	3	4	CG	5	6	7	8	CG	9	10	11	12	CG		
					Water Service					Sewerage Service					Total						
					As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12			
A	DEPRECIATION CHARGE FOR THE YEAR																				
1	CCD as at 31 March 2010			£m	3	4.403	4.403		B3	0.000	0.000			B3	4.403	4.403			B3		
2	CCD on additions (enhancement assets) post 1 April 2010			£m	3			0	0	B3			0	0	B3			0	0.000	B3	
3	CCD on additions (MNI assets) post 1 April 2010			£m	3			0.01	0.017	B3			0	0	B3			0.01	0.017	B3	
4	Total depreciation charge for the year			£m	3			0.010	0.017	B3			0	0	B3			0.01	0.017	B3	
5	Total depreciation charge			£m	3	4.403	4.403	3.431	11.198	B3	0.000	0.000	0	0	B3	4.403	4.403	3.431	11.198	B3	
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 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12	
B	INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION																				
6	Infrastructure renewals expenditure			£m	3	0.000	4.924	0.000	0.000	B2	0.000	0.000	0.000	0.000	B2	0.000	4.924	0.000	0.000	B2	
7	Infrastructure renewals charges			£m	3	0.000	3.405	0.000	0.000	C5	0.000	0.000	0.000	0.000	C5	0.000	3.405	0.000	0.000	C5	
8	Infrastructure renewals prepayment/ (accrual)			£m	3	0.000	1.519	1.519	1.519	C5	0.000	0.000	0.000	0.000	C5	0.000	1.519	1.519	1.519	C5	

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)

DEPRECIATION CHARGE BY ASSET TYPE (Total)

DESCRIPTION			UNITS	DP	1	2	3	4	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 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12	
A DEPRECIATION CHARGE FOR THE YEAR																			
1	CCD as at 31 March 2010	£m	3		100.241	107.293		1.160	B3	96.796	126.442		7.906	B3	197.037	233.735		9.066	B3
2	CCD on additions (enhancement assets) post 1 April 2010	£m	3				0.192	1.160	B3			1.506	7.906	B3			1.698	9.066	B3
3	CCD on additions (MNI assets) post 1 April 2010	£m	3				0.253	3.307	B3			0.902	5.460	B3			1.155	8.767	B3
4	Total depreciation charge for the year	£m	3				0.445	4.467	B3			2.408	13.366	B3			2.853	17.833	B3
5	Total depreciation charge	£m	3		100.241	107.293	45.044	62.068	B3	96.796	126.442	87.103	95.693	B3	197.037	233.735	132.147	157.761	B3
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 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2011-12	Actual 11-12	
B INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION																			
6	Infrastructure renewals expenditure	£m	3		69.105	84.139	18.844	26.803	B2	35.019	24.288	6.053	9.044	B2	104.124	108.427	24.897	35.847	B2
7	Infrastructure renewals charges	£m	3		85.962	80.353	19.017	19.454	C5	28.535	26.622	10.376	10.615	C5	114.497	106.975	29.393	30.069	C5
8	Infrastructure renewals prepayment/ (accrual)	£m	3		-16.857	3.786	3.613	10.962	C5	6.484	-2.334	-6.657	-8.228	C5	-10.373	1.452	-3.044	2.734	C5

**Table 33 – Depreciation Charge by Asset Type & Infrastructure
Renewals Charge**

Current Cost Depreciation (CCD) Charge

The depreciation charge for the year has been populated using the same methodology used to populate Table 25. Current cost depreciation was calculated using the Fixed Asset Register (Real Asset Management). The Fixed Asset Register holds two sets of books (HCA and CCA books) which calculate depreciation using different gross book value (GBV) and gross current replacement cost (GCRC) figures. The CCA books have been used for both Table 25 and Table 33

The final depreciation report from the CCA book was then analysed to each of their respective asset categories and service activities to identify the water and sewerage services. The management and general service activity could not be readily identified as water and sewerage services and have used the following percentages split as per IFM: Water 41% and Sewerage 59%.

Columns 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 resulted in accelerated depreciation in the year. Assets with a NCRC of £64,538,146 were decommissioned in 2011/2012 – 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, £11.198m, (2011: £3.966m) in the table relating to PPP assets. This is separately identified in the second table for PPP only. There was an element of Alpha assets totalling £7.147m included within the total depreciation which related to decommissioned assets no longer in use. This was a one-off exercise to ensure assets not in use were no longer depreciating.

During the year, there was an element of accelerated depreciation relating to Omega PPP assets totalling £31.502m. An exercise was done during the year to identify all those assets within NIW which was transferred over to the Omega PPP operator as part of the PPP project. Under UK GAAP, Omega assets are off-balance sheet and therefore they have been decommissioned and disposed of through the disposal line.

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 (£129k) relating to this has been adjusted through Water Services – CCD on MNI assets. This is the only adjustment made in populating Table 33.

There are some limitations to the CCD process namely it was based on the last asset management plan (AMP) survey of existing assets as at 1 September 2001. An MEAV assessment is planned to be done in PC15.

There were no MEA revaluations during the year and therefore no impact on CCD charge in the year.

During the year, decommissioned assets with a net current replacement cost (NCRC) of £64,538,145.78 were included within the current year depreciation charge.

	Water (11/12)	Sewerage (11/12)	Total (11/12)
CC Depreciation in year	£ 30,782,561.59	£ 59,301,283.83	£ 90,083,845.42
Accelerated Depreciation	£ 30,276,196.52	£ 34,261,949.26	£ 64,538,145.78
Impairment 11/12	£ 1,008,621.30	£ 2,129,958.17	£ 3,138,579.47
Total (2011/2012)	£ 62,067,379.41	£ 95,693,191.26	£157,760,570.67

	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

The depreciation charge for 11/12 (£157,761k) is £25,614k greater than 10/11 (£132,147k). Normal depreciation for 11/12 has increased by £2,231k as expected in the trend in recent years from 09/10 of higher spending on the capital programme. The majority of the increase is due to accelerated depreciation which has gone up by £41,804k compared to 10/11 accelerated depreciation. Normal decommissioning in the course of the business amounted to £14,206k for the year. There was an element relating to dams totalling £11,683k which were decommissioned and sit under the infrastructure column. Accelerated depreciation for PPP Assets totalling £38,649k (Alpha - £7,147k & Omega - £31,502k) made up the biggest amount of accelerated depreciation in 11/12. This was a one-off exercise to clear Alpha assets no longer in use and Omega assets which are off-balance sheet under UK GAAP. There was also an impairment of £3.139m during the year which went through the depreciation line. Also, 11/12 included a full year's depreciation (£4,051k) of the Alpha PPP asset which was £85k higher than the previous year.

Infrastructure Renewals Accounting

The IRC calculation for 11/12 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.

2011-2012 IRC

The IRC for 2011-12 based on PC10 can be summarised as follows:

Water	- £19.454m
Sewerage	- £10.615m
Total	- £30.069m

The out-turn IRE for 2011-2012 can be shown as follows:

Water	- £26.803m
Sewerage	- £9.044m
Total	- £35.847m

The prepayment /accrual at 31 March 2012 can be shown as follows:

	W TOTAL £m	S TOTAL £m	Total TOTAL £m
IRE	26.803	9.044	35.847
IRC	19.454	10.615	30.069
In year prepayment / (accrual)	7.349	(1.571)	5.778
c/f prepayment / (accrual)	3.613	(6.657)	(3.044)
Cumulative prepayment / (accrual)	10.962	(8.228)	2.734

At the end of the year to 31 March 2012 a prepayment balance of £2.734m was evident. This balance arose as the in-year prepayment of £5.778m for 2011-12 was added to the cumulative brought forward accrual balance of (£3.044m), which existed at 31st March 2011.

In line with the underlying principles of infrastructure renewals accounting it is anticipated that the cumulative level of IRE and IRC will broadly match over the longer term. The current prepayment will be monitored to ensure that the level of IRC charged in the future to the profit and loss account is appropriate given actual levels of IRE.

PPP

Alpha PPP has not given rise to any IRE for this year and therefore no IRC has been allocated to the PPP services.

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
				2008-09	2009-10	2010-11	Report Year 2011-12		2008-09	2009-10	2010-11	Report Year 2011-12	
ACCOUNTING FIXED ASSET ADDITIONS													
NON-INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE													
A													
1	Very Short	£m	3	0.000	0.043	0.137	0.729	B3	0.000	0.033	0.194	0.836	B3
2	Short	£m	3	1.634	2.464	0.748	0.504	B2	7.319	5.465	2.598	2.999	B2
3	Medium	£m	3	4.310	7.203	3.465	2.843	B2	32.232	27.181	16.794	12.546	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	6.229	9.831	6.570	1.713	B2	41.759	35.558	22.160	12.839	B2
6	Land	£m	3	0.025	0.053	0.017	-0.018	B3	0.495	0.244	0.095	-0.129	B3
7	Land Disposals	£m	3	-0.531	-0.061	-0.073	-0.210	B2	-0.001	-0.014	-0.005	0.042	B2
8	Total	£m	3	11.668	19.534	10.863	5.562	B2	81.804	68.467	41.836	29.133	B2
NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE													
B													
9	Very Short	£m	3	0.000	0.809	1.196	2.229	B2	0.000	0.000	0.590	2.097	B3
10	Short	£m	3	5.291	3.568	0.489	4.182	B2	5.117	5.603	1.736	5.117	B2
11	Medium	£m	3	6.404	5.465	8.009	9.128	B2	12.370	13.966	10.492	26.744	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	7.728	2.451	5.061	4.523	B2	10.351	10.546	8.582	14.049	B2
14	Total	£m	3	19.423	12.293	14.756	20.062	B2	27.838	30.114	21.400	48.006	B2
NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)													
C													
15	Very Short	years	0	0	4	4			0	4	4		
16	Short	years	0	10	10	10			10	10	10		
17	Medium	years	0	20	20	20			20	20	20		
18	Medium long	years	0	0	0	0			0	0	0		
19	Long	years	0	60	60	60			60	60	60		

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 34 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)
ANALYSIS OF NON-INFRASTRUCTURE FIXED ASSET ADDITIONS BY LIFE CATEGORIES - PPP

DESCRIPTION				1	2	3	4	CG	5	6	7	8	CG
				UNITS	DP	2008-09	2009-10	2010-11	Report Year 2011-12	2008-09	2009-10	2010-11	Report Year 2011-12
ACCOUNTING FIXED ASSET ADDITIONS													
NON-INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE													
A													
1	Very Short	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
2	Short	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
3	Medium	£m	3	48.389	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
4	Medium long	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
5	Long	£m	3	41.361	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
6	Land	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
7	Land Disposals	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
8	Total	£m	3	89.750	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE													
B													
9	Very Short	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
10	Short	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
11	Medium	£m	3	0.137	0.099	0.050	0.000	B3	0.000	0.000	0.000	0.000	n/a
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	0.117	0.125	0.063	0.000	B3	0.000	0.000	0.000	0.000	n/a
14	Total	£m	3	0.254	0.224	0.113	0.000	B3	0.000	0.000	0.000	0.000	n/a
NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)													
C													
15	Very Short	years	0	0	0	0	0		0	0	n/a		
16	Short	years	0	10	10	10	10		10	10	n/a		
17	Medium	years	0	20	20	20	20		20	20	n/a		
18	Medium long	years	0	0	0	0	0		0	0	n/a		
19	Long	years	0	60	60	60	60		60	60	n/a		

Table 34 – Financial Measures (Current Cost Accounting) - Analysis of Non-Infrastructure Fixed Asset Additions by Life Categories

All the capital expenditure tables have been populated using project data extracted from the company's core project control system (CAPTRAX), as well as ORACLE (Financial management system).

Internal training and mentoring has been ongoing with key staff mainly with Engineering Procurement, Operations, Asset Management, PPP and Finance and Regulation directorates. A specific Master Class was developed and presented to Engineering Procurement, Operations and Asset Management staff in December 2009 and January 2010 to help staff understanding of CIDA definitions and allocations as well as awareness of the use of CIDA data for various business and regulatory needs including common framework and benchmarking. This training has been delivered to external consultants where requested during the 2010/11 and 2011/12 years. 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 subsequent years has been adopted for AIR 12 reporting. The model takes the outputs from the above reports from CAPTRAX and completes the tables 32, 34, 35 & 36, with the CWP element of Capital expenditure. The model has been updated to change the allocation of Backlog Base (used in the SBP period but no longer available on new

CIDA allocations) from being treated as ESL (application during SBP period) to be treated as Base Maintenance.

Operating Capital and M & G

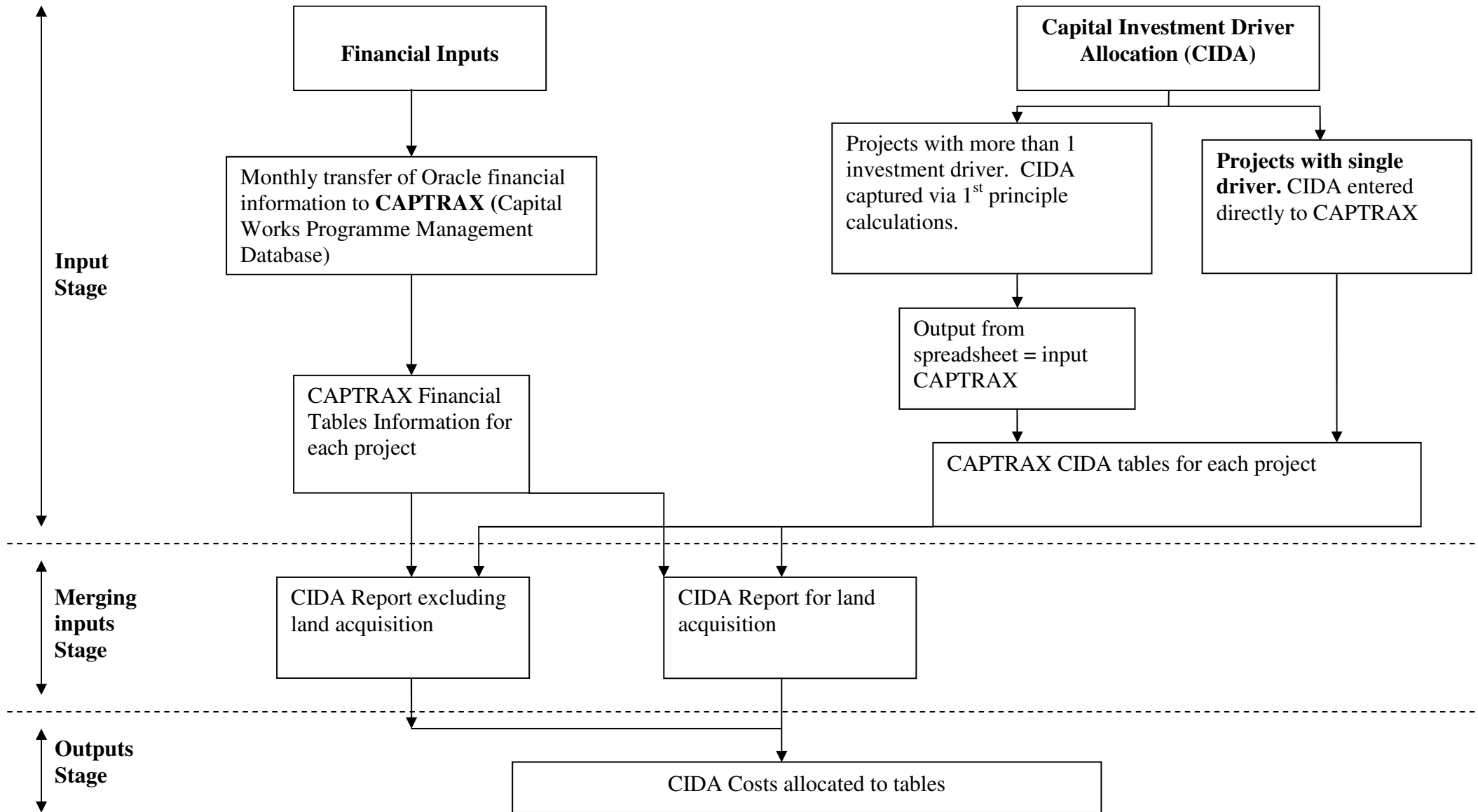
This area captures all Capital expenditure which is not managed via the CWP. For all Capital projects not on the CWP (herein referred to Operating Capital expenditure) the CIDA information has been captured on the Project A0 form at Project approval and recorded on a Database (AICC) in Finance and Regulation Directorate. A single merged output from ORACLE and the AICC Database is input into a similar model as described above that is used to analyse the output for population of the AIR tables. All expenditure in this category had a full CIDA allocation in 2011/12. CPMR was introduced during 2011/12 to manage expenditure in this area but some refinement is still required before it can be used as the Regulatory reporting tool. The AICC database will be maintained in parallel with CPMR until CPMR can produce the correct outputs.

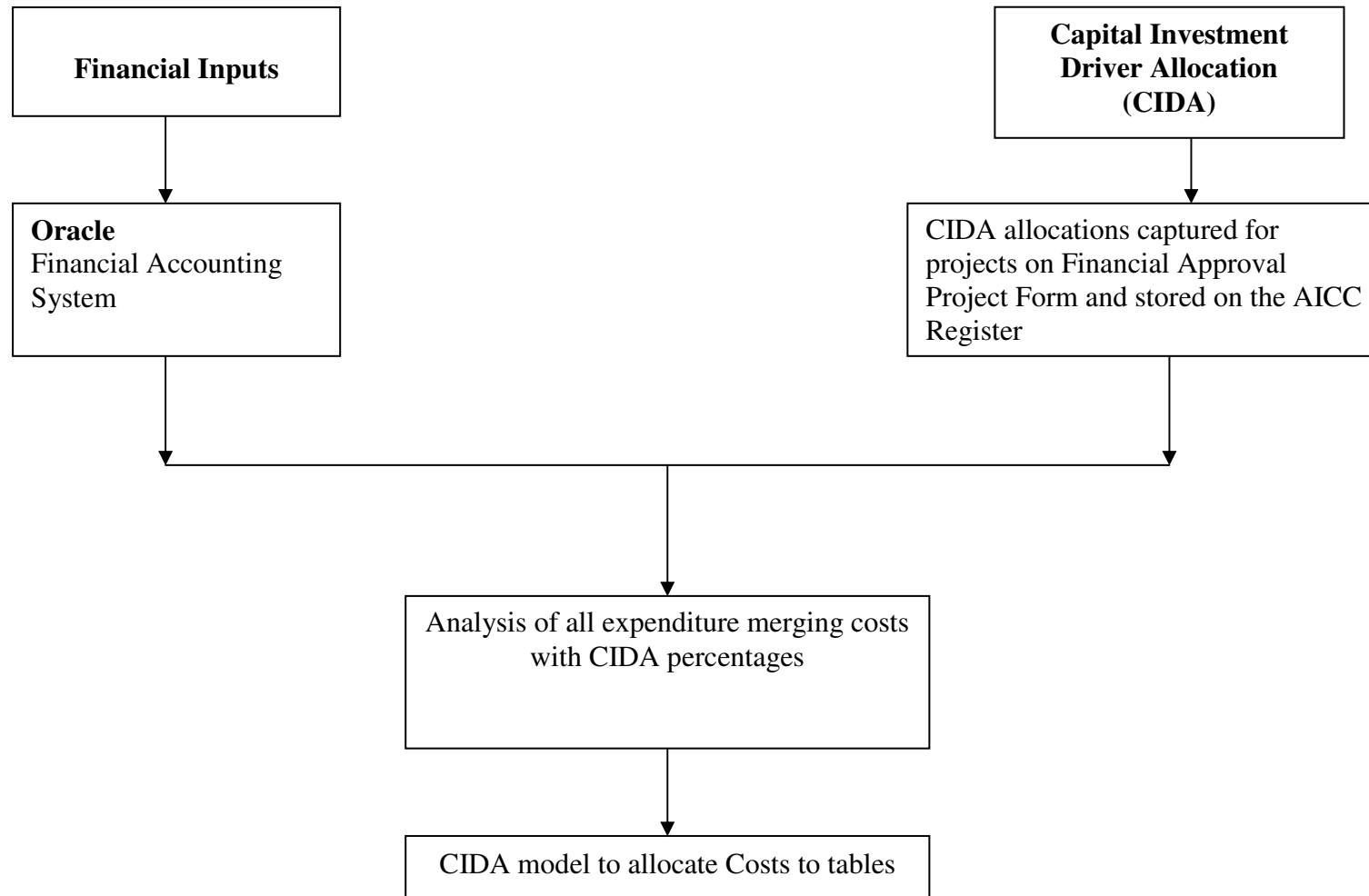
This information has been analysed separately from the CWP and merged on the final output tables.

Table population

Data used in the population of the table is based on data extracted from the company's core systems and no assumptions are made in the allocation of project expenditure to the lines in the tables for all the expenditure with CIDA directly attributed. For the small rounding figure of £80k of CWP expenditure (due to CATPRAX rounding finance to the nearest £k), this is apportioned in each table in equal portions to the allocated expenditure.

Process diagrams below show the process for completing the tables.

Process for completion of Capex Financial tables for all CWP Expenditure

Process for Completion of Capex financial tables for Operating Capital and M & G Expenditure

Asset Lives

The last comprehensive review of asset lives was completed as part of NIAMP2 in 2001. An interim review was completed in 2011/12 following the reporter recommendations in AIR11 and 8 new financial categories have been added to list used in NI Water. The new financial categories added and in use from April 2012 are as follows:

Table 1: New financial categories

Financial Category	Definition	Life in years
Fences	All fences around sites	40
Meters	Domestic Water Meters	8
Batteries	Batteries for loggers, toughbooks etc.	4
Filter Media	Media in Biological filters, Sand filters etc.	20
MBR Membranes	MBR membranes	5
Rotating Biological Filters	RBC package plants	20
Kiosks	All kiosk type structures including small control kiosks and prefabricated control buildings	20
Steel Tanks	All Steel tanks for storage and processes	40

The above categories have been added to CPMR/Captrax for CIDA allocation. The availability of the financial category is dependent on the asset type selected so for example MBR membranes is only available for selection within WwTW. The definitions have also been uploaded within the selection process, as a reminder to the project manager when selections are being made.

Methodology PPP table

Figures for PPP Alpha Capital maintenance have been taken directly from Table 42 and apportioned between Fixed Plant and Civils as per the PPP Contractors Financial model. This is the same process as adopted in AIR09.

PPP - Omega

No PPP OMEGA capital has been reported in the AIR12 financial tables for the following reasons:

- The Capital Cost split between Civils and M & E has been extracted from the Contractors Financial Model. This does not distinguish between infra and non infra elements and unlike ALPHA no valid assumptions can be made to define individual projects as some of the projects contain both infra and non infra elements.
- QBEG information has been captured on each project within OMEGA in a similar basis as was captured for the SBP submission which includes backlog base. In order to maintain consistency within all the tables we have not populated any of the OMEGA capital expenditure within the tables.

PPP - Kinnegar

No PPP Kinnegar residual interest finance has been populated as NIW have no information on either the QBEG or the Asset Life categories for this project.

NIW Table

The asset lives adopted for Regulatory reporting are consistent with those in the Fixed Asset Register (FAR). The links for reporting purposes is outlined in the Capital investment Driver allocation manual.

The last comprehensive review of asset lives was completed as part of NAIMP2 in 2001. An interim review was completed in 2011/12 and new financial categories have been added to NI Water systems for application from April 2012.

Expenditure is charged to individual projects and these are assigned individual asset lives for regulatory reporting.

This table is consistent with the analysis in Table 32. All expenditure reported in Table 34 is in outturn prices, gross of grants and contributions.

PPP Table

The expenditure of [REDACTED] on this table relates to the Capital Maintenance element of PPP Alpha expenditure for 2011/12. The £0.236m 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

Following discussion with the UR on Block C within this table the UR has agreed that these cells are no longer required.

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		5	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG
A BASE SERVICE PROVISION												
1 Base operating expenditure	£m	3	95.308	B4	98.446		71.455	B4	87.100	B4	75.626	B4
2 Infrastructure renewals expenditure (net)	£m	3	19.778	B3	32.534	B3	26.904	B3	18.768	B3	26.771	B3
3 MNI (gross of grants and contributions)	£m	3	19.356	B3	19.423	B3	12.305	B3	14.756	B3	20.062	B3
4 MNI - grants and contributions	£m	3	0.000		0.000		0.000	n/a	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	20.062	B3
6 Infrastructure renewals expenditure (gross)	£m	3	19.778		32.534	B3	26.896	B3	18.844	B3	26.803	B3
B QUALITY ENHANCEMENTS												
7 Capex: Total quality enhancement programme	£m	3	15.714	B3	19.076	B3	19.704	B3	10.775	B3	12.278	B3
8 Opex: Total quality enhancement programme	£m	3	0.050	B4	0.053	B4	0.307	B4	0.016	B4	0.279	B4
C ENHANCED SERVICE LEVELS												
9 Capital expenditure - customer service	£m	3	5.930	B3	2.949	B3	13.452	B3	4.395	B3	5.759	B3
10 Additional operating expenditure - customer service	£m	3	0.000	B4	0.000	B4	0.000	B4	0.018	B4	0.021	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	10.480	B3
12 Capex - new development	£m	3	17.758	B3	4.824	B3	11.485	B3	14.517	B3	10.163	B3
13 Capex - growth	£m	3	0.311	B3	6.139	B3	0.709	B3	0.417	B3	0.317	B3
14 Capex - free meter "selective and optants"	£m	3	0.000	B3	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	0.085	B4
16 Capital expenditure - security of supply	£m	3	1.541	B3	24.095	B3	16.996	B3	10.248	B3	8.717	B3
17 Additional operating expenditure - security of supply	£m	3	0.000	B4	0.000	B4	0.000	B4	0.015	B4	0.078	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	0.000	B3
19 New outputs/obligations - opex	£m	3	0.000	B4	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	1.153	A2
21 Enhancement requisitions, grants and contributions	£m	3	2.504		2.763		2.995	A2	2.211	A2	1.840	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	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	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	76.089	n/a
25 Infrastructure renewals expenditure (net) (NIW only)	£m	3	19.778	B3	32.534	B3	26.904	B3	18.768	B3	26.771	B3
26 Total asset additions (NIW only)	£m	3	60.611	B3	76.506	B3	74.651	B3	55.108	B3	57.296	B3
27 Total enhancement capital contributions (NIW only)	£m	3	3.990	B3	4.347	B3	4.225	B3	3.630	B3	2.993	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	84.067	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		n/a
30 Quality enhancement expenditure	£m	3					0.000	n/a	0.000	n/a		n/a
31 Enhanced service level expenditure	£m	3					0.000	n/a	0.000	n/a		n/a
32 Supply demand balance expenditure	£m	3					0.000	n/a	0.000	n/a		n/a
33 New outputs/obligations since the SBP	£m	3					0.000	n/a	0.000	n/a		n/a
34 Total capital element of PPP unitary charge payment	£m	3					0.224	n/a	0.113	n/a		n/a

Table 35 - Water service – Expenditure by purpose**Capital expenditure (Capex)**

In 2011/12 NIW invested £84.067m, 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 2011/12 NIW invested £26.771m (net) in water service infrastructure renewals. By delivering this investment the company has:

- Renewed 444km of mains (including mains renewed for ENHANCEMENT)
- Replaced 10253 communication pipes (not including lead replacement).

In 2011/12 there is a difference in the IRE (net) and IRE (gross) of £0.032m which relates to income received for watermain diversions.

Capex: base service provision-maintenance non-infrastructure (NIW)

In 2011/12 NIW invested £20.062m (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 completed two reservoirs and water towers.
- Invested in Management and General activities (water), to maintain non-operational assets including improvements to IT systems, Office rationalisation and Vehicle fleet replacement.
- Invested £3.3m in Water Treatment works upgrades. The main sites included in this investment are Carmoney WTW, Derg WTW, Clay lake WTW and Killyhevlin WTW flood alleviation and Standby Generator replacement.
- Installation of Water meters and separations (£1.8m)

Serviceability

The compliance level for drinking water quality, leaving our water treatment works, during 2011, outturned at 100.00%. This is an improvement on the 2010 figure of 99.99% and is considered to be an excellent outturn.

Expenditure to reduce leakage

Operational expenditure in the Leakage function in 2011/12 was £4.159m

The following table shows the breakdown of expenditure in the Leakage function in 2011/12.

Table 1 – Leakage expenditure

Expenditure category (£m outturn prices)	2011/12 £m
Total Capex	3.467
Total Opex	4.159
Total Expenditure	7.626

This expenditure includes £0.015m Business Improvement Capital expenditure.

The allocations for Leakage expenditure in 2011/12 are in accordance with the PC10 Final Determination Annex N.

The breakdown of capital expenditure in 2011/12 following the breakdown in Annex N is shown in Table 2

Table 2: PC10 Leakage budget and actual spend by activity.

Activity	NI Water PC 10 Leakage budgets			PC10 Period Total (£k)	2011/12 actual spend per category (£m)
	Year 2010/11 (£k)	Year 2011/12 (£k)	Year 2012/13 (£k)		
Leakage detection and repair costs					
Leakage detection costs - capex	545	541	538	1,624	0.541
Leakage infra replacement repair costs - capex	231	229	227	687	0.230
Leakage detection equip	65	65	65	194	0.013
Leakage software upgrades and developments	75	75	75	225	0.029
New leakage technology	15	15	15	45	0.000
DMA studies	608	715	325	1,648	0.586
Trunk Main studies	200	100	120	420	0.099
DMA optimisation	365	340	150	855	0.296
Water balance asset data assessments	55	40	45	140	0.061
ELL reviews	100	0	0	100	0.067
Pressure Management	465	405	315	1,185	0.361
PRV replacements	231	231	231	693	0.218
GMS Loggers/Meter studies/Meter replacement	734	734	734	2,202	0.721
Other					0.244
Total (Capex)	3,688	3,490	2,840	10,017	3.467

Capex: quality enhancements (NIW)

In 2011/12 NIW invested £12.3m in water service quality programmes. In doing so the company has:

- Renewed mains as part of the water rehabilitation programme. The quality programme is a significant element of the Rehab programme.
- Upsized mains as part of the water rehabilitation programme. Some of this work is also driven by the quality programme.

- There are no significant non infra water quality projects to report in 2011/12

-

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 2011/12 NIW invested £8.7m providing security of supply projects and £0.3m on growth projects as part of the supply-demand balance. This expenditure results partially from proportional expenditure to this service area from delivery of the Quality enhancement programme as well as security of supply projects resulting from the Water Resource Strategy.

- The Strule Intake project invested £1.6m under this category

In 2011/12 NIW also invested £10.2m in water services supply/demand programme relating to new development (provision on new supplies/connections). In doing so it has:

- Connected 4167 new properties; (3838, household and 329 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 2011/12 £32k 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 2011/12.

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 2011/12. 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.

One of the Business Improvement Projects (Cost to Serve) has become operational during the 2010/11 financial year and is being further developed to capture all costs associated with individual sites. For AIR 12 we continue to report primarily OPEX from Capex on smaller sites, on power costs alone. Through 'Cost to Serve' all power costs have been allocated to assets, this report was used to populate power costs for all Water assets in AIR12 which is a further development on 2010/11 when CAR ID's were not available on 'Cost to Serve'. Those sites that have a new power connection have had 100% of the power costs included within Opex from Capex with other sites assessed based on changes in power cost.

It should be noted that the Opex from Capex number reported in AIR12 is small. This is due to a number of factors but is mainly due to a competitive tender price for power achieved during the year. This has resulted in reduced expenditure on many sites including those with new assets. It should also be noted that power costs in 2011/12 include a Carbon Reduction Cost and this has also been included with Opex from Capex on relevant sites.

No M & G OPEX from CAPEX has been determined in AIR12. 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.

Lines 20 – 21 - Grants, capital contributions and infrastructure charge receipts for new connections

Line 20 - Infrastructure charge receipts – new connections of £1.153m in Line 20 represents the total gross receipts for 2011/12 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 (2011/12 = 31.59%) 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:

2011-12	£m
Water connections	2.225
Requisitions	-0.385*
Total line 21	1.840

* over accrued in previous years

- 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 – £57.416m
Table 35 - £57.296m

The difference in the above 2 figures are explained as follows:

- a) [REDACTED]
- b) £-116k included in Table 25 relates to Decapitalised projects in 11/12.

Confidence Grades –CIDA allocation has made further progress in 2011/12 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:

- 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.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 35A FINANCIAL MEASURES
WATER SERVICE - EXPENDITURE BY PURPOSE

RPI Inflator (Operating Expenditure) base year to report year prices
COP1 Inflator (Capital Expenditure) base year to report year prices

1.134
0.982

DESCRIPTION	UNITS	DP	1	2	3	4	5
			PC10 PROJECTIONS FOR 2011-12	PC10 PROJECTIONS UPLIFTED FOR RPI AND COPI	ACTUAL 2011-12 OUTTURN	DIFFERENCE FROM PC10 FIGURES	% DIFFERENCE FROM PC10 FIGURES
							DP 2
A BASE SERVICE PROVISION							
1 Base operating expenditure	£m	3	72.557	82.296	75.626	-6.670	-8.10
2 Infrastructure renewals expenditure (net)	£m	3	19.455	19.105	26.771	7.665	40.12
3 MNI (gross of grants and contributions)	£m	3	21.331	20.948	20.062	-0.886	-4.23
4 MNI - grants and contributions	£m	3	0.000	0.000	0.000	0.000	0
5 MNI (net of grants and contributions)	£m	3	21.331	20.948	20.062	-0.886	-4.23
B QUALITY ENHANCEMENTS							
6 Capex - total quality enhancement programme	£m	3	9.413	9.244	12.278	3.033	32.81
7 Opex - total quality enhancement programme	£m	3	0.107	0.121	0.279	0.157	129.82
C ENHANCED SERVICE LEVELS							
8 Capital expenditure - customer service	£m	3	5.803	5.699	5.759	0.061	1.07
9 Additional operating expenditure - customer service	£m	3	0.331	0.376	0.021	-0.355	-94.48
D MAINTAINING AND IMPROVING SUPPLY/DEMAND BALANCE							
10 Capital expenditure supply/demand balance	£m	3	18.735	18.399	19.197	0.799	4.34
11 Total enhancement capital contributions	£m	3	2.469	2.424	2.993	0.569	23.45
12 Capex net of enhancement capital contributions	£m	3	16.266	15.974	16.204	0.230	1.44
13 Additional operating expenditure supply/demand balance	£m	3	0.146	0.166	0.163	-0.002	-1.42
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	74.737	73.394	84.067	10.673	14.54
17 Total opex excluding new outputs	£m	3	73.141	82.959	76.089	-6.870	-8.28
18 Total gross capex - gross of grants (ire net) and including new outputs	£m	3	74.737	73.394	84.067	10.673	14.54
19 Total opex including new outputs	£m	3	73.141	82.959	76.089	-6.870	-8.28

Table 35a – Water Service – Expenditure comparisons by purpose

The PC10 Final Determination documentation provided to NI Water on February 10 did not provide the full transparency for the company to populate the Final Determination baseline on the Capital Investment Monitoring template or AIR Table 35a or 36a. The Utility regulator has provided additional information on 24/05/11 to populate the Capital lines of this table. These are fully reconciled to the Final Determination numbers for the Capex lines. The Final Determination numbers exclude the PPP Alpha Capital Maintenance.

There are some considerable variations in the CIDA allocations in 2010/11 compared to the PC10 Final Determination which is explained in detail below. This change follows reporter recommendations from 2009/10 and was highlighted to the Utility Regulator in a letter dated 19/05/11. For detailed variations at project level these are best examined on the CIM (table 40). The following commentary will give an explanation of some of the main variances.

New external constraints

It should be noted that the company is under additional external constraints since the Final Determination was published. These cannot be ignored from any comparative work and main factors are as follows:

- **Annual Funding** – NI Waters funding whilst presented in the Final Determination is now overwritten by the Public Expenditure funding which is allocated on an annual basis. This has affected NIW with initial budgets showing £20m greater than PC10 spend in 2011/12 of £205m (this has since been reduced to PC10 levels), and a reduction of £36m in 2012/13 against the PC10 budget. This revised PE budget has created a sawtooth investment profile and is presenting NI Water difficulty in managing the Capital Works Programme for 2012/13 in particular, as a significant portion of the spend in this year will be a result of projects started in 2011/12. This creates an inefficient approach for delivery of the programme as the company no longer has full control of the PC10 package.
- **Monitoring rounds** – In addition to the removal of any annual flexibility there is the additional complexity that the annual budgets will be subject to the in-year monitoring rounds which may reduce or increase funding. This approach to capital funding provides little opportunity to plan investment to follow the full Regulatory framework.
- **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 2010/11 NIW was issued with a range of governance

circulars which have impacted on delivery. In the autumn restrictions were placed on the use of frameworks – which caused around 6-8 weeks delay in the water mains programme and other framework contracts until the guidance could be amended. In March 2011 guidance was issued on the use of external consultancy, requiring ministerial approval for all consultancy. 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 began the procurement process for a series of major frameworks to replace extant and expired frameworks within the Capital Works Programme during 2011/12. This replaces the proposed Alliance delivery structure, which was adversely affected by the risks inherent in variation inherent in the Public Expenditure process and NIW's status as an NDPB. This reduces the available incentivisation for Alliance partners and eliminates the certainty of funding going forward which is essential for a commercial alliance to commit resources to the Alliance. The UR should note that the frameworks approach will not deliver the efficiencies seen in UK WASCs using Alliancing arrangements, but will satisfy the (current) NDPB requirements for governance.

Comparison issues

General Matters

The COPI factor of 0.982 has been derived from the information provided in the UR Chapter guidance. This figure is less than 1 due to deflation in the COPI index in the period 2009/10 – 2010/11. This alone has the effect of reducing the PC10 capital from that assumed in 'PC10 Final Determination' by £1.3m for Water investment in 2011/12.

It should be noted that provisional COPI figures for 2011/12 has since been released and the amended COPI factor is 0.998. This change would increase the total PC10 FD allowance in Column 2 by £1.2m. For this reason care should be taken when using this data.

Given that COPI is a combined set of indices from a number of industries, many of which has suffered significant declines due to the recession, NI Water does not accept the scale of the decline shown by COPI during 2009/10 and 2010/11 in respect of the Water Sector.

The MoU and CWA makes specific reference to COPI, stating that “The impact of COPI will be noted and monitored but no account taken of it until PC13 unless NI Water bring a bid forward for additional funding.” This element of the agreement is particularly relevant as the uncertainties around the funding available to NI Water and the level of investment that could be committed has meant that it has not been possible for NI Water to move forward with the proposed Alliance for delivering the majority of the CWP. 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 2011/12 within Table 40 dashboard.

Figures reported in Columns 1 and 2 of this table are post efficiency.

PPP

No PPP is included in this table.

Line commentary

The follow line commentaries explain the variance between the PC10 FD 2007/08 prices converted to 2011/12 prices using actual COPI provided in the guidance against the actual expenditure in the year. Most of the analysis for this commentary has taken place in Table 40 and given that this table does not reconcile to the AIR table due to the approach adopted for reporting CIDA on the CIM (see Table 40 commentary for variances) the figures shown are an indicator of the magnitude of the variance.

Line 1 – Base operating expenditure

The figure for column 1 is populated using the NI Water PC10 Business plan split from Table B3.40 and Table B3.41. This gives a Water split of 50% for 2011/12.

This line is showing a reduced OPEX expenditure in 2011/12 and relates to the company becoming more efficient in respect of OPEX.

Line 2 – Infrastructure Renewals Expenditure (net)

This line is showing an increased expenditure in 2011/12 compared to PC10 FD projected expenditure in 2011/12 prices using actual COPI. This is mainly due to an increase in watermain rehabilitation work completed in 2011/12

In addition a change in CIDA allocation following the ‘Reporter recommendations in AIR10 is impacting on this area. In accordance with the Water Resource Management Plan (WRMP), certain trunk mains are being laid to remove existing Water Treatment works (WTW). In these cases, a non infrastructure asset (WTW) is being replaced with an infrastructure asset

(Trunk Main). The Reporter recommended that when an asset is being replaced, Base Maintenance is included in the CIDA allocation of the replacement asset. This is documented in the reporters report for AIR10 Table 32 with the following points being made:

- a) *'there is a general under allocation to Base Maintenance (B), as demonstrated in the Reporter's QBEG for schemes reviewed'*
- b) *JG036 – a recommended increase in B allocation from 2% to 31% for the project.*

However the QBEG recommended by the reporter does not discuss the infrastructure / non infrastructure implications of the change. In the case of project JG036 (Castor Bay to Dungannon), CIDA now reflects a Base allocation of 31% which is split 4% non infrastructure (associated with the Water Pumping station) and 27% infrastructure (associated with the new Trunk Main). The 27% infrastructure base allocation has a direct impact on IRE despite the fact that no maintenance took place on the infrastructure asset. The increase in maintenance spend did not maintain the network; rather it extended the network and should therefore be allocated to Enhancement categories only.

This had the effect of increasing the Water Infrastructure base allocation for the project JG036 by c£1.33m against the FD allocation in 2010/11 and means that the PC10 IRE allocation cannot be directly compared with the current allocations. It also means that the PC10 IRE funding will not cover these changes.

Line 3 – MNI (Gross of grants and contributions)

This line reports a small reduction (-£0.8m) on the PC10 target. Work at WTW's has been progressed during the reporting year to address maintenance requirements.

Line 7, 9 & 13 – OPEX from Capex

The combined total of these lines is showing reduced spend in 2011/12 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 and 2011/12 the Opex from Capex is showing small actual outturns compared to the PC10 projections.
- b) The OPEX from CAPEX shown within 2011/12 relates to only the Capital Works Programme. No M & G Opex from Capex is included in the 2010/11 actual figures.

It should be noted that the process of capturing Opex data has improved with the introduction of the 'Cost to Serve' project. Power data is available by site linked to CAR ID. It is anticipated that this system will be further enhanced during 2012/13 to include labour costs, plant costs etc.

Line 6 - Capex - Total Quality Enhancement Programme

The quality enhancement (Q) programme spent more than the PC10 projection in 11/12. The variance of £3.0m additional spend in this programme is mainly attributed to additional quality spend on the Watermain Rehabilitation programme.

The PC10 FD 'Quality' funding at Killylane WTW is no longer required. The Study has determined that Base Maintenance investment will be sufficient to correct the issues on this site.

Line 8 – Capital expenditure-customer service

The variance on this programme is only £61k in 2011/12

Line 10 – Supply/ Demand Balance

It is difficult to analyse these lines separately. In summary there are 4 main variances as follows:

- c-£1.9m (T40 analysis) additional spend on Trunk Watermains in 2010/11 which relates to the additional carryover of the Castor Bay to Dungannon Trunk Main project and the advancement of Ballydugan to Newry Main link reinforcement Phase 2.
- c-£2.0m (T40 analysis) reduced spend on Reservoirs. Some of the PC10 nominated Reservoirs are being delayed to PC13/15.
- c-£3.8m (T40 analysis) reduced spend on SDB within the watermain rehab sub programme. This is the only purpose area of the Watermain rehab programme that has been reduced in the 2011/12 year.
- c-£2.9m (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 £73.4m in 10/11 prices. The actual expenditure was £84.1m.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 36 FINANCIAL MEASURES
SEWERAGE SERVICE - EXPENDITURE BY PURPOSE**

DESCRIPTION	UNITS	DP	1		2		3		4		5	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG
A BASE SERVICE PROVISION												
1 Base operating expenditure	£m	3	87.703	B4	107.531	B4	95.090	B4	71.339	B4	69.345	B4
2 Infrastructure renewals expenditure (net)	£m	3	6.195	B3	6.600	B2	11.494	B3	6.053	B3	9.044	B3
3 MNI (gross of grants and contributions)	£m	3	23.297	B3	27.838	B2	30.102	B3	21.400	B3	48.006	B3
4 MNI - grants and contributions	£m	3	0.000		0.000	B2	0.000	n/a	0.000	n/a	0.000	n/a
5 MNI - net of grants and contributions	£m	3	23.297	B3	27.838	B2	30.102	B3	21.400	B3	48.006	B3
6 Infrastructure renewals expenditure (gross)	£m	3	6.195	B3	6.600	B2	11.494	B3	6.053	B3	9.044	B3
B QUALITY ENHANCEMENTS												
7 Capex - total quality enhancement programme	£m	3	49.426	B3	79.419	B2	62.880	B3	29.753	B3	28.730	B3
8 Opex - total quality enhancement programme	£m	3	0.096	B4	1.028	B4	1.413	B4	0.129	B4	0.276	B4
C ENHANCED SERVICE LEVELS												
9 Capital expenditure - customer service	£m	3	49.691	B3	28.209	B2	20.002	B3	8.823	B3	4.251	B3
10 Additional operating expenditure - customer service	£m	3	0.000	B4	0.044	B4	0.338	B4	0.002	B4	0.005	B4
D IMPROVING SUPPLY/DEMAND BALANCE												
11 Capital expenditure supply/demand balance	£m	3	45.287	B3	44.230	B2	31.723	B3	22.238	B3	17.914	B3
12 Capex - new development	£m	3	19.875	B3	38.339	B3	28.642	B3	22.078	B3	16.950	B3
13 Capex - growth - sewage	£m	3			5.834	B3	2.777	B3	0.157	B3	0.504	B3
14 Capex - growth - sewage treatment	£m	3			0.057	B3	0.304	B3	0.003	B3	0.459	B3
15 Additional operating expenditure supply/demand balance	£m	3	0.596	B4	0.489	B4	0.968	B4	0.099	B4	0.099	B4
E NEW OUTPUTS/OBLIGATIONS SINCE THE SBP												
16 New outputs/obligations - capex	£m	3	0.000	B3	0.000	B3	0.220	B3	0.000	B3	0.000	B3
17 New outputs/obligations - opex	£m	3	0.000	B4	0.000	B2	0.000	B4	0.000	B4	0.000	B4
F GRANTS, CAPITAL CONTRIBUTIONS AND INFRASTRUCTURE CHARGES RECEIPTS FOR NEW CONNECTIONS												
18 Infrastructure charge receipts - new connections	£m	3	1.132		1.164	A2	1.029	A2	1.153	A2	0.897	A2
19 Enhancement requisitions, grants and contributions	£m	3	0.124		0.759	A2	1.253	A2	2.029	A2	1.696	A2
G ADOPTED ASSETS, NIL COST ASSETS												
20 Assets adopted or acquired at nil cost	£m	3	19.859	B3	19.284	B3	18.602	B3	46.237	B3	48.034	B3
H EXPENDITURE TOTALS												
21 Total operating expenditure	£m	3	88.395		109.092	B2	97.808	n/a	71.569	n/a	69.725	n/a
22 Infrastructure renewals expenditure (net)	£m	3	6.195	B3	6.600	B2	11.494	B3	6.053	B3	9.044	B3
23 Total asset additions	£m	3	187.560	B3	198.980	B2	163.529	B3	128.452	B3	146.936	B3
24 Total enhancement capital contributions	£m	3	1.256	B3	1.923	B2	2.282	B3	3.182	B3	2.593	B3
25 Total capital expenditure (excluding adopted and nil cost assets)	£m	3	173.896	B3	186.296	B2	156.420	B3	88.267	B3	107.946	B3
I CAPITAL ELEMENT OF PPP UNITARY CHARGE PAYMENT												
26 Base maintenance (infrastructure and non-infrastructure)	£m	3					0.000	n/a	0.000	n/a	0.000	n/a
27 Quality enhancement expenditure	£m	3					0.000	n/a	0.000	n/a	0.000	n/a
28 Enhanced service level expenditure	£m	3					0.000	n/a	0.000	n/a	0.000	n/a
29 Supply demand and balance expenditure	£m	3					0.000	n/a	0.000	n/a	0.000	n/a
30 New outputs/obligations since the SBP	£m	3					0.000	n/a	0.000	n/a	0.000	n/a
31 Total capital element of PPP unitary charge payment	£m	3					0.000	n/a	0.000	n/a	0.000	n/a

Table 36 - Sewerage Service – Expenditure by purpose**Capital expenditure (Capex)**

In 2011/12 NIW invested £107.9m (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 2011/12 NIW invested £9m (net) in sewerage service infrastructure renewals. In spending the 2011/12 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 2011/12 on both Critical and non-critical sewers in line with findings from the Drainage Area Studies.

Capex: base service provision – maintenance non- infrastructure

In 2011/12 NIW invested £48 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 £4.2 million in Management and General Activities to maintain non-operational assets included operational fleet, office rationalisation & IT Projects.
- Continued to develop a focused programme of work specifically focused on Base Maintenance at WwTW sites. £10m expenditure was concentrated at the following sites:
 - i. Ballymena WwTW
 - ii. Larne WwTW
 - iii. North Coast WwTW
 - iv. Whitehouse WwTW
 - v. Culmore WwTW
 - vi. Belfast WwTW.
- In addition to the above list a further £2m was invested at smaller WwTW across Northern Ireland via the CWP.
- Operations Directorate invested £6.7M replacing assets across the business a large portion which will be reactive maintenance.

Capex: quality enhancements

In 2011/12 NIW invested £28.7 million in sewerage service quality programmes. In doing so the company has:

- Completed 5 PC10 carryover WwTW projects and 4 additional output projects in 2011/12. Ten of the thirteen PC10 nominated outputs projects are at construction and these are contributing to the expenditure reported above.
- The small WwTW has continued in 2011/12 investing £0.8m in quality enhancement.

Table 1: WwTW Nominated outputs progress

Nominated outputs reference	NI Water project Code	Project title	Year beneficial use achieved
STW/002	KR389	Ballyhalbert WwTW	2011/12
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/011	KT102	Dunmurry WwTW	2011/12
STW/012	KP299	Enniskillen WwTW	SBP completion
STW/013	KL363	Feeny WwTW	2011/12
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	Money more WwTW	2010/11
STW/022	KF012	Moygashel WwTW	SBP completion

Nominated outputs reference	NI Water project Code	Project title	Year beneficial use achieved
STW/023	KA195	Mullaghboy WwTW	2011/12
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/030	KB436	Whitehead, Ballystrudder and Ballycarry Rationalisation	2011/12
STW/031	KF320	Bush WwTW	2010/11
STW/038	KT377	New Holland WwTW	2010/11
STW/045	KS384	Darragh Cross WwTW	2010/11
STW/051	KC338	Causeway Aird	2011/12
STW/053	KS857	Glassdrumman WwTW	2011/12
	KS216	Dunmore Sewerage – EC compliance	2011/12
	KF329	Ardrish WwPS (including Ardrish WwTW)	2011/12

Table 2: UID Nominated outputs progress

Sort ref	Nominated outputs reference	NI Water project Code	Project title	Year beneficial use achieved
1	UID/024	KS878	Bangor DAP – Sandell Lane WwPS CSO	2011/12
2	UID/025	KS878	Bangor DAP – Coastguard Lane WwPS CSO	2011/12
3	UID/189	KS878	Bangor DAP – Seacliff Road	2011/12
4	UID/029	KR440	Ballywalter DAP Stage 1 – Main Street CSO	2010/11
5	UID/030	KR432	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 53	2011/12

Sort ref	Nominated outputs reference	NI Water project Code	Project title	Year beneficial use achieved
6	UID/118	KR432	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 46	2011/12
7	UID/119	KR432	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 47	2011/12
8	UID/120	KR432	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 50 - Fort Street	2011/12
9	UID/039	KC404	Coleraine (DAP Phase 1) - Queens St CSO 02a	2011/12
10	UID/042	KC404	Coleraine (DAP Phase 1) - Strand Road PS ERO PS 02a	2011/12
11	UID/121	KC404	Coleraine (DAP Phase 1) - Rose Gardens CSO	2011/12
12	UID/122	KC404	Coleraine (DAP Phase 1) - Millburn Road CSO	2011/12
13	UID/123	KC404	Coleraine (DAP Phase 1) - Andersons Park CSO	2011/12
14	UID/051	KR441	East Belfast (Loop Interceptor sewer from east Belfast) – Allexander Road CSO 21	2011/12
15	UID/055	KR441	East Belfast (Loop Interceptor sewer from east Belfast) - Carnamena Avenue CSO 28	2011/12
16	UID/160	KR441	East Belfast (Loop Interceptor sewer from east Belfast) - Clonduff Drive CSO 29	2011/12
17	UID/161	KR441	East Belfast (Loop Interceptor sewer from east Belfast) - Merok Crescent CSO 27	2011/12
18	UID/127	KT138	Beechlawn WwPS Hillsborough	2011/12
19	UID/077	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Bonnys caravan CSO14	2011/12
20	UID/128	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Murlough SPS CSO 21	2011/12
21	UID/129	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Burrendale hotel CSO 03	2011/12

Sort ref	Nominated outputs reference	NI Water project Code	Project title	Year beneficial use achieved
22	UID/130	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Burrendale hotel No 1 CSO 02	2011/12
23	UID/131	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Mourneview CSO 04	2011/12
24	UID/132	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Burrenview CSO 05	2011/12
25	UID/133	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Shan Slieve Drive CSO 15	2011/12
26	UID/134	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - South Promenade CSO 18	2011/12
27	UID/078	KS377	Newcastle (Down Road/castle Park Sewer upgrade/attenuation) – Downs road CSO	2011/12
28	UID/135	KS377	Newcastle (Down Road/castle Park Sewer upgrade/attenuation)-Castle Park WwPS CSO13	2011/12
29	UID/136	KS377	Newcastle (Down Road/castle Park Sewer upgrade/attenuation) – Valenta Place CSO 11	2011/12
30	UID/137	KS377	Newcastle (Down Road/castle Park Sewer upgrade/attenuation) – Castle Park CSO 12	2011/12
31	UID/096	KR434	Belfast (Annadale flats Belfast hydraulic upgrades) - CSO 73 - Annadale flats	2011/12
32	UID/097	KR434	Belfast (Annadale flats Belfast hydraulic upgrades) - CSO 72 - Sunnyside street	2011/12
33	UID/140	KR434	Belfast (Annadale flats Belfast hydraulic upgrades) - Annadale SPS - CSO closure	2011/12
34	UID/141	KR434	Belfast (Annadale flats Belfast hydraulic upgrades) - Sunnyside street SPS CSO upgrade	2011/12

Sort ref	Nominated outputs reference	NI Water project Code	Project title	Year beneficial use achieved
35	UID/098	KB428	Draperstown DAP – Derrynoyd CSO 02	2010/11
36	UID/099	KB428	Draperstown DAP – Derrynoyd CSO 01	2010/11
37	UID/100	KL428	Londonderry Sewer Imps Stage 2 Duke Street RAB CSO 28	2010/11
38	UID/101	KL428	Londonderry Sewer Imps Stage 2 Duncreggan Road CSO 29	2010/11
39	UID/102	KL428	Londonderry Sewer Imps Stage 2 Dunfield Terrace CSO 30	2010/11
40	UID/103	KL443	Londonderry (sewer imp stage 2 Duke St PS group schemes) - Fountain Hill CSO 31	2011/12
41	UID/104	KL443	Londonderry (DAP Duke street work package) – Queens Quay WWPS CSO 14	2011/12
42	UID/105	KL443	Londonderry (DAP Duke street work package) - Duke street storm PS CSO63/PS 24	2011/12
43	UID/106	KL443	Londonderry (DAP Duke street work package) - Duke street 1 PS CSO CSO 41	2011/12
44	UID/107	KL445	Londonderry (DAP Victoria road work package) - Victoria road PS CSO 13	2010/11
45	UID/142	KL448	Londonderry (DAP Victoria road work package) – Prehen Park CSO 47	2010/11
46	UID/143	KL448	Londonderry (DAP Victoria road work package) – Prehen Road CSO 46	2010/11
47	UID/162	KL448	Londonderry (DAP Victoria road work package) – Sunningdale Drive CSO 53	2010/11
48	UID/109	KL446	Londonderry (DAP Duke street work package Flood alleviation) - King street RAB CSO 35	2011/12
49	UID/110	KL446	Londonderry (DAP Duke street work package Flood alleviation) - Victoria Road(new) CSO 57	2011/12
50	UID/111	KL446	Londonderry (DAP Duke street work package Flood alleviation) - Victoria Road (old) CSO 58	2011/12

Sort ref	Nominated outputs reference	NI Water project Code	Project title	Year beneficial use achieved
51	UID/112	KL449	Londonderry (DAP Strathfoyle & Drumahoe work package Drumahoe old PS) - PS CSO 07	2010/11
52	UID/113	KL450	Londonderry (DAP Strathfoyle & Drumahoe work package CAW PS) - CAW PS CSO 05	2010/11
53	UID/114	KL450	Londonderry (DAP Strathfoyle & Drumahoe work package CAW PS) - CAW Park CSO 23	2011/12
54	UID/115	KG153	Portadown (Gilford Road Portadown Sewerage upgrades) - Gilford road CSO	2010/11
55	UID/116	KG153	Portadown (Gilford Road Portadown Sewerage upgrades) - Princess way CSO	2010/11
56	UID/117	KG153	Portadown (Gilford Road Portadown Sewerage upgrades) - Eden Avenue SPS CSO	2010/11
57	UID/144	KR452	Baroda Street/Ormeau Park, Belfast CSO – Baroda Street CSO 77	2011/12
58	UID/145	KR452	Baroda Street/Ormeau Park, Belfast CSO –Ormeau Park CSO 78	2011/12
59	UID/159	KA201	Ballyeaston, Sewage System Upgrade	2011/12
60	UID/163	KR402	Joymount WwPS	2010/11
61	UID/164	KR403	Whitehouse DAP Phase 1 – Camross Park CSO	2010/11
62	UID/165	KR403	Whitehouse DAP Phase 1 – Merville Mews CSO	2010/11
63	UID/166	KR403	Whitehouse DAP Phase 1 – Manse Road CSO	2010/11
64	UID/174	KR400	Lukes Point DAP Phase 1 – Lukes Point WwPS	2010/11

Notes

- a) Rows in bold delivered in 2011/12
- b) UID ref shown in **Green** additional UID's identified in monitoring plan
- c) UID ref shown in **Red** are additional UID's not identified in PC10 or the monitoring plan.

Line 16 - Capex: New Obligations

There are no new obligations reported in 2011/12. 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 2011/12.

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 2011/12.

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 and 2011/12. 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 and is being further developed to capture all costs associated with individual sites. For AIR 12 we continue to report primarily Opex from Capex on the smaller sites on power costs alone. Through 'Cost to Serve' all power costs have been allocated to assets, this report was used to populate power costs for all WWTW's in AIR12 which is a further development on 2010/11 when the CAR ID's were not available on 'Cost of Serve'. Those sites that have had a new power connection have had 100% of the power costs included within Opex from Capex with other sites assessed based on changes in power cost.

It should be noted that in some cases the entire OPEX is treated as OPEX from CAPEX as the assets are entirely new. Examples include assets adopted and WWTW's where no form of treatment was provided before. As the OPEX has been taken straight from the general ledger these costs will only relate to the portion of the year that the site is operational and therefore no apportionment is required. However there remain some pumping stations for which it has not been possible to separately identify power costs, in particular those that have been adopted in the year. There is a time lag between adoption and the first power being billed.

Apportionment within the Table has been completed in accordance with CIDA apportionments to ENHANCEMENT. A separate 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 AIR12 is small. This is due to a number of factors but mainly due to a competitive tender price for power achieved during the year. This has resulted in reduced expenditure on many sites including those with new assets. It should also be noted that power costs in 2011/12 include a Carbon Reduction Cost and this has also been included within Opex from Capex on relevant sites.

No M & G OPEX from CAPEX has been determined in AIR12. 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.

Grants, capital contributions and infrastructure charge receipts for new connections (lines

Line 18 - Infrastructure charge receipts – new connections of £0.897m in Line 18 represents the total gross receipts for 2011/12 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 (2011/12 =31.59%) 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:

2011/12	£m
Sewers for adoption – inspection fees	0.328
Requisitions	0.882
Sewerage connections	0.487
Total line 19	1.696

Confidence Grades – CIDA allocation has made further progress in 2011/12 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 12 the reported numbers in these two tables are as follows:

Table 25 – £149.992m

Table 36 - £146.936m

The difference in the above 2 figures is explained as follows:

- a) £3.221m relates to the Residual interest on Kinnegar PPP project which is not included on Table 36.
- b) £-70k included in Table 25 relates to De-capitalised projects in 11/12.
- c) £-95k included in Table 25 relates to an adjustment for adopted assets in 2010/11.

Health and Safety

Health and Safety Expenditure has been allocated to Base Service Provision.

**ANNUAL INFORMATION RETURN - TABLE 36A FINANCIAL MEASURES
SEWERAGE SERVICE - EXPENDITURE BY PURPOSE**

1.134
0.982

DESCRIPTION				UNITS	DP	1	2	3	4	5		
						PC10 PROJECTIONS FOR 2011-12	PC10 PROJECTIONS UPLIFTED FOR RPI AND COPI	ACTUAL 2011-12 OUTTURN	DIFFERENCE FROM PC10 FIGURES	% DIFFERENCE FROM PC10 FIGURES		
									DP	DP	2	
A BASE SERVICE PROVISION												
1	Base operating expenditure					£m	3	72.268	81.968	69.345	-12.623	-15.40
2	Infrastructure renewals expenditure (net)					£m	3	10.372	10.185	9.044	-1.141	-11.20
3	MNI (gross of grants and contributions)					£m	3	32.915	32.324	48.006	15.683	48.52
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	32.324	48.006	15.683	48.52
B QUALITY ENHANCEMENTS												
6	Capex: Total quality enhancement programme					£m	3	45.131	44.320	28.730	-15.590	-35.18
7	Opex: Total quality enhancement programme					£m	3	0.645	0.732	0.276	-0.456	-62.31
C ENHANCED SERVICE LEVELS												
8	Capital expenditure					£m	3	7.985	7.841	4.251	-3.590	-45.79
9	Additional operating expenditure - customer service					£m	3	0.331	0.376	0.005	-0.370	-98.61
D MAINTAINING SUPPLY/DEMAND BALANCE												
10	Capital expenditure supply/demand balance					£m	3	13.036	12.802	17.914	5.112	39.93
11	Total enhancement capital contributions					£m	3	1.149	1.128	2.593	1.465	129.81
12	Capex net of enhancement capital contributions					£m	3	11.887	11.674	15.321	3.648	31.25
13	Additional operating expenditure supply/demand balance					£m	3	0.135	0.154	0.099	-0.054	-35.39
E EXPENDITURE TOTALS												
14	Total gross capex - gross of grants (ire net) and excluding new outputs					£m	3	109.439	107.473	107.946	0.474	0.44
15	Total opex (excluding new outputs)					£m	3	73.379	83.229	69.725	-13.504	-16.22
16	Total gross capex - gross of grants (ire net) and including new outputs					£m	3	109.439	107.473	107.946	0.474	0.44
17	Total opex including new outputs					£m	3	73.379	83.229	69.725	-13.504	-16.22

Table 36a – Sewerage Service – Expenditure comparisons by purpose

The PC10 Final Determination documentation provided to NI Water on February 10 did not provide the full transparency for the company to populate the Final Determination baseline on the Capital Investment Monitoring template or AIR Table 35a or 36a. The Utility regulator has provided additional information on 24/05/11 to populate the Capital lines of this table. These are fully reconciled to the Final Determination numbers for the Capex lines.

There are some considerable variations in the CIDA allocations in 2010/11 compared to the PC10 Final Determination which is explained in detail below. This change follows reporter recommendations from 2009/10 and was highlighted to the Utility Regulator in a letter dated 19/05/11. For detailed variations at project level these are best examined on the CIM (table 40). The following commentary will give an explanation of some of the main variances.

New external constraints

It should be noted that the company is under additional external constraints since the Final Determination was published. These cannot be ignored from any comparative work and main factors are as follows:

- **Annual Funding** – NI Water's funding whilst presented in the Final Determination is now overwritten by the Public Expenditure funding which is allocated on an annual basis. This has affected NIW with initial budgets showing £20m greater than PC10 spend in 2011/12 of £205m (this has since been reduced to PC10 levels), and a reduction of £36m in 2012/13 against the PC10 budget. This revised PE budget has created a sawtooth investment profile and is presenting NI Water difficulty in managing the Capital Works Programme for 2012/13 in particular as a significant portion of the spend in this year will be a result of projects started in 2011/12. This creates an inefficient approach for delivery of the programme as the company no longer has full control of the PC10 package.
- **Monitoring rounds** – In addition to the removal of any annual flexibility there is the additional complexity that the annual budgets will be subject to the in-year monitoring rounds which may reduce or increase funding. This approach to capital funding provides little opportunity to plan investment to follow the full Regulatory framework.
- **Governance Changes** - NIW has seen substantial and continuous changes in capital spend governance during the PC10 period. NI Water are required to comply with the guidance provided by CPD and the requirement of DRD re consultancy. The full impact of these changes is to extend the usual delivery time for a project over £2m by 6-12 weeks in reaching A3 stage. Smaller projects have proportionally smaller delays.
- 2010/11 NIW was issued with a range of governance circulars which have impacted on delivery. In the autumn restrictions were placed on the use of frameworks – which caused around 6-8 weeks delay in the water mains programme and other framework contracts until the guidance could be amended. In March guidance was issued on the use of external consultancy, requiring ministerial approval for all

consultancy. Some ambiguity remains around spend on feasibility studies which drive the construction of a physical asset. NIW are seeking clarity on this issue as this could potentially require all feasibility work prior to construction would require ministerial approval.

- **Delays in acceptance of the PC10 Final Determination** – The issues surrounding an NDPB negotiating a regulatory settlement with a regulator were exceptionally complex. Eventually a process and direction was agreed, which resulted in the Memorandum of Understanding between the NIAUR and DRD, setting out some of the key principles. This allowed the overall PC10 settlement to be agreed by the NI Water board on the 13th December 2010 – 9 months after the start of the control period.

General in year explanation of variation

- **Reduced Capital Efficiency** – NIW began the procurement process for a series of major frameworks to replace extant and expired frameworks within the Capital Works Programme during 2011/12. This replaces the proposed Alliance delivery structure, which was adversely affected by the risks inherent in variation inherent in the Public Expenditure process and NIW's status as an NDPB. This reduces the available incentivisation for Alliance partners and eliminates the certainty of funding going forward which is essential for a commercial alliance to commit resources to the Alliance. The UR should note that the frameworks approach will not deliver the efficiencies seen in UK WASCs using Alliancing arrangements, but will satisfy the (current) NDPB requirements for governance.
- **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 2010/11 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. Examples where land issues remain include Ardglass WwTW and Ballyhornan Screening.

Comparison issues**General Matters**

The COPI factor of 0.982 has been derived from the information provided in the UR Chapter guidance. This figure is less than 1 due to deflation in the COPI index in the period 2009/10 – 2010/11. This alone has the effect of reducing the PC10 capital from that assumed in 'PC10 Final Determination' by £1.97m for Sewerage investment in 2011/12.

It should be noted that provisional COPI figures for 2011/12 has since been released and the amended COPI factor is 0.998. This change would increase the total PC10 FD allowance in Column 2 by £1.75m. For this reason care should be taken when using this data.

Given that COPI is a combined set of indices from a number of industries, many of which has suffered significant declines due to the recession, NI Water is does not accept the scale of the decline shown by COPI during 2009/10 and 2010/11, in respect of the Water Sector.

The MoU and CWA makes specific reference to COPI, stating that "The impact of COPI will be noted and monitored but no account taken of it until PC13 unless NI Water bring a bid forward for additional funding." This element of the agreement is particularly relevant as the uncertainties around the funding available to NI Water and the level of investment that could be committed has meant that it has not been possible for NI Water to move forward with the proposed Alliance for delivering the majority of the CWP. 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 2007/08 base year for 2011/12 within Table 40 dashboard.

Figures reported in Columns 1 and 2 of this table are post efficiency.

PPP

No PPP is included in this table.

Line commentary

The follow line commentaries explain the variance between the PC10 FD 2007/08 prices converted to 2011/12 prices using actual COPI provided in the guidance against the actual expenditure in the year. Most of the analysis for this commentary has taken place in Table 40 and given that this table does not reconcile to the AIR table due to the approach adopted for reporting CIDA on the CIM (see Table 40 commentary for variances) the figures shown are an indicator of the magnitude of the variance.

Line 1- Base operating expenditure

The figure for column 1 is populated using the NI Water PC10 Business plan split from Table B3.40 and Table B3.41. This gives a Sewerage split of 50%.

This line is showing a reduced OPEX expenditure in 2011/12 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 2011/12 compared to PC10 FD projected expenditure in 2011/12 prices using UR projected COPI. This is due to programme delays in the sewer maintenance, flooding and DG5 sub programmes.

In addition to the under spend there is also a change in CIDA allocation following the 'Reporter recommendations in AIR10' which present an additional IRE requirement based on the PC10 Final Determination.

The Reporter recommended that when an asset is being replaced, Base Maintenance is included in the CIDA allocation of the replacement asset. This is documented in the reporters report for AIR10 Table 32 with the following points being made:

- a) *'there is a general under allocation to Base Maintenance (B), as demonstrated in the Reporter's QBEG for schemes reviewed'*
- b) *JG036 – a recommended increase in B allocation from 2% to 31% for the project.*

However the QBEG recommended by the reporter does not discuss the infrastructure / non infrastructure implications of the change. In the case of project JG036 (Castor Bay to Dungannon), CIDA now reflects a Base allocation of 31% which is split 4% non infrastructure (associated with the Water Pumping station) and 27% infrastructure (associated with the new Trunk Main). The 27% infrastructure base allocation has a direct impact on IRE despite the fact that no maintenance took place on the infrastructure asset. The increase in maintenance spend did not maintain the network; rather it extended the network and should therefore be allocated to Enhancement categories only.

The principle outlined above has also been applied to WwTW pump away solutions. In the case of KV045 (Mullaghbane WwTW), Mullaghbane WwTW will be replaced with a Terminal Sewerage Pumping Station (SPS) and a Sewerage pumping main to Forkhill WwTW where treatment for the two sites will take place. In this project, the Base allocation of 39% is split 23% non infrastructure (associated with the terminal SPS) and 16% infrastructure (associated with the new pumping main).

This had the effect of increasing the Sewerage Infrastructure base allocation for PC10 period and means that the PC10 IRE allocation cannot be directly compared with the current allocations. It also means that the PC10 IRE funding will not cover these changes.

Line 3 – MNI (Gross of grants and contributions)

In 2010/11 we reported a significantly reduced spend on this line compared to the PC10 allocation. The Base Maintenance –Sewerage non infra programme has successfully delivered in 2011/12, showing an £16m over-spend in the year compared to an under spend of £8.5m in 2010/11.

The following is a summary of the main WwTW base maintenance projects in 2011/12:

- KB460 Tullaghgarley WwTW – work at the works complete and the work on the Terminal Pumping Station is progressing.
- KB461 Larne WwTW base maintenance – complete.
- KC423 North Coast WwTW Capital Base Maintenance – complete.
(The fire damage to odour control equipment is being taken forward as project KC466 as an urgent requirement)
- KR486 M&E Capital Maintenance Whitehouse WwTW – now delivering after final approval.
- KR485 M&E Capital Maintenance Belfast WwTW – the phasing of this project has been re-assessed in liaison with Operations. Phase 1 was awarded in June 2011. Phase 2 is awaiting tendering.
- KL473 M&E Capital Maintenance Culmore WwTW – complete.
- KA242 Ballyclare WwTW refurbishment – in construction

In addition it is noted that £1.2m as spend on sub programme 12 (sewerage) on non-infra items which includes Sewerage pumping stations. These non infra items were not included in the PC10 final determination within this sub-programme.

Lines 7, 9 & 13– OPEX from Capex

These lines are all showing reduced spend in 2011/12 compared to the Final Determination. This is the case for a number of reasons including:

- a) The process used to extract the actual costs from the General Ledger (GL). Given that all sites are not available in detail on the GL all Opex from Capex is also not available. The numbers presented are primarily based on power requirements. Given that NIW obtained more competitive power tender rates in 2010/11 and 2011/12 the Opex from Capex is showing small actual outturns compared to the PC10 projections.
- b) The OPEX from CAPEX shown within 2011/12 relates to only the Capital Works Programme. No M & G Opex from Capex is included in the 2011/12 actual figures.
- c) Six WwTW's that were included with the PC10 Business Plan have achieved beneficial use prior to PC10 commencement. The OPEX from Capex for these sites has not been claimed in PC10 and as a result there is a negative difference from the Final Determination.

It should be noted that the process of capturing Opex data has improved with the introduction of the 'Cost to Serve' project. Power data is available by site linked to CAR ID. It is anticipated that this system will be further enhanced during 2012/13 to include labour costs, plant costs etc.

Line 6 - Capex - Total Quality Enhancement Programme

The quality enhancement (Q) programme has spent less than the PC10 projection for 2011/12. This is due to a slower start on the Waste Water Treatment new starts in 2010/11 and also due a change in the actual CIDA allocations on both the Waste Water Treatment new starts and Waste Water

Treatment carry over projects with less spend in Quality Enhancement and more spend in Supply Demand Balance than was projected. The main variances are described as follows:

- The main sewerage programme has suffered delays and is showing a variance of c-£5.6m (T40 analysis). Given the pressures on PC10 funding for 2012/13 the delays in this sub- programme from year 1 and 2 within PC10 will not be reversed in 2012/13.
- A variance of c£5.9m (T40 analysis) on Wastewater Carryover projects is primarily due to carryover projects being delayed and interim solution projects being extended to provide permanent solutions.
- A variance of c-£9.7m (T40 analysis) on Waterwater Treatment new starts relates to delayed starts to this PC10 sub programme and a shift in CIDA allocation to additional Base Maintenance than was provided for in the NI Water T40 Baseline. Three projects within this sub programme, Gulladuff, Maghera and Ballintoy will not be delivered in PC10.
- A variance of c-£2.9m (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 spent more than the PC10 allocation for 2011/12 of c£3.9m (T40 analysis).
- The additional outputs programme has been delayed due to PE funding reduction in 2012/13. There is a Q variance of -c£7.8m (T40 analysis) in this sub programme.
- Most of the remaining variance is explained in the PC10 final determination interpretation. T40 provides the NIW view whereas the UR detail is shown on T36a.

Line 8 – Capital expenditure-customer service

Variance on this line is explained by 2 main variances as follows:

- In 2011/12 there has been c-£1.1m (T40 analysis) reduced expenditure on Sewerage Maintenance, Flooding and DG5 relating to expenditure on DG5 properties.
- The M & G Enhancement projects have suffered delays in 2010/11 and 2011/12 with reduced spend from the FD by c-£3.4m (T40 analysis) in 2011/12.

Line 10– Supply/ Demand Balance

The main variances on this line are explained as follows:

- c-£1.7m (T40 analysis) of reduced spend on the Sewerage Maintenance, Flooding and DG5 due to delays in this sub-programme.
- c-£2.8m (T40 analysis) of additional spend on Wastewater Treatment Carryover projects. This is due to CIDA allocation change from the PC10 Final Determination and interim solution projects being extended to permanent solutions.
- c-£3.6m (T40 analysis) of additional spend on Small Wastewater Treatment projects. This is due to CIDA allocation change from the PC10 Final Determination.

- c-£3.2m (T40 analysis) of additional spend on the additional outputs programme. This is primarily due to CIDA allocation change from the PC10 Final Determination

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 £107.5m in 11/12 prices. The actual expenditure was £107.9m.

[illegible]

[illegible]

[illegible]

Table 40 – Capital Investment Monitoring

Introduction

The return includes the Final Determination Baseline information for the PC10 period as derived by NI Water, but does not include baseline changes within the PE Change agreed in October 2011. This CIM includes current actual information for the period 1st April 2010 – 31st March 2012.

Operating Background

Following the signing of the Memorandum of Understanding between the DRD and the UR on 22nd November 2010 the NI Water Board accepted the amended PC10 Final Determination (FD) on 13th December 2010.

NI Water is now part of the Public Expenditure (PE) process within the Northern Ireland Assembly budget process. NI Water received their indicative budgets for 11/12, 12/13, 13/14 and 14/15 on the 11th March 2011 (subject to the monitoring round and annual expenditure pressures within each year). The budgets for 13/14 and 14/15 have been revised in May 2012 prior to the submission of the PC13 submission but these have no impact on this CIM report.

NI Water and the UR undertook the PE10 change process for the capital works programme between July and October 2011, resulting in a revised agreed monitoring plan. This formed the basis for the programme for the remainder of the PC10 period.

NI Water submitted the PC13 business plan for the financial years 13/14 and 14/15 on the 21st May 2012. In accordance with guidance from the UR the CIM will provide details and an explanation of any material changes from the PC13 submission.

Company Baseline

Baseline information has remained unchanged from the previous submission which relates to the NI Water interpretation of the PC10 final determination.

Capital Expenditure Commentary

This submission is completed using on the same approach as that submitted previously with non- Capital Works Programme (EP) lines being analysed manually from Oracle.

The codes within the CIM reflect the guidance provided on the coding for the CIM submission for PC10. The UR has recently revised the programme coding for PC13 programmes and NI Water would like to discuss the most appropriate point to transfer to the new reporting programmes. There is a need to code PC13 schemes now starting feasibility, design and initial works to the appropriate programme.

The regulatory signoff process is under review with NIEA providing sample signoff documentation.

A supporting dashboard based on the Q4 submission has been provided with this submission.

The following is a summary of CAPEX expenditure in 2011/12 (excluding contributions) at the end of Q4 as per ORACLE and reconciled to the CIM submission shown in money of the day.

	£m
Total capital expenditure as per ORACLE	192,045
EP capital from CAPTRAX reported to CIM	143,373
Non EP capital from ORACLE	39,199
Capitalised Salaries and overheads	9,436
Rounding from ORACLE to CAPTRAX/CPMR	0.037
Reconciled Total	192,045

During the period (April 2011- March 2012) there has been capital income in the form of Grant and Contributions totalling to £4.971m. This figure is not included on the CIM submission as per the UR guidance.

The table provides –

- all financial information, both PC10 Baseline and current actual/projected expenditure
- target dates for both Baseline named projects and current actual projects
- the Parent Child relationship between PC10 parent projects where established
- PC10 QBEG figures and current actual CIDA allocations

Inflation Assumptions

The project costs of projects as reported in the 'current actual or projected' portion of the CIM are in current prices. All project costs are captured in nominal prices and no inflation assumptions are applied with CMPR.

2011/12 Year to date 16 box model showing expenditure £m

	Water Infrastructure	Water Non-infrastructure	Sewerage Infrastructure	Sewerage Non-infrastructure	Totals
Quality Enhancement	11.30	1.29	13.45	14.60	40.63
Base service provision	26.45	20.31	9.37	47.05	103.18
Enhanced service levels	4.55	1.27	2.68	1.69	10.19
Supply Demand Balance	15.83	3.96	6.06	12.15	38.01
Totals	58.12	26.83	31.57	75.49	192.01

The 16 box model for the year starts to show the variances between the PC10 programme and the current programme.

NI Water has accelerated the base maintenance spend in year to recover the reduced base programme in 2010/11. This has been successful, particularly in Sewerage Non-infrastructure, which saw substantial investment to address priority base maintenance requirements. The shift to water infrastructure can be clearly seen within the programme with a substantial increase in programme 8 and the Trunk Mains programme. The Water non-infrastructure spend remains lower than expected as a result of the time required to deliver the framework to carry out reservoir rehabilitation and the water non-infrastructure side. The supply demand element of the programme has also been reduced significantly as fewer schemes with significant growth CIDA allocations have been taken forward in the year.

CIM summary Table

Prog Code	Title	Current Actual 11/12– nominal prices	Current actual and Projected – nominal prices PC10	CIM Reported Baseline expenditure PC10 - 07/08 prices
0	Staff salaries and on-costs	9.44	29.13	28.35
1	Base maintenance (Water)	3.25	5.54	19.16
2	Base maintenance (Sewerage)	25.44	48.98	65.91
3	Water resources	3.36	8.20	5.02
4	Water treatment works	1.01	5.75	4.38
5	Water trunk mains	9.77	27.88	16.22
6	Service reservoirs and clear water tanks	0.85	9.21	13.48
7	Service reservoir rehab	0.22	2.83	9.72
8	Water mains rehabilitation	37.13	95.84	90.15
9	Leakage	3.38	9.67	9.69
10	Ops capital Water (Base)	9.12	24.87	9.74
11	Named sewerage projects	4.17	9.50	5.03
12	Sewerage Maintenance, Flooding and DG5	20.14	57.05	83.39
15	Wastewater treatment (carry over projects)	16.09	53.49	44.25
16	Wastewater treatment (new starts)	4.43	20.53	36.46
17	Small wastewater treatment works	8.01	17.91	12.43
18	Ops Capital Sewerage (base)	8.98	22.54	15.40
19	Miscellaneous	2.41	10.41	3.38
20	M&G	15.88	37.07	53.22
21	Additional Outputs Programme	8.97	26.99	38.88
	Totals	192.01	523.37	564.25
	Management Adjustment		-19.28	
	Total inc MA		504.10	

Within Table 1.7 the baseline figures are in 07/08 prices and current actual and projected figures are in nominal figures.

1.8 Reconciliation with Tables 35 and 36

Table 35 - Water service nominal expenditure

Table 35 line description		T35 £m	CIM £m	Variance £m	Variance %
3	MNI (gross of grants and contributions)	20.062	20.313	0.251	1.23
6	Infrastructure renewals expenditure (gross)	26.803	26.448	-0.355	-1.34
7	Capex: Total quality enhancement programme	12.278	12.589	0.312	2.48
9	Capital expenditure: customer service	5.759	5.813	0.053	0.92
11	Capital expenditure supply demand balance	10.480	19.791	0.594	3.00
16	Capital expenditure - security of supply	8.717			
	Totals	84.099	84.953	0.855	1.01

Table 36 - Water service nominal expenditure

Table 36 line description		T36 £m	CIM £m	Variance £m	Variance %
3	MNI (gross of grants and contributions)	48.006	47.045	-0.961	-2.04
6	Infrastructure renewals expenditure (gross)	9.044	9.375	0.331	3.53
7	Capex: Total quality enhancement programme	28.730	28.045	-0.686	-2.44
9	Capital expenditure: customer service	4.251	4.374	0.123	2.82
11	Capital expenditure supply demand balance	17.914	18.215	0.301	1.65
	Totals	107.946	107.054	-0.892	-0.83

The above table shows the comparison between the CIM and Table 35 and 36 from AIR. The treatment of grants and contributions is consistent in both table forms. Line 16 has been added to Table 35 to facilitate direct comparison on a like for like basis. Assets adopted at NIL cost reported in Table 36 have been excluded from this comparison. The variances shown arise because the data held for population of the AIR tables has direct links between the asset type, service area and investment driver. Where there are complex projects this detail is required to provide an accurate analysis of the expenditure. The summary detail on the CIM does not give a full transparency of this detail as the direct link between asset type, service area and investment area is lost but does give a reasonable interpretation of the investment.

Operations Capital and Management & General (M &G) commentary

The following assumptions have been applied within the Operations Capital and Management & General (M & G) lines which relate to PC10 sub programmes, 09, 10, 18, 19 and 20 as follows:

- Unlike the EP programme much of the Operations Capital programme is reactive and the M & G programme has been subject to revisions of business need.
- Service allocation and purpose allocation (QBEG) for these sub programmes has been revised for this submission taking account of all contracts expenditure within these sub-programmes in both 2010/11 and 2011/12 so it is a revised PC10 actual allocation.

Sub-programme 0 Capitalised Salaries and On-costs have been derived from Oracle using the current capitalised salaries methodology. The projections of Capitalised Salaries and On-costs for 2012/13 follow the amended application of the capitalisation policy as discussed in the PC13 Capitalised Salaries and On-costs business case.

Q4 Programme Level Commentary

NI Water retained the complex governance and reporting arrangements associated with being both a regulated GoCo and an NDPB for the 2011/12 financial year. Unfortunately these seem likely to continue for some time. These arrangements continue to have an effect on the delivery of the capital programme, particularly around procurement and governance of the programme and the impact of local accountability on programmes and projects. Further guidance was recently issued by DFP on the use of consultants, which is under review by NI Water and may affect the delivery of M&G projects in 2012/13.

NI Water has successfully invested the 2011/12 capital budget, meeting the investment target set. However the substantial drop in the PE capital funding available for investment in 2012/13 has a major impact on the capital programme. The carryover between 2011/12 and 2012/13 is over 85% of the 12/13 EP funding (i.e. projects committed to construction), due to the need to ramp up the programme to invest the full PE budget allocation in 2011/12. This large carryover restricts the funding available to progress new starts for delivery in 2012/13, to prepare for PC13 and PC15 and reduces the flexibility in dealing with external changes to the programme. It will also create a problem with ramping the programme up again to deliver the programme in 13/14 as there will be limited carryover. Most stakeholders agree that this is a very sub-optimal approach to the planning and delivery of a major capital investment programme.

The UR has requested that NI Water explain the material variances between the programme presented in the PC10 outturn report and the Q4 CIM. This will be explained in each sub-programme as appropriate. The UR should note that CPMR, and thus the CIM, does not yet fully reflect the PC13 business case programme as submitted on the 21st May 2012.

The 2011/12 Q4 CIM retains the FD baseline derived from the C5 table as submitted in previous CIMs.

The 2011/12 Q4 CIM contains a representation of the live programme for 2012/13, with a delivery over-profile which is removed through management adjustments. The management over-profile in the CIM for 12/13 has been reduced since the submission of the Q3 CIM.

The mechanism for extracting data from CPMR to complete the CIM has been refined. However further work may be needed if projects are suspended for long periods pending funding. All non-infrastructure carryover projects spending less than £50k in the PC10 period are assigned to the appropriate Base Maintenance programme.

Non-infrastructure additional carryover projects (mainly WwTW) spending over £50k were reported as additional carryover projects within programme 15. A number of non-infrastructure projects have identified additional carryover spend in this period, as a result of issues arising during maintenance and operation in the first year.

Some projects have been added to the CIM as a result of financial adjustments affecting spend in previous years. These projects have been assigned to the appropriate programme.

The Water Resource Management Plan (WRMP) was launched in March 2012 and will inform NI Water's trunk mains, service reservoirs and water treatment works programme moving forward.

All profiles extending into the PC13 period are subject to the UR review of the PC13 programme. NI Water has carried out limited revisions to the CIM allocations drawn from CPMR for projects starting from 2013/14 onwards. These will be reviewed and aligned with the PC13 business plan and final determination as appropriate.

The changes to the programme required as a result of changes to the PE budget will be dealt with as needed. The profiling within the programme is being reviewed and many of the projects in the PC13 period do not reflect the profiles within the PC13 business plan. PC13 projects which have not reached A1 status may not be included within the PC13 period.

0. Staff salaries and overheads

NI Water has capitalised salaries and overheads is shown as a separate line on the CIM. Capitalised salaries and on costs have been allocated to 'Service Area' and 'purpose allocation' based on the total accrued in each Service area for the 2010/11 and 2011/12 years and that projected for the 12/13 year. This has been manually calculated from the data presented in the CIM. The forward projection for Capsals and On-costs for the PC13 period takes account of the amended application of the capitalisation policy for Capsals and on-costs. This captures all staff involved in capital delivery across NI Water and apportions this across the programme. On-costs are assigned in proportion to the staff costs in each area. This increases the amount of capitalised salaries and on-costs presented within the CIM for 2012/13 onwards.

PC13 Submission Comparison

There are small differences in 2011/12 totals, based on the final costs for Capsals in the programme. The totals for 2012/13 are based on the 12/13 budget costs.

1. Base Maintenance – Water (Non-infrastructure)

The delivery of the base maintenance programme in Water (non-infrastructure) is awaiting the delivery of a suitable procurement vehicle.

JF581 for Clay Lake WTW has started on-site to address the base maintenance requirements within that works and this will complete in 2012/13.

KP664 and JP667 Killyhelvin water treatment works flood protection and standby generator replacement were completed in Q4 of 2011/12

PC13 Submission Comparison

Excluding the transfers into the programme in the PC13 programme there is a £400k variance between the PC13 business plan and the Q4 CIM reflecting part of the overall delivery over-profile in this sub-programme for 2012/13. This will be removed in the overall reduction of programme in the management adjustment line.

2. Base Maintenance – Sewerage (Non-infrastructure)

NI Water continued to review the Base Maintenance requirements workshops for WwTW and SPS with Operational staff to develop the overall list of all maintenance requests which will be progressed in 2012/13 and 2013/14 subject to funding.

a. Major WwTW short-life equipment replacement

NI Water continues to develop a prioritised programme of base maintenance work for the larger WwTW's. Six large projects are mostly completed – with the second phase for some sites now being developed. The following is a summary of progress on the major sites:

KB460 Tullaghgarley WwTW – work at the site is complete and the work on the Terminal Pumping Station is progressing.

KB461 Larne WwTW base maintenance – complete.

KC423 North Coast WwTW Capital Base Maintenance – complete. (The fire damage to odour control equipment is being taken forward as project KC466 as an urgent requirement).

KR486 M&E Capital Maintenance Whitehouse WwTW – now delivering after final approval.

KR485 M&E Capital Maintenance Belfast WwTW – the phasing of this project has been re-assessed in liaison with Operations. Phase 1 was awarded in June 2011. Phase 2 is awaiting tendering.

KL473 M&E Capital Maintenance Culmore WwTW – complete.

KA242 Ballyclare WwTW refurbishment – in construction

Under development are a number of other WwTW projects addressing particular issues for sites – which depending on prioritisation will be PC10 or PC13 projects. These include KR501 Carrickfergus and KR502 Greenisland.

A number of further sites have been identified for refurbishment and are being progressed as individual projects. UR should note that in these primarily maintenance projects there may be elements of Supply Demand Balance expenditure to take advantage of the opportunity on site to deal with localised S/D issues.

b. Targeted replacement programmes

WwTW sites with smaller base maintenance requirements will be delivered as area based programmes across a number of sites. There will be four main projects covering smaller individual projects, KI492 Base Maintenance at Multiple WwTW East IWWF >£100k, KI494 Base Maintenance WWTW North IWWF, KI495 Base Maintenance IWWF West and KI496 Base Maintenance WWTW South which combines a number of maintenance requirements across a region into a single package for delivery.

These programmes of work are designed to complement the development of a risk based approach to capital maintenance.

c. Base Maintenance arising from the wider CWP

NI Water had originally estimated that the base maintenance requirements of WwTW Enhancement driven refurbishment would be around 18-20%. However given the improvements in CIDA reporting and the base maintenance required on each site, Enhancement driven refurbishments are requiring around 40% matching base allocation to complete the scheme.

This increase appears across the programme and the trend in PC10 and PC13 will need to be monitored to determine if this trend continues. There are a variety of potential reasons for the increase in base maintenance within quality driven schemes. It could be that NI Water is replacing a higher percentage of existing assets to meet NIEA quality drivers or that the CIDA allocation in PC10 has become more consistent. These allocations continue to be monitored and refined.

d. Base Maintenance at SPS

An increasing element of the programme is base maintenance at SPS, which is carried out within this programme. This is in addition to the SPS upgrades carried out to address quality issues which are reported in programme 12.

There are a number of larger projects in this area for example KS382 Crossgar WwPS and KI488 Removal of inlet screens and installation of solid handling pumps. These projects will be taken forward on a priority basis. There are also a large number of smaller SPS upgrades which will be taken forward on a priority basis.

NI Water would want to discuss with the UR and NIEA the SPS upgrade programme. In many cases when a base maintenance upgrade is being carried out at an SPS, NIEA may request additional storage at the SPS and improvements including screening of any emergency overflow or CSO in line with current policy. This is work carried out above the base maintenance requirement as a result of NIEA intervention. NI Water would consider that

the element of investment to comply with the NIEA requirements should be quality enhancement. An example of this would be the work carried out at KG178 Annaghanoon Road WwPS upgrade.

PC13 Submission Comparison

Comparing the PC13 submission to the PC10 Q4 CIM shows a number of differences around the programme over-profile for 2012/13.

There is £7.61m variance between PC13 submission and the PC10 Q4 CIM as a result of the delivery over-profile including a number of projects profiled for PC13. These would include KR501, KR502 and KS406 among a range of current base maintenance requirements.

This over-profile will be corrected in the management adjustment line within the Q4 CIM.

3. Water Resources

JN226 Strule Abstraction is in the construction phase after overcoming the last of a series of issues. This project is a critical component of the WRMP around the security of supply in the west of the province.

The Panel Engineers maintenance programme for reservoir structures has increased in cost, both due to the tendered rates received from the suppliers and an increase in scope of the maintenance required. This work is being retendered.

PC13 Submission Comparison

This programme shows a reduction of £0.64m between PC13 Table 3.3 and the Q4 CIM. This is due to profiling variations and challenges to scope and cost. Any changes or reductions in cost will be re-profiled into the WI base area.

4. Water Treatment Works

JL723 Carmoney

The additional base maintenance at Carmoney WTW and linked assets has been identified and has been completed.

KA271 Killylane WTW – study

This nominated output has been claimed as complete in the PC10 period. The delivery of the construction elements of this project is part of the PC13 base maintenance programme. This will result in this project being moved to programme 01 in the PC13 period.

PC13 Submission Comparison

There are no material changes in programme in the PC10 period in this programme. Under the coding in PC10 until the revision of coding for PC13 KA271 Killylane WTW is retained in this programme. This profile does not include PC13 projects which have not reached A1 stage – including JP669 Killyhelvin WTW.

5. Water Trunk Mains

JG036 Castor Bay to Dungannon STM Phase 1 is complete early in 2011/12. This project has also had a scope change for improvements to the Blacklough Resource zone, addressing significant issues in that area.

JG035 Ballydougan to Newry Link main

This project has been accelerated and Phase 1 has been largely completed in 2011/12 with final commissioning on the 25th May 2012. As part of the PE budget CAPEX change process Phase 2a of this project is being taken forward for delivery at the end of 2012/13. The requirement for Phase 2b of this project is under review, dependent on the review of Camlough WTW.

JR342 Castor Bay to Belfast Phase 2

The review of the PE budget CAPEX change submission changed the timescales for the Trunk Main programme. This project now forms part of the PC13 programme and is currently going through the DRD and DFP approval process.

JR460 Gravity II McVeighs Well to Oldpark SR

Preliminary work has started on this project, which has been driven by water supply issues during the freeze thaw. The preferred option has been identified as the structural re-lining of an existing abandoned trunk main which runs between the two points, but is in poor structural condition.

PC13 Submission Comparison

There have been no material changes in PC10 between the PC13 Table 3.3 submission and the Q4 CIM. The profiling within PC13 retains a number of Trunk Mains which are scheduled for late PC15 if required. These will be removed in the re-profiling of CAPTRAX to match the PC13 Final Determination.

6. Service Reservoirs and Clear Water tanks

This programme has been substantially changed as a result of the PE budget CAPEX change process. This area is also subject to significant procurement delays as a result of the protracted procurement negotiations over consultancy services and construction services for this area. This led to difficulties in progressing projects as NI Water had planned.

This programme has successfully delivered 3 SRs in 2011/12, with a further service reservoir, Tully SR scheduled for delivery in 2012/13, as reflected in the PE 10 change process.

PC13 Submission Comparison

This programme contains no material changes – JC385 Monaclough SR remains in the CAPTRAX programme as an over-profile allocation. It is an advanced project which could be delivered if additional funding became available.

7. Service Reservoir Rehabilitation

NI Water is progressing a replacement for the service reservoir rehabilitation framework but the procurement process is taking much longer than anticipated. It is unlikely that any rehabilitation will be delivered in 2011/12 due to the contractual issues. NI Water is preparing a prioritised list of SR's and CWT's requiring maintenance, based on surveys of sites carried out during reservoir cleaning which will form the basis of the next programme.

The programme post procurement has been estimated and £0.5m has been allocated in 2012/13. NI Water may increase this amount, depending on the priority of this work and slippage within other programmes.

PC13 Submission Comparison

This programme has £0.5m allocated in 12/13 to this programme to prepare for PC13 which matches the profile within the CIM.

8. Water Mains Rehabilitation

The water mains rehab programme has been discussed with the UR in January 2012 as the programme was likely to exceed the £90m allocated. At that time to meet PE commitments NI Water was showing a committed spend of £93m.

Whilst the water mains rehabilitation programme has been constrained and has shown limited increases there have been a number of pressures on the restricted programme. This has resulted in an increase in cost of the programme as reported in the CIM of £95.84m. This has not been removed as programme over-profile because the majority of these schemes are committed.

The increases are due to water quality, roads schemes and development pressure and examples are provided.

There was a need to replace the supply to Lenamore Springs in the west of the province as a result of a cryptosporidium issue. The reinforcement of the network required to address these issues required immediate action at the request of DWI and resulted in an increase in cost of £387k.

The preparatory work for major roads schemes being launched in the next 3 years is now underway. In many cases it is not just the main routes being upgraded which require attention but the diversionary routes and secondary routes within the area. An example of this is the requirement before the widening of the A2 between Jordanstown and Carrickfergus to replace the mains on the diversionary routes at a cost of £600k. These mains are in poor condition and were scheduled for replacement in PC13, but due to the resurfacing planned, the increase in traffic on the route and the impact of burst repairs on customers this work will be carried out before the resurfacing of the diversion. On a smaller scale the regeneration of town centres through public realm works is also causing pressure on the overall budget.

PC13 Submission Comparison

Reviewing the programme against the PC13 Table 3.3 submission there has been an increase in the size of the programme against the comparative programmes 8 and 23. This increase of £1.21m is due to the issues outlined above.

9. Leakage

The leakage programme has invested as expected and the outputs of the leakage programme will be reported in the AIR 12 submission.

PC13 Submission Comparison

The leakage spend was £260k lower in 11/12 than predicted in the PC13 submission. The projected spend in 12/13 is identical between the Q4 CIM and the PC13 submission.

10. Operational Capital Water

The budgets and programme for the Operational Capital Programmes.

Additional funding has been requested by Developer Services to address development requests. This is mainly due to an upturn in construction in the social housing sector.

PC13 Submission Comparison

There has been a substantial increase in the allocation to the SDB element of the programme and a smaller increase in base maintenance. This is due to the allocation of a further £1.2m to accommodate Developer requests in the end of the 11/12 year which is shown in the Q4 CIM but not in the PC13 business plan. This increase in development requests is shown in the CIDA allocation.

11. Named Sewerage Projects

Substantial progress has been made on the named sewerage projects – all are now in the final stages and most have achieved beneficial use.

KR441 Montgomery Rd Flood Alleviation

This project has completed the 4 UIDs in this project.

KA201 Ballyeaston SPS

This project is completing after the eventual acquisition of lands for the SPS.

PC13 Submission Comparison

There is no material variation in the totals or delivery for this programme.

12. Sewer Maintenance, Flooding and DG5

This programme for PC10 completion within the CIM is developed, with the UID programme shaped by recent approvals and the need to invest the PE budget within the constraints of procurement processes.

KL444 Buncrana Road – Phase 1. This project addressing a sewer replacement has been accelerated by the need to avoid Roads Service re-surfacing work in the area. This project will deliver 2 additional UIDs.

KV154 Newry Road Pumping Station, Warrenpoint. This project remains high profile and is progressing to delivery to address capacity issues at this pumping station.

KF037 Annagher SPS. This project received approval to progress to delivery due to operational issues with the site which required an earlier start to the project.

KG184 Portadown Drainage Area Network Improvements: Obins Street and Park Road. This project is under construction and after initial issues is progressing to deliver in 2012/13.

KS835 South Street Newtownards WWPS refurbishment. This project has encountered major ground condition issues. The work to excavate the PS caused the existing electricity supply pole mounted transformer to move, cutting off the supply. This caused a cost increase and significant delays to the project.

KF330 Newry DAP – NI Water and NIEA have reached agreement on this project so NI Water are progressing this project to delivery. Detailed design and preparation are underway.

KS373 Church Street Newtownards- this project has overcome lands and planning difficulties and is progressing to delivery.

KS878 Bangor DAP work package 7 – this UID screening project has been delivered and will deliver 2 nominated PC10 UID outputs and 1 additional UID.

KN595 Brookmount Road, Hunters Crescent Sewer replacement – this project has improved 3 UIDs not in the monitoring plan discharging to the river Strule in Omagh.

The focussed DG5 programme for the period has completed feasibility studies, including modelling, surveys, maintenance including de-silting etc. and has identified a number of DG5 properties which could be resolved, including flooding period, from the overall DG5 register. All DG5 driven projects in the CIM have a DG5 identifier.

PC13 Submission Comparison

The sewerage programme has accelerated a number of projects at the end of the 2011/12 year. As a result NI Water is likely to see an out-performance on the delivery of UID improvements in 2012/13 compared to the PC13 business plan submission.

The sewerage programme for PC13 is split into programme 12 – the main planned sewerage programme and programme 24 – the reactive

development, maintenance and third party schemes. The current programme 12 combines both of these elements.

The variance in the totals between the PC13 submission and the Q4 CIM directly comparing programme 12 and PC13 programmes 12 and 24 indicates that this programme has a delivery over-profile of £2.00m – which will be removed through the management adjustment line.

15. Waste water Treatment (Carryover Projects)

The majority of projects within this programme have successfully completed and been reported to UR. There are two main exceptions.

KB436 Whitehead, Ballycarry, Ballystruder rationalisation

This project was completed in 2011/12 after the completion of the long sea outfall.

KR389 Ballyhalbert WwTW – interim solution

The interim solution is complete with the long sea outfall under construction.

KR391 Portavogie WwTW

This project is finally underway after further concessions to the harbour authority. This project will complete in 2012/13

KS225 Ardglass WwTW

After protracted negotiations with landowners NIW has achieved agreement in for the land, access and reinstatement needed for this work – however the final exchange of contracts has not occurred. Further delay in completing the land acquisition will impact project delivery.

PC13 Submission Comparison

This programme varies from the PC13 submission by £1.5m – this represents an element of the delivery over-profile based on the acceleration of Ardglass and an upwards revision in the KR391 estimate after recent changes.

This over-profile will be removed from the submission in the overall over-profile line in PC10.

16. Waste Water Treatment (New Starts)

This programme has progressed as planned in 2011/12 and has been reviewed in 2012/13 and beyond as part of the development of PC13. PC13 programmes have yet to be fully implemented in CPMR as so some variances in individual projects are still seen as a result of delivery over-profiling.

KV125 Forkhill WwTW and KV045 Mullaghbane WwTW – these projects are underway and progressing the construction of the pumping station and WwTW upgrades for these projects.

The three nutrient removal projects, KN622 Omagh WwTW, KL465 Limavady WwTW and KC416 Glenstall WwTW are at an advanced stage and will be completed early 2012/13.

KT114 Hillsborough WwTW – this project is profiled for delivery in 2012/13 – with a critical dependency on the completion of Drumbeg Drive WwPS as the solution is to pump Hillsborough to New Holland WwTW for treatment via Drumbeg Drive WwPS.

KS848 Newcastle WwTW – This project is now in construction and is maintaining a high public profile. Review of the resilience of two of the network SPS by NIEA indicates that additional work may be needed which may increase the total cost of the project. This will be scoped and discussed with NIEA as needed. The long sea outfall is under investigation to clean and review the structural integrity of the outfall and determine what repairs are needed.

KL350 Benone Rationalisation – this project is now in delivery. Recent announcements on the long-term future of Magilligan Prison may change the future PE of the new Magilligan works and this may need to be reviewed.

KB314 Gulladuff WwTW – this project will not be delivered in PC10 and now forms part of the PC13 submission.

KC302 Ballintoy WwTW – NI Water has identified a site and is negotiating with the landowner to purchase. This may allow the project to progress earlier than shown in the PC13 submission and £100k is shown for lands purchase and negotiation in the Q4 CIM in 2012/13.

PC13 Submission Comparison

The comparison between the Q4 CIM and the PC13 profile is between programme 16 in the PC13 profile and programmes 16 and 21 in the Q4 CIM. A number of projects show a higher profile than within the PC13 submission, reflecting the delivery over-profile. This includes the £100k allocated to Benone WwTW.

This programme retains a substantial delivery over-profile – with £6.36M additional monies profiled in the Q4 CIM PC10 period against the PC13 submission in 2012/13. This reflects both the programme 16 and programme 21 combined over-profile in the programme.

17. Small Wastewater Treatment

This successful programme continues to deliver improvements to the priority small WwTW agreed with NIEA.

An allocation of £1m has been assigned to this programme in 2012/13 subject to the PE budget CAPEX change review. Flexibility will be built into this programme to accommodate additional funding by extending the prioritised list of projects using an appropriate procurement route accordingly.

PC13 Submission Comparison

This programme submission aligns with the PC13 submission for PC10 and allocations for PC13 have been assigned to the programme.

18. Operations Capital (Sewerage)

The budgets and programme for the Operational Capital Programmes have been reviewed. Additional operational capital has been approved and delivered to address maintenance across NI Water in 2011/12 in preparation for the reduction in spend across the Capital Programme in 2012/13 and projected for 2013/14.

PC13 Submission Comparison

The Q4 CIM shows a spend of £8.976m and the PC13 submission shows a spend of £7.553m in 2011/12. The majority of this change is due to the provision of additional operational capital in 11/12.

19. Miscellaneous

This programme has a number of larger projects developing in this programme around security. This has increased the spend in the period. The UR is aware of the projects and the urgency and impact of these projects in the PC10 period.

PC13 Submission Comparison

This programme has been substantially changed going into the PC13 period, with this programme referenced to metering. Other projects in this programme have been transferred to the appropriate alternative programme in PC13, making direct comparison difficult. Examining the Q4 CIM reported metering programme in direct comparison indicates that the metering programme spent £200k less CAPEX in 11/12 than anticipated in the PC13 business plan.

The projects removed elsewhere include security projects and surveys and SCAMP.

20. M&G

The M&G programme was subject to some change in the final quarter of 11/12, resulting in a reduction in the total invested in the area. This was necessary to meet the PE investment total.

The slippage in the programme now represents a pressure on the M&G programme for 12/13 and NIW will manage this pressure across the overall capital programme.

ADAI

This project is now progressing well, with contractors working across Northern Ireland. The central team within NIW has been recruited and is mostly operational.

Office Rationalisation

The office rationalisation process has continued with NI Water rationalising Mark Royal House to the Westland campus. Further rationalisation to remove rented accommodation is continuing in Ballymena and Londonderry, with completion of these moves occurring in 12/13.

ICT

A major PC refresh has been completed in the quarter – moving NI Water to a standard Windows 7 platform and replacing life expired PCs.

PC13 Submission Comparison

The PC13 submission indicated a spend of £38.42m across the PC10 period. The Q4 CIM indicates a reduction in spend to £37.07m across the PC10 period. The majority of this change is due to a reduction in M&G spend in 11/12 after the completion of the PC10 capital projection to meet PE investment targets.

21. Additional Outputs Programme

The Additional outputs programme now includes an increasing number of elements of the PC13 and PC15 WwTW programme at feasibility and design stages. In this CIM these projects are shown in programme 21, but have been combined into a unified programme 16 for the PC13 submission.

NI Water are coming under increasing pressure to deliver IPPC improvements to a number of WwTW across NI, including Newry, Dunmurry and New Holland, with NIEA issuing an enforcement notice on IPPC controls at Newry. This requirement was excluded from PC10

A review of the outputs of PC10 has identified a number of additional projects – in many cases linked to larger projects in the area. These will be reported in the additional outputs for clarity pending further discussion with UR.

KS216 Dunmore Sewerage – EC compliance

This project is linked to KS857 Glassdrumman and removes an untreated outfall to the Irish Sea. The completion of Glassdrumman WwTW allows this flow to be transferred to the new works.

KS844 Ballyhornan outfall screens

This project has been delayed due to lands issues from the SBP period – the lands issues are likely to be resolved and the project should be taken forward in PC10. There has been substantial media and MLA interest in the Ballyhornan area which has considerably raised the profile of this project.

KF329 Ardress WwPS

This project has delivered the new WwTW for Ardress, but has yet to complete the new WwPS which is currently held up due to lands acquisition issues.

KB287 Swatragh WwTW – within the requirements of PE expenditure NI Water is seeking to progress Swatragh WwTW to A3 stage for delivery in 2012/13.

KL482 Tamnaherin WwTW

This project was accelerated in order to deal with PE slippage – this project was agreed for acceleration with NIEA.

KV105 Newry WwTW –The Integrated Pollution Prevention Control (IPPC) requirements have been taken forward in PC10 due to enforcement action from NIEA.

KS235 Ballygowan WwTW –This project has been profiled for PC15 as the lands issues may take some time to resolve. If lands become available NI Water will operate the appropriate change process and re-prioritise and progress this project.

KS355 Ballynahinch WwTW – This project has started on site and will continue into PC13.

KS389 Ballymartin Blackrock WwTW – This project is profiled for 2012/13 delivery but is under review due to investment constraints.

KS857 Glasdrumman WwTW – this project was delivered in this year. .

KT126 Stoneyford WwTW – This project has not progressed as expected and now forms part of the PC13 programme.

KS111 Ards South – NI Water is looking to carry out flow reduction to Ballycranbeg WwTW by diverting flow from Rubane to the new works at Ballyhalbert. This would address an NIEA high priority PC13 project and would allow flexibility for PC13.

KS113 Ards North – NI Water is planning to purchase land for a permanent solution as a plot has become available in the current property market. This will require expenditure in the PC10 period for a project which will be required in the PC15 period.

KR409 Moneyreagh WwTW. NI Water has been served with an Article 12 notice by NIEA and will be prosecuted for discharges from this works. This project will be used to take forward the interim management of storm water from Moneyreagh WwTW to comply with this notice.

KC296 Ballycastle WwTW

NI Water remains committed to the delivery of the project within PC13, however on-going issues with lands and planning continue to hinder progress.

KT403 Dunmurry Sludge Facility – this project is addressing deficiencies at the Dunmurry WwTW sludge plant subject to improvement notices by NIEA. The base maintenance at this site as part of this project has been identified as a high priority and NI Water may accelerate these elements of the project. .

This programme also includes the initiation phases for a number of PC13 and potential PC15 projects.

PC13 Submission Comparison

The overall comparison for this programme is within the comments on programme 16.

Management Adjustments

The stated management adjustments in the CIM are

- A reduction of £19.278m in 2012/13 – covering the delivery over-profile within the Sewerage, WwTW, Trunk Mains and other capital programmes.

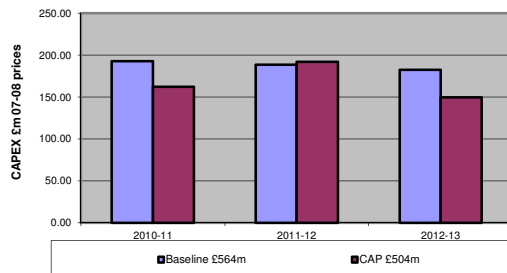
A dummy project code of xx999 has been assigned to this adjustment.

Regulatory Dashboard

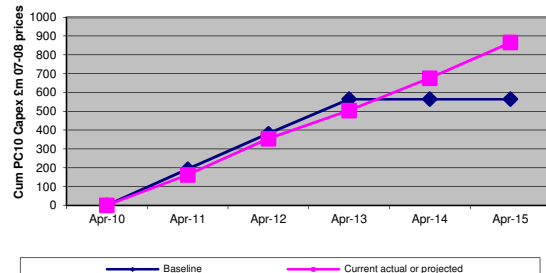
A regulatory dashboard for NI Water's CAPEX spend as reported in the Q4 2011/12 CIM has been developed and is included in this submission.

2011-12 Q4 CIM template. Current Actual COPI = 1 as per MOU agreement

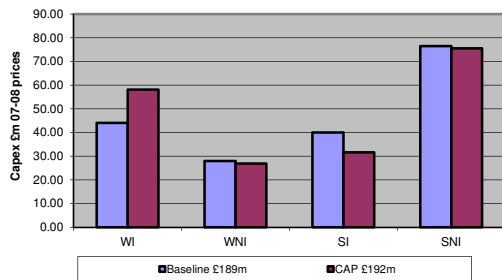
Total Annual Expenditure (2007-08 price base)



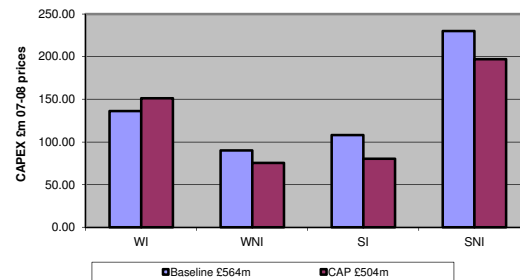
Actual-Projected CAPEX v Baseline (2007-08 price base)



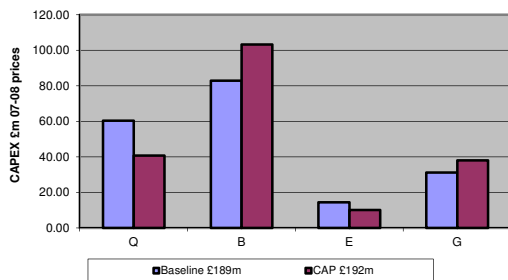
Service Allocation 2011-12 (2007-08 price base)



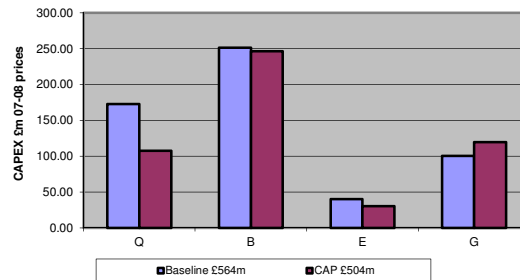
Service Allocation PC10 (2007-08) prices



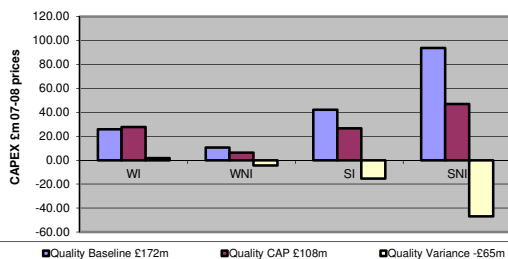
QBEG Allocation 2011-12 (2007-08 prices)



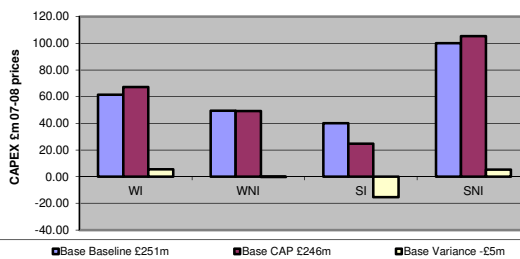
QBEG Allocation PC10 (2007-08) prices



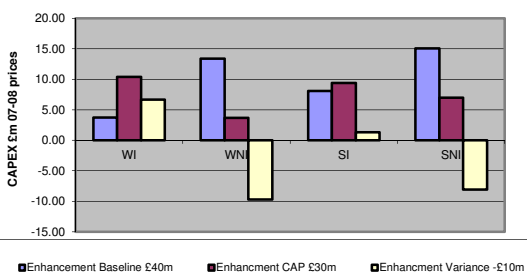
QBEG/Service allocation PC10 (2007-08 prices) Quality



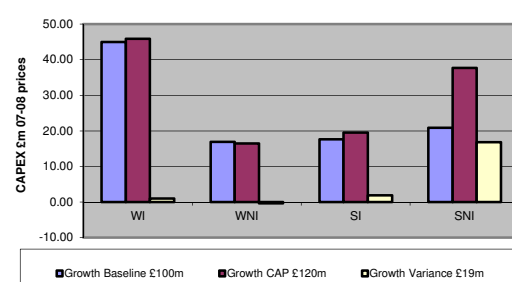
QBEG/Service Allocation PC10 (2007-08 prices) Base



QBEG/Service Allocation PC10 (2007-08 prices) Enhancement



QBEG/Service Allocation PC10 (2007-08 prices) Growth



NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 41 KEY OUTPUTS
HEALTH & SAFETY INFORMATION (NIW only)

DESCRIPTION	UNITS	DP	1		2		3		4		5	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG
A LOST TIME DUE TO SICKNESS AND ACCIDENTS AND INCIDENCE OF OCCUPATIONAL ILL HEALTH												
1 Employee total	nr	0	1,677	A2	1,579	A2	1,388	A2	1,316	A2	1,317	A2
2 Total days lost due to sickness, accident and occupational ill health	nr	0	18,882	A2	17,170	A2	10,873	A2	9,953	A2	8,510	A2
3 Total days lost - rate per 1000 employees	nr	2	11,259.39	A2	10,873.97	A2	7,833.57	A2	7,563.07	A2	6,461.66	A2
4 Number of incidents of occupational ill health	nr	0	172	A2	250	A2	147	A2	135	A2	144	A2
5 Incidents of occupational ill health - rate per 1000 employees	nr	2	102.56	A2	158.00	A2	105.91	A2	102.58	A2	109.34	A2
B RIDDOR REPORTS												
6 Total RIDDOR incidents	nr	0	16	A1	11	A1	11	A1	4	A1	4	A1
7 RIDDOR - rate per 1000 employees	nr	2	9.54	A1	6.97	A1	7.93	A1	3.04	A1	3.03	A1
8 3-day accident rate per 1000 employees	nr	2	9.54	A1	11.00	A1	7.93	A1	3.04	A1	3.03	A1
9 Major/fatal accident rate per 1000 employees	nr	2	0.00	A1	6.97	A1	0.00	A1	0.00	A1	0.00	A1
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		No data	
11 Total days lost due to sickness, accident and occupational ill health	nr	0	N/C		N/C		N/C		N/C		No data	
12 Total days lost - rate per 1000 employees	nr	2	N/C		N/C		N/C		N/C		No data	
13 Number of incidents of occupational ill health	nr	0	N/C		N/C		N/C		N/C		No data	
14 Incidents of occupational ill health - rate per 1000 employees	nr	2	N/C		N/C		N/C		N/C		No data	
D CONTRACTORS' RIDDOR REPORTS												
15 Total RIDDOR incidents	nr	0	N/C		N/C		7 + 1 (DO)	B2	7	B2	2	B2
16 RIDDOR - rate per 1000 contractors' employees	nr	2	N/C		N/C		N/C		N/C		No data	
17 3-day accident rate per 1000 contractors' employees	nr	0	N/C		N/C		N/C		N/C		No data	
18 Major/fatal accident rate per 1000 contractors' employees	nr	2	N/C		N/C		0.00	A2	0.00	A2	0.00	B2

Table 41 – Health and Safety Information (NIW only)**General**

We include all employees in all directorates in our headcount for the report. There are a small portion of internal staff who carry out unregulated business but we treat all their work as core activities.

Lines 1-5 Lost Time

In 2011/12 financial year NI Water lost a total of 8510 working days due to sickness which was equivalent to 6.5 working days lost per employee. The target KPI attendance in 11/12 was 96.5% and NI Water delivered an actual rate of 97.1%, 0.6% above the target, which is an increase of 0.5% on the 10/11 figure.

Restructuring continued during 2011/12 which resulted in 35 employees leaving through a voluntary early severance/retirement (VER/VS) package. In February 2012, 6 staff transferred under TUPE from Williams Industrial Services to NI Water.

HR Advisors in conjunction with Line Managers continue to meet with staff who have breached sick absence trigger points to highlight the importance of good attendance. Human Resources work in partnership with Line Managers, the NI Water Employee Support Officer, Independent Occupational Health, Carecall (our counselling provider) and employees to assist those on long term sick to return to work and to facilitate reasonable adjustments where required. 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 2011/12 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 1320. This gives the RIDDOR rate per 1000 employees as 3.03 for 2011/12.

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 2011/12.

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 2011/12, 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 2011/12 the total number of RIDDOR incidents reported to NIW by all of its contractors was 2. 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 contractors' RIDDOR incidents and major/fatal accidents where they have occurred.

There were 2 RIDDOR accidents and 0 Dangerous Occurrences reported.

Lines 16-17 Accident rates

Information is not collected for this line as NIW, in this period of transition, has no ready method of calculating the numbers of contractors' employees working on NIW contracts.

Line 18 Major/fatal accident rate

There were no major or fatal accidents connected with NIW's contractors or sub-contractors, including transient workers. This allows this rate to be calculated as zero.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 42 PPP REPORTING
PPP REPORTING
REPORTING YEAR 2011-2012

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	Alpha	Kinnegar	Omega	Water	Sewerage
2	Service Area	text	na		na		WT	WT	WT	WT	WD/WT	WD	WD	WWT	WWT	WWT	WWT	WWT	WWT	WWS	WWS	WWS	All	All	All	Service	Service
3		text	na		na		Ballyneers	Castor Bay	Dunore Point	Moyola	DBFO LM & FKd BDG Cort TK	Ballymoney LM	Limavady LM	Kinnegar	Richhill	Armagh	Ballynacor	North Down	Ballyrickard	Ballynacor Lagoons	Ballynacor	Duncrue	Sludge Service	Total	Total	Total	Total
4	Name of works	date	na		na		10/10/2008	09/12/2008	11/12/2008	16/09/2008	16/12/2008	15/10/2008	15/10/2008	24/05/2001	08/04/2009	27/08/2009	14/11/2009	05/05/2008	20/04/2009	N/A	31/03/2010	31/03/2010	31/03/2010				
5	Commencement date	yrs	0		na		23	23	23	23	23	23	N/A	N/A	23	23	22	24	23	N/A	22	22					
6	Service duration	date	na		na		30/05/2031	30/05/2031	30/05/2031	30/05/2031	30/05/2031	N/A	N/A	23/04/2024	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032					
B PAYMENT TO PPP CONCESSIONAIRE																											
7	Unitary Charge Capacity	€m	3		na																					5	
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 to 10	€m	3		na																						
12	Total PPP Payments (7to 10)	€m	3		na																						
13	Capital repayment	€m	3		na	Sum 7 to 10																					
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	Mid	2	B2	Table 10 Line 26		24.78	104.18	113.38	14.85													257.19		257.19		
21a	Water Treatment Works Capacity	Mid	0	A1			50	147	180	19													396		396		
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	A2	Table 11a Line 1		0	0	0	0	0												0			0	
24	Turbidity 95%ile less than 0.5NTU	1/0	0	A2	Table 11a Line 2		1	1	1	1	1												4			4	
25	Source Type	text		A1	Table 12 Block A		Impounding Reservoir	River	River	River	N/A	N/A	N/A										1 x LR, 3 x River		1 x LR, 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	B3	Table 12 Block A		104.0	146.0	175.0	146.0	N/A	N/A	N/A										68.18			68.18	
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		B2	Table 17b line 2									80.759	2,616	23.400	157.750	65.033	27.200	N/A	N/A			80.759	275.999	356.758	
31	Load received by STW's	kg BOD/day	0	B2	Table 17d									4846	157	1404	9465	3902	1632	N/A	N/A			4846	16560	21406	
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						
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						
34	COD consent	mg/l	0	A1	Table 17b line 5									125	125	125	125	125	125	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						
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						
37	Classification of Treatment Works	text		A1	Table 17b line 8									SAS	TA1	TA2	TA2	TA2	TA2	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						
G SLUDGE TREATMENT AND DISPOSAL DATA																											
39	Total sludge imported from NI Water	ttids	3	B2										0.000	0.000	0.000	0.000	0.000	0.000	5.278	25.402	0.000		0.000	30.680	30.680	
40	Sludge produced by the PPP facility	ttids	3	B2										0.823	0.066	0.570	3.330	1.225	0.000	0.000	0.000	0.000		0.823	6.752	7.575	
41	Sludge exported to Duncrue Incinerator	ttids	3	B2										0.823	0.066	0.570	3.330	1.559	1.225	0.000	0.000	0.000		0.823	6.752	7.575	
42	Sludge exported to other PPP facilities	ttids	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	
43	Sludge exported to NI Water	ttids	3	A1										N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		0.000	0.000	0.000	
44	Sludge disposed of from site to - Farmland Untreated	ttids	3	B2	Table 17G Col 1									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		0.000	0.634	0.634	
45	Sludge disposed of from site to - Farmland Convesational	ttids	3	A1	Table 17G Col 2									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		0.000	0.000	0.000	
46	Sludge disposed of from site to - Farmland Advanced	ttids	3	B2	Table 17G Col 3									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		0.000	8.19	8.190	
47	Sludge disposed of from site to - Incineration	ttids	3	B2	Table 17G Col 4									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		0.000	26.765	26.765	
48	Sludge disposed of from site to - Landfill	ttids	3	A1	Table 17G Col 5									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	ttids	3	B2	Table 17G Col 6									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		0.000	0.097	0.097	
50	Sludge disposed of from site to - Land Reclamation	ttids	3	B2	Table 17G Col 7									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		0.000	2.561	2.561	
51	Sludge disposed of from site to - Other (Willow Coppice)	ttids	3	B2	Table 17G Col 8									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		0.000	0.000	0.000	
52	Sludge disposed of from site - Total	ttids	3	B2	Table 17G Col 9																		38.247	0.000	38.247	38.247	

Table 42 – PPP Reporting**Service Dates**

No Change

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Equipment Breakdowns

- The Company does not hold this level of operational detail as the risk has been transferred to the Contractors and passed down to the Operating sub-contractor.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Changes to the Descriptive Reports on the PPP Contracts

There have been no changes to the descriptive reports on the PPP Contracts, albeit that the Omega contractor has deployed a temporary centrifuge at

Duncrue St Sludge Facility to assist during upgrade work to the existing assets on the site. These have therefore not been re-submitted.

[REDACTED]

Line 7 - Unitary Charge Capacity

[REDACTED]

Line 8 - Unitary Charge Variable

[REDACTED]

Line 9 - Unitary Charge Deductions

[REDACTED]

Alpha

[REDACTED]

Omega

[REDACTED]

[REDACTED]

[REDACTED]

Wastewater Services Performance Deductions:

[REDACTED]

Sludge Services Performance Deductions:

[REDACTED]

[REDACTED]

Kinnegar

[REDACTED]

[REDACTED]

[REDACTED]

Line 10 - Atypical expenditure

Alpha [REDACTED]

- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]
[REDACTED]

Kinnegar [REDACTED]

- [REDACTED]
[REDACTED]

Omega [REDACTED]

- [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Line 11 - Efficiency Gains

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

Line 15 - Residual Interest

Line 16 - Atypical payments capitalised

--

Line 19 - Interest

Line 21 – Distribution Input

Data has been updated to reflect the methodology in Table 10 Line 26, where the variance in demand from the PPP sites placed by the Company, along with the variation in total water into distribution delivered by the Company contrive to give a new calculated figure for the individual sites and the Alpha contract as a whole.

Line 21a – Water Treatment Works Capacity

There has been no change to the minimum required capacity of the Alpha WTW under the contract.

Line 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 for pressure gauges on High Lift and defined interstage pumping lifts combine to give a new calculated figure for the individual sites and the Alpha contract as a whole, whilst the basic methodology has not changed.

The APH for 'Alpha Total' and 'Water Services Total' has changed to reflect the requirements of Table 42 Line 27 guidance notes, wherein the Company is required to use its total Distribution Input as the denominator, rather than that of the PPP Distribution Input utilised in AIR11. This has resulted in a change in data entry.

Line 30 – Population Equivalent of Total load Received

Variation in calculated PE stems from variation in the measured sewage loads delivered to the sites by the Company, being the only variable part of the PE calculation.

Line 31 – Load Received by STWs

Variation in calculated load stems from variation in the measured sewage loads delivered to the sites through the Company's sewer network.

Line 39 – Total Sludge Imported from NIW

From the 31 March 2010 the Omega Contractor has assumed responsibility for disposal of all NI Water sludges. The total Sludge imported from NI Water is recorded as 30,680 TDS (last year the figure was 29,872 TDS).

In AIR11 it was not possible to distinguish the volumes imported specifically into Ballynacor Sludge Facility separately from those imported directly into Duncrue St Sludge Facility, due to the inadequacy of both existing and new recording devices and systems in place at service commencement on 31 March 2010 – consequently the total was recorded against the Sludge Disposal Service column. These system deficiencies have been overcome, and there is now a more accurate apportionment of the NI Water sludges received at Ballynacor and Duncrue St facilities. Consequently, the data is entered against each in a change from AIR11.

Line 40 – Sludge Produced by the PPP Facility

Whilst the total sludge production recorded against each PPP contract and PPP as a whole is broadly consistent with last year's records, the records for each of the individual Omega sites is distinctly different from those recorded in AIR11.

The variations are tabulated below;

PPP Production	AIR12	AIR11	AIR10
Armagh WWTW	0.570	0.759	0.84
Richhill WWTW	0.066	0.213	0.21
Ballynacor WWTW	3.330	2.468	2.29
Ballyrickard WWTW	1.225	1.627	1.717
NDA WWTW	1.559	1.753	1.654
Kinnegar WWTW	0.823	0.792	0.7
Totals	7.573	7.612	7.411

The change in Kinnegar is potentially as a result of sewer network improvements in the catchment during the year, with the result that more load is likely entering the works.

The changes in sludge production records data for Omega reflect a probable combination of

- (i) Cumulative tolerances in the representative nature of dry solids sampling and flowmeter accuracy (particularly on smaller sites)
- (ii) a mix of improved methodologies and record keeping systems for liquid and cake movements (as demanded by the Omega contract payment processes) implemented by end of AIR11, and
- (iii) the loads delivered to the PPP contractor from the NI Water sewer network, outside the PPP contractor's control, and
- (iv) The timing of data capture, where prolonged dry periods can have a fluctuating effect from year to year on absolute values

Line 41 – Sludge Exported to Duncrue Incinerator

Variances are accounted for in Line 40 commentary above.

Line 44 – Sludge Disposed of from Site – Farmland Untreated

A full year service resulted in 634 TDS, arising from the Contractor's choice of alternative compliant disposal routes when incineration was unavailable over a considerable period of the year.

Line 45 – Sludge Disposed of from Site – Farmland Conventional

Nil disposal, arising from the Contractor's choice of alternative compliant disposal routes when incineration was unavailable over a considerable period of the year.

Line 46 – Sludge Disposed of from Site – Farmland Advanced

A full year service resulted in 8,190 TDS, arising from the Contractor's choice of alternative compliant disposal routes when incineration was unavailable over a considerable period of the year.

Line 47 – Sludge Disposed of from Site – Incineration

A full year service resulted in 26,765 TDS being incinerated as the contractor's preferred method of disposal, being considerably larger than AIR11 when both incinerators were out of commission for prolonged periods.

Line 48 – Sludge Disposed of from Site – Landfill

A full year service resulted in 0 TDS arising from the Contractor's choice of alternative compliant disposal routes when incineration was unavailable over a considerable period of the year.

Line 49 – Sludge Disposed of from Site – Composted

A full year service resulted in 97 TDS arising from the Contractor's choice of alternative compliant disposal routes when incineration was unavailable over a considerable period of the year.

Line 50 – Sludge Disposed of from Site – Land Reclamation

A full year service resulted in 2,561 TDS arising from the Contractor's choice of alternative compliant disposal routes when incineration was unavailable over a considerable period of the year.

Line 51 – Sludge Disposed of from Site – Other

A full year service resulted in 0 TDS arising from the Contractor's choice of alternative compliant disposal routes when incineration was unavailable over a considerable period of the year.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 43 PPP REPORTING

PPP REPORTING - OPERATIONAL COSTS

REPORTING YEAR 2011-2012

[illegible]

Table 43 - PPP Reporting – Operational Costs

Line 4 – Payment to Concessionaire

Alpha

Kinnegar

Omega

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 Concessionaire has confirmed the values provided exclude any capital investment (Lifecycle / Maintenance) in the assets.

Kinnegar

This figure is equal to the figure quoted within Line 21a of Table 22. This figure will vary from year to year depending upon volumes of wastewater delivered, change in load delivered, deductions incurred and indexation.

Omega

This figure is equal to the figure quoted within Line 21a of Table 22. This figure will vary from year to year depending upon volumes of wastewater delivered, change in sludge volumes delivered for disposal, deductions incurred and indexation.

The Concessionaire has confirmed the values provided exclude any capital investment (Lifecycle / Maintenance) in the assets.

Line 6 – Power

Power costs reported on this line reflect a facility breakdown of the power costs included in tables 21 and 22. This is taken directly from location codes in the Oracle system. In respect of the Kinnegar Concession the power costs are paid by the operating Company from the monthly payment from the Concessionaire.

Line 7 – Other Direct Costs

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 AIR12 as a result of the inclusion of costs associated with the Carbon Reduction Commitment.

Line 14 – Sludge Costs

This line reflects the costs associated with the PPP sludge facilities at Duncrue Street and Ballynacor. It totals the costs included at line 5, 10, 11 and 12.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 44 OPA INPUT DATA
OVERALL PERFORMANCE ASSESSMENT

DESCRIPTION			UNITS		DP		1		2		3		4		5		
							REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
							2007-08		2008-09		2009-10		2010-11		2011-12		
							CG		CG		CG		CG		CG		
A WATER SUPPLY																	
DG2 PROPERTIES RECEIVING PRESSURE/FLOW BELOW REFERENCE LEVEL																	
1	Total connected properties at year end		000	1									806.4	C2		810.4	A2
2	Properties below reference level at end of year		nr	0									2020	B3		1,748	B3
3	% of total properties at risk of low pressure (OPA Low pressure value)		%	2									0.25	B3		0.22	B3
DG3 PROPERTIES AFFECTED BY UNPLANNED INTERRUPTIONS																	
4	More than 6 hours		nr	0									476,289	B3		7,023	B3
5	More than 12 hours		nr	0									214,274	B3		765	B3
6	More than 24 hours		nr	0									40,959	B3		18	B3
7	Total connected properties at year end		nr	0									806,444	C2		810,367	A2
8	OPA supply interruption value		nr	2									95.79	B3		0.97	B3
DRINKING WATER QUALITY																	
9	% MZC Iron		%	2									97.60	A1		98.15	A1
10	% MZC Managanese		%	2									99.69	A1		99.87	A1
11	% MZC Aluminium		%	2									99.47	A1		98.77	A1
12	% MZC Turbidity		%	2									99.95	A1		99.92	A1
13	% MZC Faecal Coliforms		%	2									99.97	A1		99.96	A1
14	% MZC Trihalomethanes		%	2									98.33	A1		99.29	A1
15	Average Overall MZC figure (Drinking Water Quality OPA value)		nr	2									99.17	A1		99.33	A1
B SEWERAGE SERVICE																	
DG5 SEWER FLOODING - OVERLOADED																	
16	Flooding incidents in the year (overloaded sewers)		nr	0									10	B3		15	B2
17	Flooding incidents (overloaded sewers attributed to severe weather)		nr	0									4	B3		1	B2
18	Number of domestic properties connected to sewerage system		000	1									612.1	C2		618.5	A2
19	% of domestic properties flooded by overloaded sewers (Overloaded sewers OPA value)		%	4									0.0010	C2		0.0023	B2
DG5 SEWER FLOODING - OTHER CAUSES																	
20	Flooding incidents (other causes - equipment failures)		nr	0									4	B3		4	B2
21	Flooding incidents (other causes - blockages)		nr	0									14	B3		17	B2
22	Flooding incidents (other causes - collapses)		nr	0									10	B3		2	B2
23	Number of domestic properties connected to sewerage system		000	1									612.1	C2		618.5	A2
24	% of domestic properties flooded by other causes (Other causes OPA value)		%	4									0.0046	C2		0.0037	B2
DG5 PROPERTIES ON THE FLOODING REGISTER																	
25	2 in 10 register at end of year		nr	0									6	B4		17	B2
26	Removed by company action		nr	0									0	B4		23	A1
27	1 in 10 register at end of year		nr	0									3	B4		10	B2
28	Number of domestic properties connected to sewerage system		000	1									612.1	C2		618.5	A2
29	% of domestic properties considered to be at risk of flooding by sewage (At risk OPA value)		%	4									0.0012	B4		0.0073	B2
C SECURITY OF SUPPLY																	
DG4 HOSEPIPE RESTRICTIONS																	
30	Hosepipe retrictions (OPA value)		%	0									0.0	A1		0	A1
LEAKAGE																	
31	Leakage (Target)		nr	2									175.00			171.00	
32	Leakage (Actual)		nr	2									176.97	B4		168.23	B4
33	% of leakage target not met (Leakage OPA value)		nr	2									1.79	B4		1.33	B4
SECURITY OF SUPPLY - ABSOLUTE PERFORMANCE																	
34	Security of supply index – company’s actual based on planned level of service (Absolute performance OPA value)		nr	0									97	A2		100	A2
SECURITY OF SUPPLY - PERFORMANCE AGAINST TARGET																	
35	Security of supply index - planned (target) levels of service		nr	0									97	A2		100	A2
36	Security of supply index - company’s actual based on planned level of service		nr	0									97	A2		100	A2
37	% of target not met (Performance against target OPA value)		%	2									0.00	A2		0.00	A2
D CUSTOMER SERVICE																	
DG6 - RESPONSE TO BILLING CONTACTS																	
38	Number dealt with within 5 working days		nr	0									103,710	B3		92,808	B2
39	Total billing contacts		nr	0									104,897	B3		92,832	B2
40	% of billing contacts answered within 5 working days (DG6 OPA value)		%	2									98.87	B3		99.97	B2
DG7 - RESPONSE TO WRITTEN COMPLAINTS																	
41	Total written complaints		nr	0									4,327	B2		2,340	B2
42	Number dealt with within 10 working days		nr	0									4,326	B2		2,323	B2
43	% of written complaints answered within 10 working days (DG7 OPA value)		%	2									99.98	A1		99.27	A1
DG8 - BILLING METERED CUSTOMERS																	
44	Company or customer readings (or both)		nr	0									65,156	A1		66,057	A1
45	Total metered accounts		nr	0									100,071	A1		103,876	A1
46	Metered accounts excluded from indicator		nr	0									32,275	A1		36,388	A1
47	% of metered accounts which have meter based bills (DG8 OPA value)		%	2									96.11	A1		97.88	A1
DG9 TELEPHONE CONTACT																	
48	Total of calls not abandoned		nr	0									300,722	A2		229,270	A2
49	Total calls received on customer contact lines		nr	0									340,989	A2		231,245	A2
50	% calls not abandoned (0.25 of DG9 OPA value)		%	2									88.19	A2		99.15	A2
51	All lines busy		nr	0									699,566	A2		0	A2
52	% calls not engaged (0.25 of DG9 OPA value)		%	2									32.77	A2		100.00	A2
53	Call handling satisfaction (0.5 of DG9 OPA value)		nr	2									4.59	A1		4.57	A1
E ENVIRONMENTAL PERFORMANCE																	
POLLUTION INCIDENTS																	
54	Number of High & Medium category pollution incidents (Sewage)		nr	0									45	A1		44	A1
55	Equivalent population served (resident)		000	2									2,115.82	C5		2,126.74	C5
56	Number of High and Medium sewage incidents per million resident population equivalent (pe) served (H&M sewage incidents OPA value)		nr	2									21.27	C5		20.69	C5
57	Number of Low category pollution incidents (Sewage)		nr	0									217	A1		202	A1
58	Number of Low sewage incidents per million resident population equivalent (pe) served (Low sewage incidents OPA value)		nr	2									102.56	C5		94.98	C5
59	Number of High & Medium category pollution incidents (Water)		nr	0									1	A1		0	A1
60	Winter population		000	2									1,814.34	C2		1,823.89	C2
61	Number of High and Medium water incidents per million resident population served (H&M water incidents OPA value)		nr	2									0.55	C2		0.00	C5
SEWAGE - SLUDGE DISPOSAL																	
62	Percentage unsatisfactory sludge disposal (Sludge disposal OPA value)		%	2									0.00	A2		0.00	A2
SEWERAGE SERVICE - BREACH OF CONSENT																	
63	WWTW Discharge consent % compliance (WWTW compliance OPA value)		%	2									4.63	C5		3.56	C5

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	
			2011-12	CG	2011-12	CG	2011-12	CG
A ELECTRICITY CONSUMPTION								
1 Grid electricity purchased (excluding renewable energy)	MW.hr	0	153,262	A1	102,266	A1	255,528	A1
2 Grid electricity purchased - renewable energy	MW.hr	0	41,110	A1	188	A1	41,298	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	250	A1	1,480	A1	1,730	A1
5 Total electricity consumption	MW.hr	0	194,622	A1	103,934	A1	298,556	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	2,286	A1	0	A1	2,286	A1
8 Total renewable enegy generated	MW.hr	0	2,536	A1	1,480	A1	4,016	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	2,572	B3	3,434	B3	6,006	B3
10 Process and fugitive emissions	t.CO ₂ e	0	5,035	B3	5,749	B3	10,784	B3
11 Transport: company owned or leased vehicles	t.CO ₂ e	0	3,769	B3	262	B3	4,031	B3
B.2 Scope 2 Emissions								
12 Total grid energy used (including CHP electricity purchased).	t.CO ₂ e	0	101,972	A2	53,651	A2	155,622	A2
B.3 Scope 3 Emissions								
13 Business travel on public transport and private vehicles used for company business	t.CO ₂ e	2	0.00	CX	0.78	CX	0.78	CX
14 Outsourced activities (if not included in Scope 1 or 2) Energy and other	t.CO ₂ e	2	0.00	CX	8234.25	CX	8,234.25	CX
15 Not used								
16 Not used								
17 Gross operational emissions	t.CO ₂ e	0	113,347	A3	71,331	A3	184,678	A3
C Net annual operational emissions								
18 Exported renewables (generated on-site and exported)	t.CO ₂ e	2	-1199.06	A1	0.00	A1	-1,199.06	A1
19 Green tariff electricity purchased	t.CO ₂ e	2	-3002.17	A1	-13.74	A1	-3,015.91	A1
20 Net operational emissions	t.CO ₂ e	0	109,146	A2	71,317	A2	180,463	A2
D ANNUAL OPERATIONAL GHG INTENSITY RATIO VALUES								
21 Operational GHG per Ml of treated water	t.CO ₂ e/Ml	3	0.321	B2	0.353	B2	0.334	B2
22 Operational GHG per Ml of sewage treated (flow to full treatment)	t.CO ₂ e/Ml	3	0.603	CX	0.509	CX	0.566	CX
23 Operational GHG per Ml of sewage treated (based on water distribution input)	t.CO ₂ e/Ml	3	0.935	C4	0.617	C4	0.806	C4
E RENEWABLE INCENTIVES								
24 Revenue from renewable energy sales and incentives	£000	3	227.724	A2	0.000	A2	227.724	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 12 return.

Processing rule

Table 45 has been populated in line with guidance provided by NIAUR and contains data sets both internal and external as required and as set out within the sections detailed below.

Table 45 reports emissions generated by the Company and outsourced PPP concessions working for the appointed business in carrying out any part of its regulated activities.

Table 45 reports emissions generated by the Company and by outsourced PPP concessions in separate columns and also calculates a Company total.

Reporting Outputs

Table 45 has been populated in line with the reporting requirements and the methodology for this is detailed further below.

Data has been provided in Table 45 for energy consumption, gross and net tonnes CO₂e of operational emissions, GHG intensity ratios and revenue from the sale of renewable electricity and other incentives.

Lines 1 – 8 - Electricity Consumption

This section provides data relevant to the total electricity consumption within NI Water and PPP concessions, a breakdown by renewable and non-renewable energy sources and data related to company generated renewable electricity.

The Company has purchased and self-generated circa 15.5% of its total electricity consumption from renewable sources within the reporting period.

Self generated renewable electricity has been via hydro schemes across several sites and a steam turbine at the Incinerator. The outputs are detailed in Table 1.

Table 1

Site	kWhrs
Fofanny	249,694
Oaklands	244,200
Silent Valley	2,041,383
Incinerator	1,480,135

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 the Company has also witnessed renewable 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 15% from good quality climate change levy exempt renewable sources.

Lines 9 – 17 - Gross Annual Operational GHG

This section provides gross annual operating GHG emissions in tonnes CO₂e within NI Water and PPP concessions, broken down as follows:

- direct emissions from burning fossil fuels;
- process and fugitive emissions and
- transport emissions

Emissions have been reported under Scope 1, 2 and 3 headings and these are detailed further below.

Scope 1 (lines 9-11) reports on all emissions emitted directly from the company's appointed activities. This includes direct emissions from burning of fossil fuels, direct process emissions and transport owned or leased by the company.

Scope 2 (line 12) reports on all emissions indirectly emitted as a result of electricity usage.

Scope 3 (lines 13 - 14) reports on all other indirect emissions not included in scope 2. Scope 3 emissions will be those from business travel on public transport and private vehicle usage for company business (line 13)

Lines 18 – 20 - Net annual operation Emissions

This section reports on net annual operational emissions derived from renewable energy generated onsite and then exported (line 18) and green energy purchased (line 19). These reductions have been subtracted from the gross emissions value (line 17) to provide a net operational emissions figure in (line20).

Lines 21 – 23 - Annual operating GHG Intensity Ratio Values

This section provides annual operating GHG intensity ratios in tonnes CO₂e per mega litre for the provision of water and sewerage service using water and waste flows as a denominator. Two intensity ratios have been provided for sewerage service, one using table 14 data as a denominator and one using additional road drainage in-flow. Confidence grading around the latter figure is at CX as the accuracy is not verifiable. Details of intensity ratios are included in Table 2.

Table 2

Description	Unit	NIW	PPP	TOTAL	CG
Annual operational emissions intensity ratio per MI of treated water	tonnes CO ₂ e/ML	0.321	0.353	0.334	B2
Annual operational emissions intensity ratio per MI of treated sewage (FFT)	tonnes CO ₂ e/ML	0.603	0.509	0.566	CX
Annual operational emissions intensity ratio per MI of treated sewage (DI Input)	tonnes CO ₂ e/ML	0.935	0.617	0.806	C4

Calculations for the tonnes CO₂e/ML intensity ration have been generated from the UK Water Industry Carbon Accounting Workbook V6 outputs using data from AIR12 Table 10 and Table 14. The confidence grading for the FFT is at CX due to uncertainty over the accuracy of the data provided and lack of MCERT calibrated and approved flowmeters

Line 24 - Renewable Incentives

This section provides data relevant to Company income from renewable electricity sales and associated incentives such as ROC revenue.

Confidence Grades

Confidence grades have been assigned for each line of data and these are based on the criteria set out in the Introduction to the Annual Information Return Reporting Requirements and guidance within the UK Water Industry Carbon Accounting Workbook V6.1.

Processing rules and Emissions Conversion Factors:

The Company has provided output data within Table 45 as calculated using the Water UK Carbon Accounting Workbook Version 6.1 (March 2012) for greenhouse gas emissions associated with the provision of water, wastewater, sludge disposal, administrative function and transport in its AIR12 return.

Data sources for the AIR 12 return have been generated from supplier's monthly consumption figures associated with the use of electricity, gas and other fuels.

All energy conversions have been derived from the Carbon Accounting Workbook V6.1 and are aligned to the DECC/Defra guidelines using the relevant emissions factor for kg of CO₂ per measured unit of energy. The calculations are carried out within locked cells in the Carbon Accounting Workbook V6.1.

Gross operational emissions reported in Table 45 are the company's total carbon emissions resulting from operational activities.

Nett operational emissions reported in Table 45 are a calculation of gross operational emissions taking into account emissions reductions for on-site

renewable energy that is exported and renewable energy that has been purchased.

The t.CO₂e/ML GHG intensity output figure for treated water emissions includes all carbon emissions from the abstraction, treatment and distribution of water, associated administrative and transport emissions divided by the volume of treated water.

The t.CO₂e/ML GHG intensity output figure for treated waste water includes all carbon emissions from waste water pumping, waste water treatment, sludge treatment and disposal, and associated administrative and transport emissions divided by the volume of waste water treated.

The GHG intensity figures for treated water and waste water for the calculations above have been derived from the volumes of water and waste water as reported in tables 10 and 14 of the Company's AIR12 data.

Assumptions

The Company has assumed that the boundary for data collection is any activity associated with the operation of the appointed business. This will include all areas where the company has direct management responsibility such as the PPP concessions.

Additional Commentary

The Company can provide details of planned future work in carbon accounting, carbon management, mitigation and adaptation. This development is linked to the Company's developing climate change strategy and in particular it is aligned to Company reporting under the new UK Government Legislation, the Carbon Reduction Commitment Energy Efficiency Scheme (CRCEES).

Assistance to the Auditor and Reporter

The Company has assisted the Auditor to enable informed judgments about the validity of energy usage and carbon emissions return data.

The Company has assisted the Auditor to confirm that the reporting methodology has been applied correctly and has assisted in the audit process as required to confirm that:

- the Company has adhered to the correct carbon accounting boundaries;
- the Company has used appropriate greenhouse gas conversion factors;
- the Company has appropriate and documented systems, management responsibly and sign off, for its carbon accounting submissions;
- the Company can validate the assumptions made and the reasons behind any omissions; and

The Company will assist the Reporter to enable informed judgments about the validity and necessity of returned data.

Omissions

The following areas have been omitted from the AIR 12 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 or AIR12 returns)

The GHG emissions associated with the omissions above are believed to be a very small part of the overall GHG emissions reported and as such have no material impact on the data provided

The GHG omissions above will be addressed in year to enable a fuller return for AIR13 reporting if deemed in further discussion to have a material impact on the emissions level.



Annual Information Return 2012

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 2012: 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:

- Removal/Addition of DG2 entries on the register as a result of more robust data being available (Better Information).
- Removal/Addition of DG2 entries resulting from capital works and networks improvements (Company Action).
- Investigation of customer 'Low Pressure' complaints.

1. Methods and Procedures

DG2 Investigations (excluding Rehab modelling)

The objective of a DG2 site investigation is to acquire the necessary data to allow a more detailed assessment to be carried out. The 2 key elements of this investigation are the logging of the water pressure and the gathering of accurate height data for both the logging point and DG2 property connection point. In keeping with 'DG2 NIWL Procedures April 2010' the following procedures are followed:

- Logging points are identified within the network, which do not exceed 250m in distance from the DG2 stopcock.
- The logging points are within the same DMA/PMA as the DG2 property.
- A unique logger ID is clearly assigned to the logging point.
- An accurate elevation of each logging point is provided using Real Time Kinematics (RTK) GPS. A value of 450mm is subtracted from this elevation to allow for the depth of the FH spindle.
- Logging point boundary polygons around the hydrants are digitised onto MapInfo to allow the associated properties to be assigned to the relevant logger.

- A pressure log and elevation may be taken in adjoining DMAs. This is to assist in identifying any potential for a BV change to improve the pressure at the DG2 property.
- A new ferrule elevation is produced for each property using Digital Elevation Model (DEM) 2008 data. The ferrule point value associated to each property is used to determine the height used for that property within the Total Head calculation.

To assist with the site investigation, a detailed map is produced showing the following information:

- Pointer Property data showing elevation at each property (NIW receives biannual updates from Ordnance Survey Northern Ireland).
- Water pipes, fittings i.e. SVs, Fire Hydrants (FHs) terminating nodes etc.
- DMAs and PMAs (where applicable).
- Background Vector maps.
- Required pressure logging points.

Reporting

Following field testing and site investigation routines, all data is analysed and the findings are included within a Recommendation for Removal Report or alternatively a Recommendation for Inclusion Report.

1. The removal of entries due to robust data being available.
2. The removal of genuine entries resulting from infrastructure changes.
3. The provision of detailed information to support the inclusion of properties in the DG2 Register.

If the data collected verifies that properties that are in receipt of a pressure >15m, then the DG2 properties are recommended to NIW for removal. Properties removed are supported by a brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors including the required pressure logging trace/print out.

Where properties are discovered to have been positioned incorrectly within NIW GIS resulting in their inclusion in the original register, and repositioning indicated that these properties were in receipt of pressure > 15m, these DG2 properties are recommended for removal.

Those properties identified as being in receipt of a pressure <15m remain on the Register and a brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors, including the required pressure logging trace/print out, is provided. Prior to this information being provided a brief assessment is undertaken to determine if the properties could be transferred onto an adjoining DMA/PMA. This information is included within the assessment where deemed viable.

Additional properties within logging areas determined to be in receipt of pressure <15m are recommended for inclusion on the register. As above a

brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors, including the required pressure logging trace/ print out, is provided. Prior to this information being provided a brief assessment is undertaken to determine if the properties could be transferred onto an adjoining DMA/ PMA. This information is included within the assessment where deemed viable.

The potential removal of properties due to networks improvements is investigated via rationalising adjacent DMA boundaries following pressure loggings as per guidelines set out in the method statement above. All networks amendments follow the removal process and the submission of final reports leads to an update of the DG2 register.

DG2 Investigations by Rehab modelling

In the case of Rehabilitation schemes, PPRA reports associated with the various work packages are submitted to Asset Management Directorate for sign off and Leakage Function for processing in relation to the update of the DG2 Register. Leakage Data Management Unit on receipt of the suite of information including logger positioning site maps, accompanying logged data, PPRA reports and DG2 Investigation Reports align this data to the existing register. Checks are conducted on logged information to ensure compliance in terms that each logger site is within 250m of actual properties highlighted and that minimum pressures provided correlate to expected total head values. Hyperlinks are created for each set of logged data, map and report. The DG2 register is updated accordingly.

Investigation of customer 'Low Pressure' complaints

Where low pressure complaints have been identified through the contact centre, the process of action is as follows:

- Contact Centre informs customer of known network planned or unplanned events in the area or determines if problem may be with customer supply only.
- Networks' first responder visits property to determine if pressure is a legitimate complaint. If pressure at property is assessed as being a potential DG2 issue, the complaint is passed to Leakage DMU for investigation.
- Leakage DMU undertakes an investigation in accordance with 'Methods and Procedures' above. Additions and removals are processed accordingly. The facility has been developed for regular monthly updates of all DG2 properties to be uploaded onto the CARtoMAP system which is utilised by the Contact Centre in relation to low pressure complaints from customers.

2. Extract from DG2 Register

UPRN	Status Date	Status	Building Nr	Primary_Thorfare	Town	Postcode	County	DMA	Pressure
185278379	30-Sep-11	In Register	12	██████████	Lisburn	████████	Antrim	Pond Park	13.14
185278380	30-Sep-11	In Register	14	██████████	Lisburn	████████	Antrim	Pond Park	12.49
185278381	30-Sep-11	In Register	16	██████████	Lisburn	████████	Antrim	Pond Park	12.14
185279458	30-Sep-11	In Register	83	██████████	Lisburn	████████	Antrim	Pond Park	10.61
185279459	30-Sep-11	In Register	85	██████████	Lisburn	████████	Antrim	Pond Park	9.62
185279460	30-Sep-11	In Register	87	██████████	Lisburn	████████	Antrim	Pond Park	9.82
185279461	30-Sep-11	In Register	89	██████████	Lisburn	████████	Antrim	Pond Park	10.08
185279462	30-Sep-11	In Register	91	██████████	Lisburn	████████	Antrim	Pond Park	10.25
185279463	30-Sep-11	In Register	93	██████████	Lisburn	████████	Antrim	Pond Park	10.77
185279465	30-Sep-11	In Register	96	██████████	Lisburn	████████	Antrim	Pond Park	10.50
185279911	30-Sep-10	In Register	1	██████████	Lisburn	████████	Antrim	Drumnakelly White Mountain	9.20
185280899	30-Sep-11	In Register	1	██████████	Lisburn	████████	Antrim	Rathvarna	12.03
185280900	30-Sep-11	In Register	2	██████████	Lisburn	████████	Antrim	Rathvarna	12.75
185281448	30-Mar-10	In Register	136	██████████	Crumlin	████████	Antrim	Aldergrove	11.28
185281457	31-Mar-10	In Register	24	██████████	Crumlin	████████	Antrim	Aldergrove	14.93
185282505	31-Mar-10	In Register	105	██████████	Glenavy	████████	Antrim	Dundrod	11.18
185282587	30-Sep-10	In Register	21	██████████	Crumlin	████████	Antrim	Dundrod	10.72
185289938	31-Mar-10	In Register	50	██████████	Downpatrick	████████	Down	Sentry Hill	13.97
185289939	31-Mar-10	In Register	48	██████████	Downpatrick	████████	Down	Sentry Hill	14.23
185289940	31-Mar-10	In Register	45	██████████	Downpatrick	████████	Down	Sentry Hill	13.49
185289993	31-Mar-10	In Register	41	██████████	Downpatrick	████████	Down	Sentry Hill	12.29
185290021	30-Mar-10	In Register	51	██████████	Downpatrick	████████	Down	Sentry Hill	11.50

3. Sources of information

For AIR12 the following information was used

- Post Project Rehabilitation Assessment reports (PPRAs) and their associated DG2 Investigative Reports (DIRs) are submitted when specific watermain rehabilitation schemes are completed and include the relevant data and reports to merit alterations to the DG2 register.
- Recommendation for Removal reports are produced on conclusion of networks improvements to merit deductions from the DG2 register.
- Recommendation for Inclusion reports are produced to substantiate the addition of properties to the DG2 register based on better information.

4. Scope and coverage

The ongoing maintenance of the existing DG2 register through the removal of properties due to company action via the processing of PPRA reports submitted during the reporting year. These are the direct result of work the majority of which were completed in the 2010/11 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

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 AIR12 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 Void Properties**
- 8.0 'No Water/Low Pressure' Complaints**

Appendix A – Roles and Responsibilities

Appendix B – Process Flow Diagram – Unplanned Interruptions

Appendix C – Process Flow Diagram – Planned Interruptions

Appendix D – Proforma - Interruption Information Sheet

Appendix E – Pointer 2.1 Specification Extracts

Appendix F – CRC Call Scripts for 'No Water/Low Pressure' Complaints

Appendix G – DG3 Register Extract

1.0 OBJECTIVE & AIM

To identify the number of properties affected by planned and unplanned supply interruptions lasting longer than 3 hours, 6 hours, 12 hours and 24 hours.

The aim of the register is to allow verification and audit of the reported information for DG3 and to enable the identification of the properties affected. It should contain information on the timing, duration and cause of each interruption and sufficient information to enable all properties affected by interruptions lasting more than three hours to be identified. Therefore, the register should include:

- properties affected (by name and location or number and street);
- date and time of interruption;
- duration of interruption and time supply restored;
- cause of interruption;
- notice given; and
- the name of person responsible for entering records in the system.

The DG3 Register is compiled and held by Customer Systems in Capital House.

2.0 REPORTING REQUIREMENTS

The information to be reported within Table 2 of the Annual Information Return (AIR) is as follows:

2.1 Line	Description
5	More than 3 hours unplanned
6	More than 6 hours unplanned
7	More than 12 hours unplanned
8	More than 24 hours unplanned
9	More than 3 hours planned and warned
10	More than 6 hours planned and warned
11	More than 12 hours planned and warned
12	More than 24 hours planned and warned
13	More than 3 hours caused by third parties
14	More than 6 hours caused by third parties
15	More than 12 hours caused by third parties
16	More than 24 hours caused by third parties
17	More than 6 hours unplanned (overruns of planned interruptions)
18	More than 12 hours unplanned (overruns of planned interruptions)
19	More than 24 hours unplanned (overruns of planned interruptions)

Note: Interruptions should be reported under each relevant time band so that the category for interruptions exceeding:

- 3 hours also includes all interruptions lasting more than 6 hours;
- 6 hours also includes all interruptions lasting more than 12 hours; and
- 12 hours also includes all interruptions lasting more than 24 hours.

Each interruption should be classed as a single interruption event, and should be recorded under only one of the four categories of: unplanned or unwarned; planned and warned; unplanned third party interruptions; or unplanned or unwarned due to overruns of planned and warned interruptions. If there are a significant number of overruns between 3 and 6 hours, the number should be reported in the commentary.

Further guidance, if required may be found in the Annual Information Return Reporting Requirements & Definitions Manual 2010, Issue 1.0 – March 2001.

3.0 DEFINITIONS

3.1 Interruption

An interruption to supply is defined as the actual loss of water supply to a property, whether planned or unplanned, warned or unwarned.

Supplies may be affected by other factors, for example, lower pressure through the flushing of mains, or restrictions on use; these are also covered under the DG2 and DG4 procedures.

3.2 Start Time

For a planned interruption the start time is the time at which water is unavailable at the first cold tap in a property; for an unplanned interruption it is when customers first notice the loss of supply or if this information is not available the time a 'no water' complaint is logged by the Customer Relation Centre.

3.3 End Time Determination

- **Opening of Valves**

NI Water records two times associated with the end of an interruption:

1. Supplies Restored Time
2. All Properties Restored Time

The **Supplies Restored Time** is taken as the time at which the main supplying valve is opened. A Work Order is generated to cover a "Valving On" standard job. Details of the Work Order including the Valve On Time are recorded in the Ellipse database, the company's Mobile Work Management System.

The **All Properties Restored Time** represents the **End Time** of an interruption and is in keeping with the regulatory definition below:

***"End Time** is when the company is satisfied that water has been fully restored to an acceptable pressure to the affected properties."*

In the majority of cases, the opening of the main supplying valve will result in the end of an interruption and there will be no difference between the Supplies Restored Time and the All Properties Restored Time.

When a large area is affected by an interruption, the Company aims to verify the time at which supplies are restored to each group of properties where there is a meaningful time difference e.g. >30 minutes. In such cases, the time between the Supplies Restored Time and the All Properties Restored Time represents the time taken to fully charge the main and to clear any problems that may have prevented the restoration of supplies to all properties, excluding problems associated with customers' own supply pipes (where this can be proved).

Other Methods Used to Determine the End Time

When it is evident that the Supplies Restored Time and estimated mains charging time has not provided a reliable End Time, Field Managers may use alternative methods to determine the end of an interruption.

- **Telemetry / Modelling Data**

Field Managers may obtain information from the Telemetry Data Management System (TDMS) to help determine the End Time more accurately.

- **Customer Visits**

The End Time may be determined by visiting customers to confirm that supply has been restored.

- **Flow / Pressure Measurement**

The End Time may be determined by checking flows and pressures via hydrants to ensure a main has been charged.

Note: The time on the customer's warning card is used to determine whether or not a planned and warned interruption overruns. It is not used to determine the End Time.

3.4 Duration

The duration is the length of time for which customers are without a continuous supply of water. An interruption starts when water is unavailable from the first cold tap in a property and finishes when the supply to the last property affected by the interruption is restored to the tap.

3.5 Planned Interruption Duration Determination

When calculating the duration of a planned interruption, the Start Time is taken as the time when the valve is turned off and the End Time is taken as the time when the valve is turned on (plus an allowance for mains charging if this is deemed to be necessary). This ensures that reporting is in line with the regulatory definition below:-

"Duration is defined as the length of time for which customers are without a continuous supply of water. **An interruption starts when water is**

unavailable from the first cold tap in a property and finishes when the supply is restored to the tap."

If a planned and warned interruption commences before the Planned Start Time, the interruption is reclassified as an unplanned interruption.

If a planned and warned interruption commences after the Planned Start Time, the time between the planned start and actual start is not included in the duration.

If a planned and warned interruption finishes before the Planned End Time, the time between the actual end and planned end is not included in the duration.

If a planned and warned interruption finishes after the Planned End Time, the interruption is reclassified as an unplanned interruption (overrun of a planned interruption).

3.6 Event

Event is the term used by 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 Services,
- Planned interruptions carried out by Engineering and Procurement (E&P) and,
- Planned interruptions carried out by Customer Field Services.

Regardless of the source of the interruption to supply all planned interruptions must follow the procedures for giving the appropriate warnings. Each function is responsible for collection and recording all appropriate information to be included in the DG3 Register.

All affected properties must be notified by letter, or card drop, at least 48 hours before the shutdown, notifying them of the planned times and dates of shutdown and the restoration of supply. A minimum of 48 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 Services

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 Services Field Manager responsible for the planned works is required to ensure that all relevant information is input to the OMIS Interruption Reporting System and all documentation is retained for audit purposes.

Details of the OMIS input sheet and the OMIS user guide can currently be obtained from Operation Services in Capital House.

4.3 Planned interruptions carried out by E&P or Customer Field Services.

E&P and Customer Field Services use a combination of an interruption Proforma and an excel spread sheet. An appropriate member of E&P or Customer 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 Customer Systems in Capital House.

Networks Water and Leakage Services record interruption information on the OMIS system. E&P and Customer 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 Services 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 Customer Systems for inclusion into the DG3 Register and calculations for KPIs.

5.2 Interruption Excel Spreadsheet

Planned interruptions undertaken by E&P and Customer 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 Customer Field Services staff and sent to Customer Systems for inclusion into the DG3 Register. All proformas should be stored by E&P and Customer 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 Services and Customer Field Services. These interruptions are routine, inconsequential and last no longer than 30mins. Information about these interruptions is held by managers in Leakage Services and Customer Field Services and 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 Services and Customer 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*. Customer Systems will email the different functions reminding them of

the deadline at the end of each month. Interruption records held by E&P and Customer Field Services should be sent to Customer Systems by the same date.

5.5 Historical records

All associated documentation is to be kept for seven years.

5.6 Audit Trail

The maintenance of audit trails is very important. During AIR audits the Reporter would more than likely want to investigate several interruptions and the associated documentation. It is therefore imperative that all records 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 Customer Systems for management information:

- DG3 monthly.
- Interruption to Supply KPIs.
- Annual DG3 Supply Interruption Report (developed to mirror the current AIR – Table 2 report as set out in the Annual Information Return Reporting Requirements and Definitions Manual 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 Customer Systems in Capital House. Interruption data from these sources is combined into an “Interruption Record – Month “worksheet and is held as the combined data record for that particular month.

The interruption data record is transferred to an “Interruption Record – Amended” worksheet where the raw data is examined for errors, anomalies duplications etc. These are re-classified if necessary and highlighted in red. The data is then categorised into the different interruption categories. These

are: Unplanned Interruptions, Planned and Warned, Third Parties and Overruns.

The amended interruption data is transferred to the “DG3 Register – Month” worksheet. Here the records are sub categorised into their time bandings, e.g. >3hrs, >6hrs, >12hrs, >24hrs for each category. This then forms the DG3 Register for that particular month.

The interruption data held on the DG3 Register that pertains to the 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 that 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 Void Properties

Within NIW, Asset Information Development (AID) is primarily responsible for ensuring the databases, systems, standards and processes are in place to support the Corporate Asset Register (GIS/Ellipse).

According to the definition, a void property is a type of connected property. The GIS picks up the following twelve property types, including void properties:

- Approved Built
- Approved Derelict
- Approved Under Construction
- Candidate Built
- Candidate None
- Candidate Under Construction
- Historical Built

- Historical Derelict
- Historical None
- Historical Under Construction
- Provisional Built
- Provisional Under Construction

Unless AID is specifically asked to exclude void properties when running queries, their GIS address lists will include any of the property types listed above.

There is a delay in updating the GIS with property status information.

Relevant extracts from the Pointer 2.1 Specification can be found in Appendix E at the back of this document (Pages 22 to 26 of 31).

8.0 'No Water/Low Pressure' Complaints

Within NIW, CRC call agents adopt a specific line of questioning with the customer to establish the cause of complaint including complaints relating to low pressure and no water.

A copy of the latest CRC call scripts for handling low pressure/no water complaints can be found in Appendix F at the back of this document (Pages 27 & 28 of 31). Provided the customer provides an accurate response to the questions asked by the call agent, the risk of wrong classification should be negated.

Appendix A – DG3 Interruption to Supply - Roles & Responsibilities

Customer Relations Centre (Normal Hours)

- Log 'no water'/'burst main' complaints into RapidXtra system.

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 Leakage Services.

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.

Customer Field Services

- Customer Field Services is responsible for meter maintenance and the installation of new meters. An interruption to supply to the property arises during the course of the installation.

Customer Systems

Customer Systems is responsible for the following:

- Receipt of all interruption information from Networks Water, Leakage Services, E&P and Customer Field Services,
- Compiles each set of information into the DG3 Register,
- Audits Data,
- Produces reports for Management and Regulator,
- KPIs.

Telemetry Control Centres (Out of Hours)

Log 'no water'/'burst main' complaints into Work Planning (Ellipse) system and inform on call supervisor immediately.

- Westland Telemetry Control Centre (Tel: [REDACTED] or Ext: [REDACTED])

TCC E-mail Addresses:-

[illegible]

- Altnagelvin Telemetry Control Centre (Tel: [REDACTED] or Ext [REDACTED])

TCC E-mail Addresses:-

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Work Planning Units

- Normal hours – create a Work Order and inform area supervisor immediately.
- Update the Ellipse System following 'status calls'.
- Ensure Work Orders are closed out.

Contact details:-

North West – [REDACTED]

South East – [REDACTED]

Networks Water - Area Managers / Field Managers

- Inform Customer Services and Work Planners of planned interruptions providing details of area & number of properties affected and proposed duration of interruption.
- Assess extent of unplanned interruptions and organise remedial work.
- Inform Work Planners on completion of remedial work.
- Record interruption details as an entry into OMIS Interruption System.
- Provide supporting information on number of properties affected and reasons for interruption.
- Record details of interruptions received from on-call staff.
- Area Managers and Customer Field Managers to carry out audit checks on OMIS entries and Interruptions Register.
- Area Managers to advise Customer Systems following the quality assurance and compliance checks.

Networks - On-call Staff

- Assess extent of unplanned interruptions, update Duty Officer (if required) and organise remedial work.
- Inform Networks Water Area Manager of actions taken and interruption details.

Functional Manager

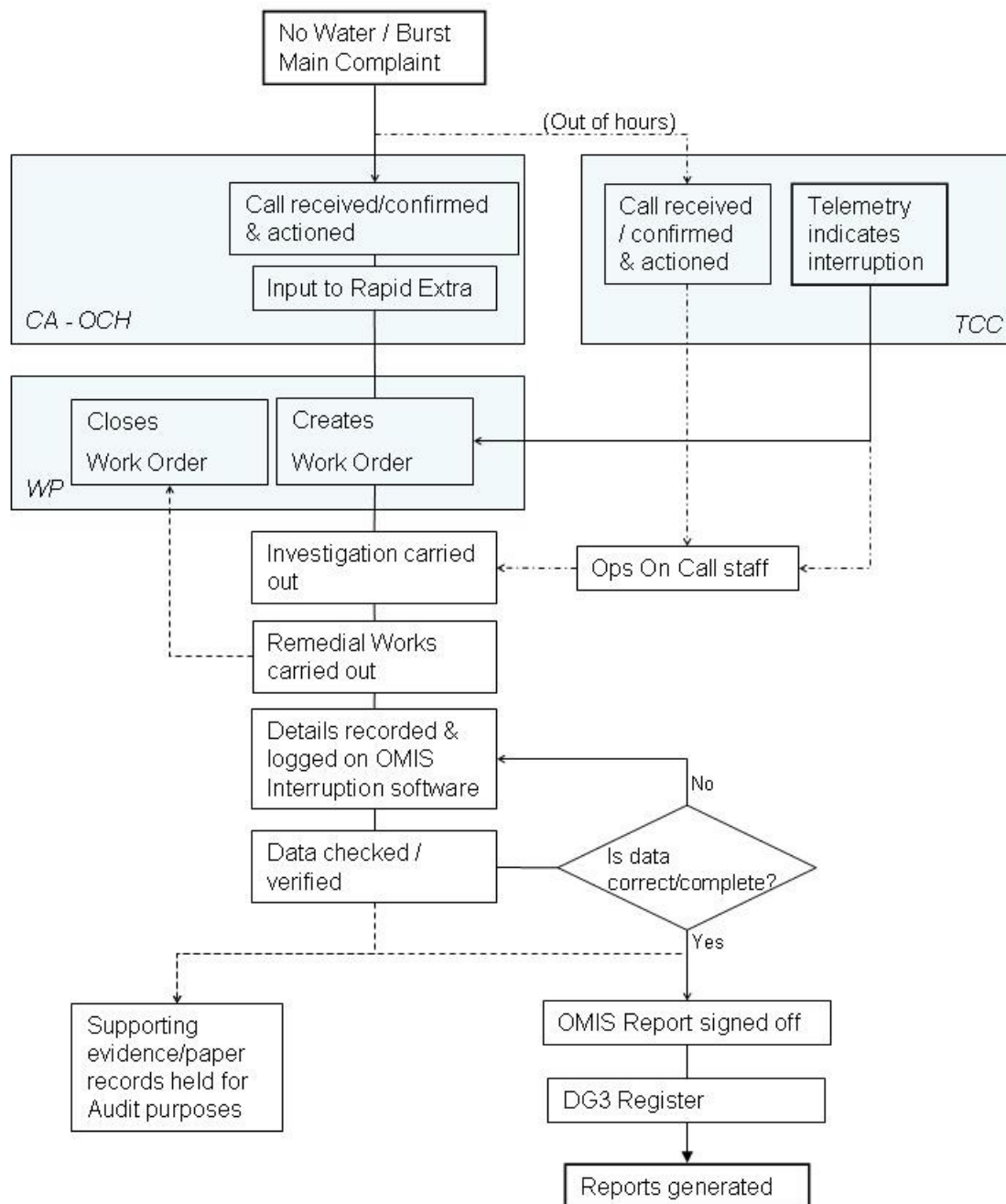
- Approves OMIS Interruptions Register and release data for reporting purposes.

Regulation & Business Performance Section

- Submit Annual Report to NIAUR.

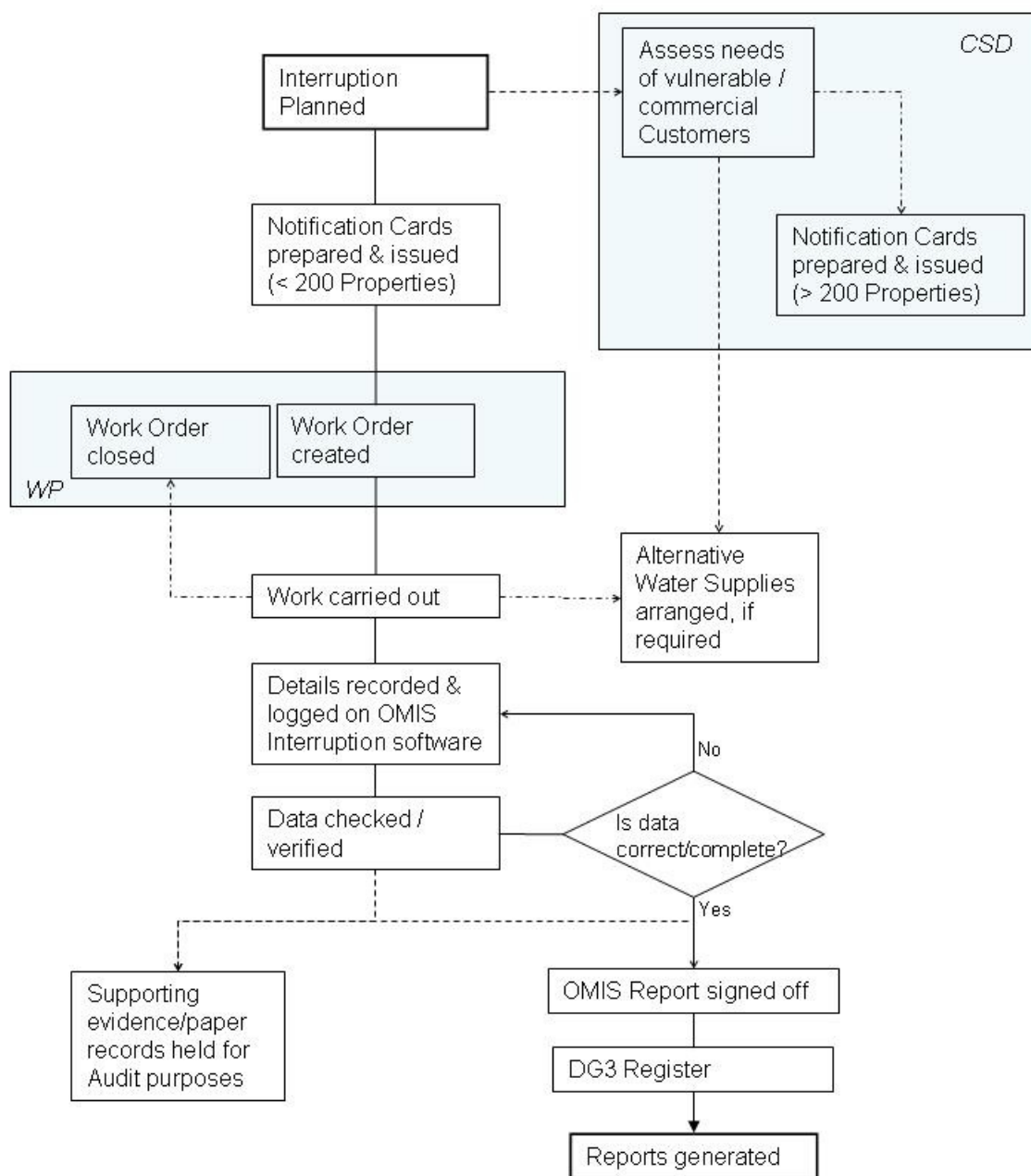
DG3 Process Flow Diagram - Unplanned

Appendix B



DG3 Process Flow Diagram - Planned

Appendix C



Appendix D – 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		
Interrupt 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"/>				
<input type="button" value="Close"/> <input type="button" value="Save"/>				

Appendix E – Pointer 2.1 Specification Extract (Page 12)**4.21 BUILDING_STATUS****Definition**

The current physical status of the building.

Constraints

Population of this field is mandatory.

Permitted PAO Status values are:

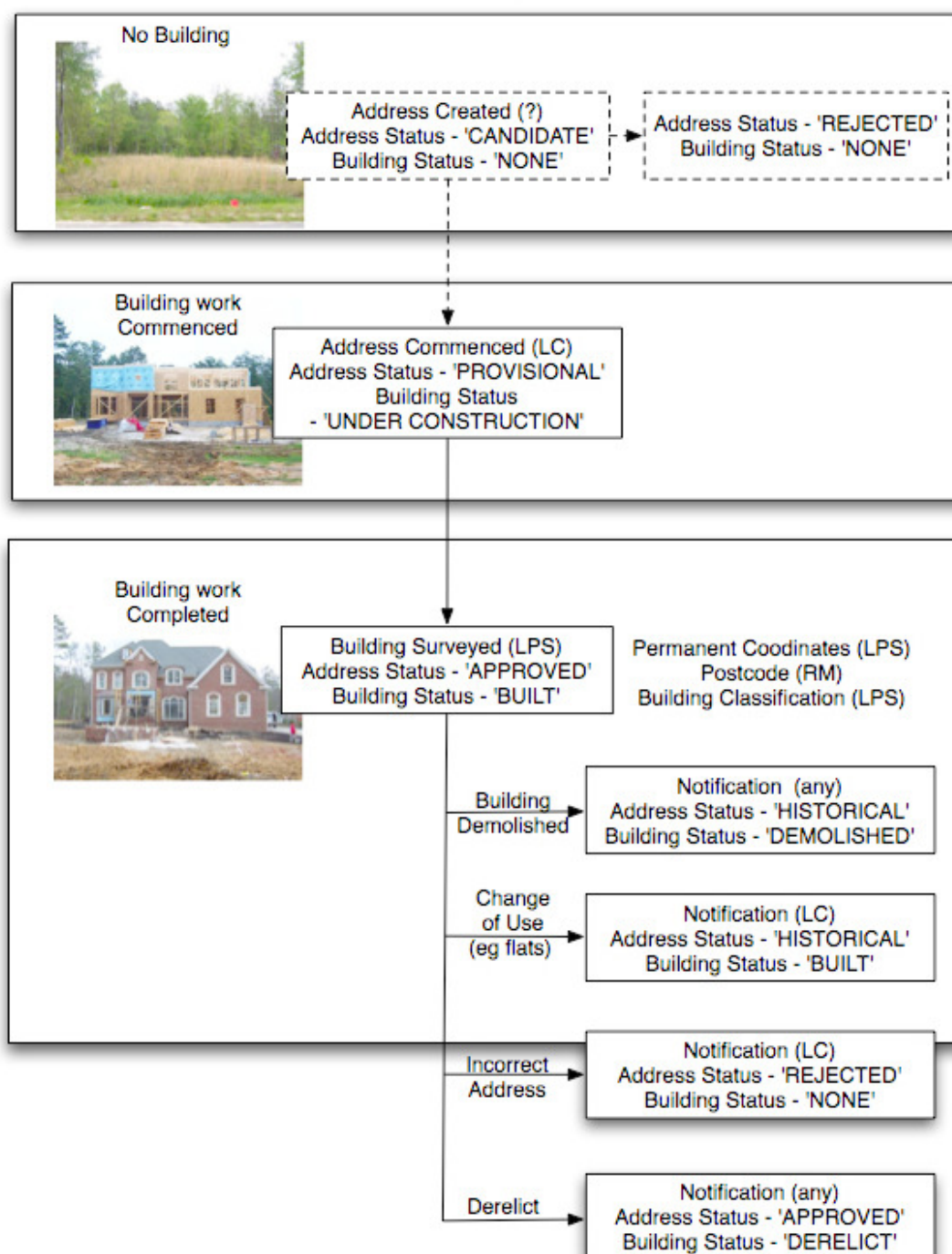
None, Under Construction, Built, Derelict and Demolished

Details

This field reflects changes to the Building_Status.

The values in this field are system generated and when a new address sent in from a council is entered in the system, the Building_Status is set to 'None' and the Address_Status set to 'Candidate'. When the council sends notification that building has commenced, the Building_Status is set to 'Under Construction' and the Address_Status set to 'Provisional'. After LPS field surveyors have confirmed the exact co-ordinates for the building, the Temp_Coords field is updated and the Building_Status is set to 'Built' and the Address_Status set to 'Approved'. A notification from a council that a building is derelict or demolished results in the Building_Status being updated and the Address_Status set to 'Historical'.

Please note that depending on the purpose for which the data is being used, the user may need to filter out certain categories of Building_Status. For example, addresses for 'Demolished' buildings would not be required where a mail shot is planned.

Appendix E – Pointer 2.1 Specification Extract (Page 13)**Pointer Lifecycle**

Appendix E – Pointer 2.1 Specification Extract (Page 14)**4.22 ADDRESS_STATUS****Definition**

The current logical status of the address.

Constraints

Permitted ADDRESS_STATUS values are: (See diagram above)

- Candidate - before building starts. Planning permission has been granted but building has not commenced. Created by the Local Council before building has begun.
- Provisional – The Local Council has confirmed that the building is under construction.
- Approved – LPS add permanent co-ordinates and/or a building classification. A Postcode may also be added however this does not affect the ADDRESS_STATUS
- Historical - addresses that are no longer in use due to dereliction, demolition etc.
- Rejected – used to indicate the deletion of an incorrect address. Population of this field is mandatory, and is system generated.

Details

The values in this field are system generated and when a new address sent in from a council is entered in the system, the Building_Status is set to 'None' and the Address_Status set to 'Candidate'. When the council sends notification that building has commenced, the Building_Status is set to 'Under Construction' and the Address_Status set to 'Provisional'. After LPS field surveyors have confirmed the exact co-ordinates for the building, the Temp_Coords field is updated and the Building_Status is set to 'Built' and the Address_Status set to 'Approved'. A notification from a council that a building is derelict or demolished results in the Building_Status being updated and the Address_Status set to 'Historical'.

Please note that depending on the purpose for which the data is being used, the data should be filtered on the categories of Address_Status. For example, addresses set to 'Historical' would not be required where a mail shot is planned.

4.23 CLASSIFICATION

Definition

The current use of the building, derived from the LPS classification.

Constraints

Data in this field is system generated.

Permitted CLASSIFICATION values are shown below. These are derived from the detailed LPS list of valuation classifications.

Details

There are three main classification groups:

- NULL – Where the record has not yet been updated with an LPS classification.
- Non Domestic (formerly Commercial) – these records are prefixed with 'ND'
- Domestic (formerly Residential) – these records are prefixed with 'DO'. Where an individual is operating a business from a room within their home, LPS still classify this as a Residential property.

These are subdivided into a further classification as detailed above.

When the building use of an addressable object changes, the CLASSIFICATION field will be updated to reflect this change.

Appendix E – Pointer 2.1 Specification Extract (Page 15)

CODE	CLASSIFICATION DESCRIPTION
ND_agriculture	Agriculture (incl farms, market gardens)
ND_agriculture_other	Miscellaneous Agriculture
ND_comm_other	Commercial other
ND_culture	Cultural (incl museums, libraries)
ND_culture_other	Miscellaneous Culture
ND_education	Education (incl school, further ed)
ND_entertainment	Leisure and tourism(non-sporting - cinemas etc)
ND_ents_other	Miscellaneous Entertainment
ND_freight_other	Freight (canal, dock, railway undertaking)
ND_health	Health(incl hospital, care home, clinics)
ND_hospitality	Hospitality (incl hotels, b&b)
ND_indust_other	Miscellaneous Industry
ND_industry	Industry (incl factory, quarries)
ND_legal	Law and Order
ND_office	Commercial office - banks, post offices, offices
ND_religious	Religious establishment (incl places of worship)
ND_retail	Retail (shops, showrooms etc)
ND_sporting	Recreation (sports facilities)
ND_utilities	Public utilities
ND_utilities_other	Miscellaneous Utilities
DO_apart	Domestic - Apartments/flats
DO_detached	Domestic - detached
DO_semi	Domestic - Semi
DO_terrace	Domestic - Terrace
DO_other	Domestic other (incl Lock-up garages)

4.24 CREATION_DATE**Definition**

The date when an address is first entered into the system by the Local Council.

Constraints

This field will only be populated for records created after the Pointer application went live in 2005. The field is automatically populated when records are entered into the database. It does not necessarily relate to the date of building, but rather when the information was provided.

4.25 COMMENCEMENT_DATE**Definition**

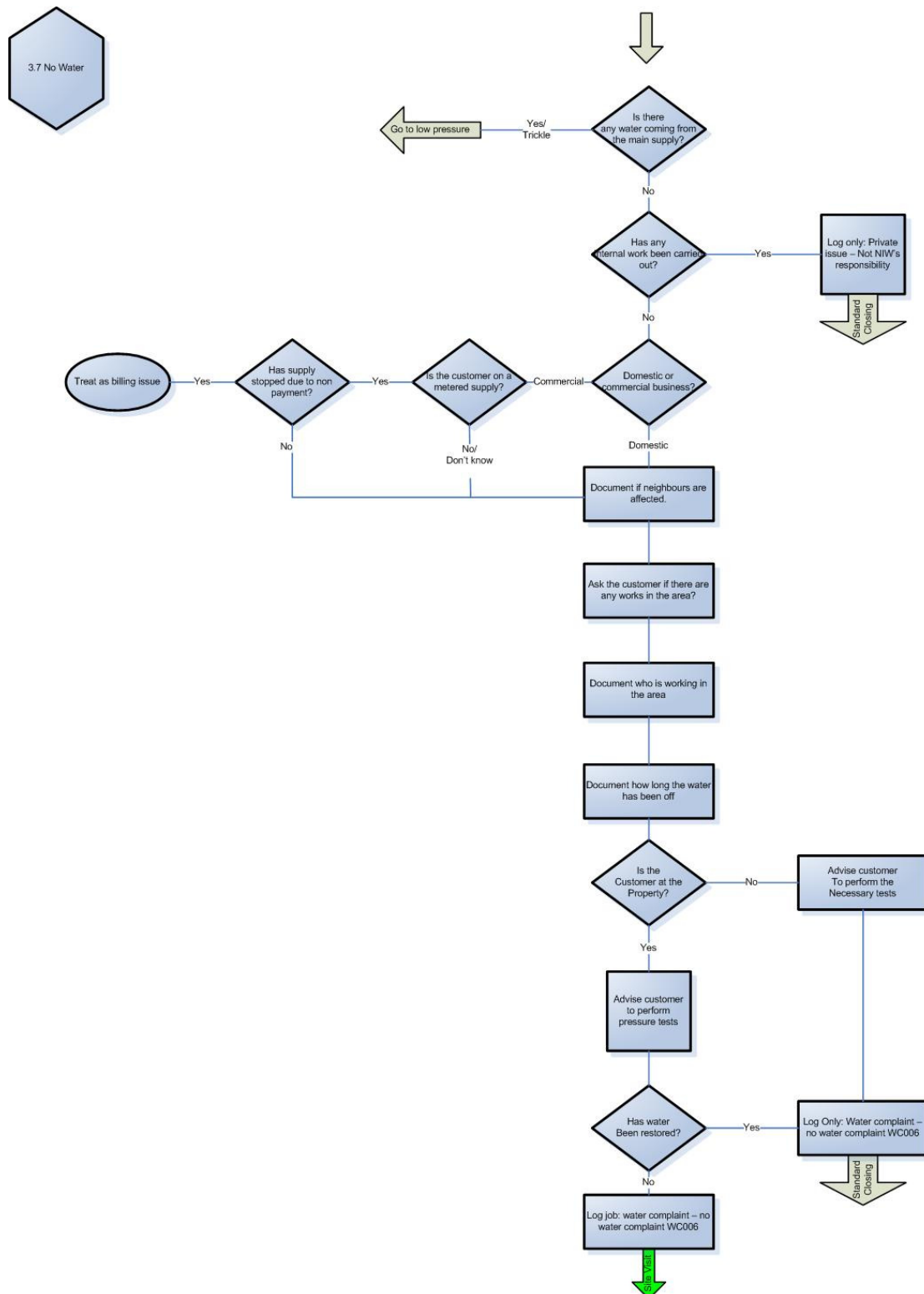
This is the date when construction on the property has begun.

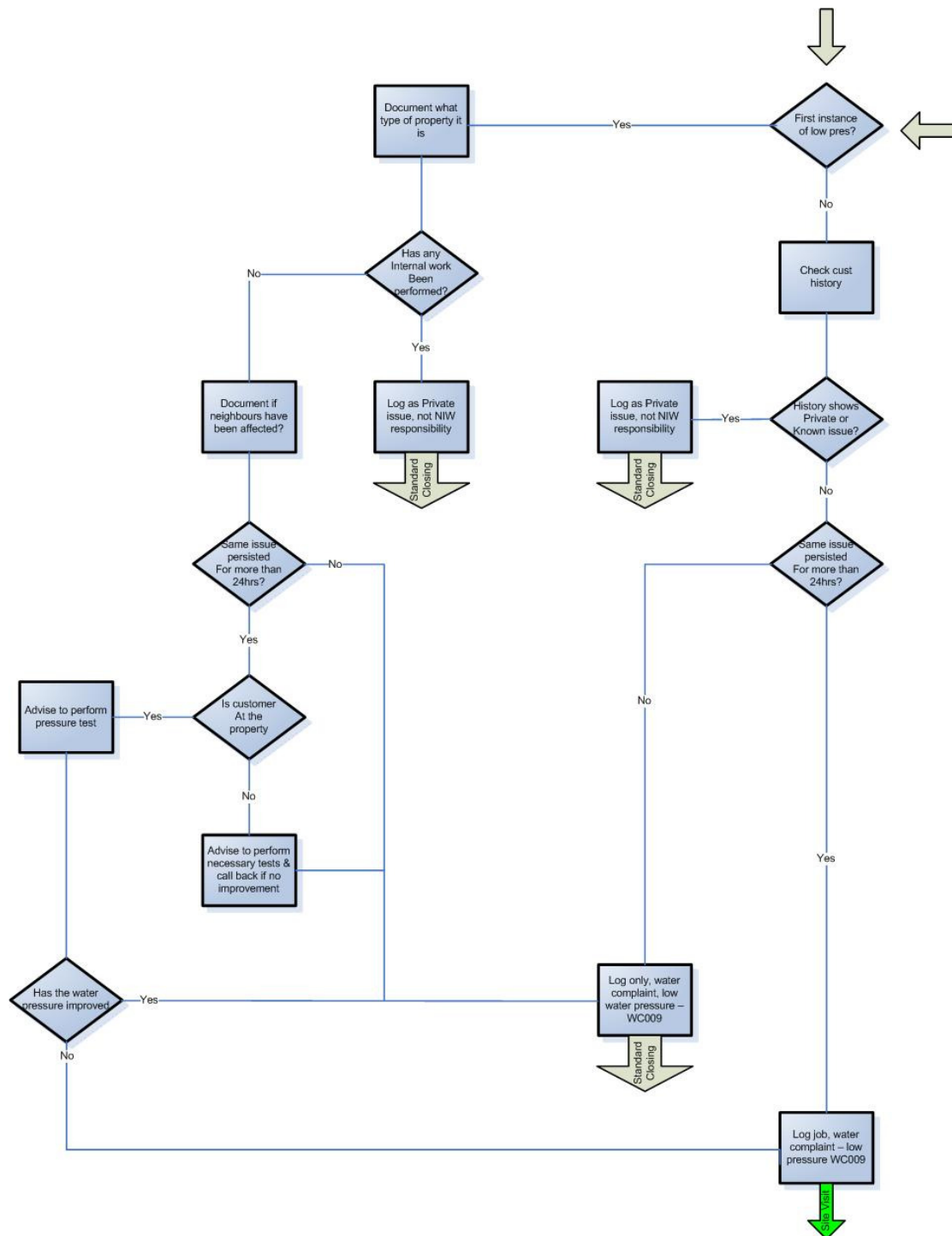
Constraints

This field will be populated for records created after the release of the new Pointer Product and when Local Council informs Pointer of the fact.

Details

This indicates when the BUILDING_STATUS changes from 'NONE' to 'UNDER CONSTRUCTION'

Appendix F – CRC Call Script for ‘No Water’ Complaints

Appendix F – CRC Call Script for ‘Low Pressure’ Complaints

[illegible][illegible][illegible][illegible]

[illegible]

E&P025	S Donnan	Gary McFarlane	South East	Planned	Distribution	01/03/2012	10:00	Card Drop	05/03/2012	08:00	05/03/2012	20:00	05/03/2012	08:00	05/03/2012	17:30	05/03/2012	17:30	9.50	54	54	54	54	0	0	-2.50	0	0	0	0	0	0	Mains Rehabilitation	
E&P072	S Donnan	Gary Lawrie	South East	Planned	Distribution	16/03/2012	14:00	Card Drop	22/03/2012	08:00	22/03/2012	20:00	22/03/2012	08:00	22/03/2012	17:30	22/03/2012	17:30	9.50	23	23	23	23	0	0	-2.50	0	0	0	0	0	0	Mains Rehabilitation	
E&P082	Robin Erskine	Peter Smith	North	Planned	Distribution	17/02/2012	16:00	Card Drop	08/03/2012	08:00	08/03/2012	20:00	08/03/2012	10:00	08/03/2012	19:45	08/03/2012	19:45	9.75	17	17	17	17	0	0	-0.25	0	0	0	0	0	0	New Mains Tie In	
E&P071	S Donnan	Gary Lawrie	South East	Planned	Distribution	16/03/2012	14:00	Card Drop	23/03/2012	08:00	23/03/2012	20:00	23/03/2012	08:00	23/03/2012	18:00	23/03/2012	18:00	10.00	4	4	4	4	0	0	-2.00	0	0	0	0	0	0	Mains Rehabilitation	
E&P090	Paddy McAleis	Norm O'Connell	North	Planned	Distribution	02/03/2012	16:00	Card Drop	15/03/2012	08:00	15/03/2012	20:00	15/03/2012	08:30	15/03/2012	18:30	15/03/2012	18:30	10.00	16	16	16	16	0	0	-1.50	0	0	0	0	0	0	New Mains Tie In	
E&P065	S Donnan	Gary Lawrie	South East	Planned	Distribution	16/03/2012	15:00	Card Drop	13/03/2012	08:00	13/03/2012	20:00	13/03/2012	08:30	13/03/2012	18:30	13/03/2012	18:30	10.00	46	46	46	46	0	0	-2.00	0	0	0	0	0	0	Main Rehabilitation	
E&P058	S Donnan	Gary Lawrie	South East	Planned	Distribution	16/03/2012	15:00	Card Drop	23/03/2012	08:00	23/03/2012	20:00	23/03/2012	08:30	23/03/2012	19:00	23/03/2012	19:00	11.00	14	14	14	14	0	0	-1.00	0	0	0	0	0	0	Mains Rehabilitation	
E&P041	S Donnan	Gary Lawrie	South East	Planned	Distribution	23/03/2012	14:00	Card Drop	26/03/2012	08:00	26/03/2012	20:00	26/03/2012	08:00	26/03/2012	19:00	26/03/2012	19:00	11.00	98	98	98	98	0	0	-1.00	0	0	0	0	0	0	Mains Rehabilitation	
E&P096	Robin Erskine	Peter Smith	North	Planned	Distribution	16/02/2012	16:00	Card Drop	28/03/2012	08:00	28/03/2012	20:00	28/03/2012	08:00	28/03/2012	19:00	28/03/2012	19:00	11.00	144	144	144	144	0	0	-1.00	0	0	0	0	0	0	New Mains Tie In	
18593		2602005	West	Ballygawley	Planned	Distribution	22/03/2012	12:00	Card Drop	27/03/2012	09:00	27/03/2012	17:00	27/03/2012	10:00	27/03/2012	15:30	27/03/2012	21:00	11	134	134	134	77	0	0	0	0	0	0	0	0	0	New Mains Tie In
E&P088	Ken Broom	Ciara Doherty	North	Planned	Distribution	01/03/2012	16:00	Card Drop	14/03/2012	08:00	14/03/2012	20:00	14/03/2012	08:00	14/03/2012	20:00	14/03/2012	20:00	12.00	4	4	4	4	0	0	0.00	0	0	0	0	0	0	New Mains Tie In	
E&P091	Ciara Doherty	Ken Broom	North	Planned	Distribution	01/03/2012	16:00	Card Drop	06/03/2012	08:00	06/03/2012	20:00	06/03/2012	08:00	06/03/2012	20:00	06/03/2012	20:00	12.00	11	11	11	11	0	0	0.00	0	0	0	0	0	0	New Mains Tie In	
E&P098	Ciara Doherty	Ken Broom	North	Planned	Distribution	01/03/2012	16:00	Card Drop	13/03/2012	08:00	13/03/2012	20:00	13/03/2012	08:00	13/03/2012	20:00	13/03/2012	20:00	12.00	48	48	48	48	0	0	0.00	0	0	0	0	0	0	New Mains Tie In	
E&P117	Ciara Doherty	Ken Broom	North	Pl																														

[illegible]

Northern Ireland Water

Level of Service Methodology

DG5 Flooding

Contents

- 1. Introduction**
- 2. DG5 Flooding Incidents – Internal**
- 3. DG5 Properties at Risk of Flooding – Internal**
- 4. DG5 Cost Benefit Analysis**
- 5. Conclusion**

Appendix A – AIR 12Table 3 Internal Flooding Key Outputs

Appendix B – Flooding Incident Report (March 2012)

Appendix C – Customer Response Scripts

Appendix D – NI WATER DG5 Internal Flooding Register Methodology

Appendix E – DG5 Register Extract

1. Introduction

Objective and Aim

NI Water must maintain verifiable records for DG5. The aim of the records is to provide an auditable method for identifying the specific, properties which are affected by flooding, or are at risk of experiencing flooding.

As part of these records companies must maintain a DG5 register which should form a database of all properties which are at risk of experiencing sewer flooding more than once in twenty years. It will enable the identification by address of individual properties which are below the reference level and should also contain information on (for example) complaints and the results of their investigation, problems which are attributable to customers apparatus and properties which experience sewer flooding but are covered by one of the allowable exclusions.

The register must clearly identify those properties below the reference level, distinguish them from those which have flooded but are not below the reference level and provide a verifiable reason for the exclusion (e.g. flooding was a result of a blockage).

The records should include:

- date of incident;
- properties affected identified by address;
- cause of flooding (including source and reason, where known);
- action taken;
- name of persons completing the records; and
- the 'Flooding' category for reporting under DG5.

Reporting Requirements

Two main outputs are required to be produced relating to internal flooding for AIR 12:

- DG5 Annual Flooding Summary – properties internally flooded as a result of overloaded sewers and other causes.
- DG5 Properties on the 'Flooding' register – properties at risk of flooding due to overloaded sewers, more frequently than once in twenty years and once or twice in ten years, requiring further investigation, problem status of properties on the register, annual changes to the register.

The information relating to the above is contained in Table 3 AIR12 Return. See Appendix A.

Reporting

NI Water Reports -The following reports are generated by Operations Services for Management information:

- DG5 (Internal) Annual Flooding Summary - Annual
- DG5 (Internal) Properties on the Risk Registers - Annual
- Monthly Reports for NI WATER Executive Team
- Nr of overloaded sewers (Hydraulic Capacity Problems)

- Nr of Overloaded Sewers (Blockage, Collapsed Sewer, Equipment failure)
- Nr of Properties on the 1 in 10 year Flooding Register.

Regulatory Report

The Finance & Regulation Directorate will report to Northern Ireland Authority for the Utility Regulation (NIAUR) on an annual basis.

Situation at March 2012

The DG5 Register has now been developed using evidence gathered from the Sewer Maintenance Contractor, Flooding Incident Reports (FIR), Operational reports and direct customer contact along with a 100% audit on all orders sent to Meridian for the current Internal flooding records. The Historical data has now been cleansed and the properties allocated to the appropriate category in the Register.

NI Water has now implemented the Reporters recommendation that historic flooding records are defaulted to the 1 in 20 register. However this has meant that only a small number of properties remained in the 2 in 10 and 1 in 10 registers. NI Water has started work to properly categorise the properties defaulted to the 1 in 20 register and expects the numbers on each register to change significantly as a result. This will enable NI Water to address the risk of flooding at more properties in the 1 in 10 and 2 in 10 registers.

Call centre scripting (see appendix C) has been revised in the last 12 months regarding internal flooding reported by the public. The totals have been recorded and there appears to be a considerable reduction in reporting of internal flooding.

New Flood Incident report (August 2012 see appendix B) forms, new Scripts and new script procedures (Jan 12) have helped to achieve this target.

Work has progressed during the year to identify critical and lateral sewers these layers have been recently added to NI Water's Corporate Asset Register. Because of this work NI Water 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 sewers.

All internal flooding incidents are subjected to a robust investigation. An expert panel (the DG5 Panel) examines the evidence for each incident and governs the addition of properties to and removal of properties from the register. Those incidents of internal flooding that do not meet the DG5 Criteria are recorded in the 'excluded' section of the Database.

The register is no longer held as an MS Excel spreadsheet but has been transferred to an Oracle database represented on the Corporate Asset Register as GIS layer. AIR12 reporting for internal flooding is produced by querying the Internal Flooding Oracle Database.

2. DG5 Internal Flooding incidents – Methodology and Procedures

Internal

Data gathering and calculation is as described below

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

Data gathering and calculation is as described below in the Line- Specific Methodology Statements for Table 3: Lines 2 to 11,15a & 17.

Sources/Primary Process

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

A download of internal flooding records was obtained from the Ellipse system for the period April 2011 to March 2012 on a month by month basis.

Investigations were carried out for each reported incident and those properties found not to be flooded after investigation, using information from the Sewer Maintenance Contractor, Flood Incident Report (FIR) Forms, Field Manager reports and contacting the Customers directly, are removed. The remaining properties were recorded as Flooding Incidents.

Assumption

For the purpose of AIR12, NI Water has assumed that a single incident includes recorded complaints from the same property on the same day or within three days.

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

- An incident of internal flooding is assumed to be where a property has been flooded internally. If two adjacent properties are flooded at the same time they are classed as two properties and two incidents.
- Where a single property floods internally on two separate occasions then this is recorded as one property and two incidents.

Sources/Secondary Process

1. Wastewater Business Unit (WWBU) carries out further investigations to determine the cause of every internal flooding incident.
2. WWBU assess the information held on customer report, Flood Incident Report (FIR), along with photographic evidence and closure details provided by the contractor.
3. WWBU determine if the cause of the flooding incident was hydraulic incapacity or flooding other cause, i.e. Blocked Sewer, Equipment Failure or Collapsed Sewer. This is done by a number of methods including site visits, concentric circle surveys, Customer Field Manager reports, customer interviews, field manager interviews and review of existing incident information.

4. If hydraulic incapacity is confirmed a Met Office Weather report is used to determine if the incident is as a result of severe weather (Line 4). The company has included the Duty Manager's Upward Report detailing a heavy rainfall event, for one incident reported in the AIR12 period (L4 & L4a).
5. These properties were then recorded on a spread sheet under the appropriate categories for lines 2, 3, 4, 4a, 5, 6, 8, 9, 10 and 11 using the information gathered from, the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly. A folder of evidence was created for all confirmed cases and this was brought to the monthly DG5 panel for approval and addition to the appropriate section of the register. At the end of the reporting year this was the data used for AIR 12 returns.
6. The figure for line 7 was obtained by having a report run in the DG5 Oracle Database which holds the information as a DG5 layer in the GIS system.
7. Line 15a relates to properties on the Historical register which have now been fully investigated and categorized accordingly thus the nil return.
8. The required information to populate Line 17 is extracted directly from the monthly spread sheet completed by the contractor.

Changes in Methodology over the Previous Year

The DG5 Registers have now been developed using, evidence gathered from Sewer Maintenance Contractor, Flooding Incident Reports (FIR), Operational reports, and direct customer contact and the cleansing of the Historical Data.

During this reporting year NI Water have made strenuous efforts to improve the quality of information provided. As per the Reporter's recommendation the company has given specific DG5 familiarisation training to the call centre staff and they also held meetings with call centre line managers to review the scripts (see Appendix C) so that the correct line of questioning is followed and the call centre staff understand the information being provided to them by the customer.

The call centre managers now monitor their staff to ensure that they are conforming to the correct process. As result of this the numbers of reported incidents have been reducing month on month which is very evident in January and February, last year there were 687 reported instances of Internal Flooding and this year there were 419, a reduction of 39%. During the reporting year the number of calls received by the call centre has reduced by approximately 25% i.e. from around 360,000 calls down to around 270,000 which is also a contributing factor.

Due to the improved quality of the logging of internal flooding incidents NI Water now thoroughly investigates every reported incident of internal flooding.

The FIR has been further improved as per Reporter recommendations to ensure that the quality of information provided by the contractor is of a much higher standard and that there is a photograph scanned onto the FIR. At present NI Water are awaiting the Contractor's implementation of a new handheld PDA which will require all fields to be completed before the operator can close any job. It is hoped that this device will be in operation during the extended contract period.

As per the Reporter's recommendation the Business Unit is proactively ensuring that the FIR is fully completed, this is being done by continuous liaising with the Meridian Utilities Limited (MUL) Contracts Manager and pointing out any errors which he then resolves. In any case where there is ambiguity the Customer Field Manager attends site to resolve the issue.

The new Flood Incident Report forms (Mar 2012) and new Script procedures (Feb 2012) are included as Appendices B & C.

As all the Internal historical data has been investigated and entered in the appropriate categories of the register Line 15a is now obsolete.

As per the Reporter's recommendation any property flooded internally due to the failure of a mitigation device will be reported as equipment failure.

3. DG5 Properties at Risk of Flooding – Internal

Internal Flooding Process

All internal flooding incidents are subjected to a robust investigation (See Appendix D – NI Water DG5 Internal Flooding Register Methodology). An expert panel (the DG5 Panel) examines the evidence for each incident and governs the addition of properties to, and the removal of properties from, the register. Those records that do not meet the DG5 Criteria are recorded in the 'excluded' section of the Database. All new incidents of external flooding are being investigated in a similar manner as the Internal flooding incidents.

The register is no longer be held as an MS Excel spread sheet but has now been transferred to an Oracle database represented on the Corporate Asset Register as GIS layer on CARtomap.

Annual Information Returns for properties on the DG5 registers are now obtained by interrogating the NI Water DG5 Oracle Database. Changes (additions and removals) are cross-checked against the meeting records of the DG5 panel where evidence is scrutinised and decisions on changes to the register made.

Continuing investigation of Flooding incidents on the 1 in 20 register

NI Water has now implemented the Reporters recommendation that historic flooding records are defaulted to the 1 in 20 register. However this has meant that only a small number of properties remained in the 2 in 10 and 1 in 10 registers. NI Water has started work to properly categorise the properties defaulted to the 1 in 20 register and expects the numbers on each register to

change significantly as a result. This will enable NI Water to address the risk of flooding at more properties in the 1 in 10 and 2 in 10 registers.

Mitigation

Properties protected from the risk of Flooding by mitigating measures, such as non-return valves are added to the 1 in 20 Register unless evidence exists to allow their addition to either the 1 in 10 or 2 in 10 registers. 2 properties protected by mitigating measures have been added to the 1 in 20 internal flooding register during this reporting period.

Movements between the 'at risk' registers

NI Water has started work to properly categorise the properties defaulted to the 1 in 20 register and based on the results so far it is expected that this exercise will result in significant movement between the registers and also in the removal of some properties from the 1 in 20 register through better information.

Cost benefit Analysis

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

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

Assumptions

Properties protected from the risk of Flooding by mitigating measures such as non-return valves are added to the 1 in 20 Register unless evidence exists to allow their addition to either the 1 in 10 or 1 in 20 registers.

'Historical' properties found to have been removed from the risk of flooding through company action in years previous to PC10 are now classed as removed through better information even if the company action was capital expenditure.

Properties suffering internal flooding during a greater than 1 in 20 year rainfall event are reported as severe weather incidents.

Removals from the register

25 properties in total were removed from the register. 14 domestic properties were removed from the 1 in 20 register by company action over this reporting period. 11 properties were removed through better information.

Properties which have not flooded in the last 10 years

1 property remains on the register which has not flooded in the last 10 years. As per the Regulators guidelines this incident will be re-investigated to confirm that it has been correctly categorised and should still be on the register.

Predicted/Actual additions to the register

The final business plan submission predicted that;

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

In this reporting period 21 new properties which have suffered internal flooding during the year or in previous years due to hydraulic incapacity were added to the register.

Reporter's Recommendation on Rainfall Radar Data

The reporter in his AIR11 report recommended that;

‘Whilst we are unsure of the availability or costs associated with the acquisition of raw radar data for NI to assess severe weather events, we would recommend the Company explore the feasibility of this approach as a future initiative’.

NI Water consulted widely with other Water Utilities, the Met Office and the Centre for Ecology & Hydrology on the availability and functionality of Radar data and software for the Northern Ireland area.

NI Water has approved a business case for acquisition of raw Radar Rainfall data and associated software to enable more accurate assessment of severe weather events. Tender documents are currently being prepared and NI Water will shortly be going to the market to procure the radar service and software in an open competition to ensure best value for money.

Company Practice in Dealing with Claims

NI Water is conscious that out of sewer flooding is distressing and particularly so when internal flooding has occurred. Out of sewer flooding may arise as a result of a transient blockage caused by inappropriate materials having been discarded into the sewer, severe weather conditions, or perhaps a defect in the sewer or at a pumping station.

Often NI Water does not have any legal liability for the distress and damage experienced by customers following such an event. As a publicly funded body and also relying on its public liability insurance cover Northern Ireland Water has to ensure that claims are only met from public funds when there is a legal liability to do so. It will therefore encourage those affected customers who have household insurance to initially make any claim directly against their household policy.

Whilst any legal liability has to be investigated before a claim is met NI Water will entirely without prejudice endeavour to arrange a basic external clean-up of domestic properties when such an event has been reported. Furthermore it will endeavour to ensure that whilst investigation is on-going any vulnerable customers whose property has been rendered uninhabitable by internal

flooding, and who also do not have the benefit of household insurance, are housed in temporary accommodation.

Conclusion

NI Water have made significant changes on reporting for AIR12, this has been achieved by better processes and better Data Quality, along with new tracking and reporting measures. The Wastewater Business Unit now has experienced staff in post this year to ensure improved data quality for Internal Flood Reporting. The creation of the DG5 panel of experts has introduced a high level of governance and scrutiny of the whole DG5 process.

NI Water will continue to strive to improve the robustness of data on, and investigation of, internal flooding incidents. The review of historical incidents in the 1 in 20 register will be completed in this current period (2012-13) allowing the proper categorisation of incidents and in turn will allow effort to be directed at priority properties which have genuine 1 in 10 or 2 in 10 DG5 flooding problems.

Appendix A – AIR 12 Table 3 Internal Flooding**ANNUAL INFORMATION RETURN - TABLE 3 KEY OUTPUTS
SEWERAGE SERVICE - INTERNAL FLOODING (TOTAL)**

DESCRIPTION		UNITS
A	DG5 ANNUAL FLOODING SUMMARY	
1	Number of domestic properties connected to sewerage system	000
	(I) OVERLOADED SEWERS	
2	Properties flooded in the year (overloaded sewers)	nr
3	Flooding incidents in the year (overloaded sewers)	nr
4	Flooding incidents (overloaded sewers attributed to severe weather)	nr
4a	Properties flooded in the year attributed to severe weather	nr
5	Props. where flooding limited to uninhabited cellars only (o/loaded sewers)	nr
	(ii) OTHER CAUSES	
6	Properties flooded in the year (other causes)	nr
7	Properties which have flooded more than once in the last ten years (other causes)	nr
8	Flooding incidents (other causes - equipment failures)	nr
9	Flooding incidents (other causes - blockages)	nr
10	Flooding incidents (other causes - collapses)	nr
11	Props. where flooding limited to uninhabited cellars only (other causes)	nr
B	DG5 PROPERTIES ON THE AT RISK REGISTER	
	(i) SUMMARY	
12	2 in 10 register at end of year	nr
13	1 in 10 register at end of year	nr
14	Total 1 in 10 and 2 in 10 properties on the register at end of year	nr
15	1 in 20 register at end of year	nr
15A	Potential risk of property flooding identified requiring further investigation to assess at risk category.	nr
16	Props. on the register which have not flooded in the past 10 yrs (excl. severe weather)	nr
17	Properties which have not flooded internally but suffer restricted toilet use (RTU)	nr
	(iii) ANNUAL CHANGES TO 2 IN 10 & 1 IN 10 REGISTERS	
22	Removed by company action	nr
23	Removed because of better information	nr
24	Added because of better information (actually flooded)	nr
25	Added because of better information (modelled)	nr
26	Average capex cost of permanent solutions to 1 in 10 & 2 in 10 DG5 problems	£000/prop
	(v) ANNUAL CHANGES TO THE 1 IN 20 REGISTER	
30	Removed by company action (1 in 20)	nr
31	Removed because of better information (1 in 20)	nr
32	Added because of better information (actually flooded - 1 in 20)	nr
33	Added because of better information (modelled - 1 in 20)	nr
34	Average capex cost of permanent solutions to 1 in 20 DG5 problems	£000/prop

APPENDIX B – Flood Incident Report (FIR)
Northern Ireland Water – Flooding Incident Report

 Work Order Ref No: 02597828 Name: Drainaway

 Location: [REDACTED] BELFAST [REDACTED]

 Date: 22/03/2012 Arrival time: 16:25:00

 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 ☒ Collapsed sewer ☐

 Defective road gulley ☐ Defective private drain ☐

 M&E equipment failure ☐ Other: ☐

4) Clean up operations:

 Not Required ☐ Further Action Required ☐ Completed ☐
☒

5) Previous History:

 Yes ☐ No ☒ Not Aware ☐

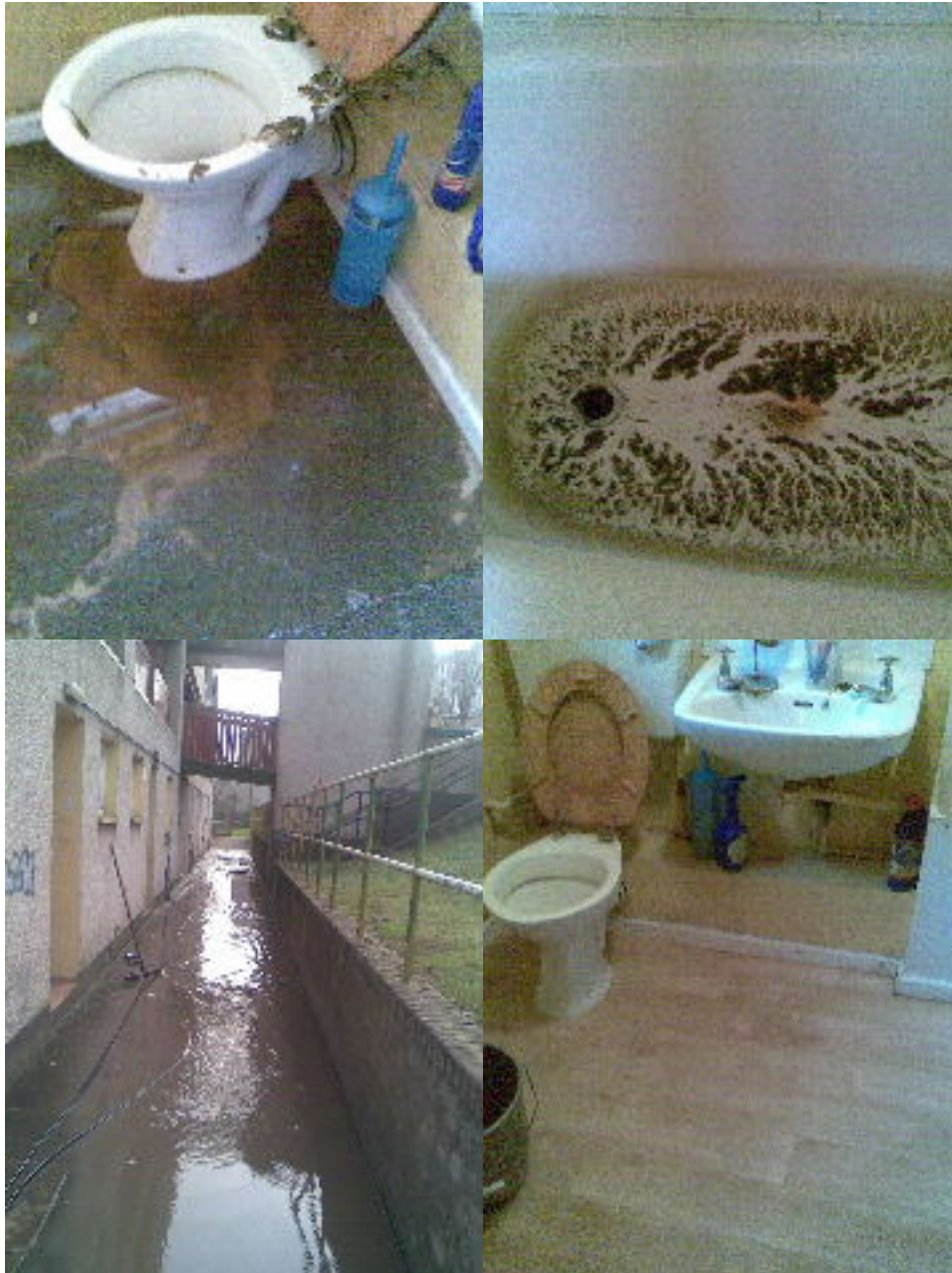
6) Weather Conditions:

 Dry ☒ OR Wet ☐ Heavy ☐ Medium ☐

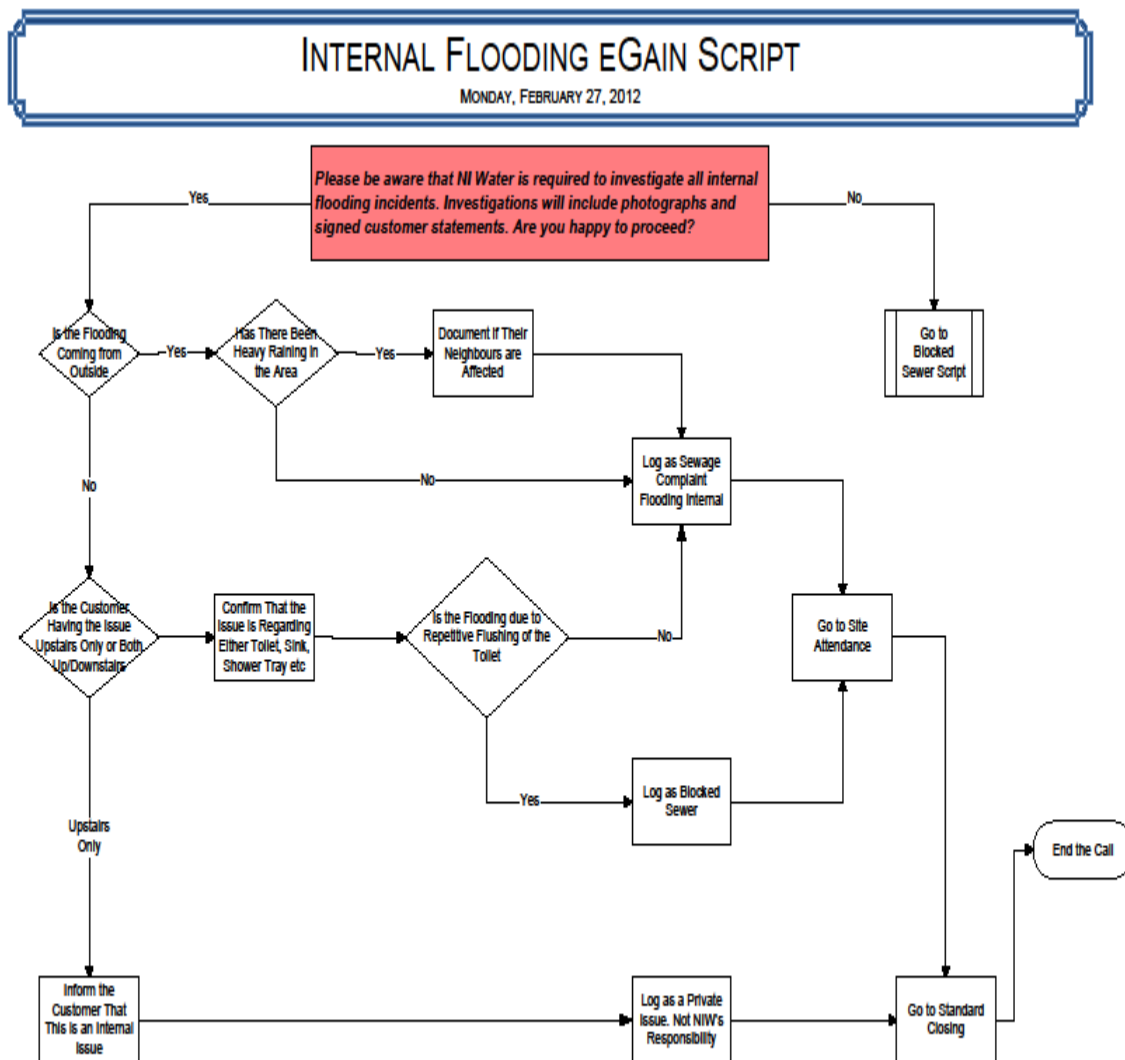
 Light ☐
Comments: Especially for Flooded jobs or Follow on jobs

cleared, internal flooding at bathroom, clean up b

PHOTO FOR FLOODED JOBS:





APPENDIX C – New Flooding Internal Script

Appendix D NI Water DG5 Internal Flooding Register - Methodology



DG5 Internal Flooding Register - Methodology

Final v1.0

31st March 2012

Main Contributors	Aspect/Section	Notes
Alan Moore / Kevin McCullough	Draft	
Alan Moore / Kevin McCullough	Final	

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Revision No	Date	Description/Amendment	Checked	Reviewed	Authorised for Issue
0.8	26 Feb 11	Revise to include improved approach	AM	KM	
1.0	31 Mar 12	Finalised ahead of sign-off by DG5 Panel	AM	KM	MMcI

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1 Introduction

1.1 Background

This document provides guidance on how the successful management of the DG5 Internal Flooding Register, within Northern Ireland (NI) Water, should be carried out. Where possible, this document complies with Ofwat and Northern Ireland Authority for Utility Regulation (NIAUR) Guidance.

1.2 Scope and Objectives

This document is owned by NI Water and describes the end-to-end business process by which a property that has experienced internal flooding is added to, and removed from the DG5 Internal Flooding Register. It will support NI Water in the development and implementation of its DG5 reporting processes and long-term management of the Register.

The purpose of this methodology is to ensure that a fully transparent, auditable process is in place for the management and maintenance of the DG5 Internal Flooding Register for NI Water in order to report to NIAUR.

2 Definitions

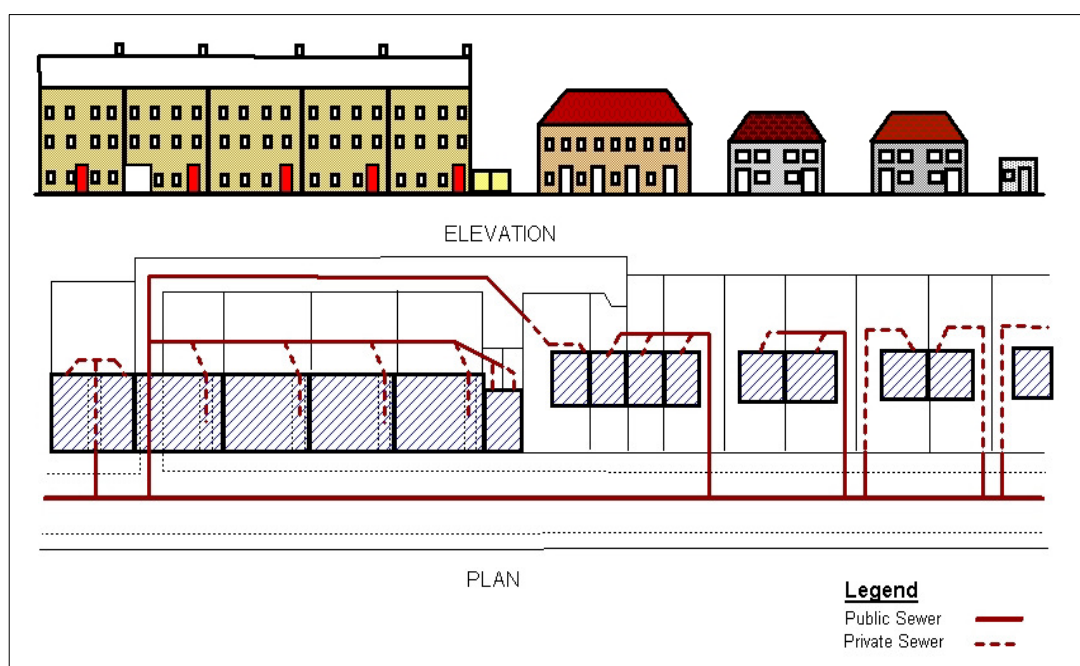
The following definitions are to be applied when recording and reporting properties and incidents held on NI Water's DG5 Internal Flooding Register.

Northern Ireland Water is only responsible for internal flooding caused by failure of the public sewerage system. This excludes private sewers, highway drainage, gullies, land drainage, and watercourses.

2.1 Legal Definitions

2.1.1 Public and Private

Northern Ireland Water is responsible for internal flooding caused by failure of the public sewerage system. The status of a sewer (i.e. whether public or private) is depicted below.



Drains; are defined as a pipe which carries waste water (sinks, baths, toilets etc.,) and trade wastes from one property to a sewer. Northern Ireland Water has responsibility for a drain up until the point of the property boundary. The length of drain within the boundary of the property lies with the property/landowner.

Public sewers; are defined as sewers serving more than a single property or, if serving a single property, sewers outside the property boundary and has been adopted, only then does responsibility lie with Northern Ireland Water.

2.1.2 Adopted and Unadopted Sewers

An adopted sewer is a sewer that is vested by NI Water and maintained at its expense. An unadopted sewer is a sewer that is either privately owned or has not yet been adopted by NI Water.

2.1.3 Third Party Responsibility

A third party incident is one where Northern Ireland Water could take action to recover costs from those responsible. Incidents due to third party attributed to hydraulic overload of the public sewerage system are significant unconsented discharges e.g. industry, leisure, domestic (swimming pool).

Where NI Water has gathered evidence that flooding of a property has occurred due to the actions of a third party, the company will attempt to recover the costs of implementing a the temporary or permanent solution.

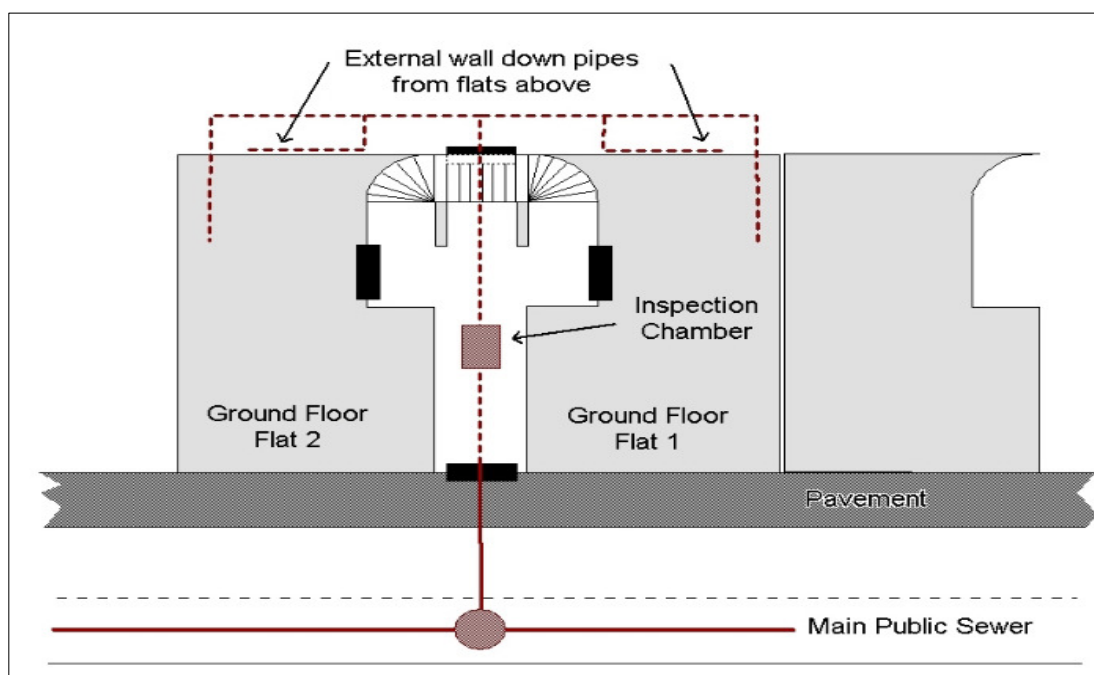
2.1.4 Basement Flooding

Customers do not have a right to connect wastewater discharges from a basement directly into the public sewerage. If a customer wishes to connect, then Northern Ireland Water will carry out investigations to confirm that by connecting the basement discharge to the public system it does not put the property at risk, because of existing conditions within the sewerage system. Written confirmation of the investigations will be given to the customer.

If a customer connects without obtaining the necessary planning permissions, then they do so at their own risk. Northern Ireland Water does not accept any responsibility for any resultant flooding incident. If basement flooding occurs due to hydraulic overload (and the customer has the right to connect) then this property will be identified as impacted by internal flooding and will be added to the appropriate register.

2.1.5 Apartment / High Rise Responsibilities

Incidents, which occur on the private drain, i.e. within the apartment block, are the responsibility of the residents. Should a flooding incident occur on the ground floor then those properties affected can be classed as internal flooding if appropriate. All other properties would be classed as external access flooding.



2.1.6 Sensitive Areas

Sensitive areas include, schools, hospitals, children play areas, nursing homes and properties of vulnerable customers. A property's sensitivity may have an impact on the prioritisation of when the solution to the internal flooding is implemented.

2.1.7 Property Classification

For reporting purposes, the following statements relate to property classification:

- Buildings that are normally occupied and used for residential, commercial, public, business or industrial purposes are included. This also includes garages that form an integral part of the property and are classed as part of the building even if the main purpose is storage.
- Buildings whose prime purpose is storage or installation of domestic appliances are not classed as occupied.
- Detached or 'linked-detached' garages i.e. those attached to a property but separated from it by an external passageway are excluded.
- A cellar forms an integral part of a building that is at least partly below ground level. Where a cellar is in regular use as part of normal living accommodation, it is termed a basement and any flooding should be reported as a normal flooding incident. Where an uninhabited cellar, i.e. one that is not used for habitation, is affected by water entering it directly (as opposed to via another part of the building) this has to be separately enumerated.

In order to ensure that the correct assessments on properties are made the following diagrams and pictures show the definitions for internal flooding against various property types;



Property with integral garage

Therefore either area flooded will be classed as internal flooding

Flow entering the solum or living area would be classed as internal flooding and only that property recorded.



Villa – Ground Floor and 1st floor properties

Flooding to the solum of the ground floor flat will mean that only that property will be identified as suffering from internal flooding.

If the 1st floor flat is accessed via a door which enters immediately into the property and is also affected by flood water, then this will also constitute internal flooding and both will be identified as an internal flooding incident.



Basement Property

A cellar that is in regular use as part of normal living accommodation is termed a basement and any flooding should be reported as a normal flooding incident.



Apartment Block

Internal Flooding would normally be contained to the ground floor flats. Individual properties affected by internal flooding will be identified and recorded. Flooding of the internal access will not be classed as internal property flooding for the remaining tenants. These will be classed as external flooding (access).



Semi-detached properties with **detached** garage.

Flooding of the garage would not be classed as internal flooding.



Detached or '**linked-detached**' garages i.e. those attached to a property but separated from it by an external passageway.

Flooding of the garage would not be classed as internal flooding.

2.1.8 Temporary and Permanent Solution

A temporary solution is defined as one which does not permanently remove the risk of flooding but reduces the risk of internal flooding happening.

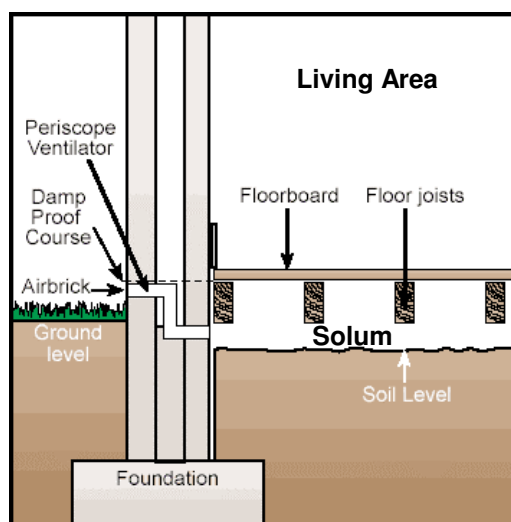
A permanent solution is defined as one that permanently addresses the cause of the hydraulic overload. Permanent works would enable a property to be removed from the DG5 Internal Flooding Register.

Examples of temporary and permanent solutions include;

Temporary Solutions	Permanent Solution
Fitting of anti-flood devices e.g. Non-Return Valve (NRV)	Land re-profiling
Air brick protection	Disconnect basement
Raising of Thresholds	Divert private drainage or public sewer
Bolt down inspection chambers	Isolate with private pumping station
Seal / bolt down manholes	Fill in hollow floors and cellars
Stop Logs	Flow attenuation
Issue of sandbags	Outfall protection e.g. flap valve
uPVC doors	Sewer Upsizing
Flood guards	'Right to purchase'

2.2 Internal Flooding Definition

A property can be deemed affected by an internal flooding incident when foul, combined or surface water escapes from the public sewerage system into a property and enters a building or passes below a suspended floor. The diagram below shows a cross section through a suspended floor.



For DG5 reporting purposes, internal flooding refers to buildings which are normally occupied and used for residential, public, commercial, business or industrial purposes. Buildings whose prime purpose is storage or installation of domestic appliances are excluded. Refer to Section 2.1.7 for Property Classification.

2.2.1 Restricted Toilet Use

Restricted Toilet Use (RTU) occurs where there is no internal flooding but where the customer is unable to flush their toilet without a risk of causing internal flooding of the property.

2.3 Flooding Cause Definition

2.3.1 Introduction

Flooding generally occurs through a combination of events and responsibility can lie with a number of different parties. Possible reasons for flooding can include:

- Blocked or overloaded drainage ditches, drains and sewers overflow across roads, gardens and into property.
- Hydraulic incapacity can on occasion cause sewers to backflow into a property.
- Rain can be so heavy that run-off flows overland down hills and slopes.

- Rain soaks into the ground causing groundwater levels to rise and flood.
- Broken or burst water mains (normally leading to basement flooding rather than property flooding above ground level).

Customers do not always distinguish between the various causes of flooding. In order to deal with an incident efficiently, it is imperative that call centre staff ascertain the cause and mechanism of the flooding. This ensures that appropriate action can be taken and the risks to the company minimised.

The cause of flooding will be determined by call centre staff asking the customer a set of pre-set questions from a call centre script.

2.3.2 Flooding due to Hydraulic Incapacity

A sewer can be classed as hydraulically incapable when the flow from a storm is unable to pass through it due to a permanent problem. Permanent problems are due to limitations in the physical characteristics of the network, generally the size of the sewer relative to flow and gradient. Properties affected by internal flooding due to hydraulic incapacity shall be placed within relevant flooding severity category unless there is evidence to prove that the flooding was due to 'Other Causes' or severe weather. Temporary problems are excluded and comprise of: Blockages, Collapses, Equipment Failure

2.3.3 Other Causes Flooding

'Other Causes' are related to localised deficiencies and transient characteristics of the network. The main causes are:

- blockages
- collapses
- equipment or operational failure

These incidents are reported separately to NIAUR, but stored within the excluded section of DG5 Internal Flooding Register.

2.3.4 Blockages

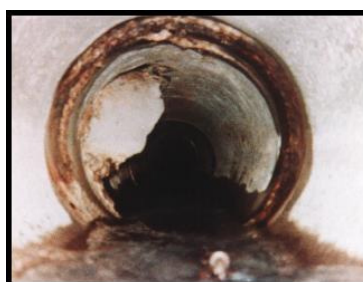
A sewer blockage can be attributed to a number of factors, including siltation, fat, roots, and debris, as shown below.



For regulatory reporting, silt, fat, roots debris are all classed as a blockage. However, it is important that the actual cause of the blockage is recorded within the incident record. The response to each of these might require a different solution. For example, a persistent fat problem may require trade effluent control or persistent siltation problems may need to be added to the de-siltation programme for that area.

2.3.5 Collapsed Sewer

In the context of the indicator a collapsed sewer, is a sewer that creates a restriction or induces a blockage, e.g. fracture, deformation, intruding junction. A rising main burst is also classified as a collapse. An example of a collapse is shown below.



2.3.6 Equipment Failure

Equipment and operational failures can be attributed to power outages, inadequate maintenance regimes, a change to operating regime other than that designed for, mechanical or electrical failure.

Where a pumping station has failed then distinction must be made between network and terminal stations, as well as the criticality or size band of the station indicated.

Where a pumping station can be seen to be overrun by the incoming flows and can be shown to be operating within its design parameters then this may be an indication of severe weather or inflow from another source e.g. watercourse, tidal, ground water infiltration etc.

If the pumping station can be seen to be beaten by incoming flows in non-severe weather conditions and can be shown to be operating within its design parameters

consideration should also be given to the possibility that the capacity of the pumping station has been exceeded, i.e. the sewer network now suffers hydraulic incapacity. Properties flooded internally as a result of such situations shall be classed as DG5 reportable.

Flooding caused by failure of an anti-flood device on a private connection, e.g. NRV, should be ascribed back to the underlying cause, hydraulic incapacity, and recorded as an internal flooding incident.

2.3.7 Third Party Causes

A third party incident is one where Northern Ireland Water could take action to recover costs from those responsible. These can include the discharge of material into the public system causing a blockage, or equipment failure, vandalism, network impacted by a third party e.g. a builder or other statutory utility.

It is important that causes beyond the reasonable control of the company are identified and described especially where a claim might be pursued against a third party. If permanent improvement or temporary operational works for Northern Ireland Water causes internal flooding then this must also be recorded and the reasons given as to why it happened.

The Floods Strategy Steering Group is made up of Northern Ireland Water, Rivers Agency, Roads Service and Local Councils could provide a useful forum in which to establish responsibility for disputed third party flooding.

2.3.8 Increase in Demand

Increase in demand is defined by Northern Ireland Water as predicted growth, which exceeds the available headroom within the network on the trigger event.

Verified hydraulic models shall be used to identify properties at risk of flooding as a direct result of development/ growth based on the Local Area Plan. This analysis is generally an output from a Drainage Area Study (DAS). No other analysis on demand is carried out.

2.4 Flooding Class Definition

- 1 in 10; is applied to reported flooding location due to hydraulic incapacity during a rainfall event with a return period between 5 and 10 years.

- 2 in 10; is applied to reported flooding location due to hydraulic incapacity during a rainfall event with a return period of 2 in 10 years i.e. <5 years, or has actually flooded twice within a 10 year period.
- 1 in 20; is applied to reported flooding location due to hydraulic incapacity during a rainfall event with a return period between 10 and 20 years.
- Severe Weather; locations refer to a reported flooding incident with a return period greater than 20 years.
- Flooding Other Causes; is applied to reported flooding locations where the cause of flooding has been found not to be hydraulic incapacity i.e. blockages, collapses, third party or equipment failure causes.
- Removed due to Company Action; is applied to reported flooding locations where NI Water has constructed a permanent solution to remove the risk of flooding
- Removed due to Better Information; is applied to reported flooding locations where information has been obtained which proves that the cause of flooding was not due to incapacity in the sewer system.

3 Internal Flooding Register – Governance

3.1 General

The NI Water DG5 Internal Flooding Register contains information on internal flooding incidents caused by the hydraulic incapacity of sewers, and properties at risk of experiencing internal flooding. NI Water's Asset Management section (AMS) is the owner of the DG5 Internal Flooding Register.

The information recorded on properties affected by internal flooding or those at risk of experiencing flooding constitutes a legal register for reporting to the NIAUR. The information contained within must be verifiable and available for audit.

NIAUR requires NI Water to produce an annual DG5 Report summarising the required DG5 information. NI Water is also required to maintain a DG5 Internal Flooding Register which holds information on properties at risk of flooding, once in twenty years and once or twice in ten years due to the hydraulic incapacity of sewers. NI Water must also report on each flooding category status of each property on the register and all annual changes to the register.

The DG5 Internal Flooding Register will contain the information required to prepare Table 3, of the Annual Information Returns (AIR). This information can be accessed via the reporting function on the DG5 incident and property database.

The DG5 Internal Flooding Register has been developed from records that date back to 1990 and the increasingly robust investigation of 'live' incidents from 2008 onwards.

3.2 Governance

Maintenance of the DG5 Internal Flooding Register and AIR reporting is the responsibility of AMS and the Network Sewerage Business Unit (NSBU). Clear definition of responsibility for actions, analysis and records within the DG5 Internal Flooding Register has been entrusted to the appropriate sections within NI Water. The stakeholders and their responsibilities have been defined within this methodology.

This end-to-end DG5 business process outlined in this document, and attached in Appendix A, will ensure that responsibilities and performance measures are in place to ensure the quality of information captured and maintained is consistent at all levels through the process.

The DG5 Panel has responsibility for approval of additions to and removals from the register, while also ensuring that the reporting processes and outputs remain robust enough to meet the reporting requirements of NIAUR. Responsibilities for the internal DG5 flooding reporting process will be reviewed on an annual basis and updated accordingly.

4 Internal Flooding Register – Business Process

4.1 Notification of Internal Flooding Incident to Call Centre

All flooding incidents are recorded through a series of different source collection methods in NI Water's asset inventory management system. This happens by customers reporting flooding incidents via our Customer Call Centre. The call handlers will establish if the incident is the responsibility of NI Water and then confirm with the customer that the incident was indeed internal flooding and record it on NI Water's call management system. A Caller Log is created with the incident information then passing to NI Water's Work Control Centre staff who distributes the relevant work order to the appropriate contractor for action. This step takes no longer than one week to complete.

4.2 Initial Investigation by Network Sewerage Business Unit

The NSBU will initiate the first phase of investigations once an internal flooding incident has been reported. Evidence gathered at this initial stage is passed to Asset Performance (AP) for further investigation/verification. The process that NSBU follow is outlined below;

- Reported Internal Flooding Incidents are downloaded from the company's asset inventory management systems and interrogated, with duplicates removed.
- Information held on Customer Reports and Flooding Incident Reports are assessed along with photographic evidence and previous flooding records to ascertain if the reported incident is internal flooding.
- NSBU to carry out further investigations to determine if the cause of flooding incident was hydraulic incapacity or due to other causes, i.e. Blocked Sewer, Equipment Failure or Collapsed Sewer. This is done by a number of methods including site visits, concentric circle surveys, customer interviews and review of existing incident information. If flooding is due to other causes, the property is placed in the excluded section of the DG5 Internal Flooding Register. (Investigation methods are outlined in Section 4.2)
- If hydraulic incapacity is confirmed NSBU use a weather report to determine if the incident is as a result of severe weather. If severe weather is confirmed the property is excluded. The same weather report, along with historic records (if applicable), is used to categorise non-severe weather incidents into one of three storm return categories – 1:20, 1:10 and 2:10. In addition properties that suffer from RTU, due to hydraulic incapacity, are also recorded. (Storm Return Categories and RTU explained in Section 4.2.10 and 4.2.11).

Once NSBU have completed the above stages a folder of evidence is compiled and forwarded to AP for further investigation/verification.

4.3 Identification of additional properties by Engineering and Procurement

In addition to the weekly flooding incident download by NSBU, Engineering and Procurement (EP) will forward a monthly report detailing any newly identified DG5 properties to NSBU for investigation. These potential DG5 properties will be identified from on-going Capital Works Programme (CWP) Schemes. This step is completed on a monthly basis.

4.4 Further Investigation by Asset Performance

AP receives all fully investigated and categorised DG5 Properties from NSBU on a monthly basis. AP carryout further detailed investigations to verify the investigations undertaken by NSBU. Detailed investigations can include modelling, DAS, customer questionnaires, Geographical Information System (GIS) assessments and topographical surveys.

AP carryout the following investigative process;

- Assess the history of flooding incidents at each property to confirm the NSBU flooding report. Historic assessments may include investigations of reported external incidents, extreme weather event records and incidents confirmed at adjacent properties.
- Interview the Operational Area Field Manager (FM) to confirm that the property has a history of internal flooding. AP also seeks advice from the relevant FM as to the cause of the internal flooding to aid in further investigations.
- Use GIS to assess the position of the sewer network.
- Carryout site topographical surveys of the sewer network and surrounding area.
- Interview the property owner with pre-set questions in DG5 Internal Flooding Questionnaire.
- Assess existing network model, i.e. DAS, for predicted flooding to verify if property floods under specific flooding scenarios.

Once AP has completed the above stages a report will be compiled summarising the evidence gathered including recommendations. If hydraulic incapacity is confirmed the evidence will be presented to the DG5 Panel to propose adding the property to the DG5 Register.

Note; if the cause is still unknown after the course of investigations and the internal flooding is major and frequent enough to warrant a thorough investigation, then a Project Consideration Form (PCF) will be raised to propose a feasibility study.

4.5 Approval of Additions by DG5 Panel

The DG5 Panel review the evidence brought before them and decide whether to add the property to the DG5 Internal Flooding Register. If the Panel members need more evidence, the property will be returned to AP for further investigation, and then re-submitted to the Panel for consideration. This step is completed once every month.

4.6 Update of Asset Information Records

The DG5 Panel Secretary will digitise all flooding incidents approved by the DG5 Panel onto the DG5 Layer of the company's GIS System, and update the DG5 incident and property database with the associated incident.

4.7 Initiation CWP Project by Asset Performance

The DG5 Panel forward all new additions to the DG5 Internal Flooding Register to AP to initiate the CWP process. Asset Performance cross-check existing CWP Schemes to ensure the property is not included in an on-going project. A PCF will be created to begin the CWP process.

Once the relevant section of the scheme is complete a DG5 Beneficial Use Form is sent from EP to AP, where a check against drainage area studies carried out to establish if the reported flooding has been resolved. If a resolution to the flooding is confirmed AP prepare supporting evidence to present at DG5 Panel for removal from the DG5 Internal Flooding Register

4.8 Approval of Removal by DG5 Panel

If a property is to be removed from the DG5 Internal Flooding Register due to 'Company Action', a Beneficial Use Form must be presented as evidence. If a property is to be removed due to 'Better Information' a folder of evidence must be presented outlining the reasons. This is completed once every month.

This clear and strictly controlled process will govern the movement of each property as it is investigated. Each stage described above can be seen in Appendix A.

5 Internal Flooding Register – Administration, Additions and Format

This section provides guidance on how properties at risk of flooding due to the hydraulic incapacity of sewers are categorised within the DG5 Internal Flooding Register.

5.1 Rules Governing Internal Flooding Register

The following rules govern the DG5 Internal Flooding Register and describe how a property is added and removed from the register. Property additions and transfers must follow the appropriate procedure as described below. (Property removals are discussed in section 7).

5.1.1 Additions to Internal Flooding Register

This procedure must be followed for all new flooding incidents received through the weekly NSBU download (see Section 3.2). These incidents will usually have occurred recently, although it is possible new information may cause a historic event to be reclassified.

- All properties that have been affected by internal flooding, caused by hydraulic incapacity, must be reported in the DG5 Internal Flooding Register. Properties flooded due to Other Causes (Blockage, Collapse or Equipment Failure) will be placed in the 'excluded' section of the same register and reported in Table 3 of the AIR.
- First time flooding where hydraulic Incapacity is confirmed shall be supported by weather reports and any supporting DAS data.
- A property affected by internal flooding as a result of hydraulic incapacity is categorised by the severity of the rainfall event and how often flooding has been recorded.
- All properties affected by flooding due to hydraulic incapacity will be investigated to ensure that each property or area flooded is accounted for within the appropriate category.
- For repeat incidents, supporting meteorological data will be required only if there is significant difference in the number of properties affected within the same location or if an event is deemed to be severe. An increase in frequency will affect the prioritisation and in some instances the register category of some or all properties affected.
- If the event was due to 'Severe Weather' the properties are placed in the 'excluded' section of the DG5 Internal Flooding Register.
- Where a property has flooded as a result of failure of a mitigation device, it should be reported as an equipment failure.
- Only if a basement has a 'right to connect' to the public sewerage system and has flooded can it be identified as being affected by internal flooding and categorised appropriately.
- If the flooding is shown to be outside Northern Ireland Water's responsibility (Third Party), it is excluded from the DG5 Internal Flooding Register and flagged appropriately within the exclusion register.
- Properties added due to better information are placed in the DG5 Internal Flooding Register when flooding has been identified for the first time,

usually as a result of network analysis, greater local knowledge or following customer contact.

5.1.2 Sources of Information

Historic information can be used with discretion in order to support or understand the full extent of a flooding incident.

If properties are found to have historically flooded when carrying out a study within a catchment (e.g. DAS) then details should be captured and the appropriate information passed to NSBU. Supporting information would include:

- The use of verified hydraulic models.
- Site and level Information.
- Customer interviews.
- Shared information between other relevant bodies e.g. Local Authorities.

Information can also include the following:

- Flooding at a property being caused by blockages/ equipment failure rather than hydraulic incapacity. Acceptable supporting data would be date stamped CCTV, or static photographic evidence.
- Severe weather classification – data provided by weather reports
- Customer Interviews
- Flooding shown to be caused by a Third Party.

5.1.3 Investigations where Hydraulic Overload is suspected

After a flooding incident has occurred it is recorded and passed to NSBU who will carry out further investigative work to ensure that the cause, mechanism and impact of flooding is identified and analysed as soon after the event as is practicable.

This process will ensure that:

- The most appropriate action is taken.
- Where necessary a cost-effective solution proposed.
- Flooding regulatory registers are maintained with accurate and up to date information.

5.1.4 Incident Investigations

Initial site investigations will be carried out by the Contractor, co-ordinated by Networks Sewerage Section. The number of properties affected by the incident and the extent of the other external areas will be recorded regardless of the cause.

If the cause cannot be attributed to 'other causes' i.e. through CCTV, visual inspections, jetting, customer liaison or third party, then a request for further

investigation will be submitted via the work order. This request will be submitted to the Contractor, by Networks Sewerage for action.

5.1.5 Network Review

This is primarily a desktop exercise to review all available information on the site and relevant assets. This will include information on the catchment through existing asset management plans, DAS, hydraulic modelling, feasibility studies, MET office data analysis, and previous cluster data if a repeat incident.

If there are known operational hot spot areas then further work on capacity checks, assessment of hydraulic model predictions and historic information will be needed. A network review will only be carried out in detail where the mechanism of flooding is unclear or where the rainfall data and impact is inconsistent with other evidence.

5.1.6 Sites Investigations

These are carried out as soon as is practicable after the incident happening. This is to ensure that the necessary evidence is gathered as close to the event as is practicable.

Site investigations may also show that there is evidence to prove that unreported flooding has occurred. Investigations are carried out using the concentric circle methodology, where investigations will start at the property affected by internal flooding and work outwards to adjacent properties in all directions. This will ensure that all affected properties are captured and recorded, allowing the full scale of the internal flooding to be realised. This approach will be repeated for every property identified for each incident.

5.1.7 Customer Questionnaires

Customers can provide useful information on the events leading up to, during and after an incident has occurred. Where appropriate a customer questionnaire should be completed.

5.1.8 Weather Reports

Weather reports will only be requested if:

- It is a first time flooding incident.
- There is low confidence in understanding the problem.
- It is a repeat incident and there is a significant disparity between the numbers of properties recorded by recurring incidents.
- Severe weather is suspected

Use of weather reports to categorise properties

- Properties will be categorised as 'excluded due to severe rainfall' if the weather report identifies the storm during which the internal flooding occurred as having a return period of greater than 1 in 20 years.
- Properties will be placed in the 1 in 20 register if the weather report identifies the storm during which the internal flooding occurred as having a return period of 1 in 20 years or less and greater than 1 in 10
- Properties will be placed in the 1 in 10 register if the weather report identifies the storm during which the internal flooding occurred as having a return period of 1 in 10 years or less and greater than 1 in 5
- Properties will be placed in the 2 in 10 register if the weather report identifies the storm during which the internal flooding occurred as having a return period of 1 in 5 years or less.

5.1.9 New Hydraulic Model Builds

If a hydraulic model does not exist and the extent of the problem cannot be determined from site investigations then a model may need to be commissioned.

Note: Prior to any major capital investment a verified hydraulic model should be used for solution development.

5.1.10 Localised Enhancements to Existing Models

Where a hydraulic model exists, then it may be necessary to carry out some localised enhancements.

This process may include manhole survey, and / or dis-aggregation of the network prior to any solution development. The validity of the enhancements to the model must be checked in that area against the original verified model.

5.1.11 Conversion Factors

There are a number of situations where conversion factors must be applied when calculating the DG5 value of larger premises and buildings. Normally a single property or house is considered to constitute one DG5 property. This approach assumes the single property is of typical size, with a typical number of appliances discharging into the sewer network.

For larger premises and buildings that are likely to have more appliances a conversion factor needs to be applied for the full DG5 value of the property to be realised and prioritised accordingly. Properties that are classed as large commercial premises should have the conversion factor applied.

The DG5 value will be calculated by adding together all the loading units for all the appliances in the building and dividing this figure by 24 to produce the DG5 equivalent.

Water Fitting (See note 1)	Loading Units
WC Flushing Cistern	2
Wash Basin in a house	1.5
Wash Basin elsewhere	3
Bath (Tap nominal size 20mm)	10
Bath (Tap nominal size larger than 20mm)	22
Shower	3
Sink (Tap nominal size 15mm)	3
Sink (Tap nominal size larger than 15mm)	5
Spray Tap	0.5
Bidet	1.5
Domestic Appliance (subject to a minimum of 6 LU's per house) (See note 2)	3
Communal or commercial appliance	10
Any other water fitting or outlet (including a tap – but excluding a urinal or water softener)	3

Note 1; Reference to any fitting includes reference to any plumbing, outlet, dedicated space or planning or other provision for that fitting

Worked Example – 1 Alanbrook Road, Belfast (Thales Factory)

Water Fitting	No. per property	Loading Unit	Total
WC flushing cistern	46	2	92
Wash basin in a house	0	1.5	0
Wash basin elsewhere	0	3	0
Bath (tap nominal size 20 mm)	0	10	0
Bath (tap nominal size larger than 20 mm)	0	22	0
Shower	4	3	12
Sink (tap nominal size 15 mm)	70	3	210
Sink (tap nominal size larger than 15 mm)	0	5	0
Spray tap	0	0.5	0
Bidet	0	1.5	0
Domestic appliance	0	3	0
Communal or commercial appliance	0	10	84
Any other water fitting or outlet (including a tap – but excluding a urinal or water softener)	10	3	30
			428

DG5 Equivalent;

$$428 / 24 = 17.83 \text{ (rounded up to 18 units)}$$

5.1.12 At Risk Categories

Properties are placed under one of the following three categories in the DG5 Internal Flooding Register:

1 in 10 – Frequency of flooding once in 10 years; Properties are classified here if either:

- The property has flooded once in 10 years from non-severe rainfall events

- The property has flooded from a single event shown to be less than a 10-year return period storm but more than a 5-year return period storm. (weather report required)

2 in 10 – Frequency of flooding twice in 10 years; Properties are classified here if either:

- The property has flooded more than once in 10 years from non-severe rainfall events
- The property has flooded from an event shown to be less than 5-year return period (weather report required)

1 in 20 – Frequency of flooding once in 20 years; Properties are classified here if either:

- This is the default category for all historical flooding properties coming into the register.
- The property has flooded from an event shown to be less than 20 year return period but more than 10 years. (weather report required)

Properties that have previously flooded and are included in the DG5 Internal Flooding Register but which have since not flooded in the last 10 years during a non-severe rainfall event, will be placed into the 1 in 20 category.

5.1.13 Timing Out

Properties can move between the different DG5 Internal Flooding Register categories, if they have not had a repeat flooding incident over a certain period of time.

Properties at risk of flooding internally due to hydraulic incapacity will move between the flooding register categories on a 'timing out' basis, as follows:

- If a '2 in 10' property does not suffer repeat flooding, caused by hydraulic overload, within 6 years it will be downgraded to '1 in 10'.
- If a '1 in 10' property does not suffer repeat flooding, caused by hydraulic overload, within 11 years it will be downgraded to a '1 in 20'.

5.1.14 Restricted Toilet Use

RTU is an NIAUR AIR reporting requirement. Properties suffering from RTU are placed in one of the three categories discussed in Section 4.1.12, and recorded in the AIR.

5.2 Format of Internal Flooding Register

5.2.1 Record Data held on each Property

The records held on each property on GIS will include at least;

- Date of Incident
- Property Address – Property Number, Street Name, Town and Postcode
- Grid Reference
- Sewer Type
- Asset causing flooding incident
- Library of Documented Evidence for addition
 - Field Manager Report, GIS Map, Incident Report, Ellipse Report, Met Office Report (if applicable) and Confirmation of CCTV
- Library of Documented Evidence for removal
 - DG5 Beneficial Use Form

5.2.2 Property and Incident Unique Identifiers

A DG5 incident number is used within the DG5 Internal Flooding Register and all related registers as a unique identifier to distinguish one incident from another.

Structure of DG5 Property and Incident Numbers

- DG5P – corporate indicator that the record is a DG5 Property
- 0000001 – unique seven figure number for each DG5 Property
- DG5I – corporate indicator that the record is a DG5 Incident
- 0000002 – unique seven figure number for each DG5 Incident

The generated seven figure number is unique for both DG5 Properties and Incidents and no two DG5 Properties or Incidents can have the same seven figure combination.

All historic and new DG5 properties will be assigned a DG5 incident number, using the above format. DG5 Property and Incident numbers will be allocated in order of date added to the register.

6 Internal Flooding Register – Periodic Maintenance

Periodically the register should be assessed to check for the following:

- Properties that have been recorded as flooding but have not had a repeat flooding after 10 years will be demoted to the 1in 20 category within the register but they are not automatically removed from the register.
- Comprehensive audits of the DG5 Internal Flooding Register must be carried-out annually (or when necessary) to ensure the information held within is accurate and reflects what has happened throughout the year.

7 Internal Flooding Register – Solutions

7.1 Permanent Solutions

A permanent solution to flooding risk is dependent on the cause. Where the problem can be isolated, a quicker and cheaper permanent solution could be implemented. However, this is not always the case and a permanent solution can take several years to construct due to the solution development, design, and tendering and construction process.

In some cases the cost involved to rectify a problem will far exceed the benefits. This means that where the solution cost exceeds a certain level per property then other action may need to be considered i.e. 'Right to purchase', 'Mitigation' or 'Do nothing' alternative.

A permanent solution will enable a property to be removed from the register.

Permanent solutions can fall into one of the following categories:

- Sewer upsizing and flow attenuation; these types of solutions require a hydraulic model and extensive data collection and analysis to understand the extent of the problem and therefore identify the appropriate cost effective solution.
- Property isolation; if a single or small number of properties are shown to be affected then where the cost of other more traditional solutions far exceed the benefit then isolation may be seen as the most appropriate long term solution.
- Right to Purchase; it is not NI Water's normal policy to purchase a customer's property. However, where there is extreme and persistent flooding the most cost-effective solution may be seek to purchase the at risk property.

7.2 Mitigation and Contingency

Mitigation will be considered where the costs of capital schemes are high or where permanent works are not planned in the short term. Where it is appropriate to do so, mitigation measures can offer customers some degree of protection against internal flooding from the public sewerage system i.e. reduce the frequency of incidents.

Mitigation measures can be applied to either persistent internal flooding or where there is severe flooding to sensitive areas. However, mitigation measures will not enable a property to be removed from the register. Where a property has flooded as a result of failure of a mitigation device it should be reported as equipment failure.

Properties with mitigating measures installed to prevent internal flooding will be defaulted into the 1:20 category of the DG5 Internal Flooding Register and will be prioritised accordingly for solution.

7.3 Prioritisation and Cost Benefit Analysis

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

- Review of existing CWP to ensure DG5 related programmes of work are captured.
- Assessment of DG5 Register to develop prioritisation methodology relative to frequency and impact.
- Receipt and analysis of feasibility studies to compliment prioritisation matrix including cost details.
- Review to ensure alignment with Regulatory Reporting on AIR and CIM returns.

8 Internal Flooding Register – Removals

A DG5 Property can be removed from the DG5 Internal Flooding Register when one of the solutions described below has been implemented. This will usually be triggered by construction of a CWP Scheme, or new information on the causes of historic events. Removal of a property from the register can only be done through a formal business process and where there is a justifiable reason, supported by sound evidence.

These properties will have supporting documentation to demonstrate that the grounds for removal have been met. This evidence will be presented to the DG5 Panel for formal removal of a property. Solutions to be considered before property removal from the register can be approved include;

- Permanent Solution; where a permanent solution has been constructed and is in beneficial use, the Capital Programme Team will present a DG5 Beneficial Use Form to the DG5 Panel as a record of confirmation of the flooding scheme completion. This will include the properties to be removed and cost of solution apportioned to flood prevention. The Beneficial Use Form will be approved by the DG5 panel members, and the identified properties removed from the DG5 Internal Flooding Register. They will in turn be re-categorised as removed due to 'company action'. The property will remain in this category of the register indefinitely or until such a time as the property floods again.
- Minor Works; where there has been evidence of asset deterioration, e.g. subsidence or through third party interference and a minor asset improvement project has been completed to rectify the flooding issues. Evidence that the flooding has been resolved will come from the appropriate FM and signed off by the DG5 Panel members.
- Better information - Severe weather; the event causing the property to be on the DG5 Internal Flooding Register is confirmed to have > 20 year return period (i.e. severe) and supported by appropriate meteorological or DAS investigation data.
- Better information - Flooding due to Third party; where investment on the sewer network would not prevent a repeat internal flooding incident and NI Water does not have responsibility for the problematic sewer the properties should be removed from the DG5 Internal Flooding Register. The details should be recorded in the AIR commentary. However, if the responsibility for the problematic sewer is shared with NI Water, then the property remains on the Register.
- Better information - Flooding is due to other causes; where it can be confirmed that flooding has occurred due to blockage, collapse or equipment failure details will be recorded as 'other causes' within the excluded section of DG5 Internal Flooding Register.

Note: Mitigation will not enable a property to be removed from the register.

Finally, errors can happen;

- Error, identified by Audit or Investigation. Where an error can be clearly shown to have occurred, then the property can be removed.

Operational improvements are an unlikely explanation for justifying removal of properties from the register. Therefore any supporting data must be robust, for example, CCTV data. In the case of permanent solution then the property would be removed.

9 Annual Information Returns

The DG5 Internal Flooding Register will contain the information required to prepare Table 3, of AIR. The information required for the AIR will be retrieved from DG5 Internal Flooding Register.

- AMS will report on internal flooding incidents due to hydraulic incapacity held in the DG5 Internal Flooding Register.
- NSBU will report on internal flooding incidents due to other causes held in the 'excluded' section of the register
- AMS and NSBU will collaborate closely when compiling the AIR for internal flooding.

– Asset Performance Customer Questionnaire

Northern Ireland Water

Asset Performance
Asset Management
Westland House
Old Westland Road
BELFAST
BT14 6TE

Tel: 08458 770002
Fax: 028 2566 3131
Email: w.moffett@NI Waterater.com
www.NI Waterater.com



Owner/Occupier

Email w.moffett@NI Waterater.com
Your Ref
Our Ref
Date

-
- Dear Sir/Madam
-
- **SEWER FLOODING AT THE ABOVE ADDRESS**
-
- I refer to your complaint of sewer flooding on, and would be very grateful if you could help me with the following pieces of information:
- - Was the flooding internal (e.g. in the house or attached garage) or external?
 -
 - What was the cause of the flooding?
 -
 - Has it been resolved by Northern Ireland Water or others?
 -
 - What way was it resolved (if known)?
 -
 - If it is still occurring, when did it last happen?
-
-

▪ Could you please respond by calling me on my mobile (07917356798) or emailing me (w.moffett@NI Waterater.com). Your assistance in this matter will be much appreciated.

▪ Yours faithfully,

▪

▪

▪

▪ William Moffett

▪ Asset Performance

– Asset Performance DG5 Determination Report

ASSET PERFORMANCE DG5 DETERMINATION REPORT	
Name and Address (Add BT Code)	
Incident Date	
Flood Type	
Rainfall Report	
Ellipse Notes	
CEMS Notes	
Customer Comments	
F.M. Comments	
Restricted Toilet Use	
Other Information Sources e.g. Pollution Reports, WWPS alarms, Captrax, Flooding Incident Reports, CCU etc.;	
GIS Assessment	
Existing Sewer Details	
Type of sewer	
Diameter (mm)	
Material Type	
Year Laid	
Sewer Location	
CCTV Carried Out	
Sewer Desilted	
Comments	
Topographical Assessment	
Possible Number of Other Properties Involved	
Flooding Mitigation (NRV's etc.;	
Drainage Area Catchment	
D.A.S.is Network Model Available	
DAS is there Predicted Flooding	
Summary	
Determination	
Signed	
Date	

– DG5 Flooding Incident Report

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

Work Order Ref No: _____ Name: _____

Location: _____

Date: _____ Arrival time: _____

7) Internal Flooding: Yes ☐ No ☐
Main Sewer ☐ Lateral Sewer ☐

Adjacent properties flooded ☐ Detached garages flooded ☐
Basements/Cellar flooded ☐ Restricted Toilet use ☐

8) External Flooding: Yes ☐ No ☐
Main Sewer ☐ Lateral Sewer ☐

Public road/footpath ☐ Public area ☐
Agricultural land ☐ Curtilage ☐

9) Comments on cause of flooding: (Select only one category below)

Blockage ☐ Collapsed sewer ☐
Defective road gully ☐ Defective private drain ☐
M&E equipment failure ☐ Other: ☐

10) Clean up operations:

Not Required ☐ Further Action Required ☐ Completed ☐

11) Previous History:

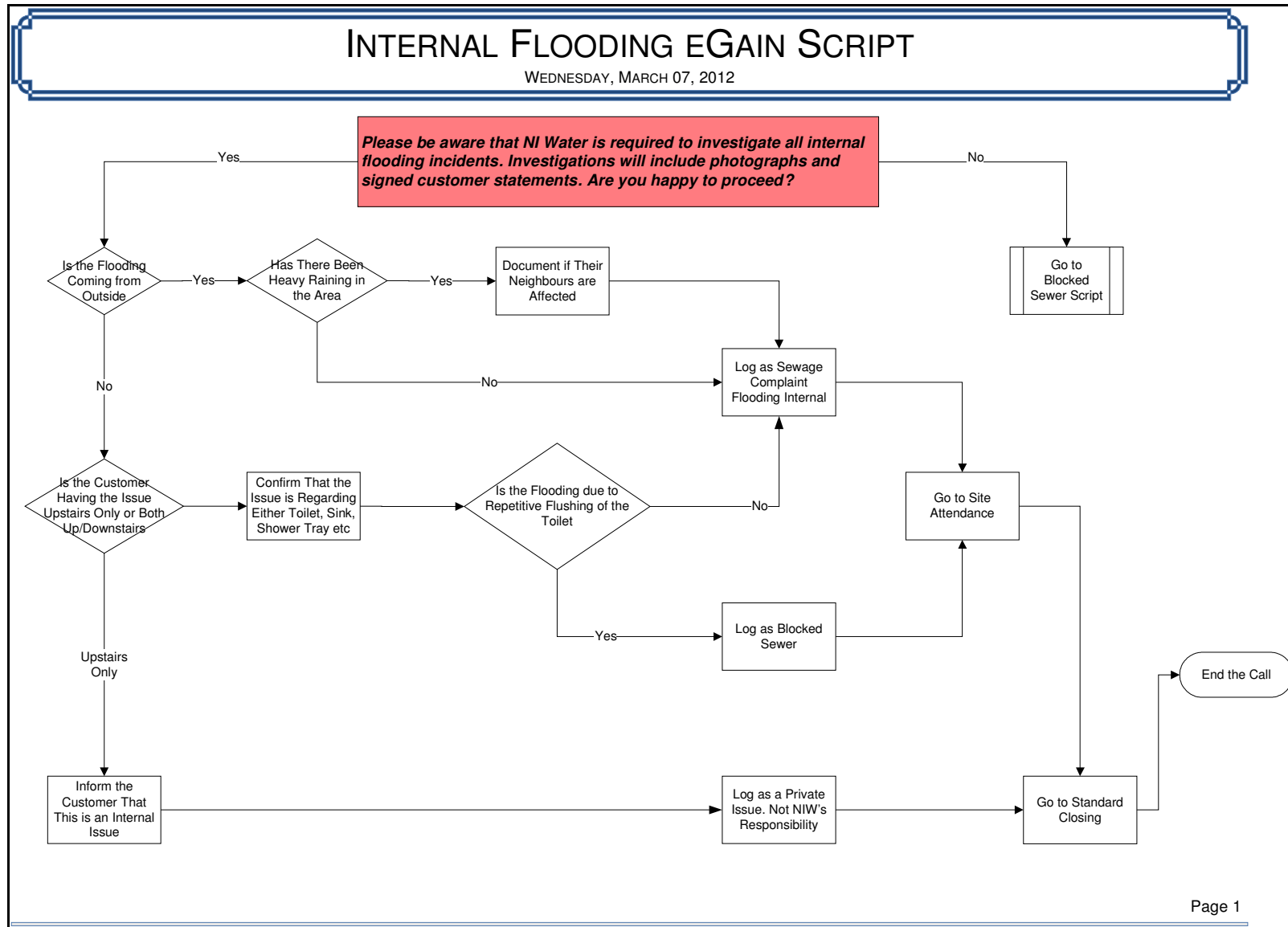
Yes ☐ No ☐ Not Aware ☐

12) Weather Conditions:

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

Comments: Especially for Flooded jobs or Follow on jobs**ATTACH PHOTOS FOR FLOODED JOBS:**

– Call Centre DG5 Caller Script



Appendix E - Extract from DG5 Register

INCIDENT_DATE	PROPERTY_NO	STREET_NAME	TOWN_CITY	COUNTY	POST_CODE	STATUS	CATEGORY	INCIDENT_REASON	REGISTER_TYPE	MITIGATION	REASON_ADDED	DATE_ADDED
24/02/2012	2	██████████	Cookstown	Tyrone	BT80 8NH	Excluded	Internal Flooding	Blockage	Flooding Other Causes	No	Better Info	23/03/2012
04/08/2011	30	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
07/06/2011	30	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
12/07/2009	30	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
23/05/2009	30	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
13/09/2008	30	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
04/09/2008	30	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
04/08/2011	28	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
07/06/2011	28	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
12/07/2009	28	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
25/05/2009	28	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
13/09/2008	28	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
04/09/2008	28	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	27/02/2012
07/08/2009	14	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	1 in 20	Yes	Better Info	27/02/2012
07/01/2012	32	██████████	Londonderry	Londonderry	██████████	Excluded	Internal Flooding	Collapse	Flooding Other Causes	No	Better Info	27/02/2012
03/07/2009	9	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	1 in 20	Yes	Better Info	27/02/2012
10/01/2012	07-Sep	██████████	Belfast	Antrim	██████████	Excluded	Internal Flooding	Collapse	Flooding Other Causes	No	Better Info	27/02/2012
30/01/2012	76C	██████████ ██████████	Bangor	Down	██████████	Excluded	Internal Flooding	Blockage	Flooding Other Causes	No	Better Info	27/02/2012
15/06/2007	61	██████████ ██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
12/06/2007	61	██████████ ██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
07/07/2011	61	██████████ ██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011

INCIDENT_DATE	PROPERTY_NO	STREET_NAME	TOWN_CITY	COUNTY	POST_CODE	STATUS	CATEGORY	INCIDENT_REASON	REGISTER_TYPE	MITIGATION	REASON_ADDED	DATE_ADDED
06/07/2011	26	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
21/07/2010	26	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
24/08/2011	26	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
06/08/2011	68	██████████	Warrenpoint	Down	██████████	Excluded	Internal Flooding	Equipment Failure	Flooding Causes Other	No	Better Info	29/11/2011
08/09/2011	██████████ 37	██████████	Belfast	Antrim	██████████	Excluded	Internal Flooding	Blockage	Flooding Causes Other	No	Better Info	29/11/2011
15/06/2007	75	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
12/06/2007	75	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
07/07/2011	75	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
15/06/2007	83	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
12/06/2007	83	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
07/07/2011	83	██████████	Belfast	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
06/07/2011	24	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
21/07/2010	24	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
24/08/2011	24	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
06/07/2011	30	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
21/07/2010	30	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
24/08/2011	30	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
06/08/2011	66	██████████	Warrenpoint	Down	██████████	Excluded	Internal Flooding	Equipment Failure	Flooding Causes Other	No	Better Info	29/11/2011
06/07/2011	28	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
21/07/2010	28	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
24/08/2011	28	██████████	Carrickfergus	Antrim	██████████	Live	Internal Flooding	Overloaded Sewer	2 in 10	No	Better Info	29/11/2011
17/09/2011	92	██████████	Lurgan	Armagh	██████████	Excluded	Internal Flooding	Blockage	Flooding Causes Other	No	Better Info	29/11/2011
17/09/2011	94	██████████	Lurgan	Armagh	██████████	Excluded	Internal Flooding	Blockage	Flooding Causes Other	No	Better Info	29/11/2011
14/09/2011	City Hotel	██████████	Londonderry	Londonderry	██████████	Excluded	Internal Flooding	Equipment Failure	Flooding Causes Other	No	Better Info	29/11/2011

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 Echo Payment Processing Team and passed to the NIW Account Services Customer Support Team
- 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.

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.

Further to the AIR11 Reporter's audit, NIW also exclude correspondence relating to payment processing, e.g. BACS notifications, payment giros and remittance advice notes.

Multiple Accounts

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

Therefore, for reporting purposes, a DG6 contact received; by a customer holding multiple accounts with NIW that is requesting an update to their

standing account details will be recorded as 1 DG6 event on 1 account and as a non-reportable event on the remaining accounts.

Furthermore, NIW are working with Rapid to activate the 'Additional Reasons' functionality to record other reasons a customer may have for calling alongside their original reason, or within their written correspondence. NIW are hoping to have this functionality in place for the commencement of the 12/13 reporting year.

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

As per NIAUR guidance, if a billing contact is not resolved by the time the year end report is run, the contact is included in the total number of billing contacts received for the year in which it is received.

However, there will be cases where the contact has still not been resolved by the time the AIR reporting information is extracted. Where the associated Holding Letter has been issued in the following year, then this closure will be reported in the subsequent year's AIR Return.

Where a Holding Letter has been issued in the same year as the outstanding DG6 contact, if it hasn't been closed by the date of the year end extraction, then this will not be reported in either this year or the following year's AIR return. We have recently embarked upon a DG6 improvement project which will help to reduce the time taken to resolve long outstanding DG6 contacts, thereby reducing the frequency of this occurrence in future reporting years.

Auditing

Internal Audits – This process falls within Echo's Quality Management system and is audited several times a year under ISO9001/2000.

Performance and the achievement of Billing enquiries are recorded as per the Contact Handling Expected Service Levels which are measured monthly in accordance with *Contract Schedule 2.2*. Detailed monthly monitoring reports of actual performance are generated by Echo within CorVu and presented in the monthly Business Review Pack (MBRP) to NIW within 5 working days of the end of each month covering lines 1.1.1 to 1.1.9 in accordance with schedule 8.4.

Validation of DG6 figures provided by Echo are carried out monthly by NIW in accordance with *Contract Schedule 2.2* and recorded in the "NIW Response to the Monthly Business Review Pack" document which is published for comment and review. Any discrepancies on monthly DG6 performance are raised with Echo and escalated.

Echo regularly performs quality reviews against contacts received to ensure contacts are dealt with correctly. Although no documentation is made available to NIW, regular reviews are carried out by Team Managers within Echo, including:

- Weekly call listening;

- Monthly scoring based on call listening and feedback to individual agents;
- Coaching and feedback; and
- Daily monitoring of all billing contacts with team feedback when necessary.

NIW conduct monthly bill accuracy checks and report their findings to Echo by randomly selecting 100 bills issued each month and analysing them for accuracy, including:

- Accuracy of standing charges, sewerage and water charges;
- Bill total agrees with supporting pages;
- Correct application of VAT;
- Customer details are correct; and
- Correct bill type is used.

Any discrepancies are logged and sent to Echo for review.

NIW Contract Office re-instated call listening from January 2011. Each month a random selection from the total calls received is made. This selection includes both billing and operational calls. Billing calls are assessed for:

- For accuracy;
- To determine if memo contents are clear and precise;
- To ensure the conversation is accurately recorded on Rapid; and
- To ensure correct use of CMS code.

Any findings are reported back to Echo management through the Response to the MBRP.

An end to end process review is carried out by internal audit.

Sources of information

System used

The telephony system comprises of a suite of Avaya products and a CallMedia ACD. The Avaya switch is tightly integrated with the CallMedia platform which provides CTI (Computer telephony Integration) and ACD (Automatic Call Distribution). Calls can be automatically routed to appropriately skilled agents ensuring a quality response to the customer, at first point of contact. NICE is the call logging system.

The software comprises of CallMedia Enterprise Console with an integral reporting suite which distributes calls based on skills sets and SLA's.

Written correspondence is date stamped at point of receipt by Echo (unless received after 16:30), scanned on a (Kodak i 620 scanner) and indexed. This safeguards security and minimises administration. Once correspondence is scanned it is indexed and batched with an allocated batch number. The scanned image is then available to Rapid Users.

All contacts received should be recorded on Rapid. Reports from CorVu are generated by Echo, validated by NIW, and are used to report on DG6 performance.

Changes in system during the report year

During the reporting year NIW carried out system upgrades of both RapidXtra and CorVu reporting databases to facilitate the use of software enhancements and enable continued licence support of the products. Neither upgrade caused any changes to the ability to report on DG6 received or closed volumes.

A review of DG6 reporting was carried out by Echo at the start of the reporting year, which enabled automated closure reports to be run using CorVu instead of Rapid. The change has improved reporting efficiency and accuracy.

Actual data

Actual data is extracted from the billing system RapidXtra using CorVu. CorVu 'DG6 Received QRY (Live)' is used to calculate the total number of DG6 contacts received (table 4, line 1) and CorVu 'DG6 Closed QRY (Live)' is used to calculate the DG6 closed performance (table 4, lines 2-5). DG6 data analysis is produced monthly and re-run for the entire reporting year, providing the necessary information essential for the Director General's reporting requirements.

Sampling

Actual data is used to report DG6 performance (table 4, lines 1-5). Sampling is only used by NIW for data quality purposes.

Reliability

All data is taken from the main billing system to ensure it is reliable and accurate.

Responses

This is defined as a response to a billing contact which may be by telephone, written correspondence or personal visit. Responses will provide the following:

An explanation of NIW's relevant policy or procedure and indicates why, in NIW's opinion, no further action on the customers billing contact is required; or

Informs the customer when action on his/her account will be taken if action cannot be taken immediately due to circumstances beyond NIW's control, for example customer needs to obtain clearance from third party, such as a landlord.

Whichever type of response is dispatched it must substantively answer all points raised by the customer and be recorded and date stamped.

Use of telephone

The telephone is the company's preferred method of responding to a billing enquiry. All DG6 related telephone calls should result in a CMS memo being

raised and coded by the agent according to the individual enquiry. An audit trail of the response will be recorded on the billing system (Rapid) as a memo with a CMS type. A full record of the actual conversation and its outcomes is held on CallMedia. A CMS is created on Rapid and contains information including:

- CMS type;
- Customer name;
- Customer address;
- Telephone contact;
- Query details; and
- Action required.

Use of letters

Letters are only used when it is not possible to deal with the customer by telephone, when a written reply has been requested by the customer and when it is deemed more appropriate by the agent. Telephone calls not dealt with at first point of contact are dealt with by the NIW Account Services department. A CMS is created on Rapid and contains information including:

- CMS type;
- Customer name;
- Customer address;
- Telephone contact;
- Query details; and
- Action required.

Holding letters are sometimes used but are customised by the agent. They are held within Rapid and are posted directly to the customer and not through DSTI.

Use of personal visit

If a DG6 contact requires a personal visit, (e.g. a meter query team site visit), the agent will raise a CMS contact. This will be transferred to the NIW Account Services Contact Team who takes ownership for resolution and closure of the contact. The Contacts Team agent will send a holding letter to the customer once the visit request has been raised. It is this date/time of this letter that is used for closure.

Response time

This is the number of working days between receipt of a contact by NIW up to and including the day of despatch of a response. For the purpose of this calculation, the day of receipt; provided it is a working day; is counted as day zero and the next working day as day one.

Emails and faxes, which can be sent at any time, that are received outside or normal operating hours shall record the receipt date as the date it was delivered to the company. For example, if an email is received on a Saturday this is recorded as day 0. The next working day (Monday) would be counted

as day 1. If an email is received on a Sunday then this is recorded as date of receipt – day 0 and Monday as day

CCNI

Written billing contacts received via the Consumer Council for Northern Ireland (CCNI) office on a customer's behalf are being included.

Holding reply

This is defined as a response to a billing contact which advises the customer that NIW will need to undertake additional research or other actions before being able to respond to the customer's contact. A holding reply is counted as a substantive response if it informs the customer what further action needs to be taken to respond to the query and includes a date by which investigations or further actions will be complete and by when the customer will receive a further communication from NIW.

A holding reply will close a contact for DG6 reporting purposes but not for NIW until all actions have been taken. NIW provides a reply within 5 working days of the customer contact and a further holding letter is sent, if there is a delay in finding a resolution. The company will include the number of days in which they will contact the customer again. Enquiries and follow up questions will not be counted as a DG6 contact.

Other Issues

Please refer to DG6 Company Commentary.

Northern Ireland Water

Level of Service Methodology

DG7 Response to Written Complaints

DG7 METHODOLOGY 2011/12

Methodology and Procedures

Northern Ireland Water (NIW) has contracted out the provision of Customer Billing and Contacts (CBC) to Echo Managed Services. Echo Managed Services (Echo) are the provider of CBC services to NIW. Written contacts and complaints are dealt with in-house by NIW Customer Services. The Accounts Services (AS) Customer Support Team within this department scan, log & index documentation whilst the AS Complaints & Exec Mail Team 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, scanned, logged & indexed by AS Customer Support Team
- CMS contact raised to AS Complaints & Exec Mail Team inboxes in RapidXtra (Customer Billing & Contact Management System)
- Allocate contacts to AS Complaints & Exec Mail Team members
- AS Complaints & Exec Mail Team member assesses, investigates and case manages complaint as appropriate
- Pass to relevant part of the business for investigation and resolution
- Review information provided by business, 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 2012. All incoming written correspondence is passed to the Account Services. It is then sifted and categorised as operational correspondence, payment notification, DG6 or DG7 according to the Utility Regulator's definitions. Following that, it is date-stamped, scanned, logged and indexed by the AS Customer Support Team.

The reported response times for all written complaints are derived from the Rapid database. All complaints, with the exception of exclusions detailed in section 3.1, are included in this total.

Definitions

A DG7 complaint is defined as any written communication from a customer or customers' representative (e.g. Citizens' Advice Bureau, solicitor), alleging action or inaction, or service or lack of a service on the company's part or that of its agent or contractor has fallen below the expectation of the customer – even if written in mild and friendly terms. This includes any expression of annoyance or dissatisfaction by the customer, or disagreement with the company.

- Written complaints include:
- Letters, 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.

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 response 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

This process falls under the remit of NIW Internal Audit. The last Customer Contact Management audit took place in May/June 2011.

In addition, each response undergoes a series of quality assurance checks before issue.

The first is carried out by the AS Complaints & Exec Mail Team member who has the item allocated to them. They check that the item has been:

- Correctly categorised as DG7
- Coded using an appropriate CMS code
- Scanned to the correct account(s)

The AS Complaints & Exec Mail Team member verifies that the information received from within the business is suitable to use in response to the complaint, before the response is drafted.

Once the response has been drafted, it is subject to a Quality Assurance Process during which adherence to an agreed Letter Writing Checklist is checked.

Monthly sampling of DG7 contacts is also undertaken by NIW Contract Office to ensure consistency of DG7 categorisation. The results of this are fed back to AS Mgmt. Team for agreement. A log of agreed exceptions is held by NIW Contract Office

The Complaints & Exec Mail Team Manager/Supervisor performs further monthly sampling of contact categorisation to ensure accuracy. These additional monitoring systems check:

- DG7 categorisation
- CMS code
- Advice code for closed complaints (existence of and; accuracy of)

Sources of Information

Complaints are sorted into the relevant categories, date-stamped, scanned, logged then indexed, thus ensuring security and minimising administration.

Each complaint received is scanned using the Kodak i620 scanner. At the end of each "batch" of correspondence scanned, a batch number is allocated. The images can then be seen by staff on their PC and indexing can begin. During indexing the following details are input by the operator:

- Property and/or customer reference
- Date
- Description

- Document type
- 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

During the reporting year NIW carried out system upgrades of both RapidXtra and CorVu reporting databases to facilitate the use of software enhancements and enable continued licence support of the products. Neither upgrade caused any changes to the ability to report on DG7 received or closed volumes.

A review of DG7 reporting was carried out by Echo at the start of the reporting year, which enabled automated closure reports to be run using CorVu instead of Rapid. The change has improved reporting efficiency and accuracy

Actual Data

Management reports are produced from the RapidXtra system, including a daily hit-list which identifies by section any item of correspondence outstanding.

Actual data is extracted from the billing system RapidXtra using CorVu. CorVu 'DG7 Received QRY (Live)' is used to calculate the total number of DG7 contacts received and CorVu 'DG7 Closed QRY (Live)' is used to calculate the DG7 closed performance. DG7 data analysis is produced monthly and re-run for the entire reporting year, providing the necessary information essential for the Director General's reporting requirements.

Sampling

Sampling is not used in compiling data for DG7. Sampling is only used by NIW for data quality purposes.

Reliability

All data is taken from the main billing system to ensure that it is reliable and accurate.

Responses

Upon receipt of a complaint, we ensure that relevant action is undertaken, provide a substantive response and ensure the correspondence is closed on the system.

The Company endeavours to answer all correspondence, regardless of the sensitivity of the issue or subject raised by the customer. Our responses do one or more of the following:

- Provide an explanation of our policy or procedure and indicate why no further action is required.

- 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 completion months sometime in the future.
- Every response answers all issues or questions raised by the customer; this is also checked on a monthly basis though DG7 sampling.

Use of Telephone

Where appropriate, telephone calls are used to respond to written complaints. Telephone calls are also used to update customers as the progress of complaints under investigation. The customer account is annotated with details of the call in these cases.

Use of Standard Letters

Standard letters are not used to respond to complaints, all responses are personalised and customised.

Use of Personal Visit

When a personal visit is used to respond to a written complaint a letter confirming the content of the visit is provided to the customer. The date of the visit is used as the date of response.

Assumptions**NI Direct**

Complaints received through NI Direct are not reported.

Telephone Complaints

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

Date of Receipt

Complaints are date stamped at point of receipt and this is used as date of receipt to NIW.

Date of Dispatch

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

Response Time

This is the number of working days between receipt of a contact by NIW up to and including the day of dispatch of a response. For the purpose of this calculation, the day of receipt; provided it is a working day; is counted as day zero and the next working day as day one.

When an e-mailed, faxed or hand delivered contact is received after 16:00 it will be scanned, logged and indexed on the next working day. The date of receipt recorded will match the actual date of receipt.

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

Substantive Holding Reply

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

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

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

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

Repeat Contact

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

This is done even if NIW consider the complaint has been dealt with as far as we are able.

Consumer Council for Northern Ireland (CCNI)

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

CCNI Enquiries and follow up questions are not recorded as complaints.

Complaints to or about Contractors

Complaints made directly to contractors about work carried out on our behalf will only be recorded if NIW are notified. If NIW are notified, complaints will be recorded even they are handled directly by the contractor.

Complaints about contractors received by NIW are reported even if they are referred to the contractor to deal with.

Other Issues

Please refer to the DG7 Company Commentary.

Northern Ireland Water

Level of Service Methodology

DG8 Bills for Metered Customers

DG8 - BILLS FOR METERED CUSTOMERS

Definitions

Every time a metered account is billed a reading type is updated onto the Rapid billing system (Rapid) to identify the type of reading.

The reading types and estimated indicator are used to distinguish the meter reading status of each metered account, which is subsequently analysed in Rapid to create the 'DG8 Meter Summary Analysis' report.

DG8 Reporting

The Rapid 'DG8 Meter Summary Analysis' report ensures we correctly identify each of the reporting requirements in the sequence shown.

The reading indicators are extracted from Rapid RPU005 meter consumption update screen. The 'DG8 Meter Summary Analysis' report extracts this information and compiles this in line with the requirements.

The report is run annually at the end of the financial year, covering the period 1 April to 31 March and includes all categories requested by the Director General for the June Return reporting.

A bill is only counted as issued if it is sent to the customer within the reporting year. Any bills that are sent after this date will be included in the following reporting year's figures.

Total Metered Accounts

The report confirms the number of active accounts with either water or water and sewerage consumption which are metered.

Company Reading and Billed

If a Company reading has been taken during the current financial year, and a bill created against that reading, it will be included under the 'Meters read by Company' indicator. The exception to this is those meters that are billed outside of Rapid (trade effluent meters).

Company readings are recorded by the Meter Reader (MR) via a PDA. Each day the MR will upload those accounts that have had a reading and or an abnormal reading from the PDA to Routestar, for transfer to Rapid.

No Bills Received During Reporting Year

Bill status is scanned for no bills issued during the reporting year and is reported under the 'Not Billed this year' indicator.

Meters included in this category are identified as having a reading entered but the 'bill sent' flag set to 'No'

Customer Readings

Reading types are scanned for not receiving a bill based on a Company Reading but at least one bill based on a 'Customer Reading' and will be included in the 'Meters read by Customers' indicator.

'Meters Read by Customer' represents the number and percentage of the meters read by the customer within the DG reporting year that are identified as either 'Customer read' or 'Customer web reading'

The Company encourages our customers to take readings themselves so that they are aware of their usage. Customer reads can be registered for billing purposes by using the On-line facility available on our website or by calling our billing line.

Customer readings are recorded via a correspondence management system. A team member will then update the account and issue a revised bill. A customer reading type indicator will be displayed on the system. The estimated read will also be visible on the system

Estimated Only

Any meters that have not satisfied any of the preceding indicators will be recorded under the 'Meters Estimated Only' indicator.

'Meters Estimated Only' represents the number and percentage of meters only estimated within the DG reporting year. The following read types are identified as estimates: Estimate Exchange Final, System Estimate, and Manual Estimate.

Unread for Two Years

If no Company reading exists during a two year period, it will be reported under the 'No Company Reading for 2 Years' indicator.

Specifically two years back from the end date of the DG report.

Exclusions

The following are excluded from the indicators:

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

Reading and Billing Frequency

Frequency of reading:

- Non-household properties are scheduled to be read twice a year. The reading schedule for each read is completed over a six month period,

the 1st read cycle is April to September and the 2nd read is October to March.

- Non-household – large volume users are read and billed monthly.
- There are a number of meters that have been assigned a reading frequency of Annual Read within the Rapid system. However, these meters are either DRD Supply or Test Meters which fall under the permitted exclusions and will only be read to assist business requirements, as neither category generates a customer bill.
- Frequency of Bill Issue :
- Household properties – the Company do not currently bill domestic properties
- Non-household – the Company aim to read at twice a year and bill twice yearly.
- Large non-household users – the Company aim to read and bill monthly.

Method of Meter Reading

Before the start of each reading period, whether monthly or six monthly, details of metered accounts scheduled for reading are transferred from Rapid to the Routestar reading system.

The accounts are then downloaded on to an electronic data storage unit (PDA) to facilitate the actual reading of the accounts by a MR in the field.

The meter reading information obtained by the MR is then transferred back to Rapid from Routestar, which is subsequently updated upon the meter being read.

The data transfer from the Routestar to Rapid is not solely automatic and currently requires manual assistance by the MAM team.

Abnormal Readings

An abnormal reading can be identified by one of two factors:

- A meter reading that gives a usage that does not fall in line with previous usage patterns, identified by the MR, billing system or customer.
- A meter reading that does not correlate with previous readings taken.

The PDA unit automatically calculates the usage between a new reading and the previous reading. The MR checks the usage against the previous readings that are displayed on the PDA. If the usage appears to be abnormal the MR will enter a report onto the PDA and or use a pre-set indicator to explain why (trouble codes).

A daily 'Rejected Readings' report is produced through the Rapid billing system that also identifies any abnormal usage that require further investigation. Each account on the report is checked and if accepted the reading will be utilised and a bill issued. If the rejected read cannot be added,

a site visit request is raised to instruct a Meter Query Technician (MQT) to investigate and provide further information.

Previous Misreads

Accounts that are identified as having previously been misread are subject to re-calculation based on the most recent meter reading.

Access Denied / Meter Reading Unobtainable

In such instances that the Company is unable to gain access to the meter, a skip code is entered which identifies that access was denied. If the customer does not provide a reading before the billing run a system estimate is used.

Faulty Meters

Where a faulty meter is identified and a MR or MQT replaces the meter, it is recorded on an MRD (Meter Replacement Docket) which their Field Manager (FM) signs off and sends to the MAM team, and "First Read New Meter" is logged on the handheld.

If a MR or MQT cannot replace the meter, a MMR (Meter Maintenance Request) is completed which their FM signs off and sends to the Meter Maintenance (MM) team, MM then forwards the MMR to the Contactor. When the meter has been replaced, the Contractor advises MM of the replacement details. The old and new details will then be returned by MM on a MRD to MAM for updating on the billing system

Updating, Post Bill Issue

If the Company has any disputed readings, the account will be suspended while further investigations are being made. Once the investigations are finalised, a revised bill will be issued if necessary.

Assumptions

Those accounts excluded from the analysis are categorised using the definitions provided by the reporting requirements, as noted above.

Additional Information

Echo, on behalf of Northern Ireland Water, is 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 [REDACTED] was initiated on 21st August 2007 to provide a direct means of contact for elected representatives and council members telephoning to enquire about specific issues in their constituencies.

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

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. Only legitimate switchboard CMS logged to these accounts will be excluded (those with a CMS type of internal, call transfer or switchboard).

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 Not Abandoned

The 'calls not abandoned' category aims to capture the total number of callers who do not abandon their call before it is substantively answered by NIW. All calls not abandoned 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

Issues are categorised via CMS type and these include billing, water service and wastewater issues. As a general policy, NIW records all telephone calls about these issues as complaints.

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 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.

NIW contract office listen to 10 randomly selected calls per month, check that they have been logged on Rapid correctly and feedback any quality issues highlighted to ECHO through the monthly response to the MBRP.

Call Handling

Practices and Procedures

All calls received are managed by 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)**

IVR has been used during the reporting year to provide customers with information during 3 separate incidents.

1. NIW launched a winter awareness campaign in order to prepare customers for another potentially harsh winter. An IVR message was set up in anticipation of an increase in customer calls in response to a leaflet drop by NIW the IVR was activated from 25/10/2011 – 07/11/2011.
2. A boil notice in Ballymoney affected circa 3000 properties. An IVR was activated from 08/11/2011 - 18/11/2011
3. There was a burst mains in Dungiven where potentially circa 2000 properties would lose supply and the IVR message was activated on 23/11/2011 and was taken off on 24/11/2011

During business as usual an introductory message is set up and assigned to each queue, e.g. Billing Enquires Line. The message greets the customer and thanks them for calling the relevant number. It explains that an agent will be with them shortly and to note that calls are recorded to help provide quality assurance and training.

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.

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

During business as usual customers hear an option when they call waterline "press 1 for new water connections, or for all other enquires please continue to hold".

When an IVR message is activated, the customer will hear a message informing them that if they are calling in relation to a specific incident to press 1 (where they will hear pre-recorded regularly updated information about the incident) or to press 2 to be put through to an agent.

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.

Text Relay Service and Text Phone

NIW has provided for a Text Relay and Textphone service to support customers with hearing difficulties.

Text Relay Service is a third-party service whereby the customer rings a Text Relay operator, who in turn contacts the Customer Relations Centre via the normal customer line (Waterline/Leakline/Billing, etc) on behalf of the customer. This is recorded as a call received on the appropriate line.

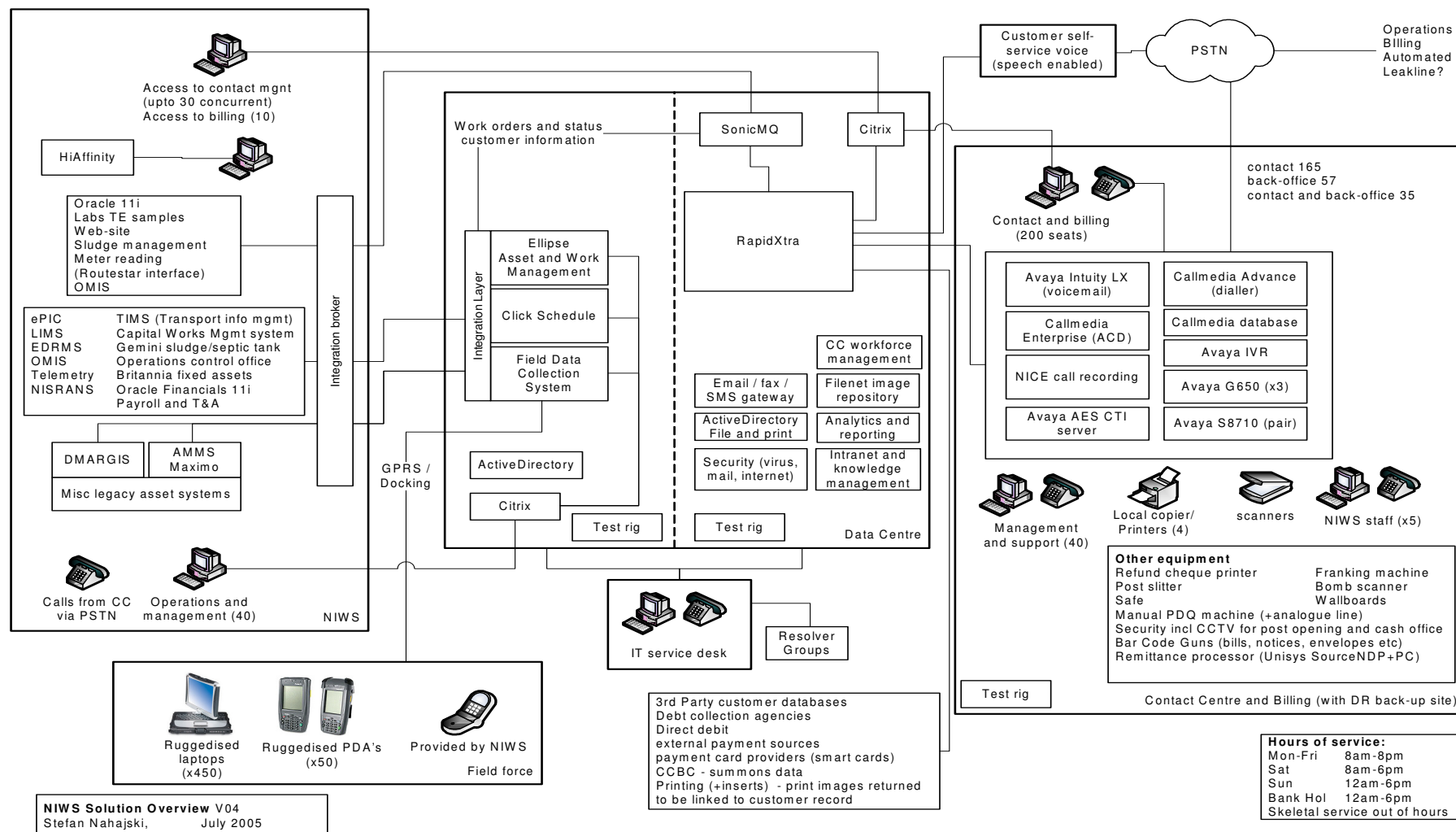
Rejected Calls

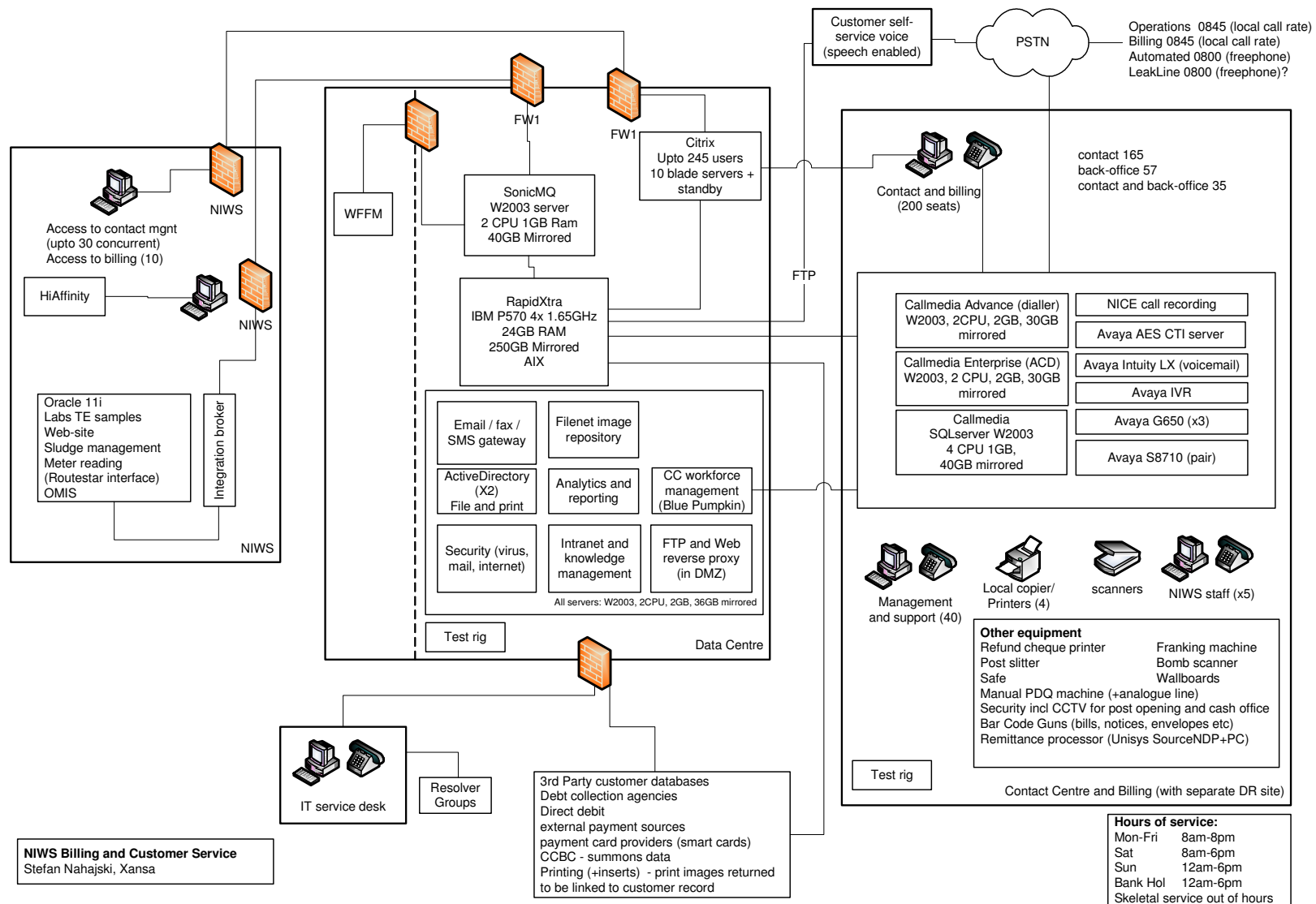
During the reported year calls currently rejected for any of the following reasons are not included in total calls received:

- The time being out of working hours
- The queue is too full and cannot accept any more tasks. Each queue holds 500 calls at any one time.
- The task queued for the 'Max Queue Time' and was returned to the connector.

Appendix 1

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).







Annual Information Return 2012

Section 4

Customer Research Appendix

Annual Information Return 2012

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 carries out quarterly surveys (Waves) of customers who have called the Company for any reason. The score for the answer to survey question 18 (*"Overall, how satisfied were you with how your call was handled 1-5?"*) is the call handling satisfaction score.

The primary objective is to provide a measurement of customer satisfaction in telephone call handling, by water industry companies.

The resultant data is required to be statistically robust based on the sample received to allow comparison both between companies each year, and for each company on a year on year basis.

Methodology

For each water company taking part, a target was set of 100 telephone interviews with customers who had contacted the water company in the previous week, for each Wave of the survey, equating to 400 per Water Company per year.

Overall Northern Ireland Water (NIW) achieved 405 interviews in total – Q1 102 interviews, Q2 100 interviews, Q3 103 interviews and Q4 100 interviews.

All surveys were administered using a Computer Aided Telephone Interviewing (CATI) unit. Each survey was undertaken by multiple interviewers to prevent any possibility of interviewer bias.

Sampling

Sample Provision

NIW is advised of the week in which call data will be collected for a survey two weeks in advance.

NIW is required to record all incoming calls to the contact centre for the seven days in question, irrespective of how calls were handled.

This data is then supplied to McCallum Layton and is password protected for data protection purposes. Data is provided based on an Excel spreadsheet containing the following fields:

- Contact Name (customer or business name);
- Business or Domestic (to indicate if a business or domestic customer);
- Telephone Number;

- Date of contact (date call made to NIW);
- Customer reference number (to trace any responses back through the system if necessary); and
- Operational and Billing flag (to indicate the nature of call).

In addition to the sample, an Audit sheet was completed which detailed the total number of calls received; number of records excluded from the sample and any factors the company felt may have affected their performance during the sampling period. The following table shows the actual number of useable records received in each Wave.

Wave 1	Wave 2	Wave 3	Wave 4	Total 11/12
5534	4759	4622	5318	20,233

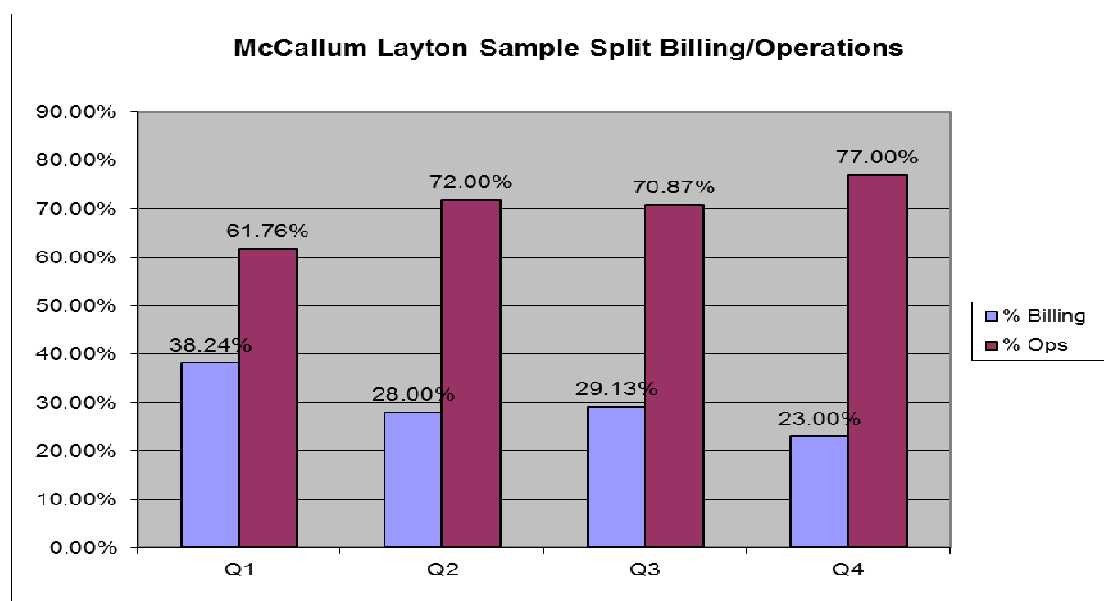
Sample Management

Upon receipt of the sample, McCallum Layton applied the following sample management procedures for each water company:-

Removal of non-useable records – e.g. overseas telephone numbers, records with no telephone numbers, visually incorrect telephone numbers; and
De-duplication – removal of any customer record which appears in the supplied sample more than once and of customers which have been included in any previous waves that year to ensure no customer is approached to participate in the survey more than once per annum.

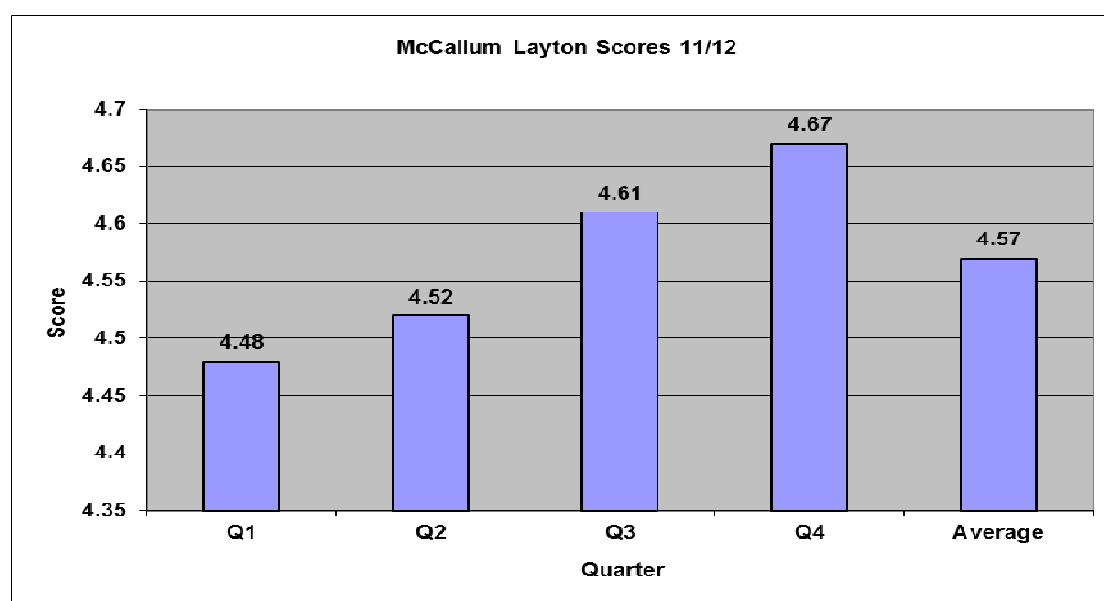
Given that NIW is not billing domestic customers (unlike other UK water companies), it is important to establish the proportion of calls received by day and query type to ascertain the quotas needed to ensure a representational spread of interviews was achieved.

The following table shows the NIW percentage split for billing and operations, per quarter.



Overall Performance Assessment

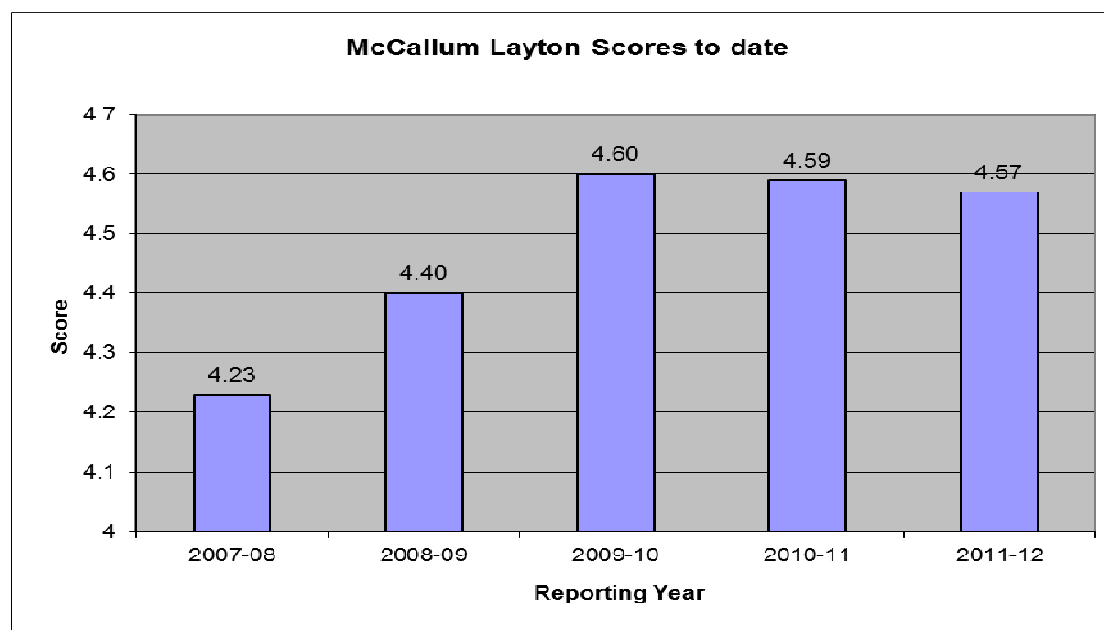
NIW achieved an overall score of 4.57/5.0 for the reporting year, falling short of the target set at the beginning of the year of 4.7, as follows;



It is clear that the freeze / thaw event in 2010/11 had a major impact on customer satisfaction. It is however encouraging to see the recovery from this position to the current score of 4.67 giving a yearly average of 4.57. Further work will be carried out in 2012/13 to improve this score.

In 2011/2012 NIW were not ranked against the English and Welsh water companies as they moved to the SIM and CES methods whereas the Regulator stated that NIW were to remain with the Customer Satisfaction Methodology.

Overall, the annual score has increased over the first 3 years of reporting with slight decreases in the last 2 years, as follows;



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 final typeset drafts of the reviewed CoP's were submitted to the Utility Regulator on 14 April 2011.

Further comments on the final draft CoP's were received from the Regulator and the drafts were revised accordingly, followed by a period of further engagement with CCNI. The CoP's were approved by the Regulator on 28 November 2011, followed by printing and launch on 16 December 2011.

The four CoP's, which have been agreed with CCNI, and approved by the Regulator are:

- Water Supply Services;
- Sewerage Supply Services;
- Dealing with Leaks; and
- Complaints.

In addition, NIW engaged with CCNI on the review of the Domestic Customer Charter and the preparation of a new CoP on Billing and Metering for Non-Domestic Customers. These were progressed and completed during 2011 and released on 16 December 2011.