northern ireland water

Public Domain Version
Annual Information Return 2010

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Section 1

Board's Overview

Board's Statement

In support of Northern Ireland Water's (NI Water) 2010 Annual Information Return (AIR10), its Board of Directors is required by the Utility Regulator to prepare a statement on the compilation of AIR10, explaining how it has satisfied itself as to the accuracy and completeness of the information provided.

The Directors consider that AIR10 provides a true and fair view of the state of affairs of NI Water for the financial year 2009/10. In preparing AIR10, 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; and
- 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 AIR10 is as reliable, accurate and complete as is reasonably practicable.

Processes and Internal Systems of Control

AIR10 has been compiled in accordance with NI Water's AIR Completion Manual, which was approved for use in compiling AIR10 and subsequent Annual Information Returns. The manual addresses recommendations from previous AIR audits made by NI Water's Internal Audit function and by the independent technical Reporter.

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

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

documentation covering the processes followed in compiling the AIR submission.

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

AIR10 Project Governance

The AIR10 Project Board was chaired by the Regulation Manager and comprised representatives (senior managers) from eight functional areas, i.e. those functions which contribute data to the AIR10 submission. A representative from Internal Audit attended Project Board meetings ex officio.

The primary roles of the AIR Project Board included:

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

Each member of the AIR Project Board chaired a functional Working Group. The Working Groups' roles included:

- Ensuring that the Utility Regulator's "Reporting Requirements" were understood and followed;
- Ensuring that relevant Line Methodologies were updated in line with the Reporting Requirements;
- Coordinating the population of Data Tables and the drafting of associated Company Commentaries in accordance with Line Methodologies and Reporting Requirements in compliance with the AIR programme; and
- 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 AIR10 Project Board. Authors, reviewers and approvers of Line Methodologies, Data Tables and Company Commentaries were designated for all input data in the AIR10 submission.

To ensure reporting consistency for AIR10, every item of data provided in the AIR10 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 AIR10 Reporting Requirements on 01 April 2010. Audits were undertaken by the company's Auditor and the Reporter in May and June 2010. 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 AIR10 submission was endorsed by the Executive Committee and Board in June and July 2010 respectively.

Board Involvement

In summary, the involvement of NI Water's Board in the completion of AIR10 included:

- Reviewing monthly company business performance analysis;
- Receiving a presentation from both the Reporter and the Auditor in June and July;
- Reviewing, commenting upon and approving the AIR10 Board's Overview, while having access to the full return;
- Reference back to NI Water's Executive Committee and Senior Management Team to verify corporate information; and
- Executive Directors received regular reports on progress and reviewed, challenged, commented and influenced the content of AIR10.

The following activities were undertaken which enhanced NI Water's ability to meet the Reporting Requirements of AIR10:

- Development of systems and controls to populate AIR10 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; and
- 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 AIR10 complies with the Utility Regulator's Reporting Requirements and provides some assurance in respect of material assumptions and judgements included in the AIR10 commentaries:

- Clear accountability at senior management level for the ownership of all elements of AIR10. 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 AIR10 process have been disseminated through the AIR10 Project Board to all staff involved in the data collection process;
- Every datum in AIR10 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 AIR10 it is reviewed and approved by senior management in the data provider's business area;
- NI Water facilitates access to allow the Reporter and Auditor access to all relevant information required to discharge their duties;
- The Board receives regular presentations during the course of the year on key performance indicators; regulatory performance and key issues for the Annual Information Return;
- The Reporter makes a presentation to the Board near the conclusion of the AIR10 process. Both the Reporter and the Auditor present to the Audit Committee/Board near the conclusion of the AIR10 process;
- Directors directly challenge the production and content of AIR10 to satisfy themselves that their duties are fulfilled; and
- In any case of uncertainty regarding data, commentary or line methodology, NI Water seeks advice and clarification from the Utility Regulator, the Reporter and the Auditor as appropriate.

Directors' Endorsement

In light of the above, NI Water's Board believes that it has developed and applied processes, governance and systems of internal control sufficient to meet its obligations for the provision of information contained in AIR10.

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; and
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:

Laurence MacKenzie
Chief Executive, Northern Ireland Water

Donald Price
Non-Executive Director, Northern Ireland Water

Chapter 1
Key Outputs and Service Delivery
Tables A and B

Drinking water compliance at the customer tap has, for the first time, exceeded the recognised Social and Environmental Guidance aspiration of 99.7% Mean Zonal Compliance (MZC). The outturn for 2009 was 99.74% MZC and, as such, also exceeded our internal target of 99.65%. Work continued throughout 2009 to minimise chlorine levels and residence times in distribution. This, in combination with the commissioning of the Alpha PPP (Public-Private Partnership) treatment works, has resulted in a significant drop in trihalomethane levels at the customer tap. The Alpha PPP works were commissioned in late 2008 and have contributed to the improvement in MZC by minimising the impact of fluctuating raw water quality.

Water Quality

In 2004 the Water Supply (Water Quality) Regulations (NI) 2002 came into force (see also Water Supply (Water Quality) (Amendment) Regulations (Northern Ireland) 2009. These regulations implement the EC Drinking Water Directive (Council Directive 98/83/EC on the quality of water intended for human consumption). They fully incorporate, and go beyond, the requirement of the Directive and introduce tighter quality standards, particularly for lead and other health related parameters. They allow a time-limited, authorised departure from the regulatory limit for certain parameters, provided that there is a planned programme of work at the appropriate water treatment works to improve the water quality, and provided that there are no adverse health implications arising from the departure.

The Amendment Regulations of 2009 built on the concept of risk management for drinking water supply systems by ensuring that Drinking Water Safety Plans (DWSPs) are implemented in Northern Ireland. NI Water has been working on DWSPs which encompass risk assessments for supply systems from raw water catchment, through treatment and distribution to the customer tap. NI Water is on track to deliver the regulatory obligations with respect to DWSPs to the Drinking Water Inspectorate by December 2010.

In 2009 NI Water continued to meet the obligations placed upon it to comply with regulatory standards and heightened demands due to increased customer expectation. Investing in the extension and upgrading of water treatment works and lowering inherent risk remains a top priority.

Wastewater

NI Water has reached the end of the three year Strategic Business Plan period, during which there has been a major investment to improve wastewater treatment facilities. The investment will continue over the Price Control period 2010-2013 (PC10) and will lead to increased levels of

compliance. The results of investment can already be seen, with compliance with the Urban Waste Water Treatment Regulations reaching 93% in 2009.

The impact of NI Water's capital investment programme is also reflected in improved compliance with the Water Order Consents issued by the Northern Ireland Environment Agency (NIEA). In 2009 over 87% of larger wastewater treatment works were compliant with the Water Order Consent and NI water achieved its best ever performance with over 91% of the population equivalent served by compliant wastewater treatment works. The latter is an increase of more than 10% over the three year Strategic Business Plan period.

Completion of further wastewater treatment works over the PC10 period will lead to increased compliance with Northern Ireland and European standards, thereby contributing to the long-term objective of the Water Framework Directive to improve water quality.

EC Bathing Waters

During 2009, NIEA monitored 24 identified bathing waters (under the European Bathing Water Directive) throughout the bathing season, which lasts from the beginning of June to mid-September. The Directive contains two standards for the quality of bathing water; a mandatory standard and a more stringent guideline standard. In 2009, 22 of the 24 identified bathing waters in Northern Ireland met the mandatory standard, and 11 met the higher guideline standards. One of the bathing water failures can be attributed to a pollution incident for which NI Water was not responsible.

NI Water has invested heavily in coastal wastewater treatment through its capital investment programme and the Omega PPP contract, particularly in the North Coast and North Down areas where there are a significant number of bathing waters. In addition, NI Water has targeted investment in upgrades to sewerage networks with intermittent discharges to bathing waters. For example, work on the Ballyholme sewerage network has been completed and work on the Luke's Point network is due for completion in the summer of 2010. Both of these projects will contribute to improvement in the quality of the Ballyholme bathing water.

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). The unusually heavy rainfall events of the past three years have had a significantly detrimental impact on bathing water quality.

Customer Billing and Contact

The quarterly independent market research, first introduced in 2007/08, continued to be carried out on NI Water's behalf. Having commenced 2009/10 with a score of 4.46 and ranking 19/24, this improved during the year to:

- 3rd overall (of 24 companies); and
- 1st of Water and Sewerage companies (of 12) with a Q4 score of 4.8. Overall the target of 4.6 was achieved.

During 2009/10 NI Water experienced a number of major incidents due to water quality, water supply or flooding. In April a routine sample taken from Dunore Point indicated an apparent water quality failure, with an estimated 225,000 customers potentially affected. The Company immediately activated its major incident response plan to establish the cause of the failure and launched intensive media bulletins to advise affected customers. Further tests confirmed that the water quality had not failed and the water was safe.

Over the Christmas/New Year period, Northern Ireland witnessed the worst winter for 30 years. As a result of the prolonged freezing conditions, NI Water experienced significant numbers of burst water mains, leaving many of our customers without supplies. Despite the conditions, staff worked to restore supplies to customers affected. Throughout the year a number of flooding incidents were dealt with and the company's Incident Plan Procedures were activated in response to these incidents.

In 2008 NI Water and CCNI undertook a joint research project to determine customers' priorities concerning water and sewerage services. This research was used to reinforce investment priorities for the PC10 period. CCNI also proposed 24 recommendations arising out of the research on water quality, flooding, environmental and customer services. Building on the independent research of consumer views, NI Water has worked closely with CCNI and other stakeholders and, as a result, out of the 24 recommendations, 18 have either been completed or are nearing completion, with the remainder planned for completion during 2010/11.

In October 2009 a new approach was implemented on how written complaints are handled, with the aim of:

- Reducing the time taken to respond to customers;
- Reducing number of complaints received;
- Identifying and addressing the root causes of complaints; and
- Improving our overall customer service.

This has significantly improved company performance, with the average time taken to respond to written complaints now reduced to 6 days - outperforming the target for percentage of written complaints responded to in 10 days.

Following on from work commenced in 2008/09, further work was completed on systems to improve the quality of information delivered to NI Water's customers.

Non-Domestic Charges

Full measured sewerage charges were introduced from 1 April 2009. However, as a result of the decision to defer domestic charges during 2009/10, a new domestic allowance of 190m³ for eligible sewerage customers was also introduced.

Unmeasured water and sewerage charges continued to be billed at 50% of the full charge. The charges are published in the Company's Scheme of Charges available on www.niwater.com/watercharges or by writing to NI Water, PO Box 2026, Belfast, BT1 9DF.

Account Management

In the course of developing relationships with non-domestic customers and the business community, NI Water is reviewing its Account Management Strategy. Alongside the existing Key Account service for large customers, we are aware of the need to focus more attention on small/medium enterprises, particularly in the current economic climate. During 2010/11, the Company will assess the potential for Account Management development in the course of reviewing how NI Water builds its business to serve its customers.

Metering programme

NI Water has continued its programme of installing meters on all new properties with first time connections to the water supply system, in accordance with existing legislation, and on existing unmeasured non-domestic properties where possible. NI Water will continue the metering of new build properties and first time connections in 2010/11, as well as continuing the programme of meter installations on unmeasured non-domestic properties. All meters installed on domestic premises will not currently generate a charge or bills.

Codes of Practice

Following the launch of the 'Priority Services' Codes of Practice in January 2009, NI Water has continued to promote this range of extra services for customers that have a disability, are elderly, have a serious medical condition or need extra help for any other reason. The company now holds a register of all customers who would like to be classified as 'Priority' and benefit from extra services.

The current suite of Codes of Practice were reviewed with CCNI during early 2010/11 and have been submitted to the Utility Regulator, with further work planned with CCNI to develop and re-launch the Priority Services within a wider Northern Ireland utility context.

Customer Contact

NI Water dealt with over 350,000 customer calls in 2009/10, arising from a number of factors including, as previously mentioned, the prolonged freezing conditions over Christmas/New Year, flooding during last August and October and incident at Dunore Point last Easter.

During the period over Christmas/New Year, four times the volume of expected calls was received. As a result the Company missed it's 2009/10 KPI on telephone contact with a performance of 96.68% against a target of 98%.

Health and Safety

The strategic Health and Safety (H&S) Action Plan, which was developed to deliver against NI Water "Zero Accident Ambition" continues to be updated. H&S action for improvement is now firmly focused on "Behavioural Change".

NI Water delivered an H&S Autumn Programme in 2009, which engaged staff and contractors at all levels to make a difference and report near-miss incidents so that measures could be taken to remove the potential for accidents in the workplace.

"Near-miss" reporting targets, which were set for 2009/10 for both NI Water and its contractors, have been surpassed. This has resulted in continuing reduction in the number of accidents in the workplace and an associated reduction in accident-related absence which has reduced by 68% on the 2008/09 out-turn.

A new "Working Safer" campaign was developed for introduction in the first quarter of 2010 and is again aimed at reducing workplace accidents and designed to deliver against new and more challenging H&S targets for 2010/11. The campaign will be supported through established communication channels and by a further engagement programme in Autumn 2010.

Carbon Accounting

The Environmental & Social Guidance for Water and Sewerage Services (2010-13) (approved by the Northern Ireland Assembly) requires NI Water to establish an appropriately indexed carbon cost to be included in the assessment of all significant capital projects from PC13 onwards.

NI Water currently does not have a fully formulated strategy in place for managing carbon emissions. However, we have proposed projects in PC10, such as wind power, which will assist with carbon efficiencies.

NI Water has set targets for the use of energy from renewable sources as follows:

Year	Percentage of power from renewable sources
2007/08	8%
2008/09	9%
2009/10	10%
2010/11	11%
2011/12	12%
2012/13	13%
2013/14	14%
2014/15	15%

In 2009/10, approximately 12.72% of NI Water's total power usage came from renewable sources (well above the target level) – of which 4.6 GWh was sourced through self-generation and 33.1 GWh was purchased.

The following tables summarise NI Water's equivalent carbon emissions in 2009/10. The figures in the table are generated from the Water UK Carbon Accounting Workbook Version 4 May 2010.

	Description	Unit	Value	Conf. Grade
1	Annual operational emissions according to the CRC	tonnes of CO_2 equivalent emissions	167,213	B3
2	Annual operational emissions according to the Defra GHG guidelines	tonnes of CO_2 equivalent emissions	186,629	B3
3	Operational GHG emissions per Ml of treated water	kg of CO_2 equivalent emissions per Ml	355	B3
4	Operational GHG emissions per Ml of sewage treated	kg of CO_2 equivalent emissions per Ml	808	B3

SUMMARY OF ALL EMISSIONS	Defra (kg CO_2 eqs)
Sum of drinking water treatment and pumping emissions	80,459,336
Sum of sewage treatment and pumping emission and sludge treatment, recycling and disposal emissions	99,626,100
Sum of all emissions (drinking water, sewage, sludge, administration and transport)	188,673
Volume of drinking water supplied (Ml)	226,837
Volume of wastewater treated (Ml)	123,234
Emissions from drinking water treatment and pumping per Ml of drinking water treated	355
Emissions from sewage treatment and pumping and sludge treatment, recycling and disposal per Ml of sewage treated	808

Chapter 2
Financial Performance Measures
Table C

The financial information in our Statutory Accounts has been prepared in accordance with UK Generally Accepted Accounting Principles ("UK GAAP"), and the Regulatory Accounts in accordance with UK GAAP modified by the Regulatory Accounting Guidelines (RAG). In the process of applying the Company's accounting policies, the Company is required to make certain judgments, estimates and assumptions that it believes are reasonable based on the information available. The more significant judgments, key assumptions and sources of information are provided below.

Financial Results (from Statutory Accounts)

Turnover was £352.3m for the year to 31 March 2010 (31 March 2009: £331.6m). Included in turnover was £277.1m (2009: £267.5m) received from DRD (Subsidy £257.4m; Road Drainage Charges £19.7m) - the remainder being measured and unmeasured charges and miscellaneous income. The subsidy covered the full domestic charge and the Northern Ireland Executive has decided that this arrangement will remain in place during 2010/11. The final decision on domestic charging for 2011/12 and beyond has not yet been taken by the Northern Ireland Executive.

Profit on ordinary activities before interest for the year was £89.5m. Operating costs in 2009/10 of £262.7m were impacted by a number of factors including inflationary pressures on power costs and the extensive Business Improvement Programme. The tax charge for the year was £14.5m. The effective tax rate for the year to 31 March 2010 was 28.1% (2008/09 28.3%). The Board will consider a proposal to declare a dividend of approximately £36m in July 2010.

Net assets decreased by 1.0% to £717.6m. The main movements in the balance sheet items were increases in fixed assets of £192.3m relating to our commitment to investment in the Capital Works Programme offset by increases in net debt. The Company net debt figure was £722.2m at 31 March 2010 (£544.5m at 31 March 2009). Gearing increased from 38.5% to 46.7% reflecting the draw down of loans under the Unsecured Loan notes 2027 Instrument.

Cash Flows and Debt

Operating activities generated a net cash inflow of £139.7m (2009: £134.1m). Net cash outflows of £38.0m (2009: £20.4m) related to returns on investment and servicing of finance. This includes interest costs of £26.9m (2009: £18.0m), interest receivable of £0.3m (2009: £1.8m) and interest element of PFI arrangements £11.3m (2009: £4.2m). Net investing activities used £245m (2009: £263m). Dividends paid during the year totalled £35.0m in respect of

the previous financial year. In order to meet the requirements of the above net outflow there was an increase in the financing requirement over the year. Net debt at 31 March 2010 was £722.2m (2009: £544.5m).

The increase in net debt was financed through an increase in net financial liabilities due after one year. The Company's 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 Interbank Offer Rates (LIBOR).

Regulatory Capital Value

NI Water's closing RCV for 2009/10 was £1,421.5m. The table below shows the RCV roll forward from the 2008/09 closing balance.

	2009/10 (£ 000)	**2008/09 (£ 000)**
RCV opening balance at 1 April 2009	**1,247,833**	**999,725**
Capital expenditure	**215,978**	**238,138**
Infrastructure renewals expenditure	**38,396**	**44,058**
Infrastructure renewals charge	**(37,035)**	**(34,272)**
Grants and contributions	**(1,221)**	**(5,747)**
Depreciation	**(42,407)**	**(47,216)**
Closing RCV	**1,421,544**	**1,194,686**
Average RCV	**1,334,689**	**1,097,206**
Opening RCV		
At 1 April 2009	**1,194,686**	**984,814**
adjust 2007-2008 RCV for application of broad equivalence	**-**	**18,696**
Revised opening balance at 1 April 2009	**1,194,686**	**1,003,510**
indexed for 2009-10	**53,147**	**(3,785)**
Opening RCV	**1,247,833**	**999,725**

The table above shows the RCV used in setting the revenue caps for the period 2007 to 2010. The differences from the actual capital expenditure and depreciation will not affect revenue limits in the current period.

Weighted Average Cost of Capital

NI Water has calculated its weighted average cost of capital for the SBP period to be 5.15%. This is based on a weighted average of our nominal cost of debt (5.25%) and the return we pay to our shareholder (5.1%). The calculation is based on SBP projections of net debt and Regulated Capital Value (RCV) and is laid out below.

This WACC has been agreed with DRD for the SBP period and is currently used as a discount rate in business case analysis. The return on RCV earned in 2009/10 was 6.63%. This is higher than the WACC calculated above as it includes an additional 'cash' or 'financeability' element.

Calculation of Weighted Average Cost of Capital (WACC)
SBP Period April 2007 - March 2010

	Opening 2007/08	Closing 2009/10	Average
Net Debt	150	696.2	423.1
Regulatory Capital Value (RCV)	800	1414.6	1107.3
Net Debt / RCV	18.8%	49.2%	34.0%
Return on debt	5.25%	for SBP period	
Return on equity	5.10%	for SBP period	
Net debt	Used to determine return on debt		
Regulatory Capital Value (RCV)	Used to determine return on equity (dividend)		
Proposed WACC for SBP period	(0.34 x 5.25%) + ((1-0.34) x 5.1%)		
Result	**5.15%**		

PPP Contracts

Project Alpha:
Project Alpha is a Public Private Partnership (PPP) between NI Water and Dalriada Water Limited (a joint venture company, now incorporating Kelda Water Services and Farrans Construction).

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

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

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

Bay, Craigavon (147 Ml/d), Ballinrees, Coleraine (50Ml/d) and Moyola, Magherafelt (19 Ml/d).

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

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

Project Omega

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

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

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

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

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

Kinnegar Wastewater Treatment Works

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

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

2009/10 PPP Cash Payments

On Balance Sheet ***Alpha***	**£k**
Opex	1,402
Interest	11,325
Total P&L Impact	**12,727**
Capital Repayment	2,906
Life Cycle Maintenance	224
Total Balance Sheet Impact	**3,130**
Total Unitary Charge	**15,857**

Effective Interest Rate used to calculate Alpha finance charge	**5.77%**

Off Balance Sheet	***Omega*** **£k**	***Kinnegar*** **£k**
Opex	13,225	2,017
Residual Interest	1,932	232
Total Unitary Charge	**15,157**	**2,249**

Estimated Residual Value at End of Contract

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

Treasury Policies and Objectives

Funding and treasury risk management functions are managed centrally by the Treasury function within the Finance and Regulation Directorate of NI Water.

During the year the Treasury Forum continued to operate as an advisory body to the Board and the Executive Committee. It performs a review and oversight role for Treasury policies, proposals and the operations of the Treasury function. It also provides a means for approving transactions in accordance with authority delegated from the Board.

Pensions

From April 2007 all employees of NI Water have been automatically entered into the new NI Water Pension Scheme. The Scheme is a separate limited company with NI Water as the principal employer. It has a benefits structure which is a 'mirror image' of the Civil Service Scheme in April 2007 and it currently has 287 pensioners.

The Scheme is a funded, defined benefit scheme. It is managed by a Board of Trustees made up equally of Company and Member nominated trustees who are legally responsible for managing the scheme. The Scheme had its first full valuation as at 1 April 2008 and this showed that it was broadly in balance.

The contribution rate has been revised to take account of this valuation and the Investment Strategy has also been revised to ensure that the return on investments will meet the needs of members going forward.

During 2010/11, NI Water will:

- Seek to conclude the Bulk Transfer of monies from the Civil Service Scheme to the NI Water Pension Scheme. This is to fund the accrued pension benefits of staff who transferred their Civil Service pension entitlement in to the Scheme; and
- Work closely with the Scheme's Trustees and advisers to ensure the effective running of the scheme to the advantage of all members.

Chapter 3
Key Supporting Information
Tables D and E

Capital Works Programme

Investment in Northern Ireland's water and sewerage infrastructure is essential in order both to meet key environmental standards and to deliver high quality services to customers. Some £210m of capital engineering projects were delivered during 2009/10. This included the continuation of projects previously started along with the commencement of new projects. Of this capital programme, 36% was targeted at water projects while 64% was targeted at wastewater projects.

Forty four projects were commenced at high priority wastewater treatment works. This will continue the on-going work to ensure compliance with the appropriate European Directives and meet the regulatory discharge consent standards. Improvements to the water treatment works at Altnahinch and Seagahan were also completed in 2009/10. Improvements were made to the water main infrastructure in a number of areas throughout Northern Ireland. Work continued on improving the wastewater network at various locations including Londonderry and Carrickfergus. The Belfast Sewers Project was completed in 2009/10.

£150m of capital projects are scheduled for delivery during 2010/11. This includes the continuation of projects previously started along with the commencement of new projects. The prioritisation of capital projects is based on Social and Environmental Guidance for NI Water as set down by the Northern Ireland Assembly. Work will continue to ensure compliance with the appropriate European Community Directives and meet the regulatory discharge consent standards. It is planned to target improvements to the water main infrastructure in a number of areas throughout Northern Ireland. Some 10 zones are programmed for work. This will be the start of a new three year programme of work to reline or replace some 900km of water mains throughout Northern Ireland. Improvements to the sewer network will be undertaken at a number of locations. Work will continue on improving the sewer network in Londonderry and Newtownards.

Technology and Innovation Programme

NI Water is committed to investment in innovation through new systems and technology that provide benefits in terms of improving service performance or reducing operational costs, whilst ensuring the resilience and security of essential control and monitoring networks. Over the 2009/10 financial period NI Water has invested £6.1 million on 33 projects through the Technology (Innovation) Programme. The projects have included the installation of telemetry (remote monitoring) at an additional 80 wastewater treatment works, 270 combined sewer overflows and the upgrading of the central telemetry control system capacity and capability. Other projects have included the

investigation of the potential development of wind energy generation on a small number of sites within the company's estate and the upgrading of instrumentation used to monitor and control our works.

Operational Effectiveness

NI Water has continued to enhance its service to customers and improve its infrastructure management through good operational management and investment in technology. This was achieved through sustained attention to works, particularly those operating beyond their designed capacity.

Asset Management

NI Water has prepared the third Northern Ireland Asset Management Plan ("NIAMP3") defining its capital investment requirements over the next 3 year period. This plan is based on the Social and Environmental Guidance set down by the Northern Ireland Assembly. NIAMP3 has formed the central core for the company's capital investment needs in the first regulated Business Plan submission known as PC10.

NI Water is continuing to work through the regulatory process to develop a programme for delivery of the Utility Regulator's PC10 Final Determination. During the reporting period NI Water has implemented a number of asset management systems, tools and procedures to drive more efficient investment. The company has completed a Corporate Asset Register (CAR) and is installing tools to make management information, particularly on asset performance, widely available from the CAR.

NI Water has built and deployed the Unit Cost Database tool to help prioritise, optimise and cost the capital investment and are populating the tools with NI Water specific data. Gaps have been identified in the asset data and the company is competitively tendering contracts to fill gaps in asset data. The asset management processes have been evolved to control NI Water's capital investment processes via a major transformation exercise through the Tactical/Strategic Asset Management Review.

Public Private Partnerships

The Alpha Contract has consistently provided statutorily compliant drinking water services, at an average rate of almost 250 million litres per day, throughout the year. An unrepresentative sample result in April 2009 required a precautionary boil notice to all customers in the greater Belfast area. Through a contract change, NI Water has brought back in-house a proportion of the contracted laboratory analysis arrangements to enhance confidence in water quality supplied from this source.

All the Omega contract wastewater treatment upgrades are complete and now in operation. Statutory compliance has been maintained across the year on discharges from all the Omega sites. The Sludge Disposal Service, for all of NI Water's wastewater treatment sludge, has been brought into operation in March 2010, completing the investment stage of the Omega contract.

Kinnegar wastewater treatment has achieved another year of statutorily compliant wastewater treatment operations.

Water Resources, Supply and Demand

Water Resources

NI Water input water to the distribution system from approximately 40 sources, including PPP sites, which comprised upland impounding reservoirs, boreholes, rivers and loughs.

NI Water, through its Water Resource Strategy (WRS), has planned to ensure that demand for drinking water is met for the period to 2030. The 2002 Water Resource Strategy was updated in 2007 and is currently being revised. It will be known as a Water Resource Management Plan (WRMP) in line with the terminology used in the Water and Sewerage Services (Northern Ireland) Order 2006. The plan will cover the period to 2035. Public consultation will take place during 2010, with a Final Plan in place by mid 2011.

The WRMP seeks to improve NI Water's security of supply and will acknowledge the implementation of the WRS to date and continue to emphasize the need to rationalize existing uneconomic water sources and concentrate on the sources that can meet our needs cost effectively and reliably in combination with leakage reduction and demand management.

Leakage

For the 2009/10 year the average amount of leakage lost from the water distribution system was 186.9 Ml/d. The winter freeze and subsequent thaw during the period from December 2009 to February 2010 had a very significant impact on the leakage figure.

NI Water was making good progress and was on target to achieve an annual reduction of 4.0 Ml/d leading to a reported level of leakage of 176.9 Ml/d. The effect of the extreme weather in late December, January and early February changed this outlook dramatically and leakage levels increased significantly. The impact of the weather meant that a major incident team was set up within the company to manage the situation.

During January 2010 the amount of water being produced from our water treatment works reached a peak of 800 Ml/day compared to figures below 600 Ml/day during November 2009. Despite the coldest winter for 30 years, sustained progress has been made in retrieving the additional leakage that was incurred during this difficult period.

During 2009/10 NI Water continued with the Water Balance Action Plan to address key components of the leakage calculation in order to improve known uncertainties in the previous methodology.

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.
- To arrange professional training and development that helps to provide awareness to NIW staff on sustainable procurement principles and appoint sustainable procurement advisors to ensure that full consideration is given to sustainable procurement within NI Water procurement processes for the acquisition of goods, services and capital works.

Chapter 4
Efficiency

NI Water delivered against our £53.8m operating cost efficiencies target from a 2003/04 base and an approximate £100m capex efficiency saving over the three year SBP period. The operating cost efficiencies are generated by factors which include the following:

- Manpower reductions resulting from the introduction of improved ways of working such as Mobile Work Management ("MWM");
- Reductions in headcount; and
- Depot rationalisation.

The capital cost efficiencies were generated by factors which include the following:

- Programme of value engineering to limit scope of capital projects while ensuring delivery of required outputs;
- Improved procurement of capital projects, e.g. bundling of projects;
- Standardisation of components used for capital projects; and
- Development of unit costs to benchmark the costs of capital components.

Business Improvement Programme

The One Programme moved to a controlled close at the end of March 2010. Overall, the programme is expected to deliver benefits, in direct savings and avoided costs, in the order of £112m for an investment of £60m during the SBP period (2007/08-2009/10). The final benefits will be validated by NI Water's Internal Audit in the first quarter of 2010/11.

In total, 135 projects/programmes will be delivered:

- Cash Hub: 22
- Customer Hub: 41
- Compliance Hub: 53
- People Hub: 19

Sixteen projects will run into 2010/11 and will be managed to completion by the Programme Management Office as part of One Programme closure. The programme has been a key driver in the delivery of opex and capex efficiencies. It has also built capability to enable the company to become a standalone and sustainable utility, compliant with environmental, economic and legislative requirements. Examples of the benefits delivered by the programme include:

- Improved customer complaint processes via a dedicated 'Triage Team' and an MLA telephone hotline;
- Developing a centralised '24/7' Operational Control Centre;
- Reducing 3 stores to 1 and rationalizing 17 depots into 6 regional hubs;
- Reducing approximately 500 posts across all function of the business;
- Delivering capex efficiency savings of approximately £63m;
- Upgrading drinking water quality monitors, reducing costs and improving compliance;
- Installation of approximately 300 Combined Storm Overflow (CSO) monitors to reduce pollution incidents;
- Implementing a Human Resource function, Payroll Systems, Mirror-Image Pension Schemes and a new staff Performance Management System;
- Submission of our first price control Business Plan (PC10) to the Utility Regulator;
- Implementation of an improved Procurement and Contract Management system;
- Developing an Asset Management Model, Asset Registers and Asset Management processes;
- Implementing a Mobile Work Management system and automating the process for scheduling customer faults so that urgent jobs are prioritised;
- Creating a data warehouse and the integration of computer systems and upgrading of technology solutions to streamline the administration and regulatory functions; and
- Commencing a Data Quality Programme to fulfil 'legal undertakings' given to the Utility Regulator (this activity will continue into PC10).

Work continues to improve the company's customer service, environmental compliance and importantly efficiency but NI Water is confident in its own ability to deliver further business changes.

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.

Table A

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL RETURN - BOARD'S OVERVIEW
TABLE A - WATER SERVICE - KEY OUTPUTS AND SERVICE DELIVERY (TOTAL)

	DESCRIPTION	UNITS	DP	BASE YEAR SBP 2006-07	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10
A	**SERVICE AND PERFORMANCE**						
1	DG2 Percentage of properties receiving low water pressure	%	2	N/C	1.29	0.72	0.27
2	DG3 Overall performance score	nr	2	1.39	1.43	1.41	2.21
3	DG4 % population - hosepipe restrictions	%	1	0.0	0.0	0.0	0.0
4	DG4 % population - drought orders	%	1	0.0	0.0	0.0	0.0
5	DG6 Percentage dealt with within 5 working days	%	1	73.1	95.0	98.6	98.1
6	DG7 Percentage dealt with within 10 working days	%	1	91.5	90.5	98.1	99.4
7	DG8 Bills for metered customers – performance	%	1	83.2	71.8	93.3	92.3
8	DG9 Percentage of calls abandoned	%	1	9.1	1.0	1.1	2.6
9	DG9 Percentage of calls receiving the engaged tone	%	1	0.1	0.0	0.0	0.0
10	Water ESL (1) enter description (including units)				N/C	N/C	N/C
11	Water ESL (2) enter description (including units)				N/C	N/C	N/C
B	**DRINKING WATER QUALITY OUTPUTS**						
12	% mean zonal compliance with drinking water Regulations	%	2	99.34	99.30	99.49	99.74
13	% mean zonal compliance with PCV for iron at the tap	%	2	N/C	98.29	98.24	97.24
14	Water treatment works improvements	nr	0	N/C	0	3	2
14a	Water treatment works improvements (PPP)	nr	0	N/C	0	4	0
15	Distribution mains renovated for quality	km	2	N/C	N/C	0.00	0.00
16	Distribution mains cleaned for quality	km	2	N/C	0	96.41	376.27
C	**ENVIRONMENTAL WATER OUTPUTS**						
17	Environmental impact - number of investigations	nr	0				
18	Environmental impact - number of options appraisals	nr	0				
19	Other environmental improvements	nr	0				
D	**SERVICEABILITY**						
20	Mains bursts per 1,000 km	nr	0	195	139	141	147
21	Water treatment work coliform non-compliance	%	2	N/C	0.12	0.08	0.08
22	Water Infrastructure	text		N/C	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.
23	Water non-infrastructure	text		N/C	N/C	N/C	

	E DEFINED OUTPUTS FOR MAINTAINING BASE SERVICES	Description
24	Water infrastructure (1)	The SBP did not contain specific Base Maintenance outputs. As indicated in Table 32, IRE (water) for 09/10 was £26.9m and MNI (water) was £12.3m
25	Water infrastructure (2)	
26	Water non-infrastructure (1)	
27	Water non-infrastructure (2)	

	SERVICEABILITY ASSESSMENT
S	Stable
M	Marginal
I	Improving
D	Deteriorating

Table B

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL RETURN - BOARD'S OVERVIEW
TABLE B - SEWERAGE SERVICE - KEY OUTPUTS AND SERVICE DELIVERY - WATER SERVICE (TOTAL)

	DESCRIPTION	UNITS	DP	BASE YEAR SBP 2006-07	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10
A	**SERVICE PERFORMANCE**						
	Sewer flooding- internal						
1	2 in 10 register at end of year	nr	0	N/C	80	80	1
2	1 in 10 register at end of year	nr	0	N/C	0	745	704
3	1 in 20 register at end of year	nr	0	N/C	0	0	0
3A	Potential risk of property flooding identified requiring further investigation to assess the risk category.	nr	0				6
4	Properties flooded in the year (overloaded sewers)	nr	0	N/C	195	3	6
5	Properties flooded in the year (other causes)	nr	0	N/C	366	23	5
	Sewer flooding- external						
6	Areas flooded externally in the year (overloaded sewers)	nr	0	N/C	899	1792	1196
7	Areas flooded externally in the year (other causes)	nr	0	N/C	4283	7968	6872
B	**QUALITY & ENVIRONMENTAL COMPLIANCE - Total**						
8	% of sewage treatment works discharges non-compliant (WO consents)	%	1	N/C	12.4	10.0	8.4
9	% of sewage treatment works discharges non-compliant (UWWTD consents)	%	1	N/C	14.0	8.0	7.1
10	% of total p.e. served by sewage treatment works in breach of WO consent	%	1	N/C	18.5	10.3	6.2
11	% of total p.e. served by sewage treatment works in breach of UWWTD consent	%	1	N/C	10.6	10.6	2.4
12	% of intermittent discharges satisfactory	%	2	61.99	67.97	93.89	74.01
13	Percentage unsatisfactory sludge disposal	%	2	0.00	0.00	0.00	0.00
C	**QUALITY AND ENVIRONMENTAL ACTIVITIES AND OUTPUTS**						
14	Unsatisfactory intermittent discharges dealt with	nr	0	N/C	N/C	27	11
15	First time sewerage schemes - properties	prop	0				
16	Sewage treatment works improved	nr	0	N/C	16	44	63
17	Additional sewage sludge arising from new quality obligations since April 2005	ttds	1	3.1	1.5	0.0	0.0
18	Total sewage sludge produced (inc. PPP)	ttds	1	38.0	38.4	38.0	37.9
19	Number of investigations completed related to the quality programme	nr	0				
D	**SERVICEABILITY TO CUSTOMERS**						
20	Sewer collapses per 1,000 km	nr	1	86.4	47.3	96.3	68.7
21	Nr of pollution incidents at CSOs and foul sewers (categories 1, 2 and 3)	nr	0	N/C	230	199	244
22	Percentage of sewage treatment works discharges failing numeric consents	%	2	N/C	12.40	11.20	7.93
23	Sewerage infrastructure	text		N/C	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.
24	Sewerage non- infrastructure	text		N/C	N/C	N/C	

E	DEFINED OUTPUTS FOR MAINTAINING BASE SERVICES
25	Sewerage infrastructure (1)
26	Sewerage infrastructure (2)
27	Sewerage non-infrastructure (1)
28	Sewerage non-infrastructure (2)

Description
The SBP did not contain specific Base Maintenance outputs. As indicated in Table 32, IRE (sewerage) for 09/10 was £11.5m and MNI (sewerage) was £30.1m

	SERVICEABILITY ASSESSMENT
S	Stable
M	Marginal
I	Improving
D	Deteriorating

Table C

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL RETURN - BOARD'S OVERVIEW
TABLE C - EXPENDITURE & FINANCIAL PERFORMANCE MEASURES (TOTAL)

	DESCRIPTION	UNITS	DP	BASE YEAR SBP 2006-07	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10
A	**TOTAL EXPENDITURE**						
1	Total operating expenditure - water service (NI Water only)	£m	3	N/C	95.358	98.499	71.762
1a	Total operating expenditure (PPP) - water service	£m	3	N/C	N/C	N/C	10.944
2	Total capital expenditure (excl. adopted and nil cost assets)	£m	3	N/C	80.389	206.859	101.554
3	Total operating expenditure - sewerage service (NI Water only)	£m	3	N/C	88.395	109.092	97.808
3a	Total operating expenditure (PPP) - sewerage service	£m	3	N/C	2.872	N/C	17.975
4	Total capital expenditure (excluding adopted and nil cost assets)	£m	3	N/C	173.896	186.296	156.420
B	**CURRENT COST ACCOUNTS - PROFIT & LOSS**						
5	Total Turnover	£m	3	N/C	294.057	327.395	347.569
6	Current cost operating costs (including CCD & IRC)	£m	3	N/C	-278.250	-315.427	-328.924
7	Current cost operating profit	£m	3	N/C	17.077	11.626	22.963
C	**CAPITAL BASE & POST TAX RETURN**						
8	Capital Value Year - End (outturn)	£m	3	N/C	984.814	1194.686	1421.544
9	Total net debt	£m	3	N/C	250.717	435.006	617.211
10a	Post tax return on capital	%	2	N/C	1.88	1.06	1.72
10b	Pre tax return on capital	%	2	N/C	N/C	1.06	1.72
D	**KEY FINANCIAL INDICATORS**						
11	Cash interest cover (funds from operations; gross interest)	ratio	2	N/C	12.26	5.75	3.97
12	Adjusted cash interest cover (funds from operation less capital charges; gross interest)	ratio	2	N/C	2.17	0.77	0.49
13	Adjusted cash interest cover (funds from operation less capital maintenance; gross interest)	ratio	2	N/C	5.12	1.62	1.86
14	Funds from operations: debt	ratio	2	N/C	0.43	0.24	0.18
15	Retained cash flow: debt	ratio	2	N/C	0.54	0.18	0.11
16	Gearing: D/RCV	%	2	N/C	25.45	36.41	43.42

Table D

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL RETURN - BOARD'S OVERVIEW
TABLE D - WATER SERVICE: KEY SUPPORTING INFORMATION (TOTAL)

	DESCRIPTION	UNITS	DP	BASE YEAR SBP 2006-07	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10
A	**OPERATING EXPENDITURE/PROPERTY ANALYSIS**						
1	Base service - operating expenditure/property served	£/prop	2	N/C	128.35	130.39	96.65
2	Enhanced service - additional operating expenditure/property served	£/prop	2	N/C	0.00	0.00	0.00
3	Improving and maintaining supply demand balance – additional operating expenditure/property served	£/prop	2	N/C	0.00	0.00	0.00
4	Quality enhancements - additional operating expenditure/property served	£/prop	2	N/C	0.00	0.07	0.42
5	New outputs/obligations – additional operating expenditure/property served	£/prop	2	N/C	0.00	0.00	0.00
6	Water service - total operating expenditure/property served	£/prop	2	N/C	128.35	130.46	97.06
B	**CAPITAL EXPENDITURE/PROPERTY ANALYSIS**						
7	Base service - capital maintenance expenditure/property served (infra and non-infra)	£/prop	2	N/C	52.70	75.67	53.03
8	Enhanced service - additional capital expenditure/property served	£/prop	2	N/C	7.99	43.86	18.19
9	Improving and maintaining supply/demand balance - additional capital expenditure/property served	£/prop	2	N/C	21.04	83.46	33.77
10	Quality enhancements - additional capital expenditure/property served	£/prop	2	N/C	21.16	65.22	26.65
11	New outputs/obligations – additional capital expenditure/property served	£/prop	2	N/C	0.00	0.00	0.00
12	Water service - total capital expenditure/property served	£/prop	2	N/C	102.89	268.22	131.64
C	**CAPITAL WORKS ACTIVITY**						
13	Number of existing water treatment works refurbished for maintenance (excl.. PPP)	nr	0				
13a	Number of existing water treatment works refurbished for maintenance (PPP)	nr	0				
14	Capacity of refurbished water treatment works for maintenance (excl. PPP)	Ml/d	3				
14a	Capacity of refurbished water treatment works for maintenance (PPP)	Ml/d	3				
15	Mains relined	km	2	10.05	0.00	0.00	0.00
16	Mains renewed	km	2	239.87	136.00	288.62	172.22
17	Total mains relined & renewed	km	2	249.92	136.00	288.62	172.22
D	**WATER BALANCE**						
18	Distribution input (inc. PPP)	Ml/d	2	619.32	614.45	632.71	623.24
19	Total leakage	Ml/d	2	168.75	156.52	180.93	186.86
20	Total water savings achieved/assumed	Ml/d	2	N/C	0.00	0.02	0.04
21	Water delivered	Ml/d	2	788.07	498.10	496.50	477.89
22	Security of supply index (planned levels of service)	nr	0	N/C	-26	42	88
23	Security of supply index (reference levels of service)	nr	0	N/C	-26	42	88
E	**METERING**						
24	Number of household meters renewed	nr	0				
24a	Number of non household meters renewed	nr	0				779
25	Meter optants installed	nr	0	0	0	0	0
25a	Meter optants installed- non household	nr	0				26
26	Selective meters - installed	nr	0	0	0	0	3945
26a	Selective meters - installed- non household	nr	0				907
27	Percentage of households metered	%	1	4.5	4.6	0.0	0.0
27a	Percentage of non households metered	%	1				81.1
F	**OTHER KEY SUPPORTING INFORMATION**						
28	Statutory GSS - Total number of GSS events: water and sewerage service	nr	0				
29	Customers on the special assistance register	nr	0	N/C	N/C	N/C	546
30	Total revenue outstanding < 48 months as % of annual forecast revenue	%	2	N/C	N/C	N/C	0.00
31	Average connected properties - water (excluding void properties)	000	0	780	743	755	739

Table E

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL RETURN - BOARD'S OVERVIEW
TABLE E - SEWERAGE SERVICE: KEY SUPPORTING INFORMATION (TOTAL)

	DESCRIPTION	UNITS	DP	BASE YEAR SBP 2006-07	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10
A	**OPERATING EXPENDITURE / PROPERTY ANALYSIS**						
1	Base service - operating expenditure/property served	£/prop	2	N/C	139.71	172.33	157.28
2	Enhanced service - additional operating expenditure/property served	£/prop	2	N/C	0.00	0.07	0.56
3	Supply/demand balance - additional operating expenditure/property served	£/prop	2	N/C	0.95	0.78	1.60
4	Quality enhancements - additional operating expenditure/property served	£/prop	2	N/C	0.15	1.65	2.34
5	New outputs/obligations - additional operating expenditure	£/prop	2	N/C	0.00	0.00	0.00
6	Sewerage service - Total operating expenditure/property served	£/prop	2	N/C	140.81	174.83	161.78
B	**CAPITAL EXPENDITURE/PROPERTY ANALYSIS**						
7	Base service - Capital expenditure/property served (infrastructure and non-infrastructure)	£/prop	2	N/C	46.98	55.19	68.80
8	Enhanced service - additional capital expenditure/property served	£/prop	2	N/C	79.16	45.21	33.08
9	Supply/demand balance - additional capital expenditure/property served	£/prop	2	N/C	70.14	67.80	48.70
10	Quality enhancements - additional capital expenditure/property served	£/prop	2	N/C	78.73	127.27	104.00
11	New outputs/obligations - additional capital expenditure	£/prop	2	N/C	0.00	0.00	0.36
12	Sewerage service - Total capital expenditure/property served	£/prop	2	N/C	275.01	295.47	254.94
C	**CAPITAL WORKS ACTIVITY**						
13	Sewers renovated	km	2	4.33	2.96	3.90	2.19
14	Sewers replaced	km	2	N/C	12.52	8.24	11.26
15	Total sewers renovated and replaced	km	2	N/C	15.48	12.14	13.45
16	Number of sewage treatment works refurbished for maintenance (excl. PPP)	nr	0				
16a	Number of sewage treatment works refurbished for maintenance (PPP)	nr	0				
17	P.e. of refurbished sewage treatment works for maintenance (excl. PPP)	000	0				
17a	P.e. of refurbished sewage treatment works for maintenance (PPP)	000	0				
D	**SEWER FLOODING ACTIVITY**						
18	Internal property flooding solved by company action	nr	0	N/C	N/C	N/C	185
19	External only flooding problems solved by company action	nr	0	N/C	N/C	N/C	N/C
20	External linked problems solved by company action	nr	0	N/C	N/C	N/C	N/C
21	Reduction in internal flooding due to other causes	nr	0	N/C	N/C	N/C	18
22	Internal property flooding benefiting from mitigation	nr	0	N/C	N/C	N/C	
23	External property/area flooding benefiting from mitigation	nr	0	N/C	N/C	N/C	
E	**OTHER KEY SUPPORTING INFORMATION**						
24	Volume waste water returned	Ml/d	2	407.45	382.57	347.82	337.63
25	Average connected properties - sewerage (excluding void properties)	000	0	664	628	624	605

Annual Information Return 2010

Section 2

Tables and Commentary

Table 1

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**HOUSEHOLD - LEAKAGE**										
1	Number of household supply pipes repaired	nr	0			495	C5	975	B3	1114	B3
2	Number of household supply pipes repaired free	nr	0			0		0	A1	0	A1
3	Number of household supply pipes repaired - subsidised	nr	0			0		0	A1	0	A1
4	Number of household supply pipes replaced	nr	0			0		0	A1	0	A1
5	Number of household supply pipes replaced free	nr	0			0		0	A1	0	A1
6	Number of household supply pipes replaced - subsidised	nr	0			0		0	A1	0	A1
7	Total savings achieved/assumed	Ml/d	2			0.00	C5	0.00	A1	0.00	A1
8	Total cost of initiative	£000	2			0.00		0.00	A1	0.00	A1
B	**HOUSEHOLD - WATER EFFICIENCY METHODS**										
9	Number of cistern devices distributed to households	nr	0			188	C5	2472	B3	2813	B3
10	Number of cistern devices installed	nr	0			0	A1	494	B4	800	B4
11	Total savings achieved/assumed	Ml/d	2			0.00	A1	0.02	B4	0.02	B4
12	Total cost of initiative	£000	2			N/C		1.66	B3	1.60	B3
13	Number of water butts distributed to households	nr	0			N/C		0	A1	0	A1
14	Number of water butts installed	nr	0			N/C		0	A1	0	A1
15	Total savings achieved/assumed	Ml/d	2			N/C		0.00	A1	0.00	A1
16	Total cost of initiative	£000	2			N/C		0.00	A1	0.00	A1
17	Number of water audit packs distributed to households	nr	0			N/C		660	B3	3028	B3
18	Total savings achieved/assumed	Ml/d	2			N/C		0.00	B3	0.02	B4
19	Total cost of initiative	£000	2			N/C		0.53	B3	0.75	B3
20	Number of water audits carried out by the company in households	nr	0			N/C		500	B1	0	A1
21	Total savings achieved/assumed	Ml/d	2			N/C		0.00	B4	0.00	A1
22	Total cost of initiative	£000	2			N/C		7.57	B2	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
24	Total savings achieved/assumed	Ml/d	2			N/C		0.00	A1	0.00	B4
25	Total cost of initiative	£000	2			N/C		0.00	A1	0.05	B3
26	Water audits at commercial premises completed by co. or agent	nr	0			N/C		4	B1	0	A1
27	Total savings achieved/assumed	Ml/d	2			N/C		0.00	A1	0.00	A1
28	Total cost of initiative	£000	2			N/C		0.17	B3	0.00	A1
D	**TOTALS**										
29	Total savings achieved/assumed	Ml/d	2			0.00	C5	0.02	B4	0.05	B4
30	Total cost of initiatives	£000	2			81.23	B4	84.77	B3	74.39	B3
E	**OTHER WATER EFFICIENCY METHODS**										
31a	Water Efficiency Publications - leaflets etc.	£	0			N/C		846	B3	1679	B3
31b	Water efficiency Promotional Material - magnets etc.	£	0			N/C		5670	B3	5142	B3
31c	Water Efficiency Devices - shower timers etc.	£	0			N/C		4666	B3	7944	B3
31d	Water Efficiency Education - Water Bus etc.	£	0			N/C		63662	B3	57218.2	B3
32	Total savings achieved/assumed	Ml/d	2			N/C		0.00	B4	0.01	B4
33	Total cost of initiative	£000	2			N/C		74.85	B3	71.98	B3

Table 1 – Key Outputs – Water Service 1

Household- Leakage

NIW operates 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 NIW, 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. NIW are not funded to operate a free/subsidised domestic supply pipe repair/replacement policy. The focus for the repair of customer supply pipes has been through the application of the Leakage Notice procedure.

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

Lines 1-8 - Household Supply Pipes

NIW do not currently operate a free/subsidised repair/replacement policy for leaking customer supply pipes. No savings can be achieved/assumed as the guidance refers only to those that are repaired/replaced free or subsidised and not those that are repaired due to waste notices being issued to the customer by NIW. There are no costs to NIW as although on occasions NIW arrange external repairs these are agreed with the customer and the cost billed to them.

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) Aerating shower heads are recommended

2. Efficient use of water in the garden

WET have attended a variety of external public events:
- Balmoral Agricultural Show in May;
- Tall Ships in August;
- Lifestyle Green Show in September 2009;
- World Water Day at IKEA;
- World Environment Day at Ulster Bank;
- Three Family Fun days held at Silent Valley Mountain Park (June, July and August 2009);
- South Eastern Health Trust in Downshire Hospital;
- North West Health Trust Altnagelvin Hospital;
- Ballinderry Fair (May); and
- Stormont Fun Day (May).

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:
- Mother and toddler groups;
- Voluntary Services Belfast groups;
- Inner Whee;
- Help the Aged;
- Rotary groups;
- National Trust staff;
- Groundwork – sustainable community allotments;
- Carers of elderly (Health Trust Day Centre); and
- Newtownabbey Councils Saving Campaign.

The WET promotes water efficiency at their Education Centres, at Silent Valley and Wastewater Heritage Centre, Duncrue, Belfast 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);
- Pencils;
- Fridge magnets; and
- Water cycle poster (teacher's aid).

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

Lines 9-12 - Household Cistern Devices

The methodology used to calculate the distribution of cistern displacement devices (CDD's) for the reporting year is to monitor the amount of CDD's distributed on a monthly basis and then to add the totals for each month together to provide the total figure distributed in the year. CDD's can be requested by the customer directly through NIW's Customer Relations Centre (CRC). For 2009/2010 the figure requested from CRC was 20.

NI Water has distributed a number of CDD's by other means: at school visits, community talks, shows and at the request of an organisation. Each teacher we came into contact with was also issued with a sample. Community Groups receiving presentations on conservation also received a hippo bag.

The table below shows the number of CDD's distributed in 2009/10.
During the report year an increase of 300 CDD's was recorded from 2008/09.

	Number Distributed		
Month	**at School Visits**	**at Community visits / shows**	**Total**
April 09	12	0	12
May 09	44	1240	1284
June 09	39	311	350
July 09	0	5	5
August 09	0	178	178
September 09	30	0	30
October 09	23	76	99
November 09	67	127	194
December 09	58	39	97
January 10	82	218	300
February 10	68	0	68
March 10	31	145	176
Total	454	2339	**2793**

Values derived from the Ofwat Water Efficiency Targets 2010-11 to 2014-15 were used to estimate the number of CDD's installed. This provided an installation rate of 20% and was due to the distribution method used i.e. through shows and events. Using the OFWAT Efficiency Report the volume displaced per flush was recorded as 2.5l/per flush. This figure is the average savings per flush achieved through the installation of Hippo Bags which are the CDD distributed by NIW.

The calculation for the savings achieved in 2009/10 report year is as follows:
S*O*F*(D*I) = Savings in litres

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

Calculation:
2.5*2.5*5*(2339*0.2) = 14168.75 l/per day
= 0.0146 Ml/d

70% installation rate for those from customer requests (20) and those given to schools (454) giving a total of 474, using the OFWAT Efficiency Report the volume displaced per flush was recorded as 2.5l/per flush. This figure is the average savings per flush achieved through the installation of Hippo Bags which are the CDD distributed by NIW.

The calculation for the savings achieved in 2009/10 report year is as follows:
S*O*F*(D*I) = Savings in litres

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

Calculation:
2.5*2.5*5*(474*0.7) = 10368.75 l/per day
= 0.01037 Ml/d

Giving a total of 0.02497 Ml/d

Lines 13-16 - Water Butts Distributed to Households

For the report year 2009/10 NI Water have not distributed water butts to households. NI Water has promoted the use of waterbutts through leaflet distribution. During 2009/10 we have developed a relationship with a large national DIY company with a view to working together to promote waterbutts and water efficiency items for the home.

Lines 1-22 - Water Audits: Household

During 2009/10 the self water audit for domestic households which can be accessed through the company's website has not been taken up well by visitors to the site. There have however been 614 hits to the site and 3 audits have been completed online. To overcome this, a link has now been introduced at intervals on the home page. This facility is still in its infancy.

An advantage of the website self water audit is that as soon as the customer completes the form the information is emailed directly to WET and this data can then be collated in a spreadsheet to accumulate water usage across NI Water's customer base.

Domestic Self Water Audit Packs

Over the report year 2009/10 WET ran a 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 2010 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 number of audits distributed was 2049 and the number of audits returned was 364 which is a return rate of 18%. The percentage acted upon is assumed to be 70%. It has been assumed that completed audit achieved savings of 10 litres per property per day.

The calculation for the savings achieved in 2009/10 report year is as follows:
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:
2049*0.70*10 = 14343 l/per day
= 0.014343 Ml/d

From the figures supplied by Water Education Department, 365 Domestic Water Audits have been distributed at shows.

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:
365*0.20*10 = 730 l/per day
= 0.000730 Ml/d

From the figures supplied by IT Corporate Communications, 614 hits have been recorded at on line water 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 10% 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:
614*0.10*10 = 614 l/per day
= 0.000614 Ml/d

Total savings figure for domestic audits 0.015687 Ml/d

Water Audits Completed by Company in Households

No audits were completed in the homes of customers.

The company have met with the Housing Executive (HE) re any new refurbishment work they intended to do in the 09/10 period but work has been postponed until the HE budget becomes available. Permission was granted for two pieces of work to commence and as a result NI Water put meters in these areas to capture data prior to commencement of the work. NI Water intends to make a provision to collect the data after new Water Efficiency products are installed. It should be noted that the HE only use inexpensive products and install baths and not baths and showers.

It was requested that all HE contractors contact NI Water's Communications Manager prior to doing any installations and in turn they would be forwarded a guide on Water Efficiency products that they should use.

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

The Energy Saving Trust have developed an on-line interactive house and by clicking on energy using items within the house the customer's energy bill is calculated and also the savings that can be made by reducing the number of times each item is used. NI Water intends to have a link to this site which will be going live in late May 2010.

Non-household - Water Efficiency Methods

NI Water operates a large user discount scheme[1] 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.

Work was carried out on NI Water's website; an area was developed to deal with promoting water efficiency within the commercial customer sector, supplied by NI Water.
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 2009/10 277 Water Audits for Schools where distributed by WET through, Teachers Packs. To calculate the savings achieved through this initiative it is necessary to make assumptions on the savings achieved (Ofwat Water Efficiency Targets 2010-11 to 2014-15). The percentage acted upon is assumed at 20% saving 10 litres per property per day

D*A*S = Savings in litres

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

[1] www.niwater.com/largeusertariff.asp

Calculation:
277*0.20*10 = 2554 l/per day
= 0.000554 Ml/d

Totals
Lines 29-30 - Totals
Savings

The total recorded savings for Sections A, B, C and E is 0.0479 Ml/d (47.9 l/per day).

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

Efficiency Method	Savings per Ml/ day	Cost of initiative £
Household		
Cistern Devices	0.02497	1603
Self Water audits	0.015687	749
Non Household		
School Audits	0.000554	54.43
Other Methods		
Shower timers (see below)	0.0067	7944
Leaflets (see below)		1679
PR items(see below)		5,142
Education Dept		57,218
Total	0.047911	74,389

The calculation of costs due to staffing has been calculated using accepted methodology from the AIR09 return.

Costs

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

Lines 31-33 - Other Water Efficiency Methods

The majority of NI Water's other Water Efficiency Methods are education based.

As already mentioned, NI Water has a dedicated Water Education Team consisting of two full time employees. The Environmental Education Manager and the Outreach and Learning Officer, who deliver presentations to a variety of community and youth groups, organise/attend external events as well as attend educational establishments at all levels. Conservation classroom presentations are given on demand and we work with the Eco Schools Award scheme. The double decker Waterbus, a mobile education unit provides displays, quiz, demonstrations, DVD and computer facilities. This exhibition aims to make children aware of a range of water issues such as the water cycle, water for health, water sources, water/wastewater cleaning and water efficiency. The Waterbus programmes have been written for Key Stage 1 (P1-P4) and Key Stage 2 (P5-P7) and we work closely with the revised curriculum. The service is well received by Education and Library Boards and we have been in contact with over 8000 pupils delivering water conservation messages alone. NI Water has a Wastewater Heritage Centre sited at Duncrue in Belfast. This site provides an insight into the history of water supply and removal of waste and the importance and techniques of waste water management. We consider contact with school children to be the vital link with parents at home, bringing news and promotional items and encouraging them to become water efficient and to be aware of the value of water management.

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

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

Efficiency Method	**Number**	**£ Cost**
Leaflet – Water Butt	1360	299.20
Leaflet- How water wise are you	6777	671
Leaflets-Hippo Bag	2813	573.85
Leaflet: Drought gardening	1646	134.97
Sub Total	…….	**1679.02**
Bookmark- Saving Water	5007	495.69
Bookmark- “Flo” Kids saving water	2494	246.90
Seeds: Drought Resistant	411	1196.01
Magnet: Save Water	5065	1410.20
Pencil- Use water wisely	7168	1576.96
Game: Snakes and Ladders	554	216.06
Sub Total	…….	**5141.82**
Shower timers	5833	7944.54
Total		**14739.33**

Over the reporting year 5833 shower timers were distributed at shows, events and presentations by NI Water staff. The installation rate of these can be assumed at 23% (Ofwat Water Efficiency Targets 2010-11 to 2014-15) a saving of 5 litres per property per day can also be assumed (Ofwat Water Efficiency Targets). With this information we can calculate the savings.

The calculation for the savings achieved in 2008/09 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:
5833*0.23*5 = 6707.95 l/per day
= 0.0067Ml/d

During the reporting year 2009/10 NI Water has regularly updated its existing website (www.niwater.com). Building on the efficiency element, NI Water has also developed an educational microsite. "What are you doing about water" (http://www.niwater.com/education/index.html) for ages 6 to 14 years. 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 website was nominated for the following awards during 2009: for CIPR National Excellence Award 2009, CIPR PRide Award (NI) – received Silver Award (runner up) and Golden Spider Award.

NI Water has highlighted throughout the year the issue of water efficiency and in particular the potential for frozen pipes. During the "big freeze" of December and January the statement of "Wrap up warm this winter" was released extensively to all daily and regional papers as well as broadcast on a daily basis. A new "U tube" video on "Protect Your Pipes this Winter" was made by NI Water's Corporate Affairs Team and the video made available to the public, there have been 798 hits on the site to date[2].

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

[2] http://www.youtube.com/northernirelandwater

Table 2

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**DG2 PROPERTIES RECEIVING PRESSURE/FLOW BELOW REFERENCE LEVEL**										
1	Total connected properties at year end	000	1	794.7	A2	800.0	A2	804.4	A2	798.7	B2
2	Properties below reference level at start of year	nr	0	N/C		N/C		10321	B4	5770	B4
3	Properties below reference level at end of year	nr	0	N/C		10321	B4	5770	B4	2154	B3
4	Properties receiving low pressure but excluded from DG2	nr	0	N/C		N/C		218	B4	94	B3
4a	DG2 Properties with pressure below a surrogate level of 7.5m at end of year	nr	0					320	B2	169	B2
B	**DG3 PROPERTIES AFFECTED BY SUPPLY INTERRUPTIONS**										
	(i) UNPLANNED INTERRUPTIONS										
5	More than 3 hours	nr	0	41241	B4	60662	B3	56480	B3	47970	B3
6	More than 6 hours	nr	0	10285	B4	9483	B3	8175	B3	9427	B3
7	More than 12 hours	nr	0	767	B4	1839	B3	2010	B4	3675	B3
8	More than 24 hours	nr	0	9	B4	72	B3	609	B4	2294	C4
	(ii) PLANNED AND WARNED INTERRUPTIONS										
9	More than 3 hours	nr	0	77958	B4	39237	B3	48163	B3	43341	B3
10	More than 6 hours	nr	0	41803	B4	20273	B3	26480	B3	22460	B3
11	More than 12 hours	nr	0	265	B4	62	B3	0	B4	135	B3
12	More than 24 hours	nr	0	25	B4	0	B3	0	B4	0	B3
	(iii) INTERRUPTIONS CAUSED BY THIRD PARTIES										
13	More than 3 hours	nr	0	6258	B4	1472	B3	2477	B3	2737	B3
14	More than 6 hours	nr	0	854	B4	510	B3	36	B3	499	B3
15	More than 12 hours	nr	0	185	B4	22	B3	33	B4	154	B3
16	More than 24 hours	nr	0	175	B4	6	B3	4	B4	0	B3
	(iv) UNPLANNED INTERRUPTIONS (OVERRUNS OF PLANNED INTERRUPTIONS)										
17	More than 6 hours	nr	0	404	B4	835	B3	590	B3	452	B3
18	More than 12 hours	nr	0	40	B4	99	B3	43	B4	118	B3
19	More than 24 hours	nr	0	0	B4	0	B3	8	B4	1	B3
C	**POPULATION**										
20	Population (winter) (total)	000	2	1743.46	B2	1771.11	B2	1800.32	B2	1805.80	C2
D	**DG4 RESTRICTIONS ON USE OF WATER**										
21	% population - hosepipe restrictions	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1
22	% population - drought orders	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1
23	% population - sprinkler/unattended hosepipe restrictions	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1

Table 2 – Key Outputs - Water Service 2

DG2 properties receiving pressure / flow below reference level

Introduction

At the start of this year the DG2 Register indicated that 5770 properties were receiving a service below the reference level. NI Water gave a commitment that during AIR10 the following tasks would be conducted:

- Available data from completed Watermain Rehabilitation schemes would be applied to the Register and used to substantiate removals.
- Field logging and investigation would continue to verify the robustness of data used to populate the Register for AIR09. This would cover properties not included in the Watermain Rehabilitation schemes.

NI Water's priority during the report period was to validate data giving rise to DG2 properties and identify removals resulting from capital works. The company are not in a position to report on the number of properties on the DG2 register served by common service pipes as such records are not available.

Line 1 - Total connected properties at year end

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

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

The number of properties on the Register at the start of the year was 5770 as reported in line 3 of AIR09. It should be noted that this number would have included those properties within 15m elevation of service reservoirs and those those identified under the definition of allowable exclusions

Line 3 - Properties below reference level at end of year

The number of properties reported as being below the reference level at end of year, AIR10 is 2154 which represents a reduction of 3616 against the AIR09 reported figure of 5770. The number of 2154 excludes 94 allowable exclusions that are within 15m elevation of a supply service reservoir. The reported figure includes 713 properties added as a result of the verification work.

There is 1 property remaining as being under investigation. Of the 4705 properties planned for validation this year, 4350 were duly logged with the remainder residing in areas covered by Rehabilitation schemes. 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 logged data. The AIR10 Table 2 Methodology Statement outlines in detail the additions and removals process.

The reductions arising from capital works are the result of an ongoing watermains rehabilitation programme. PPRAs received for 13 Work Packages resulted in 572 properties being removed from the DG2 register due to Company Action.

Rehabilitation Scheme	**DG2 Properties Removed**
Bangor Outer	445
Clough	10
Cargan	3
Silent Valley, West of The Bann, Camlough and Breda	19
Glarryford	16
Seagahan Phases 1&2	33
Stewartstown	18
Altnahinch	18
Fofanny Rathfriland	8
Lough Fea / Cookstown	2
Total	**572**

Extensive field logging continued during the AIR10 report period to support the removal of properties owing to improved information. As a direct result of this exercise 3606 properties were removed. For each property removed there is a supporting report and logged data.

As a result of the field logging process to validate those properties as receiving a surrogate pressure of less than 15m pressure and hence to be included on the DG2 register there have been 713 additional properties added to the DG2 register as being below the reference level.

A total of 57 properties were removed during the year due to rationalisation of the distribution system through pressure management schemes and network improvements. Areas affected were McCrackens DMA - 25 properties, Derrybeg Newry West DMA - 10 properties and Mourneview DMA 22 properties.

The Register has been developed with links to reports, supporting documentation and location maps, all of which are held electronically.

Schedule of Changes

	No. of Properties
Additions due to better information	713
Reductions due to better information	3606
Reductions due to asset improvements – capital works	572
Reductions due to operational improvements	57
Under Investigation	1

Line 4 - Properties receiving low pressure but excluded from DG2

The Register contains details of 94 properties reported in line 3 which have been identified as complying with the exclusion criteria as they are all within 15m elevation of the service reservoir.

NI Water is not currently in a position to validate exclusions based on any other criteria but is continuing to identify critical point and surrogate logging locations across the network which will accommodate future permanent pressure monitoring. Although this work commenced during the latter part of the reporting year, this project is in its infancy and will continue throughout and beyond the forthcoming year, should funding be available in line with the Reporter's recommendation. The long term objective is to link continuous data from these sites to a corporate system to maximise the potential of this information and report on company performance. Appropriate software will need to be developed to achieve this.

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

The number of confirmed properties on the Register with a recorded surrogate pressure below 7.5m at the year end is 198 of which 29 are within the 7.5m elevation of the service reservoir and can therefore be classed as valid exclusions. A total of 73 properties were removed in this category as they were established as being either derelict, demolished or not connected to the watermains during this investigation.

Confidence Grades

The confidence grades assigned to lines 2, 3, 4 and 4a for AIR10 are B4, B3, B3 and B2 respectively.

The confidence grade for line 2 is as per the AIR09 line3. For line 3 a confidence grade of B3 has been assigned in comparison to B4 for AIR09. There has been substantial field logging work undertaken to substantiate the

robustness of the inclusion of properties on the DG2 register. The higher confidence level reflects the field logging and analysis undertaken during the 2009/10 year and the greater level of confidence could have merited a B2 confidence grade. However we believe the B3 figure is appropriate at present until the register has 'bedded in'. Line 4 has been allocated a confidence grade of B3 similar to line 3. The confidence grade for line 4a is B2 which mirrors the figure for AIR09.

Lines 5 to 19 - DG3 Properties Affected by Supply Interruptions

The rules governing the recording and collation of data for the DG3 Register are explained in the Levels of Service Procedures. The calculation, checking and presentation of figures is explained in the Methodology Statement for AIR10: Table 2: Lines 5 to 19. DG3 procedures were established and implemented by NI Water in April 2007.

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	2007/08	2008/09	2009/10
Table 2: Line 5	More than 3 hours	60,662	56,480	**47,970 (46,406)***
Table 2: Line 6	More than 6 hours	9,483	8,175	**9,427 (7,863)***
Table 2: Line 7	More than 12 hours	1,839	2,010	**3,675 (2,111)***
Table 2: Line 8	More than 24 hours	72	609	**2,294 (730)***

*Figures excluding properties affected by frozen communication pipes are listed in brackets

The numbers of properties affected by unplanned interruptions lasting more than 3 hours have fallen over the last three years, by 4,182 properties between 2007/08 and 2008/09 and by a further 8,510 properties between 2008/09 and 2009/10. The numbers of properties affected by unplanned interruptions lasting more than 6 hours, decreased by 1,308 properties between 2007/08 and 2008/09 but increased by 1,252 properties between 2008/09 and 2009/10.

The numbers of properties affected by unplanned interruptions lasting more than 12 hours have risen over the last three years, by 171 properties between 2007/08 and 2008/09 and by a further 1,665 properties between 2008/09 and 2009/10. The numbers of properties affected by unplanned interruptions lasting more than 24 hours have also risen over the last three years, by 537 properties between 2007/08 and 2008/09 and by a further 1,685 properties between 2008/09 and 2009/10.

The increases in numbers can be largely attributed to the inclusion of 1,564 properties affected by frozen communication pipes during the prolonged

period of cold weather in December and January. The increases can also be attributed to operational difficulties experienced during this time such as high numbers of bursts, low reservoir levels and non-functioning pumping equipment. A further contributory factor was the heavy snow and resultant electricity supply failures at the end of March.

Planned and Warned Interruptions

AIR	DG3 Properties Affected	2007/08	2008/09	2009/10
Table 2: Line 9	More than 3 hours	39,237	48,163	**43,341**
Table 2: Line 10	More than 6 hours	20,273	26,480	**22,460**
Table 2: Line 11	More than 12 hours	62	0	**135**
Table 2: Line 12	More than 24 hours	0	0	**0**

The numbers of properties affected by planned and warned interruptions exceeding 3 hours and 6 hours, increased by 23% and 31% respectively between 2007/08 and 2008/09 but decreased by 10% and 15% respectively between 2008/09 and 2009/10. The main reason for the reduction is that the Company's overall meterage of new and replacement watermains reduced significantly in 2009/10. Although overall planned and warned interruptions decreased, the number of properties interrupted per meter of new watermain installed increased due to work in more urban environments such as Belfast and Lisburn City Centres, etc.

The numbers of properties affected by planned and warned interruptions lasting more than 12 hours, decreased by 62 properties between 2007/08 and 2008/09 but increased by 135 properties between 2008/09 and 2009/10. The 135 properties were affected by one-off incident in June involving a planned interruption between 18:15 and 06:30 the following day. As a large part of this interruption occurred throughout the night, customers would have been unlikely to realise the full impact.

For the third year in succession, no properties experienced planned and warned interruptions exceeding 24 hours.

Interruptions Caused by Third Parties

AIR	DG3 Properties Affected	2007/08	2008/09	2009/10
Table 2: Line 13	More than 3 hours	1,472	2,477	**2,737**
Table 2: Line 14	More than 6 hours	510	36	**499**
Table 2: Line 15	More than 12 hours	22	33	**154**
Table 2: Line 16	More than 24 hours	6	4	**0**

The numbers of properties experiencing interruptions caused by third parties lasting more than 3 hours, increased by 1,005 properties between 2007/08 and 2008/09 but decreased by 260 properties between 2008/09 and 2009/10.

The numbers of properties experiencing interruptions caused by third parties lasting more than 6 hours, decreased by 474 properties between 2007/08 and 2008/09 but increased by 463 properties between 2008/09 and 2009/10.

The numbers of properties experiencing interruptions caused by third parties lasting more than 12 hours have risen over the last three years, by 11 properties between 2007/08 and 2008/09 and by a further 121 properties between 2008/09 and 2009/10.

No properties experienced interruptions caused by third parties lasting more than 24 hours compared to 4 in 2008/09 and 6 in 2007/08.

Unplanned Interruptions (Overruns of Planned Interruptions)

AIR	DG3 Properties Affected	2007/08	2008/09	2009/10
Table 2: Line 17	More than 6 hours	835	590	**452**
Table 2: Line 18	More than 12 hours	99	43	**118**
Table 2: Line 19	More than 24 hours	0	8	**1**

The numbers of properties experiencing overruns of planned interruptions greater than 6 hours have fallen over the last three years, by 245 properties between 2007/08 and 2008/09 and by a further 138 properties between 2008/09 and 2009/10.

The numbers of properties experiencing overruns of planned interruptions lasting more than 12 hours decreased by 56 properties between 2007/08 and 2008/09 but increased by 75 properties between 2008/09 and 2009/10.

Only one property experienced an overrun of a planned interruption lasting more than 24 hours compared to 8 in 2008/09.

Additional information on performance against alternative standards

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

“Number of properties experiencing unplanned and unwarned interruptions (expressed as a percentage of households) in excess of:

1a) 6 hours, 1b) 12 hours and 1c) 24 hours”

Note: Up to and including 2009/10, the number of properties experiencing unplanned and unwarned interruptions has included interruptions caused by

third parties and unplanned interruptions (overruns of planned interruptions). From 2010/11 onwards, third party interruptions and overruns will be excluded.

Note: KPIs 1a and 1c were introduced for the first time 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** 2007/08 Props	**Outturn** 2007/08 %	07/08 KPI Target	**Outturn** 2008/09 Props	**Outturn** 2008/09 %	08/09 KPI Target	**Outturn** 2009/10 Props	**Outturn** 2009/10 %	09/10 KPI Target
>6hrs	U/P	9,483	1.185%		8,115	1.009%		9,427	1.180%	
	UTP	510	0.064%		96	0.012%		499	0.062%	
	O/R	835	0.104%		590	0.073%		452	0.057%	
	Total	**10,828**	**1.353%**	**2.0%**	**8,801**	**1.094%**	**1.2%**	**10,378**	**1.299%**	**1.0%**
>12hrs	U/P	1,839	0.230%		2,010	0.250%		3,675	0.460%	
	UTP	22	0.003%		33	0.004%		154	0.019%	
	O/R	99	0.012%		43	0.005%		118	0.015%	
	Total	**1,960**	**0.245%**	**0.25%**	**2,086**	**0.259%**	**0.15%**	**3,947**	**0.494%**	**0.15%**
>24hrs	U/P	72	0.009%		609	0.076%		2,294	0.287%	
	UTP	6	0.001%		4	0.000%		0	0.000%	
	O/R	0	0.000%		8	0.001%		1	0.000%	
	Total	**78**	**0.010%**	**0.03%**	**621**	**0.077%**	**0.01%**	**2,295**	**0.287%**	**0.01%**

Note: Percentage outturns are based on total connected properties as follows: 800,018 (AIR08); 804,418 (AIR09); 798,740 (AIR10)

>6hr KPI: The 2009/10 final outturn of 10,378 properties (1.299% of connected properties) exceeds the yearend target of 1.0%.

>12hr KPI: The 2009/10 final outturn of 3,947 properties (0.494% of connected properties) exceeds the yearend target of 0.15%.

>24hr KPI: The 2009/10 final outturn of 2,295 properties (0.287% of connected properties) exceeds the yearend target of 0.01%.

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 2009/10 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 Of Interruption (Hours)	Properties Affected	
		Date	Time	Date	Time		> 0 Hrs	> 3 Hrs
Unplanned	8914	06/04/09	00:00	06/04/09	04:00	4	40	40
Unplanned	8945	06/04/09	01:30	06/04/09	05:30	4	735	735
Unplanned	9049	29/04/09	00:00	29/04/09	03:30	3.5	43	43
Unplanned	9046	29/04/09	00:15	29/04/09	03:45	3.5	1,246	1,246
Unplanned	9129	07/05/09	00:00	07/05/09	03:15	3.25	2,055	2,055
Unplanned	9793	27/07/09	02:30	27/07/09	06:30	4	194	194
Unplanned	9776	02/08/09	00:15	02/08/09	04:30	4.25	198	198
Unplanned	9866	06/08/09	00:00	06/08/09	04:00	4	10	10
Unplanned	9959	26/08/09	00:00	26/08/09	04:00	4	889	889
Unplanned	10299	01/10/09	00:45	01/10/09	05:00	4.25	10	10
Planned	E&P020	21/10/09	00:00	21/10/09	04:00	4	12	12
Unplanned	10669	11/11/09	00:30	11/11/09	05:30	5	18	18
Planned	E&P010	12/11/09	01:00	12/11/09	05:00	4	19	19
Planned	E&P011	13/11/09	00:00	13/11/09	06:00	6	19	19
Planned	E&P015	13/11/09	02:00	13/11/09	06:00	4	10	10
Unplanned	10709	16/11/09	00:45	16/11/09	04:15	3.5	85	85
Unplanned	11135	04/01/10	00:00	04/01/10	03:45	3.75	250	250
Planned	E&P005	09/01/10	00:30	09/01/10	04:30	4	16	16
Unplanned	11572	14/01/10	00:00	14/01/10	03:15	3.25	962	962
Planned	E&P006	14/01/10	00:45	14/01/10	05:00	4.25	12	12
Planned	E&P003	19/01/10	01:00	19/01/10	05:00	4	12	12
Planned	E&P016	19/02/10	00:30	19/02/10	05:00	4.5	100	100
Unplanned	11997	16/03/10	00:15	16/03/10	03:45	3.5	499	499

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.

15 unplanned records and 8 planned records have been identified where customers would not have noticed the loss of service because it occurred at night. All 23 interruptions lasted 6 hours or less. The numbers of properties affected by these interruptions was 7,234 unplanned and 200 planned. 7,234 represents a significant proportion of the total number of properties experiencing unplanned interruptions lasting more than 3 hours in 2009/10 (47,970 properties).

Unplanned: (7,234 / 47,776) x 100 = **15.1%**
Planned: (200 / 43,341) x 100 = **0.5%**

NI Water reported in its AIR09 Commentary that there were 20 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 14,551.

Interruptions of 3 hours or less

NI Water has a record of 231 unplanned interruptions and 6 planned interruptions of 3 hours or less where customers would not have noticed the loss of service because it occurred at night. The numbers of properties affected by these interruptions were 139,918 unplanned and 117 planned.

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

The following table provides a summary of all the overruns of planned and warned interruptions lasting 6 hours or less in 2009/10.

Interrupt. No.	Month	Duration Of Interruption (Hours)	Properties Affected		Duration Of Overrun (Hours)
			> 0 Hrs	> 3 Hrs	
8987	Apr 09	1.5	36	0	0.25
E&P058	**May 09**	**4.00**	**3**	**3**	**3.00**
9315	**May 09**	**4.25**	**200**	**200**	**4.25**
9359	Jun 09	2.25	3	0	0.25
9537	**Jun 09**	**6**	**4**	**4**	**0.75**
9751	Jul 09	1.25	42	0	0.25
9807	**Jul 09**	**5.25**	**62**	**62**	**0.25**
9835	Aug 09	2.25	10	0	0.25
10278	Sep 09	1.75	20	0	0.25
10542	Oct 09	2	57	0	0.50
10489	**Oct 09**	**4.5**	**24**	**24**	**1.00**
10986	Dec 09	2.5	2	0	0.50
11380	Jan 10	3	24	0	1.00
11627	Feb 10	2.25	18	0	0.25

There were 5 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was:

3 + 200 + 4 + 62 + 24 = **293**

This number is small compared to the number of properties that experienced a planned and warned interruption of between 3 and 6 hours (20,881).

T2: L9 = 43,341
T2: L10 = 22,460
43,341 – 22,460 = **20,881**

NI Water reported in its AIR09 Commentary that there were 5 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was 165.

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

The following table provides a summary of the 32 unplanned interruptions caused by electricity supply failures in 2009/10. Interruption Numbers 12196-12216 relate to power failures during a period of heavy snow at the end of March.

Interrupt No.	Month	Duration (Hrs)	Properties Affected					Comments
			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs	
9341	May 09	5.5	8	8	0	0	0	NIE power failure
9077	May 09	5.75	80	80	0	0	0	
9443	Jun 09	3	15	0	0	0	0	
9450	Jun 09	6	38	38	0	0	0	Pumps tripped due to lightening strike. Pumps started again at reduced pressure. Pumps only pumping to one property on [redacted]
9737	Jul 09	4.25	6	6	0	0	0	Pump fault
9736	Jul 09	5	6	6	0	0	0	Pump failure at [redacted]
9738	Jul 09	5	50	50	0	0	0	
10518	Oct 09	2	12	0	0	0	0	Reason for pump trip unknown
10573	Oct 09	3	36	0	0	0	0	Mains supply interruption – unknown cause
11200	Jan 10	1.5	30	0	0	0	0	
12076	Mar 10	22	3	2	2	2	0	[redacted] Booster off. Pump would not build up the pressure to 2 properties on. Possible air lock.
12196	Mar 10	2	11	0	0	0	0	[redacted]
12452	Mar 10	9	49	49	49	0	0	[redacted]
12220	Mar 10	4.5	1	1	0	0	0	Booster station at Derrylin SR – [redacted]
12205	Mar 10	15	7	7	7	7	0	Glen Booster - [redacted] Electric failure due to storm.
12446	Mar 10	17.5	24	24	24	24	0	NIE Power Failure – [redacted]
12445	Mar 10	18.25	24	24	24	24	0	NIE Power Failure – [redacted]
12467	Mar 10	37.5	21	21	21	21	21	Killyland WPS
12456	Mar 10	38.5	9	9	9	9	9	[redacted]

Interrupt No.	Month	Duration (Hrs)	Properties Affected					Comments
			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs	
12207	Mar 10	39.25	38	38	38	38	38	Power off due to heavy snow – [redacted]
12209	Mar 10	39.25	15	15	15	15	15	Power off due to heavy snow – [redacted]
12461	Mar 10	43.5	8	8	8	8	8	Bratwell PS
12464	Mar 10	53.5	5	5	5	5	5	Clagan WPS
12212	Mar 10	53.75	21	21	21	21	21	Power off due to heavy snow - [redacted]
12214	Mar 10	53.75	20	20	20	20	20	Power off due to heavy snow – [redacted]
12468	Mar 10	54	59	59	59	59	59	Lettermire PS
12453	Mar 10	72.5	3	3	3	3	3	[redacted]
12215	Mar 10	78	5	5	5	5	5	Power off due to heavy snow - [redacted]
12457	Mar 10	78.5	5	5	5	5	5	[redacted]
12455	Mar 10	81	10	10	10	10	10	Slaught Lane PS
12460	Mar 10	91.25	25	25	25	25	25	South of Belraught Pumps
12216	Mar 10	142	1	1	1	1	1	Pump keeps tripping out - [redacted]

32 unplanned interruptions were caused by electricity supply failures in 2009/10. 21 of the power failures occurred during a period of heavy snow at the end of March.

In terms of numbers of properties affected, the most significant incident occurred in May when 80 properties were without supplies for 5.75hrs. In terms of interruption duration, the most significant incident occurred in March when 1 property was without supplies for 142hrs.

The combined impact of the 32 electricity supply failures on the annual outturns is as follows:-

	>3 Hrs	**>6 Hrs**	**>12 Hrs**	**>24 Hrs**
Numbers of Properties Affected by Electricity Supply Failures	540 (350)	351 (349)	302 (300)	(245)
Numbers of Properties Affected by Unplanned Interruptions	47,970	9,427	3,675	2,294
Percentage Impact	1.13% (0.73%)	3.72% (3.70%)	8.22% (8.16%)	(10.68%)

Figures relating to the heavy snow are in brackets

The impact of the electricity supply failures was greatest on the >24hr outturn, accounting for 10.68% of the total number of properties affected by unplanned interruptions.

The combined impact of the electricity supply failures on KPI target compliance was as follows:-

	> 6 Hrs	**> 12 Hrs**	**> 24 Hrs**
Percentage of Connected Properties Affected by Electricity Supply Failures	0.044%	0.038%	0.031%
Percentage of Connected Properties Affected by Unplanned Interruptions	1.299%	0.494%	0.287%
Percentage Impact	3.39%	7.69%	10.80%

Figures relate to the heavy snow

The impact of the electricity supply failures was greatest on >24hr KPI target compliance, accounting for 10.80% of the outturn percentage. The removal of properties affected by unplanned interruptions caused by electricity supply failures does not alter the fact that NI Water would have failed to meet its >6hr, >12hr and >24hr KPI targets.

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

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

The following table provides a summary of the 44 interruption to supply incidents during 2009/10 for which Upward Reports were generated. Significant incidents are in bold text.

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
001	8996	14 Apr 09	[redacted] - Drumsaragh DMA Area - Burst Main	5.25	313	313	0	0	0	3
002	Additional 1	20 Apr 09	[redacted]	9	9	9	9	0	0	3
003	9327	10 May 09	Burst watermain, Portaferry	27.5	1	1	1	1	1	3
	9365			7.5	7	7	7	0	0	
	9366			10.25	6	6	6	0	0	
	9367			16.25	6	6	6	6	0	
004	9242	15 May 09	[redacted] NT'Ards burst TM	20.75	56	56	56	12	0	3
005	E&P053	04 Jun 09	'Do Not Drink' Notice, [redacted]	5.50	10	10	0	0	0	3
006	9393	05 Jun 09	Burst TM, [redacted] Downpatrick	10.5	37	37	37	0	0	3
007	9410	11 Jun 09	Burst watermain, [redacted]	21	12	12	2	1	0	3
008	9473	12 Jun 09	Burst watermain, [redacted] Dungannon	8	74	74	6	0	0	3
009	9451	16 Jun 09	Burst Main Dungiven	6	750	750	0	0	0	3
010	9458	20 Jun 09	Burst trunk main Omagh	6	160	160	0	0	0	3
011	9541	20 Jun 09	Burst Main Randalstown	4.5	96	96	0	0	0	3
012	9551	22 Jun 09	Banbridge loss of supply	5	86	86	0	0	0	3
	9552			9	37	37	37	0	0	
	9553			5.5	24	24	0	0	0	

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
013	9773	30 Jul 09	Burst watermain [redacted] Belfast	5.75	400	400	0	0	0	3
014	9921	17 Aug 09	Burst watermain, [redacted] Ballygawley	10.5	350	200	200	0	0	3
015	Additional 2	20 Aug 09	Loss of Telemetry	10	100	27	20	0	0	3
016	Additional 1	23 Aug 09	Loss of supplies to customers in Ballymoney fed from Dunaghy SR	6.17	37	95	15	0	0	3
017	10009	26 Aug 09	Burst inlet main, Stang SR, Hilltown	6	4	4	0	0	0	3
	10011			6	24	24	0	0	0	
	10012			6	26	26	0	0	0	
	10013			5	5	5	0	0	0	
	10014			1.5	5	0	0	0	0	
018	**10073**	**28 Aug 09**	**Burst Main, Brishey SR, Dungiven**	**6.5**	**260**	**260**	**260**	**0**	**0**	**3**
	10074			**13.25**	**352**	**352**	**352**	**352**	**0**	
	10075			**19.75**	**4**	**4**	**4**	**4**	**0**	
019	10098	03 Sep 09	Breach on 9" Inlet to Craig Park SR, Bushmills	9.25	57	57	57	0	0	3
020	Additional 1	28 Sep 09	Burst, Waterside	4	25	25	0	0	0	3
021	**10452**	**02 Oct 09**	**Loss of Supply Backford Bridge DMA Coalisland**	**39.25**	**45**	**44**	**36**	**29**	**29**	**3**
022	10451	14 Oct 09	Eglinton DMA Loss of mains supply	8.5	899	899	72	0	0	3
023	10408	17 Oct 09	Scone Service Reservoir - Burst on the inlet main	9.5	9	9	9	0	0	3
024	10920	04 Nov 09	Interruption to Supply Limavady Area	8.75	108	108	32	0	0	3
	10926			9	38	38	3	0	0	

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
025	**10776**	**06 Nov 09**	**Burst Watermain, Springhill SR, L'derry**	**19**	**457**	**457**	**457**	**457**	**0**	**3**
	10823			**5.75**	**418**	**418**	**0**	**0**	**0**	
026	**10915**	**13 Nov 09**	**No water complaints Altnagelvin, L'derry**	**12**	**234**	**227**	**12**	**0**	**0**	**3**
027	n/a	21 Nov 09	Interruption to NIE Supply in Derry City and Surrounding Area	No supply interruption						3
028	10712	23 Nov 09	No Water Beltoy SR Carrickfergus	6	400	400	0	0	0	3
029	10730	24 Nov 09	Whiteabbey Lower SR Outlet Main	5.5	80	80	0	0	0	3
030	10883	28 Nov 09	Radergan SR Ballygawley	11.5	31	31	31	0	0	3
	10884			16.5	6	6	6	0	0	
031	10890	13 Dec 09	Burst Watermains Mallusk & Holywood	7.25	85	85	85	0	0	n/a
032	10941	14 Dec 09	[redacted] Castlereagh	7.25	100	100	100	0	0	3
033	**10990**	**18 Dec 09**	**Supply Problems in Greysteel Area**	**126**	**87**	**87**	**72**	**23**	**16**	**3**
034	Additional 3	19 Dec 09	8" DI Trunk Main Burst at [redacted] Ballymagorry, Strabane	10	3	3	3	0	0	3
035	**Numerous incidents**	**24 Dec 09 21 Jan 10**	**Winter Freeze**	**n/a**	**31,305**	**10,374**	**3,390**	**716**	**383**	**1**
036	Additional 4	31 Dec 10	Loss of supply - Ballygomartin SR	3.75	250	250	0	0	0	3
037	**11596**	**09 Jan 10**	**Loss of Production Capability at Fofanny WTW**	**193.25**	**9**	**9**	**9**	**9**	**9**	**2**
	11597			**3**	**25**	**0**	**0**	**0**	**0**	
	11598			**5**	**25**	**25**	**0**	**0**	**0**	

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
	11600			**157.5**	**30**	**30**	**30**	**30**	**30**	
	11664			**15.5**	**313**	**313**	**313**	**1**	**0**	
	11665			**16**	**165**	**165**	**165**	**165**	**0**	
038	12043	24 Jan 10	Altmoe WTP	2.5	3	0	0	0	0	Precautionary
039	11656	03 Feb 10	Loss of Supply - Lough Maccrory	7	50	50	50	0	0	3
040	11846	04 Feb 10	Restricted production from Lough Fea WTWs	7	155	155	155	0	0	3
	11847			10	238	238	238	0	0	
	11848			9.25	434	434	434	0	0	
041	11819	08 Feb 10	Randalstown Burst Trunk Main	5.25	1803	1803	0	0	0	3
042	Additional 1	26 Feb 10	Loss of Supply - PRV Malfunction - [redacted] Belfast	3	2500	2500	0	0	0	3
043	**12126**	**24 Mar 10**	**[redacted] Lisburn - Burst Trunk Main**	**6**	**300**	**300**	**0**	**0**	**0**	**3**
	12127			**4**	**200**	**200**	**0**	**0**	**0**	
	12128			**13**	**150**	**150**	**150**	**150**	**0**	
044	**12196**	**30 Mar 10**	**Adverse Weather - Loss of Power All Areas**	**2**	**11**	**0**	**0**	**0**	**0**	**2**
	12452			**9**	**49**	**49**	**49**	**0**	**0**	
	12220			**4.5**	**1**	**1**	**0**	**0**	**0**	
	12205			**15**	**7**	**7**	**7**	**7**	**0**	
	12446			**17.5**	**24**	**24**	**24**	**24**	**0**	
	12445			**18.25**	**24**	**24**	**24**	**24**	**0**	
	12467			**37.5**	**21**	**21**	**21**	**21**	**21**	
	12456			**38.5**	**9**	**9**	**9**	**9**	**9**	
	12207			**39.25**	**38**	**38**	**38**	**38**	**38**	
	12209			**39.25**	**15**	**15**	**15**	**15**	**15**	
	12461			**43.5**	**8**	**8**	**8**	**8**	**8**	

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
	12464			**53.5**	**5**	**5**	**5**	**5**	**5**	
	12212			**53.75**	**21**	**21**	**21**	**21**	**21**	
	12214			**53.75**	**20**	**20**	**20**	**20**	**20**	
	12468			**54**	**59**	**59**	**59**	**59**	**59**	
	12453			**72.5**	**3**	**3**	**3**	**3**	**3**	
	12215			**78**	**5**	**5**	**5**	**5**	**5**	
	12457			**78.5**	**5**	**5**	**5**	**5**	**5**	
	12455			**81**	**10**	**10**	**10**	**10**	**10**	
	12460			**91.25**	**25**	**25**	**25**	**25**	**25**	
	12216			**142**	**1**	**1**	**1**	**1**	**1**	

In order to determine which incidents contributed most to KPI underperformance, NI Water has examined the records of interruptions lasting longer than 6 hours, 12 hours and 24 hours and particularly, those interruptions where the numbers of affected properties exceeded the monthly target allowances or those months where the actual number of interruptions was exceptional.

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

Interrupt. No.	Month	Duration Of Interruption (Hours)	Properties Affected					Cause	Target Allowance		
			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs		> 6 Hrs	> 12 Hrs	> 24 Hrs
9518	Jun 09	26	12	12	12	12	**12**	Disconnection of Old Main	473	71	**5**
10074	Aug 09	13.25	352	352	352	**352**	0	Burst Distribution Main	473	**71**	5
10452	Oct 09	39.25	45	44	36	29	**29**	Burst Distribution Main	473	71	**5**
10776	Nov 09	20.5	457	457	457	**457**	0	Burst Distribution Main	946	**141**	9
10915	Nov 06	33.5	234	227	28	20	**10**	Other	946	141	**9**
10990	Dec 09	126	87	87	86	48	**41**	Burst Distribution Main	946	141	**9**
11142	Dec 09	104.5	30	30	30	30	**30**	Low Reservoir Level	946	141	**9**
11144	Dec 09	36.5	50	50	50	50	**20**	Low Reservoir Level	946	141	**9**
11697	Dec 09	175	40	40	40	40	**40**	Low Reservoir Level	946	141	**9**
11698	Dec 09	47.5	18	18	18	18	**18**	Low Reservoir Level	946	141	**9**
11699	Dec 09	99.75	50	50	50	50	**50**	Low Reservoir Level	946	141	**9**
11700	Dec 09	60	180	180	180	**180**	**180**	Low Reservoir Level	946	**141**	**9**
11600	Jan 10	157.5	30	30	30	30	**30**	Low Reservoir Level	946	141	**9**
11604	Jan 10	12.5	1,587	1,587	**1,587**	1	0	Burst Trunk Main	**946**	141	9
11665	Jan 10	16	165	165	165	**165**	0	Low Reservoir Level	946	**141**	9
12128	Mar 10	15.5	150	150	150	**150**	0	Burst Trunk Main	946	**141**	9
12455	Mar 10	81	10	10	10	10	**10**	Power Failure	946	141	**9**
12209	Mar 10	39.25	15	15	15	15	**15**	Power Failure	946	141	**9**
12214	Mar 10	53.75	20	20	20	20	**20**	Power Failure	946	141	**9**
12467	Mar 10	37.5	21	21	21	21	**21**	Power Failure	946	141	**9**
12212	Mar 10	53.75	21	21	21	21	**21**	Power Failure	946	141	**9**
12460	Mar 10	91.25	25	25	25	25	**25**	Power Failure	946	141	**9**
12207	Mar 10	39.25	38	38	38	38	**38**	Power Failure	946	141	**9**
12468	Mar 10	54	59	59	59	59	**59**	Power Failure	946	141	**9**

NI Water assumes a monthly target allowance of one seventeenth of the year end target from April to October and a monthly target allowance of two seventeenths of the year end 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	2009/10 Target		Monthly Target Allowance			
			Apr to Oct		Nov to Mar	
	%	Properties	%	Properties	%	Properties
>6hrs	1.00	8,044	0.059	473	0.118	946
>12hrs	0.15	1,206	0.0088	71	0.018	141
>24hrs	0.01	80	0.00059	5	0.0012	9

There were 24 occurrences during the year where the number of properties affected by a single incident exceeded the entire monthly target allowance. On one occasion, both the >12hr and >24hr target allowances were exceeded. The property count for 1 incident (relating to the freeze/thaw) exceeded the >6hr monthly target allowance. The property counts for 5 incidents (2 relating to the freeze/thaw) exceeded the >12hr target allowance. And the property counts for 19 incidents (8 relating to the freeze/thaw and 8 relating to the power failures) exceeded the >24hr target allowance.

The following table provides a summary of the months throughout 2009/10 when the total of number of properties affected by unplanned interruptions, third party interruptions and overruns exceeded the monthly target allowance.

Month	Properties Affected by Unplanned &Third Party Interruptions & Overruns			Target Allowance		
	>6hrs	>12hrs	>24hrs	>6hrs	>12hrs	>24hrs
June	495 (426)		17	473	71	5
August	937 (695)	356		473	71	5
October			29	473	71	5
November		510	12	946	141	9
December	1,231 (1,091)	573 (471)	379	946	141	9
January	2,796	293	45	946	141	9
March		463 (313)	247	946	141	9

Note: Numbers of properties affected by unplanned interruptions are given in brackets if different from total.

There were 4 months in the year when the total number of properties affected exceeded the >6hr monthly target allowance, 5 months in the year when the total exceeded the >12hr monthly target allowance, and 6 months in the year when the total exceeded the 24hr monthly target allowance.

December/January: Official sources suggest this has been one of the coldest winters in approximately 50 years. Underperformance against all

three KPI targets in December and January can be largely attributed to the exceptionally high numbers of bursts, low reservoir levels and frozen communication pipes as a consequence of the freeze/thaw conditions experienced. The following table contains 2009/10 temperature and air frost data and average temperature and air frost data derived from the Met Office website. According to the provisional data for December to March there were 61 days of air frost compared to an average of 30.2 days. Maximum and minimum temperatures were generally several degrees lower than expected.

	Max Temp (°C)		Min Temp (°C)		Air Frost (Days)	
	Armagh	Average	Armagh	Average	Armagh	Average
Apr 09	13.5	12.2	5.4	4.0	0	3.3
May 09	15.4	15.2	7.0	6.3	0	0.5
Jun 09	19.7	17.7	9.3	9.1	0	0
Jul 09	**19.5**	19.6	12.0	11.4	0	0
Aug 09	**18.9**	19.2	12.0	11.0	0	0
Sep 09	17.4	16.6	9.8	9.0	0	0
Oct 09	14.7	13.0	8.5	6.7	0	0.9
Nov 09	10.5*	9.5	4.2*	3.5	5*	5.4
Dec 09	**5.6***	7.6	**-0.3***	2.4	**15***	7.5
Jan 10	**4.9***	7.0	**-1.0***	1.7	**17***	9.3
Feb 10	**6.2***	7.6	**-0.9***	1.7	**17***	8.3
Mar 10	10.5*	9.7	**0.9***	2.9	**12***	5.1

*Provisional

August/**October**/**November**: High rainfall and subsequent ground movement may have contributed to underperformance against the >6hr and >12hr targets in August and the >12hr target in November. The following table contains 2009/10 rainfall data and average rainfall data derived from the Met Office website. According to the data, November was the wettest month with 2.4 times the average rainfall and August was the second wettest month with 1.7 times the average rainfall.

	Rainfall (mm)	
	Armagh	Average
Apr 09	**90.9**	55.4
May 09	**77.7**	54.4
Jun 09	**56.6**	55.7
Jul 09	**97.6**	52.3
Aug 09	**124.7**	71.9
Sep 09	23.6	67.1
Oct 09	**84.6**	81.1
Nov 09	**171.8***	72.1
Dec 09	47.6*	83.4
Jan 10	44.0*	79.8
Feb 10	42.2*	57.5
Mar 10	**83.7***	64.9

*Provisional

March: Underperformance against the >12hr and >24hr targets in March can be attributed to the heavy snowfall at the end of the month and resultant power failures.

Impact of Freeze/Thaw on Numbers of Unplanned Interruptions Caused by Burst Mains

The freeze/thaw is considered to have taken place between 24 December to 21 January. The following table provides details of the numbers of unplanned interruptions caused by burst mains and the numbers of properties affected by these incidents during the freeze/thaw.

	>0hrs	>3hrs	>6hrs	>12hrs
Incidents	489	148	18	7
Properties	24,179	8,943	2,290	101

Interruptions to Supply Caused by Frozen Service Pipes due to Severe Weather in 2009-10

A service pipe may be frozen in one of three ways:

1. Communication pipe frozen – NI Water responsible
2. Supply pipe frozen – Customer responsible
3. Communication pipe and supply pipe frozen – NI Water responsible

During the freeze/thaw, a limited number of investigations were conducted in order to establish the extent of frozen pipe problems at certain properties. The results of these investigations remain the only firm evidence in support of the extent to which the company or the customer was responsible.

If the results are viewed as a sample representing all frozen pipe problems, then knowing the total number of problems, the numbers of company and customer related problems can be estimated.

In the absence of a more complete set of records, NI Water has taken the decision to estimate numbers by following the process described and to review the way it establishes and records the extent of frozen pipes for future reporting.

The sample consists of **66** random investigations into the extent of frozen pipe problems. *Details of the excavations (including addresses and findings) are listed in the LoS Methodology.*

According to the results of the excavations,

- 28 excavations found that the communication pipe was frozen (42%). Note that in most cases the supply pipe was also frozen.
- 38 excavations found that the supply pipe was frozen (58%).

The total number of problems relating to frozen pipes was determined as follows:

1. 55,280 calls were logged at the Customer Response Centre between 21 December and 21 January. These calls were transposed by CRC staff into the Ellipse system. As a result, 13,397 “No Water” complaints were input into the Ellipse system for action. It is noted that duplicate calls made by customers were linked to the original calls and that CRC were still receiving “non-incident” calls e.g. meter consumption and account queries, septic tank emptying requests, blocked sewer reports, etc.

2. A report was derived from Ellipse listing the 13,397 Work Requests created during the reporting period (24-12-2009 to 21-01-2010) with a Request Type of “NO - No Water”.

3. Records were sorted according to Date and Address fields and filtered to remove duplicate records. The number of records remaining after this process was **5,316**.

4. Records were removed if they related to areas that experienced operational difficulties such as bursts, empty reservoirs and non-functioning pumping equipment. These records were identified as a result of Field Manager reviews and OMIS and Upward report comparisons. The number of records remaining after this process was **3,724**. This represents the estimated number of no water complaints received by the Company as a result of frozen pipes.

By applying the earlier percentages, the Company has estimated the numbers of frozen communication pipes and frozen supply pipes.

(3,724 / 100) x 42 = **1,564** communication pipes frozen (NIW responsibility)
(3,724 / 100) x 58 = **2,160** supply pipes frozen (customer responsibility)

Assumption: It is not known how long interruptions lasted relating to frozen pipes. The company has therefore assumed that in each instance, the interruption would have lasted for more than 24 hours.

The numbers of properties affected by interruptions lasting longer than 3, 6 12 and 24 hours (Lines 5-8) have been increased by 1,564.

Please see the Confidence Grading section of the Commentary for a breakdown of numbers by DG3 time band, including numbers for incidents not caused/caused by frozen service pipes and a total column reconciling to the figures reported in Table 2.

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

In the past, the tendency has been for NI Water to assign the same confidence grade to Lines 5 to 19 of Table 2. This is because the same processes and procedures are used to capture and report the data throughout. The exception came in 2009 when the Company believed it may be more appropriate to distinguish between the accuracy of the higher numbers it reports (>3hr & >6hr time bands) and the lower numbers it reports (>12hr & >24hr time bands) by assigning accuracy bands of "3" and "4" respectively. The Reporter's recommendation to use consistent accuracy bands was later noted and it was the Company's intention in AIR10, to assign a confidence grade of "B3" to all of the DG3 lines, provided there had been no significant changes to its processes and procedures.

This year, the task of calculating final figures for the Return has been complicated by the requirement to include the numbers of properties affected by frozen supply/communication pipes. As such, the Company feels it should employ a more quality-assured approach in the methodology used to assign its confidence grades, particularly as sampling techniques have been used.

Reliability Band – Excluding Frozen Supply/Communication Pipes

With the exception of numbers relating to frozen supply/communication pipes, NI Water believes the reliability of its data to be "**B**". This is justified as follows:

- 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 tendency has been to focus on interruptions lasting longer than 6 hours.

As reliability bands "D", "C" and "A" are inappropriate on the basis of the descriptions, NI Water believes a reliability band of "B" to be most representative of its data. 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.

Accuracy Band – Excluding Frozen Supply/Communication Pipes

With the exception of numbers relating to frozen supply/communication pipes, NI Water believes the accuracy of its data to be "**3**". This is justified as follows:

An accuracy band of "3" represents an accuracy outside +/- 5% but within +/- 10%. The numbers of properties affected in 2009/10 and the numbers of incidents from which they were derived are listed in the following table, together with numbers reflecting the accuracy limits.

		Properties	Outside	Within	Incidents	Outside	Within
			+/-5%	+/10%		+/-5%	+/10%
	Unplanned						
Line 5	>3hrs	**46,406**	2,320	4,641	**844**	42	84
Line 6	>6hrs	**7,863**	393	786	**139**	7	14
Line 7	>12hrs	**2,111**	106	211	**53**	3	5
Line 8	>24hrs	**730**	37	73	**21**	1	2
	Planned & Warned						
Line 9	>3hrs	**43,341**	2,167	4,334	**803**	40	80
Line 10	>6hrs	**22,460**	1,123	2,246	**465**	23	47
Line 11	>12hrs	**135**	7	14	**1**	0	0
Line 12	>24hrs	**0**	0	0	**0**	0	0
	Third Party						
Line 13	>3hrs	**2,737**	137	274	**26**	1	3
Line 14	>6hrs	**499**	25	50	**7**	0	1
Line 15	>12hrs	**154**	8	15	**2**	0	0
Line 16	>24hrs	**0**	0	0	**0**	0	0
	Overrun of Planned						
Line 17	>6hrs	**452**	23	45	**13**	1	1
Line 18	>12hrs	**118**	6	12	**5**	0	1
Line 19	>24hrs	**1**	0	0	**1**	0	0

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. The Company has made every attempt to ensure that all major interruptions are accounted for and in its efforts, has compared its Upward Reports for the year to ensure the inclusion of records representing all 44 major supply disruptions.

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 2009/10, the Company has improved the accuracy of its time band assignations for unplanned and third party interruptions lasting longer than 6 hours by comparing the start and end times recorded in the DG3 Register with the times at which the earliest and latest "no water" complaints were received from customers, 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.

In addition to the consistency checks described, the Company also carries out a series of "sense" checks on the data in the DG3 Register to ensure that:

- 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";
- No records have been lost during the transfer of data between spreadsheets; and
- All calculations involving the summation of property counts are correct.

The information associated with unplanned interruptions, third party interruptions and overruns lasting more than 6 hours is less likely to be inaccurate because of the interest these interruptions generate within Operations 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.

Impact of Frozen Supply/Communication Pipe Interruptions on Confidence Grading

NI Water acknowledges that the methodology employed for estimating the numbers of properties affected by frozen supply/communication pipes is less reliable than the established methodology. As the methodology involves reliance on extrapolation from a limited sample for which Grade A or B data is available, the Company believes that a reliance band of "C" would be more appropriate for its numbers relating to frozen supply/communication pipes.

In order to determine whether or not the inclusion of these numbers would impact on the overall reliability of its Table 2 figures, the Company has studied the proportions of less reliable data.

DG3 Unplanned Category	Underlying data assessed using standard methodology	Estimated DG3 figure for incident based on less robust methodology – all categorised as >24hr	Total	% of Total represented by lower quality data
>3hrs	**46,406**	1,564	47,970	3%
>6hrs	**7,863**	1,564	9,427	17%
>12hrs	**2,111**	1,564	3,675	43%
>24hrs	**730**	1,564	2,294	68%

The above table shows that impact is greatest on the >24hr figure where the less robust data accounts for a greater percentage (68%) of the overall figure. The impact is less significant on the other time bands where robust data accounts for the greater percentage of the overall figures. Based on this analysis, the Company has decided to demote the overall reliability band of its >24hr figure from “B” to “C”.

The percentages in the above table do not reflect the inaccuracy of the overall figures as it is only the inaccuracy of the estimate that will have an impact. The Company has decided to demote the overall accuracy of its >24hr figure from “3” to “4”.

Action Plan for Improvement

As NI Water is unable to report confidence grades of A2, A3, B2 or better for its DG3 data, the Company intends to carry out the following actions:

- The Company will analyse interruptions with a view to identifying:

    1. Why the circumstances resulted in an interruption,
    2. What weaknesses were exposed, and
    3. Whether or not anything could be done in future to minimise the impact if a similar situation arose.

- The Company will improve the link between the DG3 Register and investment/operational practices

- The Company will identify the DG3 information requirements of its Asset Management directorate to enable the delivery of cost effective solutions

- The Company will review the way it establishes and records the extent of frozen supply/communication pipe interruptions for future reporting

- The Company will continue to pursue a long-term DG3 reporting solution within its data warehouse "DIAMOND". The DG3 Register should be compiled with data from Rapid Xtra, Ellipse and the GIS. A linkage to these systems would provide automatic confirmation of property counts, start times, end times and other details that may help to ensure incident and address completeness/consistency.

- Customer Field Managers will check the records of all interruptions lasting longer than 24 hours to ensure that the alternate supplies field has been completed.

- The Company will reduce the time it takes to amend the data following "No Water" complaint and Upward Report comparisons by limiting the number of persons in the process chain. By involving Customer Field Managers in amendment decisions, it is hoped to further improve the accuracy of any amendments.

- The formal Head of Function monthly signing off procedure, introduced in April 09, is to be expanded to include Level 4 signoff.

Reporter's Recommendations on AIR09 – Progress Update

Recommendation	Document Reference	Recommendation Detail
19	Table 2 – Pg 9 para 4	NI Water to continue DG3 start time consistency checks for unplanned interruptions and amend OMIS if required

In 2009/10, NI Water introduced an additional audit measure whereby the details of DG3 interruption records for unplanned and third party interruptions lasting longer than 6 hours were compared with records of "No Water" complaints from customers. The no water complaints were derived from Rapid Xtra via CorVu Reports or manual interrogation of the system.

Recommendation	Document Reference	Recommendation Detail
20	Table 2 – Pg 10 para 2	Company to maintain and improve the recording of "split interruptions"

Throughout 2009/10, NI Water has improved the reporting process in general by carrying out DG3/Upward Report comparisons for all Upward Reports relating to supply interruptions (44 in total) and DG3/"No Water" complaint comparisons for all unplanned and third party interruptions lasting more than 6hrs. This has allowed the Company to identify complaint calls within the 6, 12 and 24hr time bands, where relevant. Although the emphasis has been on amending the Start and End Times to suit the "No Water" complaints i.e. the two extremes, there have been instances where an interruption has had to be reported under a higher time band than originally anticipated and where the

comparisons have been used to determine the smaller number of properties in the higher time band. Telemetry data has also played a role.

Recommendation	Document Reference	Recommendation Detail
21	Table 2 – Pg 15	Confidence Grade for all Table 2 DG3 lines should be consistent

In 2009, NI Water was undecided about the most appropriate confidence grade to assign to its property counts for interruptions lasting longer than 12 hours. One argument was that the percentage error was likely to be higher for these property counts because the interruptions were more likely to involve small numbers of properties. Another argument was that the likelihood of error would be reduced because of the greater attention given to accuracy and the higher profile of such interruptions.

After much consideration, NI Water opted for a lower confidence grading. However, this conflicted with the Reporter's recommendation for consistent grading throughout Table 2. In 2010, the Company has adopted a more quality-assured approach in the methodology used to assign its confidence grades, particularly as sampling techniques have been used to estimate numbers of properties affected by frozen supply/communication pipe interruptions.

Recommendation	Document Reference	Recommendation Detail
6	BOV – Pg 6 para 4.2	Further work is required to ensure DG3 systems are embedded, reporting is consistent and robust audit trails are maintained

See progress update for Recommendations 20 and 21

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 2009. Information was extracted from monthly bulletins published in the Research section of the NI Tourist Board website[3].

MONTH	HOTEL BED-SPACES SOLD	GUESTHOUSE & B&B BED-SPACES SOLD	TOTAL BED-SPACES SOLD	PERCENTAGE
Jan-09	142,700	22,200	164,900	5.42%
Feb-09	178,700	27,900	206,600	6.79%
Mar-09	184,000	31,900	215,900	7.10%
Apr-09	206,000	40,100	246,100	8.09%
May-09	226,400	59,000	285,400	9.38%
Jun-09	228,100	52,973	281,073	9.24%
Jul-09	263,200	74,500	337,700	11.10%
Aug-09	292,300	84,500	376,800	12.39%
Sep-09	201,200	58,100	259,300	8.53%
Oct-09	234,000	43,600	277,600	9.13%
Nov-09	176,000	21,600	197,600	6.50%
Dec-09	168,800	23,700	192,500	6.33%
Total	**2,501,400**	**540,073**	**3,041,473**	**100%**

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

5.42% + 6.79% + 7.10% + 8.09% + 6.50% +6.33% = 40.23%

- According to the "GB and Overseas Visitors to Northern Ireland Summary for January - August 2009" (NITB website), the number of non-resident visitor nights for Northern Ireland was 4,892,000.

- The percentage bed-spaces sold (Jan-Aug 09) was calculated as follows:

  5.42 + 6.79 + 7.10 + 8.09 + 9.38 + 9.24 + 11.10 + 12.39 = 69.52%

- The number of non-resident visitor nights for Northern Ireland (Jan-Dec 09) was estimated as follows:

  (4,892,000 / 69.52) x 100 = 7,036,824

[3] www.nitb.com

- By calculation, the estimated number of non-resident winter visitor nights

  = (7,036,824 / 100) x 40.23 = 2,830,914

- By calculation, the estimated average number of non-resident winter visitors per night = 2,830,914 / (31 + 28 + 31 + 30 + 30 + 31) = 15,640

- According to AIR10: Table 7: Line 17, the baseline resident population is **1,790.16 x 10^3**.

- By calculation, the Population (winter) = 1,790,160 + 15,640 = **1,805,800**.

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

AIR08	AIR09	AIR10
1,771.11 x 10^3	1,800.32 x 10^3	**1,805.80 x 10^3**

The Winter Population figure has increased from 1,800.32 x 10^3 in AIR09 to 1,805.79 x 10^3 in AIR10, an increase of 5.48 x 10^3 (0.3%). This slight increase can be attributed to changes in the component figures that make up this figure. The baseline resident population has increased from 1,775.11 x 10^3 to 1,790.16 x 10^3, an increase of 15,050. However, the estimated average number of non-resident winter visitors per night has decreased from 25,195 to 15,640, a decrease of 9,555.

The "Northern Ireland Visitor Performance Year End Estimates 2009" states that 2009 brought one of the toughest years for tourism worldwide and despite the weakness of sterling against other currencies, visits from other Eurozone countries and North America did not increase. Overall, the business tourism sector saw significant declines, and the Visiting Friends and Relatives sector also struggled in the uncertain economic climate.

Changes in Methodology

In previous years, this calculation was based on an estimated annual number of non-resident visitor nights for Northern Ireland, published in NI Tourist Board's "Preliminary Visitor Tourism Forecast". According to the publication, the estimate was based on January to August data from both the Northern Ireland Passenger Survey (NITB) and the Survey of Overseas Travellers (Fáilte Ireland).

This year, NI Tourist Board has published the actual number of non-resident visitor nights (Jan-Aug 09) in their "GB and Overseas Visitors to Northern Ireland Summary". The annual number was estimated by NI Water on the basis that the percentage bed-spaces sold for hotel, guesthouse and bed and breakfast establishments (Jan-Aug 09) was 69.52%.

Confidence Grade

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

1. The GB and Overseas Visitors to Northern Ireland Summary provides the actual number of non-resident visitor nights for Northern Ireland but only for Jan-Aug 09. The number is based on surveys conducted by both NITB and Fáilte Ireland. An annual equivalent is only obtainable through extrapolation.

2. The Hotel and Guesthouse/B&B Occupancy Reports provide the numbers of bed-spaces sold. However, the numbers are based on the extrapolation of data for a representative sample of establishments.

NI Water has assigned a confidence grade of **C2** to account for known deficiencies in the reliability and accuracy of the reported figure.

The "2" has been assigned because even if all visits occurred in the winter, the difference in the calculated winter population would only be 23,237 properties (+1.29%). *(See calculation below.)*

7,036,824 / (31 + 28 + 31 + 30 + 30 + 31) = 38,877
1,790,150 + 38,877 = 1,829,027
1,829,027 – 1,805,790 = 23,237
(23,237 / 1,805,790) x 100 = 1.29%

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.

There were no restrictions placed on the use of water during the reporting year. The high reliability assessment (A1) is based on the established procedures for the making of any order to prohibit or restrict the use of water. The high accuracy grade reflects the fact that no orders were made during the reporting year.

Northern Ireland Water does not operate a sprinkler license system.

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.

Table 3

NORTHERN IRELAND WATER LIMITED -ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**DG5 ANNUAL FLOODING SUMMARY**										
1	Number of domestic properties connected to sewerage system	000	1	703.5	B2	676.3	B2	598.8	B2	603.4	B3
	(I) OVERLOADED SEWERS										
2	Properties flooded in the year (overloaded sewers)	nr	0	N/C		195	D6	3	B4	6	B4
3	Flooding incidents in the year (overloaded sewers)	nr	0	N/C		212	D6	3	B4	6	B4
4	Flooding incidents (overloaded sewers attributed to severe weather)	nr	0	N/C		126	D6	0	B4	0	B4
5	Props. where flooding limited to uninhabited cellars only (o/loaded sewers)	nr	0	N/C		0	D6	0	DX	0	D6
	(ii) OTHER CAUSES										
6	Properties flooded in the year (other causes)	nr	0	N/C		366	D6	23	B4	5	B4
7	Properties which have flooded more than once in the last ten years (other causes)	nr	0	N/C		108	D6	3	CX	1	CX
8	Flooding incidents (other causes - equipment failures)	nr	0	N/C		19	D6	4	B4	0	B4
9	Flooding incidents (other causes - blockages)	nr	0	N/C		324	D6	16	B4	3	B4
10	Flooding incidents (other causes - collapses)	nr	0	N/C		34	D6	3	B4	2	B4
11	Props. where flooding limited to uninhabited cellars only (other causes)	nr	0	N/C		0	D6	0	DX	0	D6
B	**DG5 PROPERTIES ON THE AT RISK REGISTER**										
	(i) SUMMARY										
12	2 in 10 register at end of year	nr	0	N/C		80	DX	80	DX	1	DX
13	1 in 10 register at end of year	nr	0	N/C		0	DX	745	D6	704	D6
14	Total 1 in 10 and 2 in 10 properties on the register at end of year	nr	0	N/C		80	DX	825	DX	705	DX
15	1 in 20 register at end of year	nr	0	N/C		0		0	DX	0	DX
15A	Potential risk of property flooding identified requiring further investigation to assess at risk category.	nr	0							6	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		N/C	
17	Properties which have not flooded internally but suffer restricted toilet use (RTU)	nr	0	N/C		N/C		N/C		350	C4
	(ii) PROBLEM STATUS OF PROPERTIES ON THE 1 IN 10 & 2 IN 10 REGISTERS										
18	Cost beneficial problems where risk is reduced temporary measures (mitigation)	nr	0								
19	Non cost beneficial problems where risk is reduced by temporary measures (mitigation)	nr	0								
20	Cost beneficial problems without mitigation awaiting solution and those which have not been appraised	nr	0								
21	Non cost beneficial problems without mitigation	nr	0								
	(iii) ANNUAL CHANGES TO 2 IN 10 & 1 IN 10 REGISTERS										
22	Removed by company action	nr	0	N/C		N/C		N/C		185	A1
23	Removed because of better information	nr	0	N/C		N/C		N/C		N/C	
24	Added because of better information	nr	0	N/C		N/C		N/C		71	B2
25	Added because of increased demand	nr	0	N/C		N/C		N/C		N/C	
	(iv) PROBLEM STATUS OF PROPERTIES ON THE 1 IN 20 REGISTER										
26	Cost beneficial problems where risk is reduced temporary measures (mitigation) (1 in 20)	nr	0								
27	Non cost beneficial problems where risk is reduced by temporary measures (mitigation) (1 in 20)	nr	0								
28	Cost beneficial problems without mitigation awaiting solution and those which have not been appraised (1 in 20)	nr	0								
29	Non cost beneficial problems without mitigation (1 in 20)	nr	0								
	(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		N/C	
31	Removed because of better information (1 in 20)	nr	0	N/C		N/C		N/C		N/C	
32	Added because of better information (1 in 20)	nr	0	N/C		N/C		N/C		N/C	
33	Added because of increased demand (1 in 20)	nr	0	N/C		N/C		N/C		N/C	

Table 3 - Key Outputs – Sewerage Service – Internal Flooding

Line 1 – Number of domestic properties connected to sewerage system

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

We would expect the confidence grade for this table (B3) to improve throughout the year as the benefits of the data quality programme are realised.

Calculation Process

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

Lines 2 to 11 – Annual Flooding Summary

Sources/Process

A download of internal sewer flooding records was obtained from the Ellipse system for the period April 08 to March 09 on a month by month basis.

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

Investigations were carried out for each reported incident and those properties found not to be flooded after investigation using information from the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly, are removed, the remaining properties were combined for a yearly total.

Assumption

For the purpose of AIR10, NIW has assumed that a single incident includes recorded complaints from the same property on the same day or within three days.

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

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

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

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

Line 4 – Flooding Incidents

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

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

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

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

Lines 5 and 11 – Flooding to uninhabited cellars

As stated in last year's methodology from JR08 for England and Wales, it can be seen that it is reasonable to report zero properties for cellar flooding. Given that NI is not likely to have as many properties with cellars as in parts of England and Wales and that such detailed information is unavailable for NIW's property flooding records derived from Ellipse or the returned Flooding Incident Report Forms, the decision has been taken to assume zero properties for cellar flooding.

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

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

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

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

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

Changes in Methodology over the Previous Year

As stated NIW's Flooding register is still at the development stage with only partial reporting capability. It is our aim to move towards full flooding reporting capability. Therefore as recommended by the Regulator, properties flooded (Other Causes) for AIR10 have been added to Line 15a 'requiring further investigation line'. These will be investigated as part of the remit of the newly created a DG5 expert panel comprised of key personnel.

Initially, the role of the DG5 panel is to provide a forum in which all areas of the business can feed into the flooding register development exercise for both internal and external flooding. However, as the Flooding Register and supporting business processes develop, the focus of this panel will shift to agreeing additions to and removals from the DG5 register, while ensuring the business process is maintained at all levels.

NIW are currently agreeing a programme for the development of the Flooding register along with methodologies, processes, definitions and roles and responsibilities. NIW will work towards full reporting capability for both internal and external flooding incidents before the end of the PC10 period.

Work has progressed during the year to identify critical and lateral sewers these layers have been recently added to NIW's Corporate Asset Register. Because of this work NIW should be in a better position for AIR11 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

Call centre scripting has been revised twice in the last 18 months regarding internal and external flooding reported by the public. The totals have been recorded and there appears to be a slight reduction in reporting of internal flooding.

Confidence Grading for DG5

All data is lifted directly from **reported** internal flooding incidents and cross checked with the returned Flooding Incident Report Forms, Operation Staff and Customer where appropriate. Therefore the confidence grade on the

figures reported for lines 2, 3, 4, 6, 8, 9 and 10 is B4, because the numbers reported in these lines are so small a change of only one property would exceed the accuracy implied by a higher CG. The confidence grade for line 7 because of use of historical data is CX as recommended by the Reporter and for lines 5 and 11 is, as last year, D6. The reason for this is given in the Line Specific Methodology. It had been proposed to enhance the confidence grade further for AIR10 by using Insurance Claim data but this information was not readily available. NIW now intend to, for each confirmed internal flooding, investigate adjacent properties. In addition the Flooding Incident Report Form has now been amended to capture the required detail for flooding of cellars and NIW should be in a position to report on these lines for AIR11.

Lines 12 – 17- DG5 Properties on the at risk register

Calculation Process

Data gathering and calculation is as described below in the Line Specific Methodology Statements for Table 3: Lines 12 to 15a.

Objective/Aim

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

Sources/Process for incidents reported within reporting year of 2009/2010

A download of internal sewer flooding records was obtained from the Ellipse system for the period April 09 to March 10 on a month by month basis.

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

Investigations were carried out for each reported incident and those properties found not be flooded after investigation using information from the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly, are removed, the remaining properties were combined for a yearly total.

The purpose of this initial sorting process was to ensure that records relating to the same property were grouped together and records relating to the same incident were also grouped together for the same date.

The cause of each confirmed internal flooding incident is confirmed by using the above steps with the records that have been excluded from inclusion to the ‘At Risk’ register for one or more of the following reasons:

- The cause of flooding was equipment failure.
- The cause of flooding was sewer blockage.

- The cause of flooding was sewer collapse.
- The return period of the storm was more than 1 in 20.

have been identified and a count kept for AIR and records determined as DG5 Reportable have been assigned to one of three “At Risk” registers – 2 in 10, 1 in 10 or 1 in 20. These “At Risk” registers are held on a MS Excel worksheet along with a section for excluded records.

Sources/Process for incidents held within NIW Historical Records

The internal flooding Historical Register is a collection of historical events that have taken place since January 2000. Flooding events are recorded as addresses of properties that have been flooded. There are a number of different sources for the information contained in this register of flooding events and the quality of information differs from source to source.

Data sources used to compile the historical records are as follows:

- Central Claims Unit;
- Drainage Area Studies;
- Eastern Division Flooding Records;
- Customer Enquiry management System (CEMS);
- Work Planning System (WPS);
- Captrax;
- Anecdotal Evidence; and
- Ellipse.

Because the data was contained in sources that indirectly related to flooding incidents the data is not considered to be good quality.

Determination of historical data was carried out using the available information obtained from the above sources, and was carried out as follows:

1. A visual check was made against each incident reading all data held on all sources for each incident at each address.
2. Where there was no information written on the cause of flooding this incident was placed by default to the 1:10 register, pending further investigations.
3. Where a mention was made of blockage or equipment failure etc. then this incident was excluded.
4. Additional investigations using Operational and Asset Management staff were carried out to check each defaulted property against their local knowledge to confirm flooding, a reason for flooding or work has been carried out to alleviate the cause of the flooding.

The addresses remaining therefore have no apparent cause of flooding and will remain defaulted onto the 1:10 register until further investigations into weather conditions or frequency of flooding at each location will move the property from one category to another or remove altogether. The removals of properties will be reported upon on lines T3 lines 20 – 22 for AIR10.

Process

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

1. The number of records assigned to the Internal 2 in 10 "At Risk" Register was counted to give the figure for Line 12.
2. The number of records assigned to the Internal 1 in 10 "At Risk" Register was counted to give the figure for Line 13.
3. The numbers of records assigned to the Internal 2 in 10 and 1 in 10 "At Risk" Registers were summated to give the figure for Line 14.
4. The number of records assigned to the Internal 1 in 20 "At Risk" Register was counted to give the figure for Line 15.

Confidence Grading for DG5

Although a considerable amount of work has been carried out in the initial default determination of 2000+ historical internal flooding records further work needs to be carried out to acutely determine each individual flooding incident. Grades remain the same as last year.

Of the 742 properties taken from 2000+ historical records defaulting to the 1:10 register it was NIW's intention to investigate these further by the use of workshops and face to face meeting with appropriate staff in Operations and Engineering Procurement to establish the exact cause of flooding and confirm if any capital schemes have already been completed to eliminate the flooding at individual properties. This work should be substantially complete and NIW were able to remove 110 properties from the 1 in 10 register.

Line 22 – Removed by Company action

The 'At Risk' Register at April 09 – which the company acknowledges was not yet robust - included many flooding locations which had *already* been addressed by company action.

106 properties at such locations were identified and removed. This may be viewed as one element in the process of enhancing the Register, in line with the Reporter's recommendations.

Line 24 – Added because of better information

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

Lines 23, 25, 30 to 33

The data to populate these lines is not gathered by NIW at present as the Internal Flooding register is still under development as stated in Line Specific Methodology Statement.

Table 3a

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**ANNUAL FLOODING SUMMARY**										
	(I) OVERLOADED SEWERS										
1	Areas flooded externally in the year (overloaded sewers)	nr	0	N/C		899	D6	1792	D6	1196	D6
2	Curtilege flooding incidents in the year (overloaded sewers)	nr	0	N/C		733	D6	1619	D6	1160	D6
3	Highway flooding incidents (overloaded sewers)	nr	0	N/C		194	D6	357	D6	299	D6
4	Other flooding incidents (overloaded sewers)	nr	0	N/C		120	D6	244	D6	144	D6
5	Total flooding incidents (overloaded sewers)	nr	0	N/C		1047	D7	2220	D6	1603	D6
6	External flooding incidents (overloaded sewers attributed to severe weather)	nr	0	N/C		458	D6	1062	D6	575	D6
	(ii) OTHER CAUSES										
7	Areas flooded externally in the year (other causes)	nr	0	N/C		4283	D6	7968	D6	6872	D6
8	Areas which have flooded more than once in the last 10 years (other causes)	nr	0	N/C		1723	D6	3828	D6	5861	D6
9	Flooding incidents (other causes - equipment failure)	nr	0	N/C		173	D6	438	D6	318	D6
10	Flooding incidents (other causes - blockages)	nr	0	N/C		4300	D6	9217	D6	7323	D6
11	Flooding incidents (other causes - collapses)	nr	0	N/C		210	D6	528	D6	401	D6
B	**AREAS ON THE 1:10, 2:10, 1:20 AT RISK REGISTER**										
	(I) SUMMARY										
12	2 in 10 register at end of year	nr	0	N/C		7	DX	7	DX	7	DX
13	1 in 10 register at end of year	nr	0	N/C		1	DX	1	DX	1	DX
14	1 in 20 register at end of year	nr	0	N/C		0	DX	0	DX	0	DX
15	Total on the 1:10, 2:10, 1:20 register at end of year	nr	0	N/C		8	DX	8	DX	8	DX
15A	Potential risk of property flooding identified requiring further investigation to assess at risk category.									40863	DX
	(ii) PROBLEM STATUS OF EXTERNAL AREAS ON THE 1:10, 2:10, 1:20 REGISTER										
16	Cost beneficial problems where risk is reduced temporary measures (mitigation)	nr	0								
17	Non cost beneficial problems where risk is reduced by temporary measures (mitigation)	nr	0								
18	Cost beneficial problems awaiting solution and problems which have not been appraised	nr	0								
19	Non cost beneficial problems which have not been solved by mitigation	nr	0								
	(iii) ANNUAL CHANGES TO 1:10, 2:10, 1:20 REGISTER										
20	Removed by company action (external only)	nr	0	N/C		N/C		N/C		N/C	
21	Removed by company action (external linked)	nr	0	N/C		N/C		N/C		N/C	
22	Removed because of better information	nr	0	N/C		N/C		N/C		N/C	
23	Added because of better information	nr	0	N/C		N/C		N/C		N/C	
24	Added because of increased demand	nr	0	N/C		N/C		N/C		N/C	
25	Removed from external to internal register	nr	0	N/C		N/C		N/C		N/C	

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

Lines 1-11 – Annual flooding summary
Calculation Process

Data gathering and calculation is as described below in the Line- Specific Methodology Statements for Table 3: Lines 1 to 11. See also DG5 Methodology Flowcharts.

Lines 1 & 7 Methodology
Sources/Primary Process

1. A download of external sewer flooding records was obtained from the Ellipse system for the period April 09 to March 10.
2. The records were sorted firstly by Date field, then by Property Number field, then by Street Name field and finally by Town field.

The purpose of this initial sorting process was to ensure that records relating to the same external area were grouped together and records relating to the same incident were also grouped together. The order in which records were arranged was as follows:-

- Records representing complaints regarding the same external area on the same day;
- Records representing complaints regarding the same external area on different days;
- Records representing complaints regarding neighbouring external areas in the same street on the same day;
- Records representing complaints regarding neighbouring external areas in the same street on different days;
- Records representing complaints regarding external areas in neighbouring streets on the same day; and
- Records representing complaints regarding external areas in neighbouring streets on different days.

3. A string of text was created for each record consisting of the contents of the Property Number field, the Street Name field and the Town field in that order.
4. A query was created returning a response of “True” in row 1 if the string of text in row 2 equalled the string of text in row 1.
5. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
6. Records with “0”, “1”, “2” or “3” subtraction results and “True” responses were eliminated.

Note: Records returning “0” and “True” responses represented complaints from the same property on the same day. Records returning “1” and “True” responses represented complaints from the same property within one day, etc.

Assumption

For the purpose of AIR10, NIW has assumed that a single incident includes recorded complaints from the same property on the same day or within three days.

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

7. The remaining records were representative of one external flooding complaint per unique property per unique external flooding incident.

The remaining records may have included properties flooded both internally and externally during the same event.

8. The records were labelled as "External" and combined with the confirmed annual "Internal" records (also labelled) and representative of one internal flooding complaint per unique property per unique internal flooding incident.
9. The records were sorted firstly by Date field, then by Property Number field, then by Street Name field and finally by Town field.
10. A string of text was created for each record consisting of the contents of the Property Number field, the Street Name field and the Town field in that order.
11. A query was created returning a response of "True" in row 1 if the string of text in row 2 equalled the string of text in row 1.
12. The responses to the above query were copied to another column and dropped down one cell.
13. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
14. All internal records were eliminated.
15. External records were also eliminated but only if they returned a value of "0", "1", "2" or "3" and "True".
16. The remaining records were representative of one external flooding complaint per unique property per unique external flooding incident.

The remaining records did not include properties flooded both internally and externally during the same event.

Sources/Secondary Process

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

2. A string of text was created for each record consisting of the contents of the Property Number field, the Street Name field and the Town field in that order.
3. A query was created returning a response of "True" in row 1 if the string of text in row 2 equalled the string of text in row 1.
4. Records with "True" responses were eliminated.
5. The remaining records were representative of one external flooding complaint per unique property, meaning that external areas affected by more than one incident were reported only once, as per the definition. The remaining records were apportioned using the following process:-

Assumption – Apportionment

The raw data for this return has been derived from the Ellipse system and is typical of that provided by the customer only. As such, the cause of flooding is undetermined in each case and the extent of flooding is also undetermined. The decision has been taken to base the apportionment of data on averages for England and Wales since it is thought that this would give the best approximation to apportionment based on actual causes and extents.

Lines 2 - 5 Methodology
Sources/Secondary Process

1. Records representative of one external flooding complaint per unique property per unique external flooding incident were derived using the Primary Process previously described.
2. The Street Name field was split into two separate fields (SN1 and SN2).
3. A string of text was created for each record consisting of the contents of the SN1 field and the contents of the Town field in that order.
4. A query was created returning a response of "True" in row 1 if the string of text in row 2 equalled the string of text in row 1.
5. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
6. Records with "0", "1", "2" or "3" subtraction results and "True" responses were eliminated.

Note: Records returning "0" and "True" responses represented complaints from the same external area, neighbouring external area or neighbouring street on the same day. Records returning "1" and "True" responses represented complaints from the same external area, neighbouring external area or neighbouring street within one day, etc.

Assumption

For the purpose of AIR10, NIW has assumed that a single incident includes recorded complaints from the same property, neighbouring properties and neighbouring streets on the same day or within three days.

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

7. The remaining records were representative of one external flooding complaint per unique external flooding incident. The remaining records were apportioned using the following process:-

Assumption – Apportionment

The raw data for this return has been derived from the Ellipse system and is typical of that provided by the customer only. As such, the cause of flooding is undetermined in each case and the extent of flooding is also undetermined. The decision has been taken to base the apportionment of data on averages for England and Wales since it is thought that this would give the best approximation to apportionment based on actual causes and extents.

Line 6 Methodology
Sources/Secondary Process

1. Records representative of one external flooding complaint per unique property per unique external flooding incident were derived using the Primary Process previously described.
2. The Street Name field was split into two separate fields (SN1 and SN2).
3. A string of text was created for each record consisting of the contents of the SN1 field and the contents of the Town field in that order.
4. A query was created returning a response of "True" in row 1 if the string of text in row 2 equalled the string of text in row 1.
5. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
6. Records with "0", "1", "2" or "3" subtraction results and "True" responses were eliminated.

Note: Records returning "0" and "True" responses represented complaints from the same external area, neighbouring external area or neighbouring street on the same day. Records returning "1" and "True" responses represented complaints from the same external area, neighbouring external area or neighbouring street within one day, etc.

Assumption

For the purpose of AIR10, NIW has assumed that a single incident includes recorded complaints from the same property, neighbouring properties and neighbouring streets on the same day or within three days.

"Three days" was chosen on the basis that a noticeable volume of repeat calls tends to be received within three days of an incident occurring. There is

then a much longer passing of time before calls are again received from the same locality, suggesting that the original incident has passed and that the calls relate to a different incident.

7. The remaining records were representative of one external flooding complaint per unique external flooding incident. The remaining records were apportioned using the following process:-

Assumption – Apportionment

1. The monthly rainfall for Armagh and Ballypatrick (April 09 – March 10) was obtained from the Met Office site.

2. The average monthly rainfall for Armagh and Ballypatrick combined (April 09 – March 10) was derived from the monthly rainfall for the two sites.

3. The average monthly rainfall for Carmoney, Aldergrove and Armagh was obtained from the Met Office site.

4. The average monthly rainfall for Carmoney, Aldergrove and Armagh combined was derived from the average monthly rainfall for the three sites.

5. The results of Step 4 were subtracted from the results of Step 2 in order to calculate the difference between the two sets of results. A +ve difference signified an “above average” rainfall. A –ve difference signified a “below average” rainfall.

6. The results of Steps 4 and 5 were expressed as fractions of the total rainfall in 2009/10.

7. The fractions calculated in Step 6 were applied to the estimated number of incidents due to overloaded sewers in 2009/10 (1,603) in order to calculate the estimated numbers of incidents attributed each month to the average rainfall and the above/below average rainfall.

8. The monthly numbers of incidents attributed to above average rainfall were summated to give the total number of incidents in 2009/10 (556). This figure is used as the estimated number of external flooding incidents in 2009/10 due to overloaded sewers attributed to severe weather.

Line 8 Methodology
Sources

1. A download of external sewer flooding records was obtained from the Ellipse system for the period April 09 to March 10
2. The Ellipse records were combined with all historical flooding records from the External Flooding Database, less any Ellipse records already included.

Historical flooding records included all determined and undetermined records at 31 March 2010.

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

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

The purpose of this initial sorting process was to ensure that records relating to the same external area were grouped together and records relating to the same incident were also grouped together. The order in which records were arranged was as follows:-

- Records representing complaints regarding the same external area on the same day;
- Records representing complaints regarding the same external area on different days;
- Records representing complaints regarding neighbouring external areas in the same street on the same day;
- Records representing complaints regarding neighbouring external areas in the same street on different days;
- Records representing complaints regarding external areas in neighbouring streets on the same day; and
- Records representing complaints regarding external areas in neighbouring streets on different days.

4. A string of text was created for each record consisting of the contents of the Property Number field, the Street Name field and the Town field in that order. (This was used to determine the number of unique properties per incident.
5. A query was created returning a response of “True” in row 1 if the string of text in row 2 equalled the string of text in row 1.
6. The responses to the above query were copied to another column and dropped down one cell.
7. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
8. Records with “0”, “1”, “2” or “3” subtraction results and “True” responses were eliminated.

Note: Records returning “0” and “True” responses represented complaints from the same property on the same day. Records returning “1” and “True” responses represented complaints from the same property within one day, etc.

Assumption

For the purpose of AIR10, NIW has assumed that a single incident includes recorded complaints from the same property on the same day or within three days.

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

9. Records with “False” “True” responses were eliminated.

These records represented the most recent complaints from properties having made multiple complaints. Records become redundant once they have been compared with the records directly above.

10. Records with “False” “False” responses were eliminated.

These records represented external areas flooded once in the last 10 years.

11. Records with subtraction results in excess of “3650” and “True” responses were eliminated.

These records represented external areas flooded more than once in excess of 10 years.

12. Records were retained if they returned a subtraction result between “4” and “3650” inclusive and “True” responses.

These records represented external areas flooded more than once in the last 10 years. However, the same area could have appeared more than once, once for every separate incident.

13. Records were again sorted by Property Number field, Street Name field and Town field to ensure the order was correct for the next stage in the process.

14. A query was created returning a response of “True” in row 1 if the string of text in row 2 equalled the string of text in row 1.

15. Records with “True” responses were eliminated.

16. The remaining records were representative of one external flooding complaint per unique property.

Assumption – Apportionment

The decision has been taken to base the apportionment of data on averages for England and Wales since it is thought that this would give the best approximation to apportionment based on actual causes and extents.

Lines 9 - 11 Methodology
Sources/Secondary Process

1. Records representative of one external flooding complaint per unique property per unique external flooding incident were derived using the Primary Process previously described.
2. The Street Name field was split into two separate fields (SN1 and SN2).
3. A string of text was created for each record consisting of the contents of the SN1 field and the contents of the Town field in that order.
4. A query was created returning a response of "True" in row 1 if the string of text in row 2 equalled the string of text in row 1.
5. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
6. Records with "0", "1", "2" or "3" subtraction results and "True" responses were eliminated.

Note: Records returning "0" and "True" responses represented complaints from the same external area, neighbouring external area or neighbouring street on the same day. Records returning "1" and "True" responses represented complaints from the same external area, neighbouring external area or neighbouring street within one day, etc.

Assumption

For the purpose of AIR10, NIW has assumed that a single incident includes recorded complaints from the same property, neighbouring properties and neighbouring streets on the same day or within three days.

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

7. The remaining records were representative of one external flooding complaint per unique external flooding incident. The remaining records were apportioned using the following process:-

Assumption – Apportionment

The raw data for this return has been derived from the Ellipse system and is typical of that provided by the customer only. As such, the cause of flooding is undetermined in each case and the extent of flooding is also undetermined.

The decision has been taken to base the apportionment of data on averages for England and Wales since it is thought that this would give the best approximation to apportionment based on actual causes and extents.

Changes in Methodology over the Previous Year

There have been no changes in the methodology from that as reported for AIR 09. The raw data is from the same source i.e. Ellipse Work Management System and figures are derived using the Line- Specific Methodology Statements and calculation sheets.

Confidence Grading

All data is lifted directly from **reported** external flooding incidents and no further interrogation has been carried out on these incidents the confidence grade for all Annual Flooding Summary figures in Table 3a Lines is D6 and due to the nature of the raw data there is no detail relating to the cause of flooding it has been necessary to base proportioning on JR09 average for England and Wales.

Future Reporting Line 15a

There are currently approximately 40863 undetermined records of reported External Flooding NIW proposal is still to have these investigated and determined so that the DG5 External Registers can be suitably populated, target date is March 2011.

Lines 12 – 15 - Areas on the 1:10, 2:10, 1:20 at risk register
Calculation Process
Data gathering and calculation is as described below in the Line- Specific Methodology Statements for Table 3a: Lines 12 to 15.

Lines 12 - 15 Methodology
Reporting Restriction
NIW is currently in the process of determining all records held within the External Flooding Register as either DG5 Reportable or Excluded. Undetermined records are deemed to be under investigation. Therefore, it has only been possible to report on the total number of determined records at 31 March 2010 in this part of the table.

Records determined as DG5 Reportable have been assigned to one of three “At Risk” registers – 2 in 10, 1 in 10 or 1 in 20. These “At Risk” registers are held on an MS Excel worksheet along with a section for Excluded records. Records have been excluded for one or more of the following reasons:-

- The cause of flooding was equipment failure;
- The cause of flooding was sewer blockage;
- The cause of flooding was sewer collapse;
- The return period of the storm was less frequent than 1 in 20; and

- The mitigation work is complete and the external area is no longer at risk of flooding.

Process

1. The number of records assigned to the External 2 in 10 “At Risk” Register was counted to give the figure for Line 12.
2. The number of records assigned to the External 1 in 10 “At Risk” Register was counted to give the figure for Line 13.
3. The number of records assigned to the Internal 1 in 20 “At Risk” Register was counted to give the figure for Line 14.
4. The numbers of records assigned to the External 2 in 10, 1 in 10 and 1 in 20 “At Risk” Registers were summated to give the figure for Line 15.

Changes in Methodology over the Previous Year

There have been no changes in the methodology from that as reported for AIR 09. NIW has not commenced work on the determination of External records as it was decided for this reporting year to concentrate on Internals. Therefore there has been no increase in the number as quoted for AIR09.

Confidence Grading for DG5

As the ‘At Risk’ Registers are in their initial stages of development, the figures shown would not reflect a realistic number of properties contained in each of the ‘At Risk’ Registers. Consequently a Grading of DX has been given.

Lines 16 - 25 - Areas on the 1:10, 2:10, 1:20 at risk register
Calculation Process

The data to populate lines 16 to 33 is not gathered by NIW at present as the External Flooding register is still under development as stated in Line-Specific Methodology Statement.

Going Forward to Implement Reporter’s Recommendations
Work will commence during the AIR11 reporting period to gather the required information to more accurately complete the lines in Table 3a. Meetings have been held with the Flooding Contractor on the supply of information that will fulfil our commitment. Together with this and a more dedicated DG5 role being set up (April 10) within the Wastewater Business Unit and a more active involvement by Asset management good progress should be made.

Table 4

NORTHERN IRELAND WATER - ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**DG6 RESPONSE TO BILLING CONTACTS - GENERAL**										
1	Total billing contacts	nr	0	36208	C2	53137	B2	81370	B3	99126	B3
2	Number dealt with within 5 working days	nr	0	26478	C2	50464	B2	80262	B3	97271	B3
3	Number dealt with in more than 10 working days	nr	0	6676	C2	1497	B2	12	B3	59	B3
4	DG6 Percentage dealt with within 5 working days	%	1	73.1%	C2	95.0	B2	98.6	B3	98.1	B3
5	Percentage dealt with in more than 10 working days	%	1	18.4%	C2	2.8	B2	0.0	B3	0.1	B3
B	**CONNECTED PROPERTIES**										
6	Number of properties connected for water supply only	nr	0	90810	B3	135779	B3	141751	A2	144655	B2
7	Number of properties connected for water and sewerage services	nr	0	705167	B3	664282	B3	662629	A2	654085	B2
8	Number of properties connected for sewerage services only	nr	0	128	B3	197	B3	38	A2	35	B2

Table 4 – Key Outputs – Customer Service 1

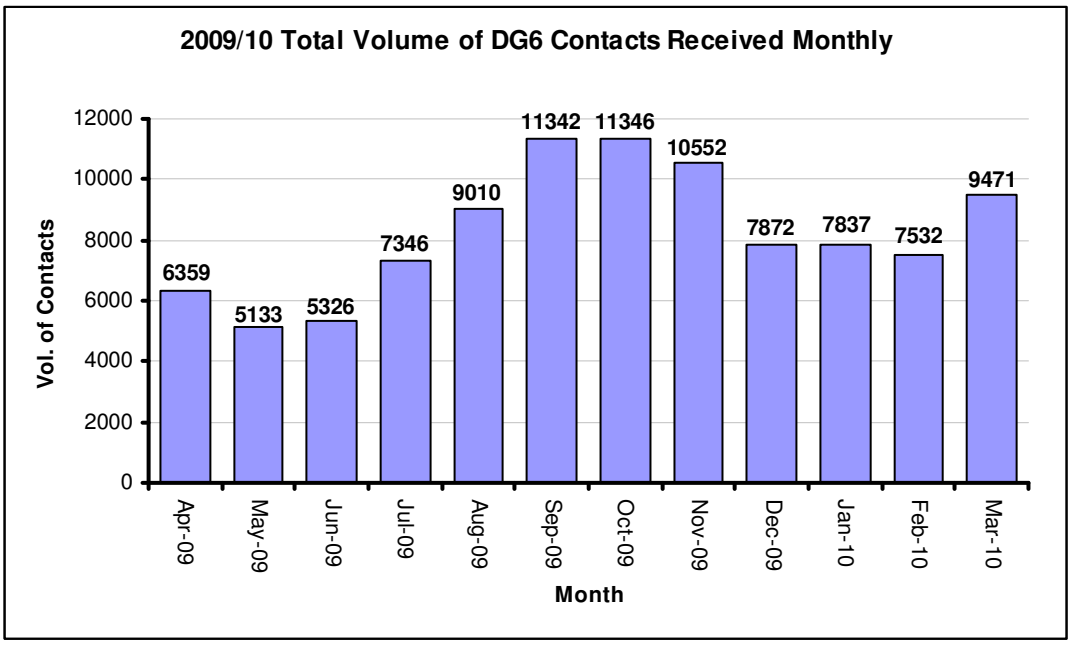
Lines 1- 5 - DG6 – Response to Billing Contacts

This was the third year of non domestic billing by Northern Ireland Water (NIW). Following decision of the Executive, domestic charges continued to be deferred for 2009/10 charging year.

Two significant changes were made to billing from April 2009:

- Introduction of domestic sewerage allowance for all those accounts which already had a domestic rateable allowance for water; and
- Non domestic sewerage charges went to 100% of charge.

The chart below shows the monthly profile of DG6 contacts received during 2009/10.



The profile of billing contacts was low in the first quarter due to a delay in measured billings from April 2010. This was because of required system changes to accommodate the new sewerage domestic allowance and contractual issues with our outsource partner which prevented this work being completed in time for start of new financial year. Billing resumed in July 2010 and contacts increased August, September and October as six months billings had to be completed in three. The increase in contacts recorded in March 2010 is a combination of factors. The major freeze/thaw incident during January had a significant impact on our DG8 performance; meter readers were unable to locate or read meters due to the winter conditions and many were diverted to support the incident response teams. This in turn impacted on the number of DG6 contacts as more customers raised queries regarding their bill as it was based on a system generated estimate read. Additionally the release of 540 backdated bills in March 2010 due to the re-classification

of test meters project has increased the number of charge enquiry contacts for March 2010.

The source data for DG6 Table 4 (lines 1 to 5) is reported using the submitted methodology stated for DG6. The difference of 1855 between received and closed contacts (which is a 1.87% variance) is attributable to DG6 open contacts spanning year end.

In response to the AIR09 reporter's feedback, 2009/10 monthly reports for DG6 (received and closed) are run by Echo and independently validated by the NIW contract office on a monthly basis. At the beginning of each month the DG6 reports are run for both the current and previous months to accurately update closed figures on a retrospective basis and support the annual reconciliation. Variances are queried with 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. In line with Reporter recommendations, NIW can confirm that mail received after 2pm is logged on the same working day and that telephone contacts requesting a copy bill are actioned within 5 days.

Holding replies

Holding replies are used when ongoing investigations or results of future activity delay resolution of a billing contact. For instance, a high consumption query may require a field visit prior to resolution. In this instance the Customer Relations Centre does not currently report the actual number of holding letters sent and the length of time a contact remains open. NI Water now receives the following requested additional information for DG6 2010 including:

- Opening balance of contacts carried over from last reporting period;
- Total number of DG6 contacts received during the month;
- Total number of DG6 contacts closed during the month;
- Actual time taken to close a DG6 contact;
- Age of longest outstanding contact; and
- Ageing profile of all outstanding DG6 contacts.

A request is still outstanding for the following holding letter information:
- Total number of DG6 holding letters issued per month; and
- Total number of DG6 contacts closed to a holding letter.

In light of the Reporter's recommendations to review the use of multiple holding letters, a DG6 project is underway to both improve the number of open queries and remove the use of holding letters. The estimated timescale for this project is quarter 3 2010/2011.

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

The NIW Billing & Revenue team also randomly selects 5 calls for listening and monitoring re: quality assurance.

The NIW Billing & Revenue team updates the Business Process Document at regular intervals, making it available to relevant staff.

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

Lines 6 - 8 - Connected Properties
A confidence grade of B2 can be assigned as the data is taken directly from the RapidXtra Property Summary Report.

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

Line 6 – Number of properties connected for water supply only
AIR09 figure – 141751
AIR10 figure – 144655

Line 7 – Number of properties connected for water and sewerage services
AIR09 figure – 662629
AIR10 figure – 654085

This figure has most likely decreased (by 8500) due to the economic downturn during the reporting year.

Line 8 - Number of properties connected for sewerage services only
AIR09 figure – 38
AIR10 figure – 35

Table 5

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**DG7 RESPONSE TO WRITTEN COMPLAINTS**										
1	Total written complaints	nr	0	1220	B2	2644	B2	3727	B4	3469	B4
2	Number dealt with within 10 working days	nr	0	1116	B2	2394	B2	3636	B4	3449	B4
3	Percentage dealt with within 10 working days	%	1	91.5	B2	90.5	B2	97.6	B4	99.4	B4
4	Number dealt with in more than 20 working days	nr	0	30	B2	10	B2	16	B4	14	B4
5	Percentage dealt with in more than 20 working days	%	1	2.5	B2	0.4	B2	0.4	B4	0.4	B4
B	**DG8 BILLS FOR METERED CUSTOMERS**										
6	Total metered accounts	nr	0	77534	B2	78444	A2	84075	B2	85540	B2
7	Metered accounts excluded from indicator	nr	0	869	B2	1126	A2	17692	B2	17447	B2
	(I) NO. OF CUSTOMERS WITH METERED ACCOUNTS RECEIVING AT LEAST ONE BILL DURING YEAR BASED ON METER READING:										
8	Company readings	nr	0	63580	B2	55401	A2	61751	B2	62553	B2
9	Company or customer readings (or both)	nr	0	63753	B2	55517	A2	61904	B2	62825	B2
	(ii) NUMBER OF CUSTOMERS WITH METERED ACCOUNTS RECEIVING:										
10	Estimated bills only	nr	0	1949	B2	2836	A2	3901	B2	4971	B2
11	No bills received during the report year	nr	0	10963	B2	18965	A2	578	B2	297	B2
12	Unread by company for 2 years	nr	0	9148	B2	9930	A2	895	B2	1074	B2
C	**DG9 TELEPHONE CONTACT**										
13	Total calls received on customer contact lines	nr	0	259046	B2	322318	B2	321720	A2	351864	A2
14	All lines busy	nr	0	142	B2	0	B2	0	A2	0	A2
15	Total of abandoned calls	nr	0	23575	B2	3374	B2	3591	A2	9069	A2
16	Call handling satisfaction	nr	2			4.23	B2	4.40	A2	4.60	A2
17	Total telephone complaints	nr	0	13788	B2	22636	B2	33102	A2	47860	A2
D	**SPECIAL ASSISTANCE REGISTER**										
18	Customers on the special assistance register	nr	0	N/C		N/C		N/C		546	A2

Table 5 – Key Outputs – Customer Service - 2

Lines 1-5 – DG7 Response to Written Complaints

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

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

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

Methodology

It should be noted that the line methodology for calculating the percentage of complaints closed within 10 working days intentionally differs from that submitted for AIR 09, in line with the Reporter's AIR 09 Table 5 Commentary.

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

> That is:
>
> 3449 (closed within 10 days, regardless of date of receipt) / 3469 (received in year) = 99.42%

The methodology employed for the 2008/09 reporting period, as reported in AIR09, expressed the number of complaints **closed** within 10 working days as a percentage of the total volume of complaints closed during the reporting period

Had this methodology been employed this year:

> 3449 (closed within 10 days, regardless of date of receipt) / 3515 (closed, regardless of date of receipt) = 98.12%

It is noted that last year's submitted DG7 figure of 98.1% was corrected to 97.6% by the Reporter in the November erratum. A calculation error was highlighted.

NIW have been in initial discussions with the Reporter to gain clarification on the DG calculation method, and will be seeking further clarification for the forthcoming reporting period.

NIW will be investigating this matter further and will be engaging with both the Reporter and Echo to clarify the reporting requirements set out by the regulator, in particular how out of year contacts are reported.

Responses

It has been practice to issue several holding responses for a single contact, where we were unable to fully address the complaint within 10 working days. It is accepted that this is not good practice, and we committed to address this during the 2009/10 reporting period.

A number of other areas for improvement were identified, including quality of response and the need for engagement with customers.

Improvements
Triage Team

On 26th October 2009, we introduced a new 'triage' approach to dealing with written complaints. This new process supplemented the existing process in an effort to provide better and quicker responses to customers.

A dedicated Triage Team was set up within the Customer Services Directorate. The team was made up of experienced staff with specialist knowledge of technical and operational issues, billing, letter writing and complaint management.

The key objectives of the team were to:

Increase rate of first contact resolution;
Reduce average time taken to resolve complaint;
Reduce number of holding letters issued;
Reduce number of repeat contacts;
Improve quality of response to customer; and
Reduce volume of escalated contacts within the business.

The team assesses and prioritises each complaint and assigns it to a given owner, ensuring the relevant research and resolution is completed. Where possible, the team will also contact the customer by telephone to ensure that the issues raised are fully understood. Draft responses are reviewed by the appropriate expert. The process has encouraged better communication between the complaints teams and the wider business. This ensures that complaints are resolved as quickly as possible.

The new approach has proven to be successful.

Between 26th October 2009 and 31st March 2010:

Almost 1500 complaints dealt with through Triage approach;
49% closed at first point of contact;
89% fully closed within 10 working days – no substantive holding responses issued; and
6 day average closure time.

This approach has also reduced the volume of on-hand open complaints within the business.

At the end of the reporting period we had:

56 open complaints;
Oldest complaint – 15 working days;
3 complaints open for more than 10 working days – all pending completion of agreed actions, as outlined in substantive responses; and
4 day average open time.

CCNI Pilot Complaints Review

At the close of the reporting period, CCNI carried out a pilot complaints review. This review assessed a random sample of complaints dealt with during the year. Feedback was generally positive, and CCNI have made a number of recommendations that will be taken forward during 2010/11.

Logging Correspondence

It had been practice to log any items of correspondence received after 2.00pm as being received the following working day. We recognised that this was not acceptable. All complaints were reviewed and 'date received' fields have been corrected.

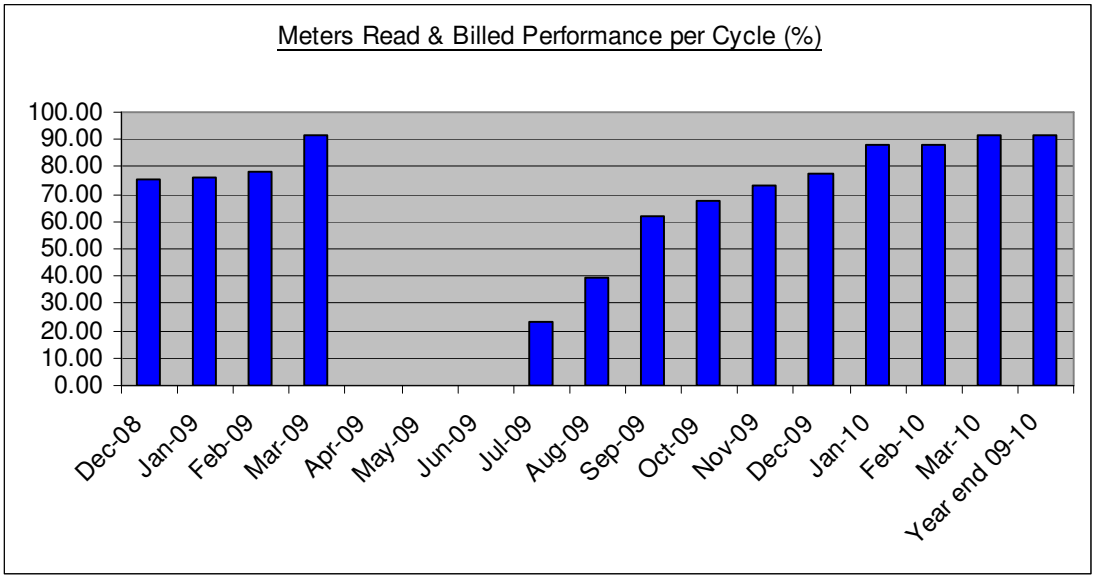
This resulted in 32 complaints not being closed within 10 working days and these have been counted as fails.

Lines 6 - 12 - DG8 – Bills for metered customers

As part of an efficiency initiative the Customer Field Services Organisation was restructured at the beginning of April 2009 with several Meter Readers leaving our organisation. This resulted in the loss of local knowledge within some Meter Reading Areas. At this point in time Route Optimisation Technology was being considered to enhance Meter Reading Performance. This initiative was subsequently shelved as it was felt that issues around management and data quality needed to be addressed in the first instance.

As an alternative to Route Optimisation a combination of Route Navigation and GIS was rolled out to assist Meter Readers in November 2009.

The graph below illustrates a summary of meter reading performance, i.e. meters read versus total meters scheduled to be read shown as a percentage per cycle. (Data Source: Rapid)



The graph above illustrates:

- 0% for the read and billed figure for April, May & June 09 because we were unable to upload reads into the billing system until the system had been changed to facilitate the new sewerage allowance introduced from 1 April 2010. This change was delayed due to contractual difficulties experienced with the Steria exit from our outsource contract.

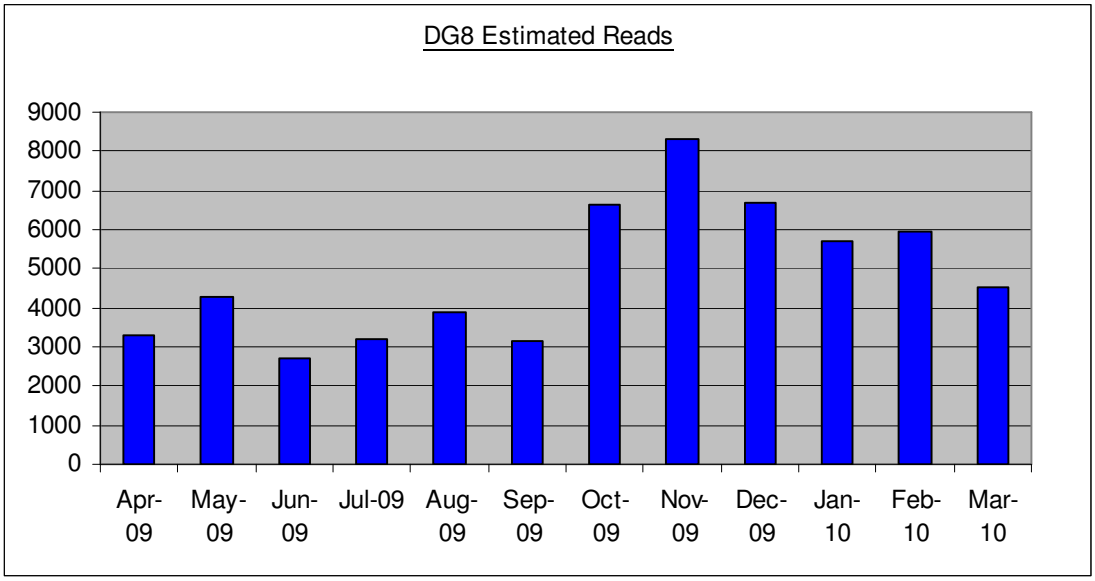
- The percentage increases throughout the year as the graph is based on actual meter reads out of the total meter base for the year.

It was also noted that there was:

- A decrease in performance after March 2009 moving into April 2009 when the New Meter Reading Organisation came into effect.

- From October 2009 (Cycle 7) and forward there was a decrease in overall performance due to the focus on reading meters which had not been read during the first half of the year.

Although this allowed us to allocate meter reading resources more effectively and efficiently to target the DG8 KPI, it was not without its consequences. Meters not targeted in the second read cycle were billed based on an estimate (as per graph below), which generated greater customer contact impacting on DG6 volumes.



The major freeze/thaw incident during January had a significant impact on our DG8 performance; meter readers were unable to locate or read meters due to the winter conditions and many were diverted to support the incident response teams.

Based on our performance up to end December, we were forecasting that the annual DG8 target would be met, but this prolonged incident has contributed greatly to the target being missed.

Moving forward into 2010/11 year we will be reviewing working practices which should improve meter reading performance, by;

- Focusing meter reading resource on billable meters.
- Targeting all Routes/Meters during the first 6 months inclusive of the difficult routes.
- Realising the increased benefits from Route Navigation.
- Delivering on recommendations coming from the Meter Reading Internal Benchmarking Project.

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

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

The number of metered accounts excluded from the indicator are:

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

Billing Policy

Frequency of Bill Issue:

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

Customer Reads

The Company encourages our customers to take readings themselves so that they are aware of their usage. Customer reads can be registered for billing purposes by using the On-line facility available on our website or by calling our billing line.

The Confidence grade of B2 has been applied for lines 6-8.

Lines 13 – 17 - DG9 Telephone contact

Line 13 – Total calls received on customer contact lines

This is the Director General standard for the measurement of telephone answering performance. Currently our expected SLA is 97% of telephone calls must be substantively answered in 30 seconds. During 2009/10, Northern Ireland Water answered 92.62% of all calls received during business within 30 seconds out of a total of 351,864 calls. This is a significant decline on the last reporting year's performance of 97.09%. There are however a number of significant contributory factors to this reduction in overall performance as outlined below:

The adverse winter weather conditions in December and January, known within Northern Ireland Water as the Freeze / Thaw event.

The exceptional level of call volumes during the above incidents had a major impact on service levels.

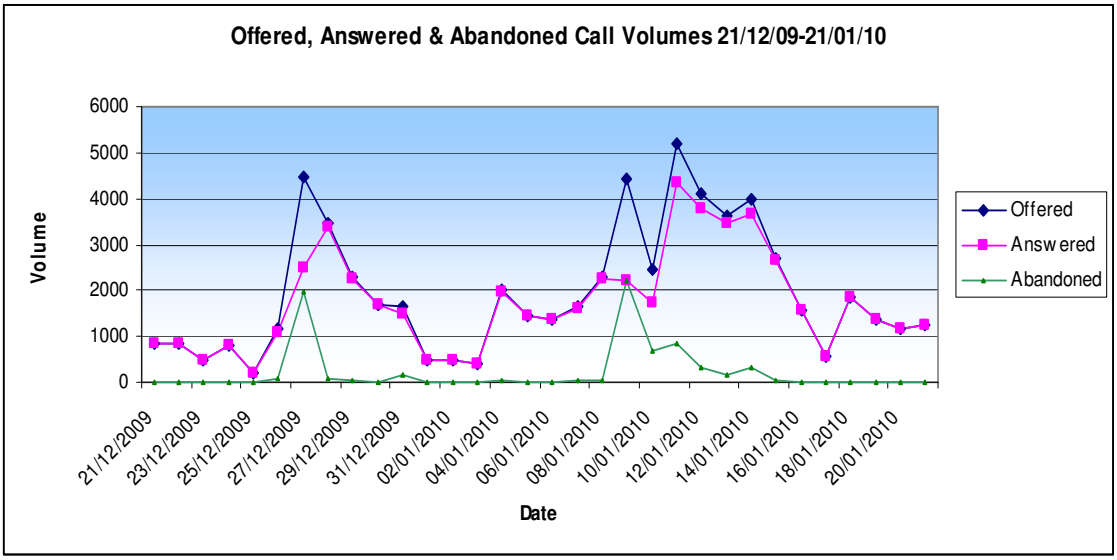
Line 14 - All Lines Busy

The possibility of a customer receiving an engaged or all lines busy tone has been minimised by the availability of 210 telephone lines. Whilst it is more than the number of staff that we have, it means if a customer rings and a staff member is not available to answer the call, the customer will wait in the relevant queue. If the customer rings and all lines are busy then the customer will receive an engaged/all lines busy tone.

Line 15 - Calls Abandoned

9,069 calls were abandoned during the reporting year. The Company's performance of 97.42% of calls not abandoned falls short of the 99% target set for the year. The failure to meet the expected target can be attributed in the main to freeze/thaw event in December and January. During this period the call centre received 55,280 calls, of which 7,142 were abandoned. This equates to approximately 2% of abandoned calls. Without this event NIW would have been well within the 1% target.

On a typical day the Contact Centre would normally deal with around 1,300 calls. This spiked on several days during the incident, for example on Monday 28th December 3479 calls were received, on Monday 11th January 5201 calls were received. A typical Sunday would present on average 150 calls to the Contact Centre. On the 27th December 4451 calls were received, on Saturday 9th January 4447 calls were received. The table below shows the calls offered, answered and abandoned during the incident.



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 4923 rejected calls made outside of published working hours recorded during the 2009/10 reporting period. The customer will receive the appropriate out of hours message.

Line 16 - Call Handling Satisfaction

Customer's satisfaction with regards call handling is assessed by McCallum Layton, an independent market research company. McCallum Layton carry out quarterly customer survey of 100 customers who have called the Company for any reason. The answer to survey question 18 ("*Overall, how satisfied were you with how your call was handled1-5?*") gives the call handling satisfaction score.

McCallum Layton carries out the same research for 25 UK water companies with OFWAT organising and overseeing the project. The Company achieved an overall score of 4.6/5.0 for the reporting year, meeting the target set at the beginning of the year. In the last quarter of 2009/10 NI Water was ranked 3rd out of the 25 participating UK Water Companies, a massive improvement on the 12th place from the previous year.

Line 18 - Customers on the Special Assistance Register

The Company launched its Priority Services Service in February 2009. At the end of March 2010, 546 customers were on the Special Assistance Register.

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 NIW 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 NIW using similar systems to NIW. From 1st April to 31st March 430 jobs were received by NIW through this process.

Temporary Customer Contact Points

The company did not employ any temporary customer contact points during the reporting year.

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

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

IVR

The Company does not use an IVR system (although the system would have IVR functionality)

Sampling Methods

The Company is capable of reporting actual DG9 contacts received, telephone complaints, calls abandoned and all lines busy and do not need to employ any sampling methods to monitor these parameters.

The only parameter that is assessed by sampling methods is Customer Call Handling Satisfaction. 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 NIW, or a service or lack of service provided by NIW 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, NIW records telephone calls about the following water service issues as complaints: no water, lack of pressure, leaks, taste and odour, discoloration and hard water (except for simple enquires e.g. dishwater settings). Telephone calls about the following wastewater services are also recorded as complaints: sewer flooding other than those received through NI

Direct/blockages, collapsed sewers/manholes, smells from sewage treatment works/pumping stations and flies from sewage treatment works.

Incidents

In addition to the freeze/thaw event in December/January, the following incidents may have affected service:

- Suspected water contamination issue in the Dunore area in April 2009 impacting 220,000 customers lead to a significant increase in call volumes, for example on 14th April 2771 calls were received; and

- 31st March 2010 – due to a widespread power outage a number of NIW pumping stations failed to operate. This led to an increase in calls on this day to 3226 (more than double the average daily call volume).

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 NIW (via its outsourced partner) from McCallum Leyton.

Table 5a

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**TOTAL WRITTEN COMPLAINTS**										
1	Total written complaints	nr	0	1220	B2	2364	B2	3727	B4	3469	B4
2	Number dealt with within 10 working days	nr	0	116	B2	2268	B2	3636	B4	3449	B4
3	Number dealt with in more than 20 working days	nr	0	30	B2	10	B2	16	B4	14	B4
B	**CATEGORY OF WRITTEN COMPLAINTS**										
	(i) Charges and Bills										
4	Total written complaints about charging and billing issues	nr	0	N/C		820		1577	B2	1345	B2
5	Total written complaints about charging and billing issues escalated to second stage review	nr	0	N/C		N/C		36	B2	n/a	
	(ii) Water Service										
6	Total written complaints about water service issues	nr	0	N/C		366		822	B2	622	B2
7	Total written complaints about water service issues escalated to second stage review	nr	0	N/C		N/C		18	B2	n/a	
	(iii) Sewerage Service										
8	Total written complaints about sewerage service issues	nr	0	N/C		771		1024	B2	914	B2
9	Total written complaints about sewerage service issues escalated to second stage review	nr	0	N/C		N/C		7	B2	n/a	
	(iv) Metering										
10	Total written complaints about metering issues	nr	0	N/C		32		71	B2	92	B2
11	Total written complaints about metering issues escalated to second stage review	nr	0	N/C		N/C		2	B2	n/a	
	(v) Other activities										
12	Total written complaints about other service issues or activities	nr	0	N/C		375		233	B2	496	B2
13	Total written complaints about other service issues or activities escalated to second stage review	nr	0	N/C		N/C		7	B2	n/a	

Table 5a - Complaints data for the Consumer Council

We identified that a number of DG7 written complaints have been categorised incorrectly. In particular, we found high levels of complaints were coded as 'other' and 'poor service'.

We are currently, reviewing the coding/rules underpinning DG7 reporting to confirm accuracy and compliance with Regulatory Guidelines.

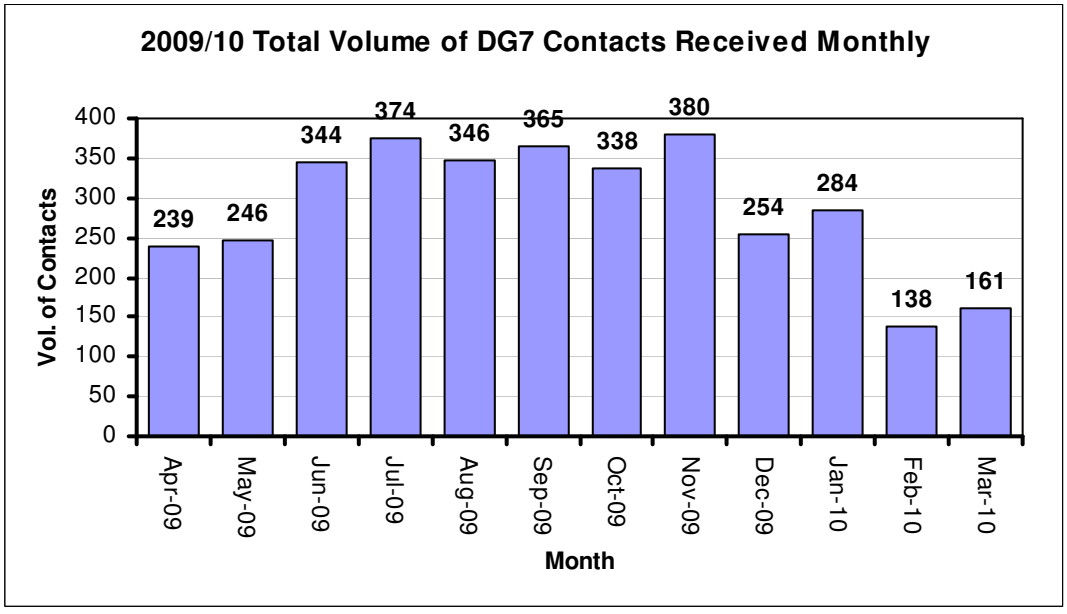
Operational Issues

During December 2009 and January 2010, Northern Ireland experienced a severe and prolonged freeze. The freezing conditions and subsequent thaw caused major operational difficulties and much of the province suffered from interruptions to water supplies. This resulted in an increased volume of written operational complaints.

Also, there were times during this period when customers experienced difficulty in contacting our call centre. This also resulted in a relatively high volume of complaints. It is of note that a high proportion of these complaints were made by e-mail.

DG7 Received Annual Profile and Explanation

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



Due to a contractual dispute with Steria, non-domestic billing was delayed until July 2009. The backlog of bills were issued during July, August and September. This led to an increased volume of billing queries (DG6) and written complaints.

Delays in providing full responses to billing queries generated written complaints about how the initial query was handled. This would account, in part, for the high volumes of complaints received during October and November.

DRD Roads Service introduced the requirements of the Street Works (NI) Order 2005 on 1st April 2009 with the consequence that only persons with a valid Street Works License are permitted to undertake excavation and reinstatement work in a public area. As the approved Utility for the installation of watermains and sewers in a public street, Northern Ireland Water, now carry out the excavation and reinstatement for new water connections. The cost for this service is included in the charge for a new water connection. Customers saw this as an increase in the cost of a new connection and this change generated a number of complaints.

The total volume of complaints received during February and March has reduced significantly. There is no obvious explanation for this decrease.

Table 6a

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	2 REPORTING YEAR 2007-08	3 REPORTING YEAR 2008-09	4 REPORTING YEAR 2009-10	CG
A	REVENUE OUTSTANDING - MEASURED HOUSEHOLDS							
1	Total revenue outstanding < 48 months (measured households)	£m	3			0.000	0.000	A1
2	Number of measured households with outstanding revenue < 48 months	nr	0				0	A1
3	Revenue outstanding < 3 months (measured households)	£m	3				0.000	A1
4	Number of measured households with outstanding revenue < 3 months	nr	0				0	A1
5	Revenue outstanding 3 - 12 months (measured households)	£m	3				0.000	A1
6	Number of measured households with outstanding revenue 3 - 12 months	nr	0				0	A1
7	Revenue outstanding 12 - 24 months (measured households)	£m	3				0.000	A1
8	Number of measured households with outstanding revenue 12 - 24 months	nr	0				0	A1
9	Revenue outstanding 24 - 36 months (measured households)	£m	3				0.000	A1
10	Number of measured households with outstanding revenue 24 - 36 months	nr	0				0	A1
11	Revenue outstanding 36 - 48 months (measured households)	£m	3				0.000	A1
12	Number of measured households with outstanding revenue 36 - 48 months	nr	0				0	A1
13	Revenue outstanding > 48 months (measured households)	£m	3				0.000	A1
14	Number of measured households with outstanding revenue > 48 months	nr	0				0	A1
B	REVENUE OUTSTANDING - UNMEASURED HOUSEHOLDS							
15	Total revenue outstanding < 48 months (unmeasured households)	£m	3			0.000	0.000	A1
16	Number of unmeasured households with outstanding revenue < 48 months	nr	0				0	A1
17	Revenue outstanding <3 months (unmeasured households)	£m	3				0.000	A1
18	Number of unmeasured households with outstanding revenue < 3 months	nr	0				0	A1
19	Revenue outstanding 3 -12 months (unmeasured households)	£m	3				0.000	A1
20	Number of unmeasured households with outstanding revenue 3 - 12 months	nr	0				0	A1
21	Revenue outstanding 12-24 months (unmeasured households)	£m	3				0.000	A1
22	Number unmeasured households with outstanding revenue 12 - 24 months	nr	0				0	A1
23	Revenue outstanding 24-36 months (unmeasured households)	£m	3				0.000	A1
24	Number of unmeasured households with outstanding revenue 24 - 36 months	nr	0				0	A1
25	Revenue outstanding 36 -48 months (unmeasured households)	£m	3				0.000	A1
26	Number of unmeasured households with outstanding revenue 36 - 48 months	nr	0				0	A1
27	Revenue outstanding >48 months (unmeasured households)	£m	3				0.000	A1
28	Number of unmeasured households with outstanding revenue > 48 months	nr	0				0	A1
C	REVENUE OUTSTANDING - MEASURED NON HOUSEHOLDS							
29	Total revenue outstanding < 48 months (measured non households)	£m	3			7.875	12.721	A2
30	Number of measured non households with outstanding revenue < 48 months	nr	0			27160	20,254	A2
31	Revenue outstanding < 3 months (measured non households)	£m	3			5.913	9.556	A2
32	Number of measured non households with outstanding revenue < 3 months	nr	0			13002	12,754	A2
33	Revenue outstanding 3 - 12 months (measured non households)	£m	3			1.962	3.165	A2
34	Number of measured non households with outstanding revenue 3 - 12 months	nr	0			14158	7,500	A2
35	Revenue outstanding 12 - 24 months (measured non households)	£m	3				0	A1
36	Number of measured non households with outstanding revenue 12 - 24 months	nr	0			0	0	A1
37	Revenue outstanding 24 - 36 months (measured non households)	£m	3				0	A1
38	Number of measured non households with outstanding revenue 24 - 36 months	nr	0				0	A1
39	Revenue outstanding 36 - 48 months (measured non households)	£m	3				0	A1
40	Number of measured non households with outstanding revenue 36 - 48 months	nr	0				0	A1
41	Revenue outstanding > 48 months (measured non households)	£m	3				0	A1
42	Number of measured non households with outstanding revenue > 48 months	nr	0				0	A1
D	REVENUE OUTSTANDING - UNMEASURED NON HOUSEHOLDS							
43	Total revenue outstanding < 48 months (unmeasured non households)	£m	3			0.584	0.302	A2
44	Number of unmeasured non households with outstanding revenue < 48 months	nr	0			5647	3,238	A2
45	Revenue outstanding <3 months (unmeasured non households)	£m	3			0.173	0.042	A2
46	Number of unmeasured non households with outstanding revenue < 3 months	nr	0			198	516	A2
47	Revenue outstanding 3 -12 months (unmeasured non households)	£m	3			0.411	0.260	A2
48	Number of unmeasured non households with outstanding revenue 3 - 12 months	nr	0			5449	2,722	A2
49	Revenue outstanding 12-24 months (unmeasured non households)	£m	3				0.000	A1
50	Number unmeasured non households with outstanding revenue 12 - 24 months	nr	0				0	A1
51	Revenue outstanding 24-36 months (unmeasured non households)	£m	3				0.000	A1
52	Number of unmeasured non households with outstanding revenue 24 - 36 months	nr	0				0	A1
53	Revenue outstanding 36 -48 months (unmeasured non households)	£m	3				0.000	A1
54	Number of unmeasured non households with outstanding revenue 36 - 48 months	nr	0				0	A1
55	Revenue outstanding >48 months (unmeasured non households)	£m	3				0.000	A1
56	Number of unmeasured non households with outstanding revenue > 48 months	nr	0				0	A1
E	REVENUE WRITTEN OFF							
57	Amount of revenue written off from measured households	£m	3	N/C	N/C		0.000	A1
57a	Amount of revenue written off from measured non-households	£m	3	N/C	0.815	0.170	0.340	A2
58	Amount of revenue written off from unmeasured households	£m	3	N/C	N/C		0.000	A1
58a	Amount of revenue written off from unmeasured non-households	£m	3	N/C	0.005	0.000	0.013	A2
F	CUSTOMER SERVICES OPERATING EXPENDITURE							
59	General customer services operating expenditure Total	£m	3	N/C	17.579	16.873	18.558	A2
i							3.621	A2
ii							13.474	A2
iii							1.376	A2
iv							0.087	A2
60	Outstanding revenue collection operating expenditure (households)	£m	3	N/C	N/C	N/C	N/C	
60a	Outstanding revenue collection operating expenditure (non households)	£m	3					
61	Donations to charitable trusts assisting customers in debt (households)	£m	3	N/C	N/C	N/C	N/C	
62	Operating expenditure due to vulnerable household customers	£m	3	N/C	N/C	N/C	N/C	
63	Total customer services operating expenditure	£m	3	N/C	17.579	16.873	18.558	A2

Table 6a – Bad Debt

Overview

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

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

The figures contained within the table are clarified below:

Box A – Revenue Outstanding – Measured Households

For the year ended 31 March 2010 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 £0.262m due to DRD from NIW for subsidy at 31 March 2010.

Box B – Revenue Outstanding – Unmeasured Households

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

Box C – Revenue Outstanding – Measured Non-Households

Revenue outstanding from non-households is the amount of revenue relating to measured water, measured sewerage and trade effluent charges that had been billed in the year but not collected at 31 March 2010.

At 31 March 2010 the closing trade debtor balance was £12.721m. Trade Debtors increased this year due to:

- An increased tariff from 2008/09.
- Delay in issuing measured billing in 09/10, measured billing commenced in July 09.
- Aging of debt has improved in 2009/10 due to the continued monitoring of cash collected through the bad debt project.

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 £5.2m and is made up of the following:

- £2.7 m for debt over 1 year
- £1.7m for debt 180 – 365 days
- £0.2m for debt 151 – 180 days

- £0.2m for debt 121 – 150 days
- £0.4m for remainder of debt

There is one GL code for measured water and sewerage debtors. At year end the GL debtor balance (gross of credit balances) was approx. £0.87m more than the detailed debtors listing provided by Echo. This was due to the following:

- Test meters to be billed £0.75m
- Referred bills (£0.09m)
- Non void vacant properties £0.09m
- [redacted] £0.12m

Summary of all relevant rows for Section C

Row 29 – Total Revenue Outstanding < 48 months - Measured Non Households: The total amount of revenue at the end of 2009/10 outstanding from measured non households for less than 48 months. Balance as at 31 March 2010 was £12.721m.

Row 30 – Number of Measured Non-Households with Outstanding Revenue < 48 months: The number of measured non households at the end of 2009/10, with revenue outstanding for less than 48 months. Total at 31 March 2010 was 20,254. (Last years figure of number of measured non-households with revenue outstanding less than one year was incorrectly stated at 27,160 the correct number of measured non-households with revenue outstanding less than 48 months was 17,989. The figure reported included measured and unmeasured and was distorted as a result of non-households with revenue outstanding spanning over more than one age band. If non households with outstanding revenue fall into more than one age band then the non household should only appear in the oldest age band.

Row 31 – Revenue Outstanding < 3 months (Measured Non Households): The total amount of revenue at the end of 2009/10 that has been outstanding from measured non households for less than 3 months. Balance as at 31 March 2010 was £9.556m

Row 32 – Number of Measured Non-Households with Outstanding Revenue < 3 months: The number of measured non households at end of 2009/10, with revenue outstanding for less than 3 months. As at 31 March 2010 this totalled 12,754. (Last years figure of number of measured non-households with revenue outstanding less than 3 months was incorrectly stated at 13,002, the correct number of measured non-households with revenue outstanding less than 3 months was 9,039). The figure reported included measured and unmeasured and was distorted as a result of non-households with revenue outstanding spanning over more than one age band. If non households with outstanding revenue fall into more than one age band then the non household should only appear in the oldest age band.

Row 33 – Revenue Outstanding 3-12 months (Measured Non Households): The total amount of revenue at the end of 2009/10 that has been outstanding from measured non households for at least 3 months but less than 12 months. Balance as at 31 March 2010 was £3.165m.

Row 34 – Number of Measured Non-Households with Outstanding Revenue 3-12 months: The number of measured non households at end of 2009/10 with revenue that has been outstanding for at least 3 months but less than 12 months. At 31 March 2010 this totalled 7,500. (Last years figure was incorrectly stated at 14,158 the correct number of measured non-households with outstanding revenue between 3-12 months was 8,950). The figure reported included measured and unmeasured and was distorted as a result of non-households with revenue outstanding spanning over more than one age band. If non households with outstanding revenue fall into more than one age band then the non household should only appear in the oldest age band.

Row 35 – Total Revenue Outstanding 12-24 months (Measured Non Households): The total amount of revenue at the end of 2009/10 outstanding from measured non households for at least 12 months but less than 24 months.

Once the bad debt provision is applied there are no debtors greater than 12 months. Therefore at 31 March 2010 this row and all remaining rows in box C are zero.

Box D – Revenue Outstanding – Unmeasured Non-Households
Revenue outstanding from non-households is the amount of revenue relating to unmeasured water and sewerage charges that had been billed in the year but not collected at 31 March 2010.

- This income stream was introduced in 2008/09.
- At 31 March 2010 the closing trade debtor balance was £0.302m. (31 March 2009, £0.584m). Reason for the decrease is due to the continued monitoring of cash collected through the bad debt project.

The debtor balance reported figure is made up of unmeasured water and sewerage debtors less bad debt provision. The bad debt provision is £0.382m and is made up of the following:

- £0.19m for debt over 1 year
- £0.15m for debt 180 – 365 days
- £0.02m for debt 151 – 180 days
- £0.02m for remainder of debt

The remainder of the balance is spread over the remaining categories.

Summary of all relevant rows for Section D

Row 43 – Total Revenue Outstanding < 48 months - Unmeasured Non Households: The total amount of revenue at the end of 2009/10 outstanding from unmeasured non households for less than 48 months. Balance at 31 March 2010 was £0.302m

Row 44 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 48 months: The number of unmeasured non households at the end of 2009/10 with revenue that has been outstanding for less than 48 months. Total at 31 March 2010 was 3,238.

Row 45 – Revenue Outstanding < 3 months - Unmeasured Non Households: The total amount of revenue at the end of 2009/10 outstanding from unmeasured non households for less than 3 months. Balance at 31 March 2010 was £0.042m.

Row 46 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 3 months: The number of unmeasured non households at the end of 2009/10 with revenue outstanding for less than 3 months. Total at 31 March 2010 was 516.

Row 47 – Revenue Outstanding 3-12 months - Unmeasured Non Households: The total amount of revenue at the end of 2009/10 outstanding from unmeasured non households for at least 3 months but less than 12 months. Balance at 31 March 2010 was £0.260m.

Row 48 – Numbers of Unmeasured Non-Households with Outstanding Revenue 3-12 months: The number of unmeasured non households at end of 2009/10 with revenue outstanding for at least 3 months but less than 12 months. Total at 31 March 2010 was 2,722.

Row 49 – Revenue Outstanding 12-24 months - Unmeasured Non Households: The total amount of revenue at the end of 2009/10 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 2010 this row and all remaining rows in box D are zero.

Box E – Revenue Written Off

Bad debt write-offs
The bad debt write off policy is detailed below. As with all other customer data the company receives monthly figures for bad debt write-offs. The figure for the year is £0.353m (2008/09, £0.17m). The movement in the year is predominately due to the work involved in the aged debt project, which has resulted in further investigation and NIWL approving write offs of £0.209m in February 2010.

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:

Value £	Authorised Person
Up to £5,000	Collection & Operational Manager (Echo) and NI Water Revenue Manager
£5,000 - £49,999	Head Of Operations (Echo) and NI Water Head of Billing and Revenue
> £50,000	Operations Director (Echo) and Director of Operations and Customer Services in conjunction with the Director of Finance and Regulation. NI Water Director Customer Services

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

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

NI Water uses a third party contractor to manage their debtors and a Debt Management Strategy was drawn up for Echo use to guide their actions and decisions. The strategy states that write offs will only be made on terminated accounts where the debt has been finalised.

Summary of all relevant rows for Section E

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

Row 57a – Measured Non-Households: Bad debts written off are calculated on a monthly basis and include trade effluent. The total for 2009/10 was £0.340 (2008/09, £0.170m). This income stream was only introduced in 2008/09, the increase in the year is due to an additional year of debtors aging and the bad debt project.

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

Row 58a – Unmeasured Non-Households: Bad debts written off are calculated on a monthly basis. The total for 2009/10 was £0.013m and 2008/09 costs were nil as this income stream was only introduced in 2008/09.

Bad Debt provisioning
The methodology for calculating the bad debt provision is consistent with 2008/09. The company view this methodology as providing the best estimate

of the provisioning required. NI Water's bad debt provision is calculated as follows:

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

The following is a summary of the bad debt provision at 31 March 2010 and 31 March 2009:

	2010	**2009**
	£m	**£m**
Measured water & sewerage	5.084	4.667
Unmeasured water & sewerage	0.382	0.323
Trade effluent	0.104	0.165
Total	**5.570**	**5.155**

Subsidy

NI Water received £238.900m subsidy in relation to household customers and at 31 March 2010 an amount for £1.454m was outstanding from DRD. The total subsidy for household 31 March 2010 was £240.354m.

NI Water received £17.000m subsidy in relation to non-household customers and at 31 March 2010 an amount for £1.716m was due to DRD. The total subsidy for non-household 31 March 2010 was £15.284m.

At 31 March £0.262m was due to DRD from NIW, these figure were made up of £1.454m household subsidy and £1.716m for non-household subsidy.

Summary of all relevant rows for Section F

Row 59 – General customer services operating expenditure: the figures agree to the sum of line 13 in table 21 and line 12 in table 22. The total can be broken down as below:

			2009/2010
			£m
Private Septic Tank Desludging			1.211
Customer Services (Meter Read & Customer Queries)			0.565
Consumer Meters Repair And Maintenance			(0.043)
Customer Services Function Activity -	Employment costs	3.621	
	Hired and contracted costs	13.474	
	Other costs	1.376	
			18.471
Total CS Opex			20.204
Less Unappointed Costs:			(1.211)
Less Unappointed Costs:			(0.435)
TOTAL CS OPEX PER AIR Table 6a Row 59			18.558

The total of £18.558m is a £1.7m increase over the costs in 2008/09. This arises from the extra costs arising from contractual arrangements with suppliers.

Row 60 – Outstanding revenue collection operating expenditure: As NI Water has no actual revenue from households, there is no revenue outstanding from households and therefore no operating expenditure for outstanding revenue collection.

Row 61 – Donations to charitable trusts assisting customers in debt: There were no donations to charitable trusts assisting customers in debt in the year.

Row 62 – Operating expenditure due to vulnerable household customers: Household customers in Northern Ireland currently do not pay for water and sewerage services; therefore, NI Water has no 'vulnerable customers'.

Row 63 – Total customer services operating expenditure: This agrees to the total of table 21, line 13 and table 22, line 12.

Table 7

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG	5 CURRENT YEAR 2010-11	CG
A	**PROPERTIES**												
1	Household properties connected during the year	000	3	6.118		7.595		8.358	B3	4.457	B2		
2	Non-household properties connected during the year	000	3	5.859		1.482		0.723	B3	0.272	B2		
B	**BILLING**												
3	Households billed unmeasured water	000	3	650.150		634.990		646.099	C3	654.625	B2	659.625	B2
4	Households billed measured water (external meter)	000	3	30.890		30.398		0.000	C3	0.000	B2	0.000	B2
5	Households billed measured water (not external meter)	000	3	0.000		0.000		0.000	C3	0.000	B2	0.000	B2
6	Households billed water	000	3	681.040		665.388		646.099	C3	654.625	B2	659.625	B2
7	Household properties (water supply area)	000	3	718.390		712.932		686.036	C3	693.005	B2	701.922	B2
8	Non-households billed unmeasured water	000	3	48.690		31.341		30.519	C3	16.050	B2	12.945	B2
9	Non-households billed measured water	000	3	50.420		42.823		78.416	C3	68.666	B2	70.184	B2
10	Non-households billed water	000	3	99.110		74.164		108.935	C3	84.716	B2	83.129	B2
11	Non-household properties (water supply area)	000	3	107.210		83.516		116.249	C3	102.636	B2	118.555	B2
12	Void properties	000	3	45.455		56.896		49.698	C3	49.572	B2	49.121	B2
C	**POPULATION**												
13	Population - households billed unmeasured water	000	2	1644.36		1637.01		1672.51	B3	1685.97	B3		
14	Population - households billed measured water	000	2	88.49		85.06		0.00	A1	0.00	A1		
15	Population - non-households billed unmeasured water	000	2	0.00		8.10		6.67	B3	8.86	B3		
16	Population - non-households billed measured water	000	2	0.00		18.36		95.93	B3	95.33	B3		
17	Population - total	000	2	1732.85		1748.53		1775.11	B2	1790.16	B2		

Table 7 – Non Financial Measures - Water Properties & Population

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

- **Properties (Lines 1 & 2)**
  Reports properties connected during the year.

- **Billing (Lines 3-12)**
  Includes a breakdown of all measured and unmeasured household and non-household properties billed by the company. The property numbers should be the average for the report year.

- **Population (Lines 13-16)**
  This records the population within each of the measured and unmeasured household and non-household categories. The population numbers should be the average for the report year.

In keeping with the Utility Regulator guidance, lines 6, 10 and 17 are calculated lines, being the sum of their equivalent lines within the table.

The information in this table is used for the water balance calculation and also in tariff and charging analysis and determination (water delivered unit cost).

Definition of 'Billed' Properties
Domestic customers were originally due to be charged for water and sewerage charges from April 2007. However this has been deferred and is not planned to be implemented during 2010/11.

In April 2008, NI Water extended the water charging 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.

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 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 and Data Validation
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 (to confirm and cleanse data on voids, site meters and duplicates) or universal non-domestic metering programme.

There has been significant focus on customer numbers during 2009/10, primarily due to the PC10 draft and final determination process and NIW Undertakings. As a result, there will be data shifts from AIR09 especially in unmeasured non-domestic numbers as test meters have been omitted in AIR10.

In addition, the roll-out of the metering programme has continued. Overall the number of non-domestic unmeasured properties has decreased from circa 17400 to 14600. This shows a reduction of 2800 in year and circa 12500 since March 2008.

Even though NIW has been installing meters on all new household connections since April 2008, as explained above, customers are not being charged on a measured basis, so the property is still being reported as unmeasured. Depending on the basis for charging when domestic billing is introduced in April 2010, these customers can be activated as measured household if required.

Data on property counts and classifications continue to be reported monthly and reconciled (where possible) with other data collection activities, such as the metering programme.

Data on population is obtained from Northern Ireland Statistics and Research Agency (NISRA), adjusted for the summer months based on information received from Northern Ireland.

For the purposes of the Annual Information Reporting, these have been subtracted manually and added to the non-households billed measured water category.

There are deemed to be 625 (gross) unmeasured – not charged properties which (based on sample taken) are mostly NI Water premises as per table below.

Description	Count
Sewage Disposal Works	607
Fire Authority For N I	11
Sewage Disposal Work	2
(empty)	1
Doe (Roads)	1
Fire Authority For N I 18-22	1
Generator House	1
Stores Yard	1
Totals	**625**

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

The survey and reclassification of test meters, initially identified through the Data Integrity Project, is still going. Of the 11,500 in total, circa 1900 still need to be surveyed and 2500 require further analysis.

Those that are found to be non-domestic billable should be attributed to the non-domestic measured category and billed retrospectively to April 2007. The Rapid Property Summary for 31st March 2010 indicates a reduction of 545 non-domestic test meters and 550 domestic test meters during 2009/10.

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.

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

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

However, the Reporter believes that NI Water has adopted a prudent approach, and as we work to fully verify each test meter it is possible that the number of test meters assigned to the measured non-household customers

could reasonably be expected to increase over time as the status of more accounts of this nature are assessed and verified.

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

To ensure that these meters are not double counted, they are no longer included in Table 7 non-domestic property counts (although NIW still retain this information for customer record and charging purposes). However, there are 386 domestic properties classified as site meters and there will be further investigations and analysis to be completed during 2010/11 to ensure these are classified correctly.

Overall, the number of non-domestic site meters has increased by 681 during 2009/10 and 3118 since March 2008, driven primarily as a result of charging.

Confidence Grades
We would expect the confidence grade for this table (B2) to improve throughout the year as the benefits of the data quality programme are realised.

The Reporter's recommendations are being addressed as part of the overall data quality project.

Lines 13 - 17 - Population
The population data used by NIW has been derived from 2008 based Population Projections obtained from NISRA (Northern Ireland Statistics & Research Agency) website[4].

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 NIHE Housing Condition Survey 2006[5]. The survey of 6,270 unconnected properties allowed an occupancy rate of 0.291 to be determined with a total population for unconnected properties of 6,270. This is the same methodology as per AIR09. The total supplied population for all connected properties is calculated as 1,790,158.

Non-household population has been calculated by adding the population in communal residence[6] to the population of farms. The number of farms is provided by the Customer Services Directorate and the occupancy rate is

[4] http://www.nisra.gov.uk/archive/demography/population/projections/ni/wni08cc.xls.
[5] http://www.nihe.gov.uk/housing_conditions_survey_2006.pdf
[6] http://www.nisra.gov.uk/archive/demography/population/household/NI06_House_Projs.pdf #6

obtained from NISRA[7]. NISRA have updated their communal population assessment. The communal population for 2009/10 was 30,390 compared to 26,455 as used in AIR09. The farm population is 29,637 x 2.49 = 73,796. Therefore non-household population is 104,186.

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 1,685,972 (Line 13)

The population for non-household measured/unmeasured was derived from the % split between measured (not including farms) and unmeasured non-household properties and applied against the NHH communal population. The total farm population (73,796) has been classed as measured. The communal population (30,390) is split based on 16,050 unmeasured customers (29.1%) and 39,029 measured customers which excludes farms (70.9%). This therefore provides a population for measured NHH of 95,330 (Line 16) and an unmeasured NHH population of 8,856 (Line 15).

Line 17 is calculated by summing Line 13 + Line 14 + Line 15 + Line 16. This gives a figure if 1,790,158 which is the total connected population.

For AIR10 Guest Houses and B&Bs are included under either measured or unmeasured non-household consumption and this is consistent with previous years. This follows the recommendation by the Reporter that NI Water investigate.

[7] http://www.nisra.gov.uk/archive/demography/population/household/NI06_House_Projs.pdf.

Table 8

NORTHERN IRELAND WATER LIMITED -ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE SBP YEAR 2006-07	2 REPORTING YEAR 2007-08	3 REPORTING YEAR 2008-09	4 REPORTING YEAR 2009-10	CG
A	HOUSEHOLD METER INSTALLATION							
1	Selective meters - installed	nr	0	0	0	0	3945	B3
2	Meter optants installed	nr	0	0	0	0	0	A1
3	Meters installed - external meter with existing boundary box	nr	0	0	0	11401	3945	B3
4	Meters installed - external meter without boundary box	nr	0	0	3723	0	0	A1
5	Meters installed - internal meter	nr	0	0	0	0	0	A1
6	No. of meter installation requests outstanding for greater than three months	nr	0		0	0	0	A1
B	NON HOUSEHOLD METER INSTALLATION							
7	Selective meters - installed	nr	0				907	B2
7a	Number of non household meters renewed	nr	0				779	B2
8	Meter optants installed	nr	0				26	B2
9	Meters installed - external meter with existing boundary box	nr	0				375	B2
10	Meters installed - external meter without boundary box	nr	0				71	B3
11	Meters installed - internal meter	nr	0				228	B2
12	No. of meter installation requests outstanding for greater than three months	nr	0				20	C3
C	WATER DEMAND AT RECENTLY METERED NON-HOUSEDHOLD PROPERTIES							
13	Average water billed - selective metered properties	l/prop/d	2	N/C	N/C	N/C	442.28	B3
14	Average water billed - optionally metered properties	l/prop/d	2					

Table 8 – Non Financial Measures - Water Metering

Water Metering Activities

Lines 1- 8 - Household Meter Installation
Domestic Customers
NIW installs meters on new domestic connections as per the obligation associated with Article 81 of The Water and Sewerage Services (Northern Ireland) Order 2006; we do not however install meters in existing domestic premises given the deferral of charging by the Northern Ireland Assembly.

NIW is not metering Domestic Optants (including those over 60) given the deferral of charging by the Assembly in March in 2007. Also to note given the deferral NIW is not using its power to meter domestic properties as and when customers move house.

Lines 7 - 12: Non Household Meter Installation
Non Domestic Customers - New Connections
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.

We have installed and continue to install meters at non domestic premises providing it is technically possible to do so.

Optants
NIW will install meters at existing non domestic premises when the customer requests a meter, providing it is technically possible to do so. An optants process was developed in the reporting year and has been communicated across the company to include the customer relations centre. In essence if an unmeasured customer requests the option to have their premises billed as a measured (metered) property and it appears financially beneficial to them, then we will endeavour to install a water meter.

Unmeasured Non Households (UNHH) – Selective Metering
NIW gave a commitment to the Regulator in the later part of 2009 to increase the number of measured (metered) non domestic customers resulting in a reduction of unmeasured non domestic customer base. This commitment was for 100 properties and NIW were able to achieve 99 properties as forwarded to our billing centre for conversion to metered billing status. Premises metered under this programme of work are viewed as selective metered properties by NIW. Other selective meter installations include ‘new finds’ or premises previously unknown to the company and metered either by NIW or our metering contractor. As mall number of selective meter installation requests was received during the reporting year from other parts of the organisation such as billing and leakage sections.

Meter Maintenance
NIW has a meter maintenance section within the metering team and reactively replaces and occasionally repairs meters. The maintenance

activities are driven by reports from field service and meter reading staff with all work requests being logged on a local database. Work requests are tracked from receipt through issue to maintenance contractor and completion and finally updating of our billing centre and asset records sections.

Line 13 - Average Water Billed - Selective Metered Properties

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

The figure reported for line 13 is 442.28 l/prop/d. This is higher than the overall average consumption due to a number of high 1st reads.

Table 9

NORTHERN IRELAND WATER LIMITED COMPANY - ANNUAL INFORMATION RETURN 2010

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

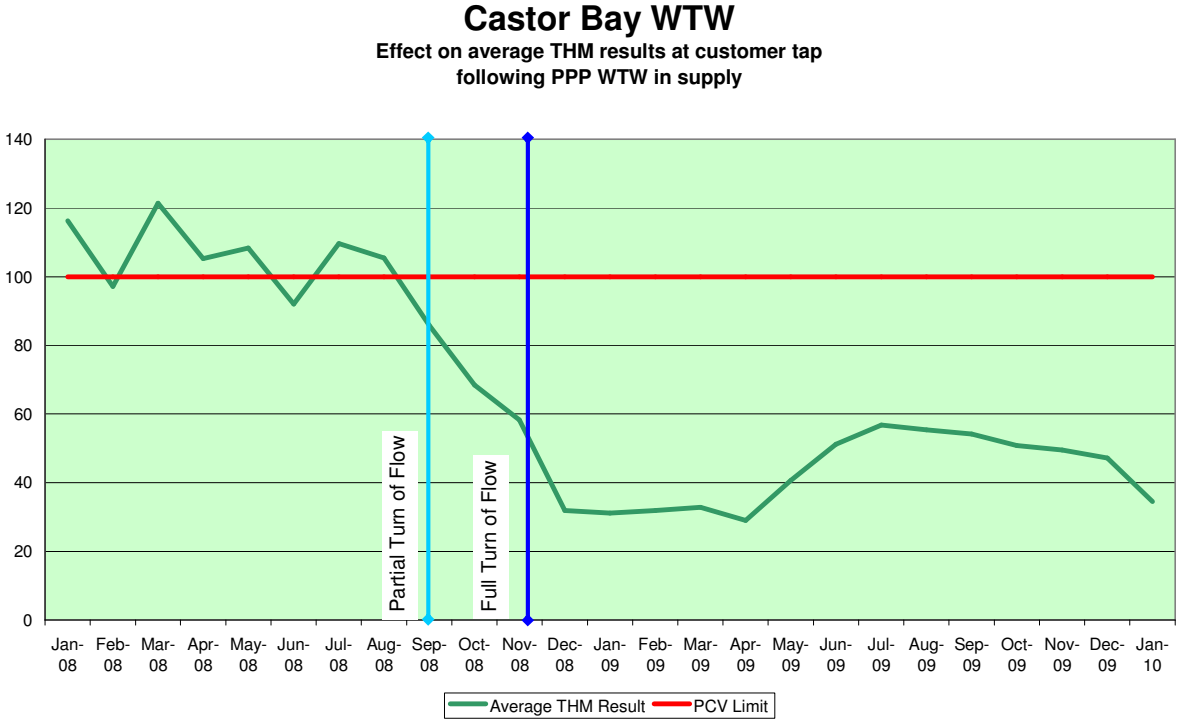
	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	WATER TREATMENT AND DISTRIBUTION										
1	Distribution input affected by Article 31 undertakings (or ADs)	Ml/d	3	330.000	A2	236.311	A2	247.256	A2	8.319	A2
2	Distribution input affected by new Article 31 (or ADs) since start of report year.	Ml/d	3	5.000	A2	9.862	A2	0.000	A1	0.000	A1
3	Percentage distribution input not affected by Article 31s (or ADs)	%	3	58.129	A2	61.924	A2	60.633	A2	98.665	A2
4	Percentage properties in WSZs affected by Article 31s in distribution	%	3	43.662	A2	38.020	A2	37.445	A2	2.068	A2
5	Percentage properties in WSZs affected by new Article 31s in distribution	%	3	0.450	A2	1.402	A2	0.000	A1	0.000	A1
B	DISTRIBUTION INPUT COVERED BY WORK PROGRAMMES AGREED WITH DWI										
6	Raw water deterioration	Ml/d	3	50.000	A2	42.457	A2	11.831	A2	0.000	A1
7	Conditioning water supplies to reduce plumbosolvency	Ml/d	3	703.000	A2	606.817	A2	614.605	A2	617.029	A2
8	Reducing the risk from Cryptosporidium	Ml/d	3	805.000	A2	617.772	A2	0.000	A1	0.000	A1
9	Other	Ml/d	3	0.000	A2	0.000	A2	0.000	A1	0.000	A1

Table 9 – Water Quality

Background – Year on Year

The quality of water supplied by NI Water to customers has improved between 2008 and 2009:

- Mean Zonal Compliance has increased from 99.49% in 2008 to 99.74% in 2009 (NI Water assessed waiting for confirmation from DWI)
    - The increase in water quality is to a large extent due to a decrease in exceedances of the Total Trihalomethane parameter as the new Public Private Partnership (PPP) sites came into service. See example graph for Castor Bay WTW below:



- The Operational Performance Index (for NI Water based on turbidity, iron and manganese as agreed with the Drinking Water Inspectorate (DWI)) decreased from 99.22% in 2008 to 98.90% in 2009 (NIW assessment on Turbidity, Iron and Manganese). This is largely due to a number of samples which engendered simultaneous exceedances in all 3 parameters.

- The percentage compliance measured at Water Treatment Works (WTWs) decreased from 99.95% in 2008 to 99.92% in 2009.

- The percentage compliance measured at Service Reservoir (SR) decreased slightly from 99.93% in 2008 to 99.92% in 2009.

- Overall out of 235,468 measurements (directive standards, national standards, indicator parameters and additional monitoring requirements)

made at customer tap, WTWs, SRs and Authorised Supply Points, 99.90% met the standards.

Please note a total re-zoning exercise was carried out for 2009 based on more accurate DMA data. The new 2009 Water Supply Zones are not contiguous with the previous zones, and as such have been given new codes and names, with the codes reflecting the leakage supply areas, and the names reflecting the supplying WTW / SR and the major conurbation in the zonal area.

Line 1 – Distribution input affected by Article 31 undertakings (or ADS)
The data used for the estimation of average flow at WTWs in Table 9 lines 1-3 was supplied from operations leakage metering. This data was estimated prior to 2005 to allow the scheduling of audit samples to meet regulatory requirements during the year. This scheduling was audited by DWI. For the purposes of scheduling from 2007, an estimate of expected daily throughput by works was received from operational scientists in order to populate the LIMS system for frequency of sampling. For this return the Distribution Input was calculated as the average daily flow from the various individual sites or amalgamation of associated readings obtained from leakage metering.

Article 31 Undertakings or Authorised Departures

- Article 31 Undertakings – NI Water did not use Article 31 Undertakings during 2009.
- Authorised Departures – NI Water had a number of authorised departures in place during 2009 (details below). The AD end date is the date authorised by DWI, being one year after the completion of the programme of work to allow commissioning. The ADs listed are at zonal level, and are derived from the original supplying WTW authorisations (available if required) apart from 1 pesticide AD which was applied at the authorised supply point as this was the point of measurement. Further ADs may be applied for in the future if required by DWI. In the table below, those zones where the AD had expired by the 31st December 2009 are highlighted in yellow, with the remaining zones with active ADs highlighted in green.

2009 ADs by Water Supply Zone/Authorised Supply Point with AD End

Site Code	Site Name	Parameter	Units	AD Value	AD Start	AD End	Active at year end
ZN0501	Moyola Magherafelt	Total Trihalomethanes	ug/l	150	01/01/2007	16/07/2009	No
ZN0503	Unagh Cookstown	Total Trihalomethanes	ug/l	150	01/01/2007	16/07/2009	No
ZS0502	Forked Bridge Dunmurry	Total Trihalomethanes	ug/l	150	01/01/2007	24/09/2009	No
ZS0503	Forked Bridge Stoneyford	Total Trihalomethanes	ug/l	150	01/01/2007	24/09/2009	No
ZS0801	Castor Bay Ardress	Total Trihalomethanes	ug/l	150	01/01/2007	24/09/2009	No
ZS0802	Castor Bay Lurgan	Total Trihalomethanes	ug/l	150	01/01/2007	24/09/2009	No
ZS0803	Castor Bay Portadown	Total Trihalomethanes	ug/l	150	01/01/2007	24/09/2009	No
ZN0303	Dunore Point Ballymena	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZN0401	Dunore Point Antrim	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0101	Belfast Ballygomartin North	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0102	Belfast Ballygomartin South	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0103	Belfast Ballyhanwood	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0104	Belfast Breda North	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0105	Belfast Breda South	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0106	Belfast North	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0107	Belfast Oldpark	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0108	Belfast Purdysburn	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0110	Dunore Point Glengormley	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
W2501	Altmore	MCPA	ug/l	0.5	22/11/2007	24/12/2009	No
ZN0901	Altmore Cabragh	Total Trihalomethanes	ug/l	150	01/01/2007	24/12/2009	No
ZN0902	Altmore Donaghmore	Total Trihalomethanes	ug/l	150	01/01/2007	24/12/2009	No
ZN1102	Seagahan Armagh	Total Trihalomethanes	ug/l	150	01/01/2007	24/12/2009	No
ZN0704	Lough Bradan Drumquin	Total Trihalomethanes	ug/l	150	07/08/2007	06/08/2010	Yes
ZN0706	Lough Macrory Killyclogher	Total Trihalomethanes	ug/l	150	07/08/2007	06/08/2010	Yes

- In line with the AIR09 Reporter's recommendation, the individual associated WTWs were assessed against both being in service at the end of the year and also the expiry of their Authorised Departure. This led to 7 WTWs being assessed with 6 sites being excluded from the calculation as highlighted here – sites in yellow are excluded, and the site in green included.

2009 WTWs affected by Authorised Departures

Site Code	Water Treatment Works	Ml/d	Out of service	AD Expiry	Included	Volume Ml/d
W1301P	Moyola	14.51		16/07/2009	No	
W2308P	Castor Bay	80.74		24/09/2009	No	
W2501	Altmore	3.74		24/12/2009	No	
W2514	Seagahan	10.92		24/12/2009	No	
W3301P	Dunore Point	119.40		15/10/2009	No	
W3315P	Forked Bridge	21.18		15/10/2009	No	
W4513	Lough Braden	8.32		06/08/2010	Yes	8.32
					Total affected DI	**8.32**

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

During 2009 there were no new Article 31 undertakings or Authorised Departures in place for NI Water. The entry in Line 2 is therefore 0.

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

The calculation for this line was taken from the DI affected by ADs from the "2009 WTWs affected by ADs" table above measured against the overall average DI as assessed by leakage in the Supply DI Summary sheet referred at line 1.

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

As discussed previously, for 2009 the water supply zones for regulatory customer tap sampling were completely redrawn and recalculated. The new zones were derived from NI Water's DMA information and the new polygons created by joining the DMA boundaries. Property counts for 2009 were directly obtained from a GIS property count on the Pointer data set (licensed from OSNI) using the new boundaries. For the purpose of scheduling, the population for each of the zones was derived by multiplying the number of properties in the zone with a fixed factor of 2.77. The %age of properties affected is therefore identical to the %age of population.

Although the line states that it refers solely to Article 31 undertakings, this has been calculated as including WSZs affected by Authorised Departures in accordance with the guidance. The zones were assessed by the expiry date of the relevant Authorised Departure as below. Again zones whose ADs had expired prior to the 31st December 2009 are highlighted in yellow, whilst those with population affected are highlighted in green.

2009 ADS by Water Supply Zone showing population affected

Zone Code	Zone Name	Population	AD End	Affected by AD	Population Affected
ZN0303	Dunore Point Ballymena	28805	15/10/2009	No	0
ZN0401	Dunore Point Antrim	78060	15/10/2009	No	0
ZN0501	Moyola Magherafelt	55768	16/07/2009	No	0
ZN0503	Unagh Cookstown	15582	16/07/2009	No	0
ZN0704	Lough Bradan Drumquin	25398	06/08/2010	Yes	25398
ZN0706	Lough Macrory Killyclogher	21143	06/08/2010	Yes	21143
ZN0901	Altmore Cabragh	4636	24/12/2009	No	0
ZN0902	Altmore Donaghmore	8816	24/12/2009	No	0
ZN1102	Seagahan Armagh	39875	24/12/2009	No	0
ZS0101	Belfast Ballygomartin North	43929	15/10/2009	No	0
ZS0102	Belfast Ballygomartin South	41279	15/10/2009	No	0
ZS0103	Belfast Ballyhanwood	62934	15/10/2009	No	0
ZS0104	Belfast Breda North	48620	15/10/2009	No	0
ZS0105	Belfast Breda South	64924	15/10/2009	No	0
ZS0106	Belfast North	39223	15/10/2009	No	0
ZS0107	Belfast Oldpark	75546	15/10/2009	No	0
ZS0108	Belfast Purdysburn	44937	15/10/2009	No	0
ZS0110	Dunore Point Glengormley	36184	15/10/2009	No	0
ZS0502	Forked Bridge Dunmurry	63234	24/09/2009	No	0
ZS0503	Forked Bridge Stoneyford	26494	24/09/2009	No	0
ZS0801	Castor Bay Ardress	32363	24/09/2009	No	0
ZS0802	Castor Bay Lurgan	70380	24/09/2009	No	0
ZS0803	Castor Bay Portadown	74273	24/09/2009	No	0
				Total	**46541**
			All population	**2250260**	
			Percentage affected	**2.068%**	
			Percentage not affected	**97.932%**	

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

As referred in line 2 above, during 2009 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 or during 2009 and are not included in the calculations.

Site Code	Site Name	Ml/d Raw Water Deterioration	Comment
W2501	Altmore	3.74	PAC for Pesticide removal
W4513	Lough Bradan	8.32	Upgrade for pesticide removal
	Total	**12.06**	

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

Site Code	Site Name	Ml/d Raw Water Deterioration	Comment
W2706	Camlough	4.30	PAC for Pesticide removal
W3317	Dorisland	26.47	PAC for Pesticide removal
	Total	**30.77**	

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

Line 7 – Conditioning water supplies to reduce Plumbosolvency

NI Water, as required by DWI following discussion with the Health Authorities, has put in place orthophosphoric acid dosing to control plumbosolvency in the distribution system. The average initial dose rate was approximately 1 mg/l following propensity testing. The level of dosing is reviewed annually against compliance with existing and future lead standards, with DWI being informed as to the proposed dosing rates. DWI have the opportunity to query the proposed dose rates. Following the annual review, many of the dose rates for 2009 were reduced.

Site Code	Site Name	Ml/d Dosed Water
W1301P	Moyola PPP	14.507
W1302	Lough Fea	11.839
W1303	Dungonnell	9.273
W1310	Glarryford Borehole	4.320
W1501	Killylane	10.815
W1701P	Ballinrees PPP	25.689
W1702	Altnahinch	8.333

Site Code	Site Name	Ml/d Dosed Water
W2308P	Castor Bay PPP	80.743
W2501	Altmore	3.740
W2509	Clay Lake	4.132
W2514	Seagahan	10.923
W2706	Camlough	4.300
W2801	Fofanny (New Works)	38.723
W2802	Carron Hill (New works)	6.780
W3301P	Dunore Point PPP	119.397
W3315P	Forked Bridge PPP	21.180
W3317	Dorisland	26.472
W3801	Drumaroad	112.674
W4301	Carmoney	18.562
W4306	Caugh Hill	20.309
W4501	Derg	13.176
W4513	Lough Bradan	8.319
W4523	Lough Macrory	11.729
W4541	Glenhordial	4.427
W4701	Killyhevlin	25.014
W4722	Belleek	1.653
	Total	**617.029**

Line 8 – Reducing the risk from *Cryptosporidium*

DWI approved *Cryptosporidium* risk assessments were carried out on all sources and showed effective barriers existed at all treatment works. For previous Annual Information Returns, this was the basis of calculating the Distribution Input for this line. Under the current guidance, which requires that this should be assessed against sites with "legally binding instruments", NI Water has no sites which fall into this category. The return for this line is therefore 0.

Line 9 – Other

There were no other Distribution Inputs affected by other legal requirements not mentioned in lines 6 – 8. The return for this line is therefore 0.

Confidence Grades

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

Table 10

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG	5 CURRENT YEAR 2010-2011
A	**WATER DELIVERED - VOLUMES**											
1	Billed measured household	Ml/d	2	14.52		14.76		0.00		0.00		0.00
2	Billed measured non-household	Ml/d	2	129.32		124.68		134.05		127.02		
3	Billed measured	Ml/d	2	143.84		139.44		134.05		127.02		
4	Billed unmeasured household	Ml/d	2	296.15		306.61		311.07		310.06		312.49
5	Billed unmeasured non-household	Ml/d	2	41.73		24.48		20.80		11.38		
6	Billed unmeasured	Ml/d	2	337.88		331.09		331.87		321.44		
B	**WATER DELIVERED - COMPONENTS**											
7	Estimated water delivered per unmeasured non-household	l/prop/d	2	840.98	B4	803.30	B4	784.61	B4	665.60	B4	
7a	Estimated water delivered per unmeasured household	l/prop/d	2	434.10		443.29	B4	481.59	B3	470.49	B3	
8	Per capita consumption (unmeas'd h'hold - excl s/pipe leakage)	l/h/d	2	145.07	B3	145.18	B3	158.97	B3	158.41	B3	
9	Per capita consumption (meas'd h'hold - excl s/pipe leakage)	l/h/d	2	158.88		158.34		0.00		0.00		
10	Underground supply pipe leakage (unmeas'd households)	l/prop/d	2	67.19		63.58		65.97		62.02		
11	Underground supply pipe leakage (ext. metered households)	l/prop/d	2	0.00		0.00		32.98		31.01		
12	Underground supply pipe leakage (other metered h'holds)	l/prop/d	2	0.00		0.00		0.00		62.02		
13	Underground supply pipe leakage (void properties)	l/prop/d	2	67.19		63.58		65.97		62.02		
14	Meter under-registration (measured households)	Ml/d	2	0.45		0.53		0.00		0.00		
15	Meter under-registration (measured non-households)	Ml/d	2	5.78		5.53		9.84		9.62		
16	Distribution system operational use	Ml/d	2	9.12		4.97		4.72		4.80		
17	Water taken legally unbilled	Ml/d	2	8.76		25.09		29.37		25.89		
18	Water taken illegally unbilled	Ml/d	2	0.97		2.48		1.21		3.54		
19	Water taken unbilled	Ml/d	2	9.74		27.57		30.58		29.43		
20	Water delivered (potable)	Ml/d	2	305.89		498.10		496.50		477.89		
21	Water delivered (non-potable)	Ml/d	2	0.00		0.00		0.0		0.00		
22	Water delivered (non-standard rates: potable)	Ml/d	2	491.46		4.20		13.90		12.85		
23	Water delivered (non-standard rates: non-potable)	Ml/d	2	0.00		0.00		0.00		0.00		
24	Distribution losses	Ml/d	2	118.74		111.38		131.49		140.55		
25	Total leakage	Ml/d	2	168.75	B3	156.52	B3	180.93	B4	186.86	B4	
26	Distribution input	Ml/d	2	619.32	B2	614.45	B2	632.71	B2	623.24	B2	
27	Bulk supply imports	Ml/d	2	0.00		0.00		0.00		0.00		
28	Bulk supply exports	Ml/d	2	0.00		0.22		0.34		0.34		
29	Water treated at own works to own customers	Ml/d	2	619.32		614.45		632.37		622.90		
30	Overall water balance	cg			B2		B2		B3		B2	
C	**SECURITY OF SUPPLY**											
31	Security of supply index - company's planned levels of service	nr	0	N/C		-26		42		88		
32	Security of supply index - reference levels of service	nr	0	N/C		-26		42		88		

Table 10 – Non Financial Measures - Water Delivered

Introduction

The water delivered components for NI Water have been assessed and produced using the methodology described in Chapter 10 of the Northern Ireland Authority for Utility Regulation (NIAUR) Annual Information Return Reporting Requirements and Definitions Manual 2010. In accordance with the chapter's requirements, a Table 10 has been completed with this the accompanying commentary.

NI Water has followed the guidance in Chapter 10 and 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. In addition, the estimate of distribution losses uses the Integrated Flow Method, with the resultant total leakage checked using the Minimum Night Flow Method. A Maximum Likelihood Estimation, using the squares method, is applied for the reconciliation adjustments to the components of the water balance.

In summary, the outputs of the water balance are that the Integrated Flow Method of leakage assessment has given a figure of 202.57 Ml/d for total leakage and the Minimum Night Flow Method has provided a figure of 178.12 Ml/d. When the resulting imbalance between the two methods of 24.45 Ml/d is compared to the Distribution Input figure of 625.41 Ml/d (pre MLE), it provides a percentage discrepancy of 3.91%. As this is within the 5% tolerance set to enable a Maximum Likelihood Estimation method to be applied, using the squares method, NI Water arrive at a reconciled leakage figure of 186.86 Ml/d.

In comparison with AIR09 figures, the imbalance has decreased by 6.02 Ml/d from 30.47 Ml/d in AIR09. This has further decreased the percentage discrepancy below the 5% threshold to a figure of 3.91%. A rise has occurred in the reconciled leakage of 186.86 Ml/d, from the previous year's value of 180.93 Ml/d. The primary factor for the increase in leakage was as a result of the 2010 winter freeze/thaw as well as some adjustment as a result of the adoption of company specific data and better information.

NI Water has continued throughout 2009/10 with the ongoing work in relation to the Water Balance Action Plan. The reported level of leakage has increased but this can be attributed to two factors:

- The most significant issue was the adverse weather conditions encountered during the winter months and this is explained in greater detail.
- Implementation of phase 2 of the water balance action plan with specific reference to the adoption of company specific assessments for the hour to day factor and the household night use assessment.

Winter Weather

The weather conditions between December 2009 and March 2010 were significantly colder than previous years. According to the Met Office data the average minimum temperature for the 2010 winter period (December 2009 to February 2010 for Northern Ireland was -1.02 ^{0}C which was the second coldest winter period in the last 100 years and the coldest since 1963[8]. During this same period there were 48.7 days of air frost which was the third highest in the last 100 years.

The severe weather conditions between 21 December 2009 and 21 January 2010 brought widespread disruption to the water distribution system. Temperatures fell as low as -13 ^{0}C (recorded at Castlederg in County Tyrone on the night of the 8/9th January 2010) and it was one of the most protracted cold spells across Northern Ireland in a generation. The freezing conditions and subsequent thawing caused a very significant impact on the water network with abnormally high numbers of burst mains and frozen pipes. As a result there were very significant water supply problems and a category 1 incident was instigated within NI Water.

Storage at a number of service reservoirs was depleted by bursts on the system and water treatment works operated at peak capacity to compensate for the increased daily demand. Daily distribution input from water treatment works peaked at around 800 Ml/d on 14 January 2010 which was over 200 Ml/d of an increase from the average volume for November 2009. The average daily distribution input for January 2010 was 718 Ml/d compared to 663 Ml/d during January 2009. Water tankers were deployed in a major tankering operation to restore reservoir levels and bring back those affected to supply. There was a very significant impact on bottom-up leakage levels which increased between the months of December 2009 and January 2010 by approximately 50 Ml/d.

The freezing conditions not only occurred at night but also during the day. During the period from the 2nd to the 10th January 2010 overnight temperatures in most locations frequently fell between -5 ^{0}C and -10 ^{0}C, whilst temperatures during this period by day struggled to rise above freezing. This was highlighted by the number of air frost days in December and January of 15 and 17 days respectively. The number of air frost days in February and March 2010 was 17 and 12 days respectively also having a significant impact.

The weather conditions were such, particularly in the latter part of December 2009 and January 2010, that widespread ice and snow caused treacherous conditions on roads and pavements. Rural roads were particularly badly affected. The overall conditions were such that it made driving vehicles difficult, in some areas leakage detection was impossible and where possible leakage detection was very difficult. There was a ground cover of snow and ice with fittings buried and when found they were frozen over.

[8] www.metoffice.gov.uk/climate/uk/datasets/Tmin/ranked/Northern_Ireland.txt

Prior to the freeze/thaw NI Water were on target to achieve a reduction of 4.0 Ml/d over the 2009/10 year. However the impact of the extreme weather conditions was such that leakage levels increased significantly in January 2010. Despite the ongoing poor winter weather immediate action was taken to recover the leakage situation during the months of February and March 2010 and substantive gains were made. However the overall impact meant that there was an additional 3175 Ml of leakage, which equated to an additional 9.0 Ml/d of leakage (averaged across the 2009/10 year), as a result of the extreme winter weather conditions. Due to the severity of the impact of the weather on the distribution system the leakage recovery situation will continue into the 2010/11 year and will impact on the leakage assessment for a period of least 12 months after recovery to pre-winter levels.

Water Balance Review – Phase 2

NI Water identified a number of issues with the AIR08 submission. Concerns were raised by both the reporter and the regulator with regards to the reliability of the water balance due to the discrepancy threshold of 5% being exceeded. As a result a Water Balance Action Plan was undertaken over a two year period. The first phase of the action plan was included in AIR09 and the output of the second phase is now included within AIR10. The first phase of the review looked at the following:

- Configuration of distribution input meters was rationalised to reflect with greater accuracy the water entering the distribution system.
- Ongoing improvements made to customer data.
- Improvements to the PCC assessment which included a comprehensive survey of properties and population within the PCC sites.
- Interim assessments of meter under registration for PCC sites (household properties) and non household properties.
- An interim NI Water specific assessment for household night use.
- An interim NI Water specific assessment of the hour to day factor and average zonal night pressure.
- Assessment of trunk main and service reservoir leakage to tie in with common industry practice.
- Updated assessment of underground supply pipe leakage utilising NI Water data.
- The method by which non-household night use allowances are used within the minimum night flow analysis was amended as an interim measure to provide a more robust approach to this calculation.
- The introduction of a confidence limit to the distribution input.
- Amendments made to the bottom up leakage assessment.
- The Maximum Likelihood Estimation was changed from a linear to a squares method.

NI Water indicated that at the Water Balance Action Plan would take 2 years to complete. Work in relation to the second phase is outlined as follows:

- The introduction of company specific meter under registration figures to replace the interim figures used in AIR09.
- A non household night use model has been developed and company specific figures can be attributed to the various categories of customer. The non household night use assessment has not been included within AIR10 as it is considered more appropriate that the assessment is introduced in conjunction with the new leakage management software.
- An update has occurred of the company specific household night use allowance.
- A company specific hour to day factor has been calculated to replace the interim assessment used in AIR09.
- The supply pipe leakage assessment has been updated and incorporated into the water balance.

As a result of the work over the last two years there has been improvement in the assessment of the water delivered components. As highlighted in AIR09 the scale of the work being undertaken has been considerable as it has represented a review of every component of the water delivered. The completion of the work, to date, to improve the assessment of these components in such a short timescale has been very challenging. When compared to the England & Wales companies this type of work was completed over a number of years with improvements being made year on year.

Further Work

On conclusion of this two year programme of work we do recognise that there is the need to address some further issues. During 2009/10 NI Water released a tender for new leakage management software and the project is now ongoing to replace the existing legacy system. This will impact on the DMA nightline assessment and hence the leakage estimate, to some degree. At present the effect of this can not be determined. In addition, the non household night use model needs to be applied to specific types of customers within each DMA and this requires the new leakage management software to implement and this will also impact upon the bottom-up leakage assessment.

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 134.05 in AIR09 Ml/d to 127.02 Ml/d in AIR10. The water delivered to non-households has therefore decreased by 7.03 Ml/d.

For AIR10, NI Water has developed a report that is a more robust representation of the total 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.

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% has been determined by WRc which replaces the interim assessment of 8.1% used for AIR09.

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 AIR10 is 310.06 Ml/d. This is similar to the figure in AIR09 of 311.07 Ml/d.

The Billed Unmeasured Household volumes have been calculated by multiplying the average PCC figure for NI Water by the unmeasured household population. The source of the PCC figure is the NI Water domestic consumption monitor. The household population figure is sourced from the Northern Ireland Statistics and Research Agency (NISRA). Adjustments are made to this household population figure to account for:

- Non-Household Population – Sourced from the recent NISRA 2008 based population projections which replaces the figure used in AIR09 from the 2001 census.
- Unconnected Properties Population – The number of unconnected properties is sourced from the Northern Ireland Housing Executive (NIHE) Housing Conditions Survey report. The population of unconnected properties is determined by multiplying the assessed average occupancy from the NIHE report by the number of unconnected properties.
- Farm Population – The population of farms is now 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).

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. In AIR09 an interim assessment of 6.52% was used.

During the reporting year the steps that have been taken to improve the reliability of this estimate include:

- In 2008/09 a comprehensive survey was carried out of the Domestic Consumption Monitor Areas. This survey covered a total of 5371 properties to determine the property types and occupancy rates. In 2009/10 1,245 properties were surveyed covering 22 sites. The survey again involved actual counts of types of properties in each area, counts of vacant properties in each area and the completion of survey questionnaires to determine occupancy. The 2008/09 and 2009/10 surveys have provided the population and property numbers for the AIR10 consumption monitor assessment. The overall occupancy rate is 2.51 for AIR10. The occupancy rate for AIR09 was 2.49. The NISRA interpolated occupancy rate for Northern Ireland is 2.49 for 2009/10. Anecdotal evidence gathered from staff undertaking the recent survey indicates that customers are aware that their water usage is being permanently monitored and that it may be having an impact on their behaviour. As a result of the surveys, replacing meters and undertaking leakage detection reviews this has likely to have raised NI Water's visibility and awareness with customers. The impact of when participants within a study modify their behaviour as a result of being the focus of investigation is known as the "Hawthorne Effect." A bias is introduced into the measurement of water use in that the population in the survey may not be fully representative of the population as a whole. Professor Adrian McDonald of Leeds University has researched this and carried out work for other GB companies such as South West Water, Yorkshire Water, and Essex & Suffolk. For AIR10 a bias of 1.5% has been applied which is very much at the low end of the range applied by other water companies.
- Use of company specific MUR value as determined by WRc to replace the interim company assessment which complies with the AIR09 recommendation from the Reporter.
- Replacement of 13 of the domestic consumption monitor meters that were over 5 years old. In addition 14 areas were removed from the monitor and 11 new areas identified and set up.

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

At the time of the freeze/thaw in late December 2009 and January 2010 NI Water advised customers not to run taps. There was anecdotal evidence that this was occurring with domestic customers, but we have been unable to make any assessment, and no allowance for such has been made within the

water balance. However it is likely to have been a factor in relation to water usage.

Line 5 – Billed Unmeasured Non-Household
The reported value for Billed Unmeasured Non-Household for AIR10 is 11.38 Ml/d. The value reported in AIR09 was 20.80 Ml/d

The assessed unmeasured non-household figure for AIR10 is 223.57 m^3/prop/yr which is a reduction compared to a figure of 263m^3/prop/yr for AIR09. The phasing arrangement for the average volume of unmeasured non-households, as outlined in Appendix 19.1 of PC10, applies.

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 AIR10. The interim MUR figure for AIR09 was 8.1%.

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 AIR10 is 665.60 l/prop/d. The figure reported for AIR09 was 784.61 l/prop/d.

The allowance for unmeasured non-household properties for AIR10 is 223.57 m^3/prop/yr. The figure used for AIR09 was 263 m^3/prop/yr.

Line 7a – Estimated Water Delivered Per Unmeasured Household
The post MLE figure for estimated water delivered per unmeasured household for AIR10 is 470.86 l/prop/d. The figure reported for AIR09 was 481.59 l/prop/d.

Line 8 – Per Capita Consumption (Unmeasured Household – Excluding Supply Pipe Leakage)
The post MLE figure for PCC for AIR10 is 158.41 l/hd/d. The figure reported for AIR09 was 158.97 l/hd/d.

NI Water has 112 domestic consumption monitors set up specifically to monitor unmeasured household consumption. These sites are small (average size of 50 properties), permanently bounded, monitored for leakage, and flows into them are recorded by meters. NI Water has 87% 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 141.47 l/hd/d. This assessment is based on 12 months consumption data from 1 April 2009 to 31 March 2010. This compare to a pre MLE figure of 141.53 l/hd/d for AIR09.

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. The figure used for AIR09 was 6.52%.

A total of 13 meters were replaced in 2009/10 primarily, in the latter half of the year. Meters older than 5 years were prioritised.

In 2008/09 a major review was undertaken of domestic consumption monitored areas by completing a property and population survey. A follow up survey was undertaken in 2009/10 which covered 1,245 properties. The information from both surveys has been used 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 AIR10 PCC Monitor.

Although significant work has been undertaken, NI Water does recognise that there is a need to carry out ongoing reviews of its domestic consumption monitor areas to ensure that they are in accordance with best practice. As stated in AIR09 it is our aim to survey the sites on a rolling five year basis.

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 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 AIR10 as 46.31 Ml/d. The figure for AIR09 was 49.44 Ml/d. The unit values are 62.02 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 Ml/d is approximately 25% of total leakage. This figure is comparable to those reported by water companies in England and Wales.

From the "Ofwat Service and Delivery Report 07/08" it can be ascertained that the majority of the water companies in England and Wales estimate the underground supply pipe leakage on externally measured properties to be approximately half that of internally measured and other properties. This is

the assumption that has been made in the estimation of per property values for underground supply pipe leakage and is consistent with AIR09. Since, in NI Water, the unmeasured non-household use is based on the measured non-household use, this assumption will also be applied to the unmeasured non-household.

To convert the total underground supply pipe leakage volume to the required l/prop/d figure, the total SPL volume has been divided by the sum of the number of unmeasured household properties, the number of void properties and half of the total number of non-household properties. The resulting value is the figure in l/prop/d for underground supply pipe leakage for internally measured and other properties. The resulting figure is divided by two as an estimate for underground supply pipe leakage on externally measured properties. The SPL calculation for NI Water is detailed in the NI Water Supply Pipe Leakage Assessment Report for 2009/10 (carried out by Crowder Consulting).

During the reporting year an update of the estimation of underground supply pipe leakage was undertaken which again followed the guidelines of the UKWIR report 'Towards Best Practice for the Assessment of Supply Pipe Leakage'.

Lines 14 to 15 – Meter Under-Registration
Company specific MUR figures have been assessed by WRc for AIR10 to replace the interim figures used in AIR09. For non-household consumption the interim MUR figure for AIR09 was 8.10% which has now been replaced with the company specific assessment of 8.33% for AIR10. For household consumption the interim MUR figure was 6.52% which has now been replaced with the company specific assessment of 7.39% for AIR10 as per the Reporter's AIR09 recommendation.

Line 16 – Distribution System Operational Use
The reported value of Distribution System Operational Use (DSOU) for AIR10 is 4.80 Ml/d. The value reported for AIR09 was 4.72 Ml/d.

A review of DSOU was undertaken for AIR08. The methodology adopted has again been used again for AIR10. This included a review of the components that make up DSOU, such as service reservoir cleaning; mains renewal; repair flushing; water and chlorine sampling.

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

Lines 17 to 19 – Water Taken Unbilled
The reported Water Taken Unbilled figure has reduced from 30.58 Ml/d in AIR09 to 29.43 Ml/d in AIR10.

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

- As per AIR09 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 AIR09.
- Unmetered SPS consumptions have been assessed on the average consumption of metered SPSs.
- SPS numbers with automatic screens have been sourced from the Wastewater M&E maintenance schedule.
- 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 5.43 Ml/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)
Non-standard rates are applied to volumes of consumed water greater than 100,000m^3/yr. There are 30 customers eligible for the non-standard rates but only 18 customers have consumed more than 100,000m^3.

The post MLE total volume of potable water delivered at non-standard rates is 12.85 Ml/d, which also includes a MUR adjustment of 8.33%.

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 AIR10 are estimated to be 140.55 Ml/d. This is an increase on the AIR09 figure of 131.48 Ml/d.

Line 25 – Total Leakage

Total leakage is the sum of distribution losses and underground supply pipe leakage. The reported figure for total leakage for AIR10 is 186.86 Ml/d. The reported figure for AIR09 was 180.93Ml/d.

Total leakage is also calculated using an MNF methodology. For AIR10 reported pre MLE MNF method leakage is 178.12 Ml/d. The figure reported for AIR09 was 170.74 Ml/d.

NI Water has an extensive DMA network (approx. 1070 DMAs) covering 99% of all properties in Northern Ireland. Over 80% of these DMAs are monitored with electromagnetic meters with a direct link to the company telemetry system. The remaining DMAs are monitored through mechanical meters and GSM/standard flow loggers. GSM loggers have an automatic link to the Company's telemetry system. Standard loggers are downloaded on a monthly basis and MNF data input into the telemetry system.

NI Water uses their Telemetry Data Monitoring 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 is currently in the process of procuring a new leakage management system to mitigate the restrictions of the current system. As yet, it is still to be determined when the new system will be made available but it is anticipated to be within a two year period.

Data from other corporate systems is used in TDMS. Using the DMA meter configurations held within TDMS, a minimum night flow is calculated for the DMA. This is based on an actual minimum recorded between 02:00 and 06:00 of the DMA inlet meter, with deductions made at the concurrent time for the outlet meters (including continuously monitored customers). Minimum Night Flow and DMA attributes are then extracted from the system on a monthly basis in to MS Excel spreadsheets to perform leakage calculations.

DMA minimum night flow (MNF) is determined using a 20^{th} percentile method. Minimum night flows are recorded on a daily basis. The 20^{th} 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 night use allowance for households has been updated by Crowder Consulting for AIR10 and the figure is 2.42 l/prop/h. The figure used in AIR09 was 2.48 l/prop/h. For non-household properties the figure used for AIR10 is 8 l/prop/h which is the same figure used for AIR09. The non-household night use figure is from the WRc Managing Leakage Suite of Reports. A non household night use model has been developed and company specific figures can be attributed to the various categories of customer. The non household night use assessment has not

been included within AIR10 as it is considered more appropriate that the assessment is introduced in conjunction with the new leakage management software.

The leakage has been calculated at resource zone level to accommodate the shortcomings of the current non-household night use model. As all non-households are allocated the same night use allowance, regardless of size and usage, this can lead to under/over estimation of leakage at DMA level. In some cases this can lead to "negative" leakage. By aggregating the night use to resource zone level and subtracting this value from the aggregated minimum night flows then the under/over estimation is balanced out.

For AIR09 an interim hour to day factor of 22.5 was used. A company specific figure has now been developed for AIR10 which is 22.8. This work has been undertaken 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 AIR10 service reservoir and trunk main leakage assessments are the same as those within AIR09. Service reservoir leakage estimated as 4.53 Ml/d and trunk mains leakage estimated as 13.66 Ml/d. As per the Reporter's recommendations NI Water has commenced in 2009/10 a series of drop tests on service reservoirs. In addition NI Water are also developing a tile analysis model to determine a company specific trunk mains leakage assessment as advised by the Reporter.

The net effect to the changes the made to the calculation of MNF method leakage are:

- Update to the household night use coefficient = approximately +0.5 Ml/d
- Adoption of company specific hour to day factor = approximately +1.5 Ml/d

The net effect, due to the changes made, is therefore an additional +2.0 Ml/d.

The effect of the severe winter contributed about +9.0 Ml/d to the MNF leakage. The overall impact of both the severe winter and the adoption of the revised household night use assessment and the company specific hour to day factor contributed an additional 10 Ml/d

NI Water feels that the use of a 15% confidence is still appropriate for the MNF Method Leakage in the MLE calculations. This is consistent with the figure used in AIR09. Crowder Consulting carried out an exercise for AIR09 to determine an appropriate confidence limit for MNF method leakage that supports this value.

Line 26 – Distribution Input

The distribution input figure for AIR10 has been calculated as a post MLE figure of 623.24 Ml/d. The distribution figure for AIR09 was 632.71 ML/d. The company specific confidence interval for distribution input for AIR10 is 2.13%. This is the same as AIR09.

As identified in AIR09 a comprehensive review of the reporting of distribution input was undertaken in 2008/09. The best practice adopted during AIR09 has continued to be carried out in 2009/10. In addition during the reporting year the following work has been undertaken:

- NI Water's M&E function has continued with the annual calibration of all DI meters.
- A meter verification study was undertaken by an independent body to determine the suitability of flow meter installations of the DI meter stock in accordance with best practice guidelines published by the National Engineering Laboratory for the auditing of flow metering systems. NI Water is currently considering the recommendations of this report.

At the time of the freeze/thaw because of the serious demand issue at that time three additional sources were brought into operation. Two of these were Drumabest BH and Alcrossagh BH which are included in the distribution input figure. However the other source was Cabragh BH which is not included in the distribution input as it was not metered and was a direct supply into a service reservoir from the borehole. This is not material as we estimate that it may have been of the order of 10 Ml over 15.5 days which is approximately 0.027 Ml/d over the 2009/10 year.

Line 27 to 28 – Bulk Supply Imports / Exports

There are no bulk imports of water to NI Water. There is one small import from the Republic of Ireland which supplies 3 properties.

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

The post MLE volume amounts to 0.34 Ml/d and includes an MUR adjustment of 8.33%.

Line 29 – Water Treated At Own Works to Own Customers

With the exception of the 71 small exports above, all water treated at its own works is used by NI Water's own customers. The post MLE distribution input volume amounts to 623.24 ML/d and deducting the cross border exports the volume of water treated at own works to own customers is 622.9 Ml/d.

Overall Water Balance

Table 1 Water Balance Table

Water Balance April 2009 - Mar 2010						
NIW	**Pre MLE** (mld)	**Error estimate** (%)	**Confidence Range** (mld)	**% of total**	**MLE Adjustment** (mld)	**Post MLE** (mld)
Billed Measured HH	0.00	10%	0.00	0.0%	0.00	0.00
Billed Measured NHH	125.11	10%	156.53	7.8%	1.91	127.02
Billed Unmeasured HH	299.12	10%	894.73	44.8%	10.94	310.06
Billed Unmeasured NHH	11.35	15%	2.90	0.1%	0.04	11.38
SPL	46.31					46.31
DSOU	4.78	25%	1.43	0.1%	0.02	4.80
Water Taken Unbilled	28.79	25%	51.81	2.6%	0.63	29.43
Sum of components	600.97					623.24
Distribution Input	625.41	2%	177.46	8.9%	2.17	623.24
Top Down Leakage	**202.57**					
BU Leakage	**178.12**	15%	713.89	35.7%	8.73	**186.86**
Imbalance (mld)	**24.45**			100.0%		
% Imbalance	**3.91%**					**482.70**

There is an overall imbalance of 24.45 Ml/d, 3.91% of the distribution input. The imbalance reported for AIR09 was 30.47 Ml/d, 4.79% of the distribution input.

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 2010, the confidence grade applied to the NI Water's water balance is B2. The confidence level for the overall water balance for AIR09 was B3.

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.

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.

Unmeasured Non-household Water Delivered has a confidence grade of B4. This component has been calculated based on the allowance for unmeasured non-household properties (calculated based on measured non-household consumption data). An error estimate of 15% has been applied to this component in the MLE calculations.

Total Leakage has a confidence grade of B4. A 15% error estimate has been applied to BU Leakage in the MLE calculation.

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.

In accordance with the definition provided by NIAUR the Overall Water Balance has a confidence grade of B2. The water balance components reconcile with measured distribution input to less than 5%.

Table 2 Water Delivered Components Confidence Grades

Component	Reliability Bands				Accuracy Bands						
	A	B	C	D	1 <1%	2 1-5%	3 5-10%	4 10-25%	5 25-50%	6 50-100%	X
Unmeasured Household Per Capita Consumption (l/head/d)											
Unmeasured Non-Household Water Delivered (l/prop/d)											
Total Leakage (Ml/d)											
Distribution Input (Ml/d)											
Overall Water Balance											

Lines 31 & 32 - Security of Supply
Security of Supply is discussed in Table 10a.

Table 10 a (i)

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

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**
Northern	55.08	50.00	0.00	82.00	76.67	23.08	4.73	18.35	21.15%	245.57	0.00%	0.00	
Southern	70.17	147.00	0.00	156.45	146.02	60.72	13.44	47.28	27.83%	413.33	0.00%	0.00	
Eastern	146.51	187.00	0.00	330.63	309.16	2.88	20.09	-17.21	-4.91%	900.08	50.28%	0.12	
Western	79.44	0.00	0.00	71.36	66.70	8.08	4.86	3.22	4.23%	160.60	0.00%	0.00	
Central	11.86	19.00	0.00	28.72	26.85	2.14	1.99	0.15	0.50%	70.57	0.00%	0.00	
Total	**363.06**	**403.00**	**0.00**	**669.15**	**625.40**					**1790.15**		**0.12**	**88**

Table 10a (i) – Non Financial Measures - Security of Supply Index – Planned level of service

As indicated in AIR09 NI Water is currently developing a water resource management plan. The security of supply index has been calculated based on this Draft 2010-2035 Water Resource Management Plan (DWRMP).

The new plan has adopted the latest methodology for producing water resource management plans and there has been a significant step change in the reported SOSI since 2008/09, which was 42, to the reported 88 for 2009/10. This is due to a number of reasons;

- A new approach for headroom (UKWIR (2002), *An Improved methodology for assessing Headroom*. Report 02/WR/13/2) used in the ongoing DWRMP has been utilized to assess the level of uncertainty in the supply demand balance. This methodology is more comprehensive than the previous approach and has reduced the level of uncertainty with regard to headroom which in turn has resulted in a lower headroom requirement than previous calculations for SOSI by NI Water.

- Revised Water Resource Zone (WRZ) boundaries that accurately reflect the current water supply situation within Northern Ireland. The 2002 water resource strategy had allowed for 15 water resource zones but with various network improvements since 2002 the current plan has been able to identify a total of 5 independent water resource zones. Previous SOSI calculations have indicated an overall surplus of WAFU across Northern Ireland as a whole but the low SOSI score was more a reflection of the inherited system of many small individual water supply systems. Separate supply demand balances are constructed at WRZ level. Surpluses in one or more WRZs may then be available for transfer across WRZs boundaries to meet deficits. A number of changes have taken place since the 2002 WRS and the current review has enabled a detailed reassessment of the supply system and the 5 WRZs identified are an accurate reflection of the water supply system. As a result there are fewer isolated zones and the WAFU can be made available more easily across Northern Ireland.

- A Review of the outage allowance has resulted in a 1% reduction as compared to the 2002 WRS allowance. The assessment of outage for WRS 2002 was based on discussions with each of the four Water Service Divisions in existence at the time, but no historic outage data were available. A nominal outage allowance of 3% of distribution input was assumed. For WRMP 2010 a structured interview was held with key NI Water staff to develop an understanding of outage, identify sources most at risk from outage events, and where possible to quantify these risks. After these consultations the outage was revised to 2%, based on the latest information available and an element of expert judgement.

- Distribution Input has been reduced further 2008/09

Eastern WRZ has a projected deficit of 17.21Ml/d; this is partly explained by the increased flow due to the freeze/thaw that the province experienced during January 2009 and February 2010. In addition the WAFU on each side of the East and South WRZs boundary requires a more comprehensive review under the WRMP and this will be possible once the completed trunk main hydraulic model becomes available towards the end of June 2010.

The calculation for AIR10 is believed to be a reasonable reflection of the current NI Water SOSI but it is possible that further review of the DWRMP during 2010 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 10 Table 7.

Table 10 (ii)

NORTHERN IRELAND WATER - ANNUAL INFORMATION RETURN 2010

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
Northern	55.08	50.00	0.00	82.00	76.67	23.08	4.73	18.35	21.15%	245.57	0.00%	0.00	
Southern	70.17	147.00	0.00	156.45	146.02	60.72	13.44	47.28	27.83%	413.33	0.00%	0.00	
Eastern	146.51	187.00	0.00	330.63	309.16	2.88	20.09	-17.21	-4.91%	900.08	50.28%	0.12	
Western	79.44	0.00	0.00	71.36	66.70	8.08	4.86	3.22	4.23%	160.60	0.00%	0.00	
Central	11.86	19.00	0.00	28.72	26.85	2.14	1.99	0.15	0.50%	70.57	0.00%	0.00	
Total	**363.06**	**403.00**	**0.00**	**669.15**	**625.40**					**1790.15**		**0.12**	**88**

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

As indicated in AIR09 NI Water is currently developing a water resource management plan. The security of supply index has been calculated based on this Draft 2010-2035 Water Resource Management Plan (DWRMP).

The new plan has adopted the latest methodology for producing water resource management plans and there has been a significant step change in the reported SOSI since 2008/09, which was 42, to the reported 88 for 2009/10. This is due to a number of reasons;

- A new approach for headroom (UKWIR (2002), *An Improved methodology for assessing Headroom*. Report 02/WR/13/2) used in the ongoing DWRMP has been utilized to assess the level of uncertainty in the supply demand balance. This methodology is more comprehensive than the previous approach and has reduced the level of uncertainty with regard to headroom which in turn has resulted in a lower headroom requirement than previous calculations for SOSI by NI Water.

- Revised Water Resource Zone (WRZ) boundaries that accurately reflect the current water supply situation within Northern Ireland. The 2002 water resource strategy had allowed for 15 water resource zones but with various network improvements since 2002 the current plan has been able to identify a total of 5 independent water resource zones. Previous SOSI calculations have indicated an overall surplus of WAFU across Northern Ireland as a whole but the low SOSI score was more a reflection of the inherited system of many small individual water supply systems. Separate supply demand balances are constructed at WRZ level. Surpluses in one or more WRZs may then be available for transfer across WRZs boundaries to meet deficits. A number of changes have taken place since the 2002 WRS and the current review has enabled a detailed reassessment of the supply system and the 5 WRZs identified are an accurate reflection of the water supply system. As a result there are fewer isolated zones and the WAFU can be made available more easily across Northern Ireland.

- A Review of the outage allowance has resulted in a 1% reduction as compared to the 2002 WRS allowance. The assessment of outage for WRS 2002 was based on discussions with each of the four Water Service Divisions in existence at the time, but no historic outage data were available. A nominal outage allowance of 3% of distribution input was assumed. For WRMP 2010 a structured interview was held with key NI Water staff to develop an understanding of outage, identify sources most at risk from outage events, and where possible to quantify these risks. After these consultations the outage was revised to 2%, based on the latest information available and an element of expert judgement.

- Distribution Input has been reduced further 2008/09

Eastern WRZ has a projected deficit of 17.21Ml/d, this is partly explained by the increased flow due to the freeze/thaw that the province experienced during January 2009 and February 2010. In addition the WAFU on each side of the East and South WRZs boundary requires a more comprehensive review under the WRMP and this will be possible once the completed trunk main hydraulic model becomes available towards the end of June 2010.

The calculation for AIR10 is believed to be a reasonable reflection of the current NI Water SOSI but it is possible that further review of the DWRMP during 2010 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 10 Table 7.

Table 10 (iii)

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 10A NON FINANCIAL MEASURES

Security of Supply Index - Critical period (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
Northern													
Southern													
Eastern													
Western													
Central													
Total													

Table 10a (iii) – Non Financial Measures - Security of Supply - Critical period

As indicated in AIR09 NI Water is currently developing a water resource management plan. The security of supply index has been calculated based on this Draft 2010-2035 Water Resource Management Plan (DWRMP).

In accordance with best practice guidance for water resource planning, companies generally consider their supply demand balances under different planning scenarios. For each planning scenario a baseline forecast of supply and demand is produced.

Some companies might need to derive critical period scenarios, where their supply demand balance is sensitive to these because there are sustained periods when demands are significantly higher than average; this is a peak demand condition. Supply-side characteristics may also influence whether or not critical period analysis is required, for instance, where WRZs are supplied predominantly by groundwater, or by run of river abstractions with limited storage.

The supplies available to NI Water are dominated by abstractions from Lough Neagh, which can be considered an infinite hydrological storage resource. In addition, recent demand data does not suggest that there is a strong peak demand driver in Northern Ireland. For these reasons, it is not appropriate or necessary to consider the critical period scenario for Northern Ireland, because this is not the primary driver for investment to maintain the supply demand balance.

On this basis there has been no need for NI Water to develop a SOSI calculation for a critical period.

Appendix A
Deployable output

A.1 Non-technical summary

Atkins was appointed by Northern Ireland Water (NI Water) in March 2009 to prepare the Company's Water Resources Management Plan (WRMP) for the period 2010 to 2035 (WRMP 2010). The new WRMP replaces the current Water Resource Strategy (WRS) prepared by Ferguson McIlveen[1] and updated by Scott Wilson in January 2007[2]. The main supply-side component of the WRMP is deployable output (DO). This is calculated using a standard methodology that requires the use of behavioural models of the water resource system. This Appendix describes the construction of water resource system models for the calculation of DO.

None of the models or input data sets used for Water Resource Strategy (WRS) 2002 was available. New water resource models have therefore been constructed. The models have been developed using the Aquator water resource modelling application. The 2010 supply system has been configured to five Water Resource Zones (WRZs) based on information and data collated from a variety of sources and through collaboration with both NI Water staff and the Atkins Trunk Mains Modelling (TMM) team.

There are few direct measurements of reservoir inflows and flows at river intakes. A bespoke method for determining flow time series for use in the water resource system model was therefore developed for the WRMP 2010. The methodology employed utilises gauged flow data provided by the Rivers Agency along with software developed for Northern Ireland Environment Agency by Wallingford Hydrosolutions Ltd.

The overall DO for Northern Ireland was calculated as 773.6 Ml/d until 2015 falling to 759.5 Ml/d after the decommissioning of the Camlough source in the South WRZ. The individual WRZ results as follows:

- North WRZ 106.2 Ml/d (56.2 Ml/d excluding PPP transfers);
- West WRZ 88.2 Ml/d;
- Central WRZ 31.1 Ml/d (12.1 Ml/d excluding PPP transfers);
- East WRZ 329.5 Ml/d (149.5 Ml/d excluding PPP transfers); and
- South WRZ 218.6 Ml/d and 204.5 Ml/d beyond 2015 (71.6 Ml/d excluding PPP transfers).

Overall, it seems that there is little change in the total DO for Northern Ireland with the WRMP 2010 DO value around 3 Ml/d higher than the WRS 2002 DO of 771 Ml/d. On an individual WRZ level, the major differences are due to the repositioning of WRZ boundaries, decommissioning of older sources and inclusion of PC10 schemes.

The models were configured to investigate the potential impacts of changes in flow regime from climate change. The river flow series in the model were perturbed in accordance with the UKWIR UKCP09 Rapid Assessment. Looking across the whole of Northern Ireland, the 50th percentile scenario showed virtually no change from the baseline. Under the 5th percentile perturbations there was a DO reduction of just below 27 Ml/d (3.5%) simulated. Under the 95th perturbations simulated DO was increased by 23 Ml/d (3.0%).

The work described in this Appendix provides a robust basis for the DO values to be used in the supply/demand balance elements of the WRMP. The approach makes best use of available data and techniques. The analysis can be updated as and when improved data

[1] Ferguson McIlveen (2003) Water Resource Strategy 2002-2030
[2] Scott Wilson (2007) WRS Review of Recent Published Data - Revision B

and information becomes available, for example using longer (pre 1975) flow time series generated from rainfall-runoff models.

A.2 Background

Atkins has updated all aspects of the NI Water supply demand balance for the new WRMP. The update has been in accordance with the standard planning guidance issued by the Environment Agency for water companies in England and Wales for the PR09 Business Plan submissions and amendments issued by DRD.

The supply demand balance analysis includes:

- Reassessment of deployable output (DO) from the Company's existing sources;
- Preparation of new demand forecasts;
- Reassessment of target headroom to allow for uncertainty; and
- Outage allowances for existing and future sources.

A detailed options appraisal was undertaken as part of the WRMP process to identify the least cost planning solution for NI Water over the planning period. Atkins has also undertaken a Strategic Environmental Impact Assessment (SEA) for the Draft WRMP.

In addition to the preparation of the WRMP and undertaking a SEA, the scope of Atkins' work includes for the development of a trunk mains model (TMM) for the Northern Ireland network. When complete this will allow a better understanding of the hydraulic capacity of the system and hence the potential for transfers between areas of surplus and areas of deficit both within Water Resource Zones (WRZ) and between WRZs.

The preparation of a WRMP follows a standard approach set out in guidelines based on a programme of R&D projects funded by UKWIR and the Environment Agency to develop practical methodologies. The methodologies have been reviewed and where necessary updated over time to take account of new techniques and analytical tools, greater computing power, and more data.

The fundamental supply-side building block for the supply/demand balance is the estimation of deployable output (DO); other measures of source yield such as "safe yield" or "reliable yield" do not form part of the current WRMP process. The value of DO represents the output of a source (or group of sources) that can be achieved under specific design conditions. For surface water sources, the calculation of DO is based on behavioural analysis using flow time series that are as long as possible. The DO of a source is a measure of what the source can produce under the hydrological conditions of the worst drought on record. Under more favourable hydrological conditions, a given source may be able to deliver more than the DO, up to limits determined by the capacity of the treatment works and/or abstraction licence conditions.

None of the models or input data sets used for WRS 2002 was available for WRMP 2010. New water resource models have therefore been constructed using the Aquator water resource modelling application. The models have been configured to represent the current supply system. Model construction has used information and data collated from a variety of sources and through collaboration with both NI Water staff and the Atkins TMM team. In addition to assessing the current supply system, the models have been used to test scenarios related to climate change and will be used to assist the optioneering process. At the end of the WRMP it is the intention that the models will be handed over to NI Water to allow future scenarios to be tested if such a requirement arises.

This Appendix details the reasons for opting to use a water resources model, the decision to use Aquator, the model build process and the model setup and execution of DO and

scenario model runs. At each stage of the Appendix recommendations are given for possible future improvements with later plans, which are commonly linked to further data becoming available for inclusion in the models. This Appendix should always sit alongside the models to provide the basis for a comprehensive audit trail which is a critical element of any long-term modelling exercise.

A.3 Introduction to Aquator

Whilst it is possible to determine the DO of individual sources without the aid of a computer model, such a tool is essential when looking at conjunctive use across a Water Resource Zone[3] (WRZ). There are a number of appropriate software packages that are commercially available but Aquator has been chosen as the most suitable one for WRMP 2010. It has been used for a number of years by various water companies in the UK as a high level strategic water resources planning tool. It provides an intuitive and flexible platform for simulating all elements of a WRZ and, importantly, allows future supply system modifications to be incorporated into the model environment with ease.

The following information is taken from the Oxford Scientific Software website (the developers of Aquator) and the Aquator User Manual. A brief history, a description of the features of the model and an introduction to the DO analyser which has been be used to complete the supply forecast for the WRMP is provided.

- **History**: The first version of Aquator was developed for use by the then Scottish Water Companies now Scottish Water and the Scottish Environment Protection Agency (SEPA). It was delivered to these organisations early in 2001 as part of the Surface Water Yield Project undertaken by Water Resource Associates. Since then Aquator has been adopted by other water companies, environmental organisations and consulting engineers worldwide.
- **Features**: Aquator is a state of the art simulation package that enables one to construct a representation of any water supply system on-screen by dragging and dropping components from the toolbox onto the schematic area. Each component encapsulates a built-in set of operating rules. As Aquator seeks to satisfy the daily demand, these rules are automatically enforced no matter how complex the system. While obeying these rules Aquator implements a multi-pass strategy for supplying water. These passes enable Aquator to calculate leakage, to satisfy minimum flow requirements, and to supply at lowest cost when water is plentiful but otherwise supply according to resource state.
- **DO analyser**: The main function of Aquator in relation to WRMP 2010 is the DO analyser which is used to calculate the DO of each of the WRZs. Aquator has analysers for both the English & Welsh and Scottish methods of determining DO. The English & Welsh method, which is applicable to WRMP 2010, involves setting a minimum and maximum overall demand in a resource zone and increasing the demand incrementally until failure is encountered. The DO of the system is defined as the overall demand that is one increment below the demand causing a failure.

[3] A Water Resource Zone is the largest possible zone in which all resources, including external transfers, can be shared and hence the zone in which all customers experience the same risk of supply failure from a resource shortfall.

A.4 Model build

A.4.1 Introduction

The following sections of the Appendix outline the construction phase of the Aquator models that were developed to simulate water supply in each of the five WRZs in Northern Ireland. The boundaries of the five WRZs used for WRMP 2010 were identified using information from the previous WRS, and through collaboration with the Atkins TMM team. The WRZ boundaries have been presented and discussed at various progress, Project Steering Group and technical meetings with NI Water staff. The agreed boundaries are shown Figure A.1.

Figure A.1 – WRMP 2010 WRZs: North WRZ in purple shading; West in yellow; Central in blue; East in green; and South in red

As with all computer modelling exercises, the most important success factor is the amount and the quality of data that can be provided to feed into the model build. Therefore, prior to commencing model development, a comprehensive data collation phase was undertaken with data requests to NI Water and the Northern Ireland Rivers Agency. The data collated were used to feed into the model structure (section A.4.2) and as model input data (section A.4.3) which were used to set the physical constraints in the model, for example reservoir storage capacities, as well as providing boundary conditions, for example the amount of flow entering the WRZ in rivers. The knowledge and expertise of the Atkins TMM team was also employed at various stages of the Aquator model build.

A.4.2 Model structure

Introduction

As is the case for all high level strategic tools, deciding on an appropriate level of simplification of the real system on the ground is a critical step in the model build. In this supply forecast this is mainly based on:

i. Professional judgement of what is suitable for a DO assessment;

ii. Looking back to how DO has been determined in Northern Ireland in previous years; and,

iii. Ensuring that the work is consistent with the amount and quality of data that have been provided in the data collation phase.

Provenance

In the initial stages of the model build four schematics were put together with the Aquator software in a format suitable for DO assessment. These were based on information in the WRS 2002 (text in section A.5.2, Table 4.1 and various maps from WRS 2002). The schematics were grouped according to a previous divisional structure used at that time. Each component was checked against a GIS mapping layer of the water supply network produced by NI Water on 22/12/2008 and provided as background material with the tender for the WRMP.

These schematics (Figures A.3 to A.7) were then issued to a number of key personnel within NI Water who were asked to comment on the schematics in relation to the current situation on the ground, especially in the geographical areas of which they held particular expertise. The original schematics then were updated to take account of this new information. The schematics were also rearranged into the five new WRZs (North, West, Central, East and South) as set out for the WRMP 2010 and reissued to NI Water for final checks.

In the final step of the model structuring process, each schematic was verified with the Atkins TMM team. This was to ensure that the distribution network set out in Aquator was an appropriate representation of the real one. Although Aquator necessarily involves a large degree of simplification of the distribution system, it is still important to ensure that overall movements of water around the WRZ are representative.

All PC10 funded schemes are included in the models and following the recommendations of WRS 2002 all groundwater sources are assumed to be out of service for WRMP 2010. Any assets which have been identified as being ‘out of service’ or abandoned have not been removed from the original schematics. However they have been disabled in the model and are represented with a line through the component name. Assets known to be operated under the PPP have ‘PPP’ inserted into the component name. Aquator demand centre components (yellow circles in the model schematics) are still included based on the 2002 WRS resource zone names as they remain the most appropriate means of apportioning demand across each WRZ.

In addition to the model structures shown in the section below, a further set of models were constructed to give an unconstrained view of the WRZ, where all sources are linked to one central demand centre. In this approach DO results are not limited by pipeline capacity constraints and so provide a useful indication of supply potential in the WRZ. These four model schematics (the central WRZ is already connected in this respect) are included in section A.8.1 in and more explanation of this approach is given in section A.5.1

Schematics

This section provides schematics for each WRZ model, Figure A.2 provides a guide to the component symbols shown in the schematics, (North WRZ in Figure A.3 West WRZ in Figure A.4; Central WRZ in Figure A.5; East WRZ in Figure A.6; and South WRZ in Figure A.7), exported directly from Aquator, and

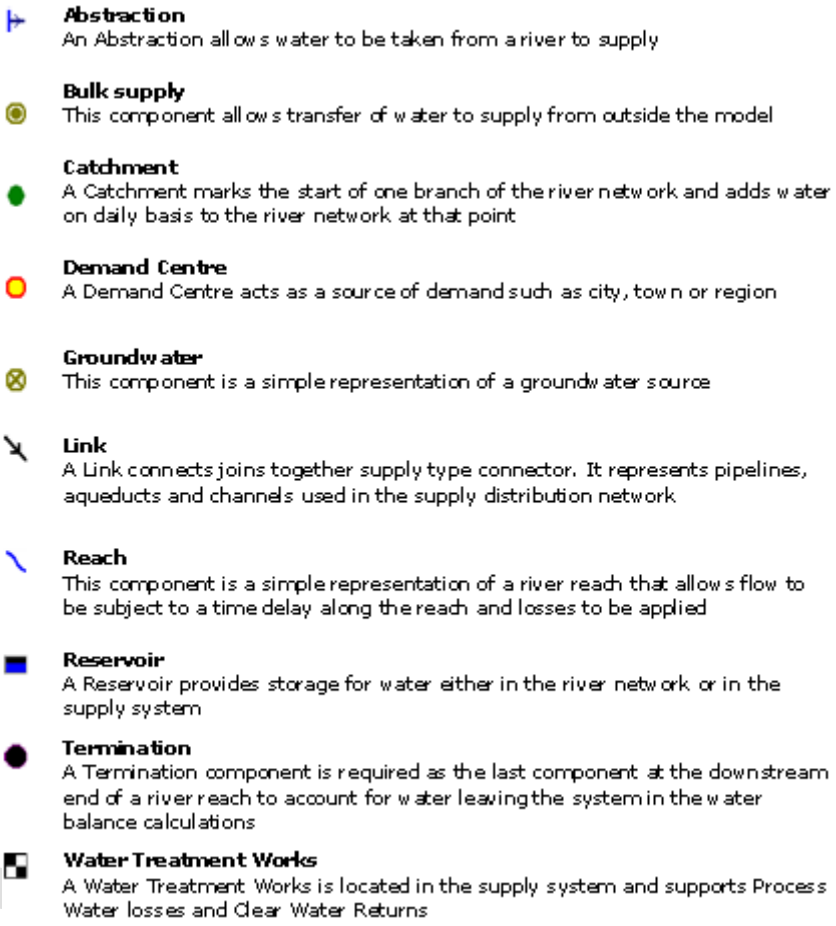


Figure A.2 – Key to Aquator model components symbols

North WRZ Schematic

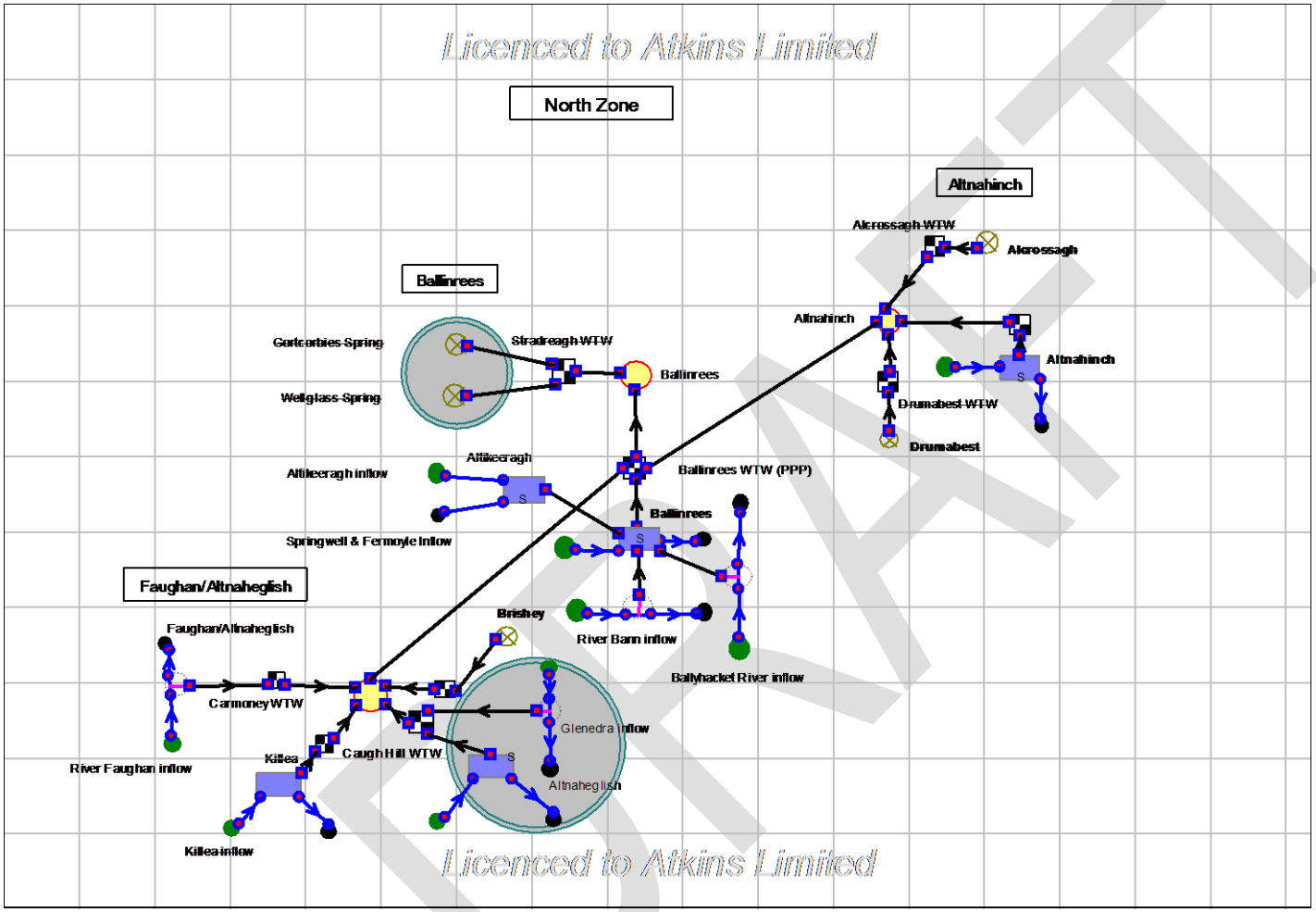


Figure A.3 – North WRZ model schematic

Note that the links (black arrows) do not necessarily represent individual pipelines, rather a general movement of water

West WRZ Schematic

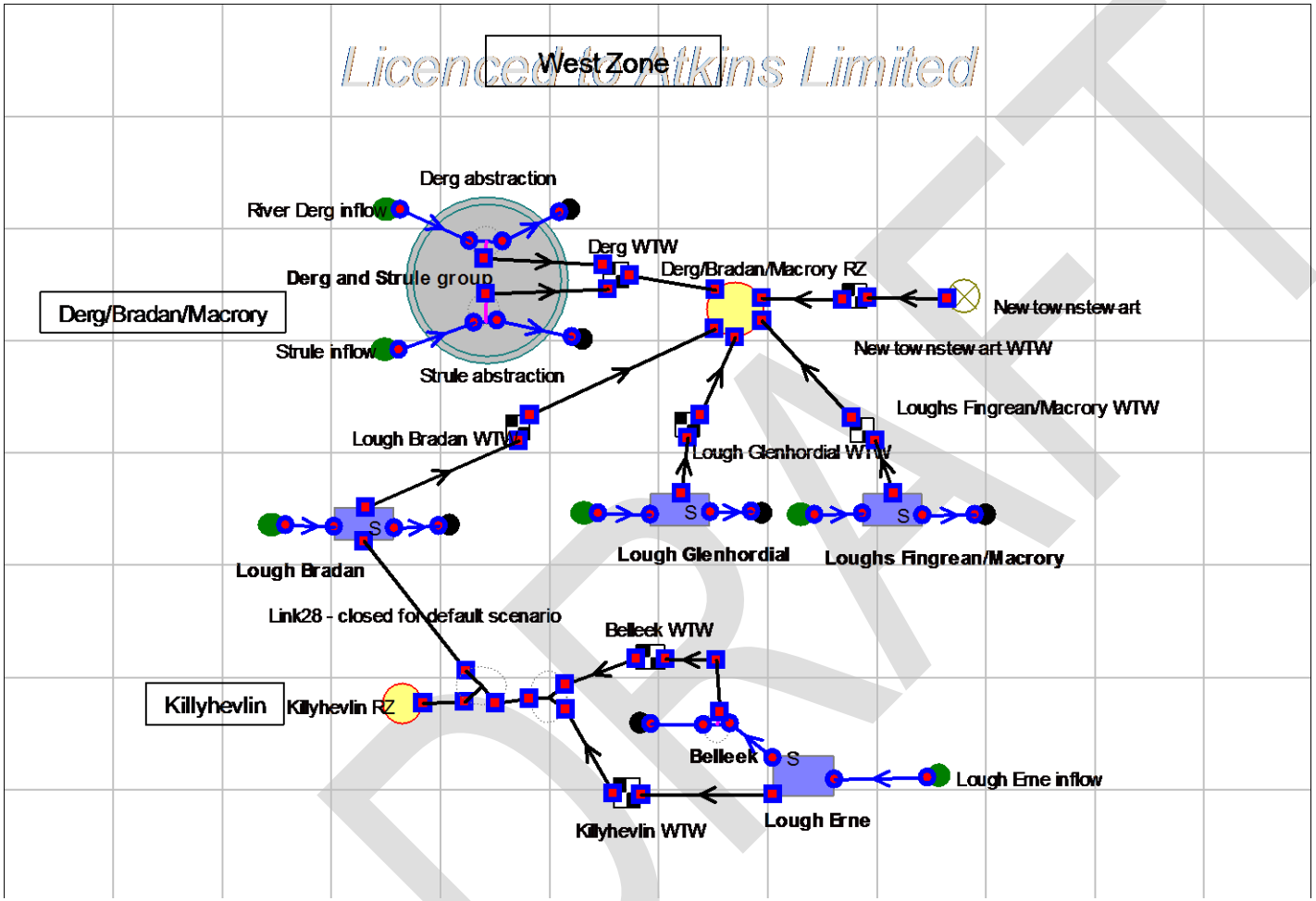


Figure A.4 – West WRZ model schematic

Note that the links (black arrows) do not necessarily represent individual pipelines, rather a general movement of water

Central WRZ Schematic

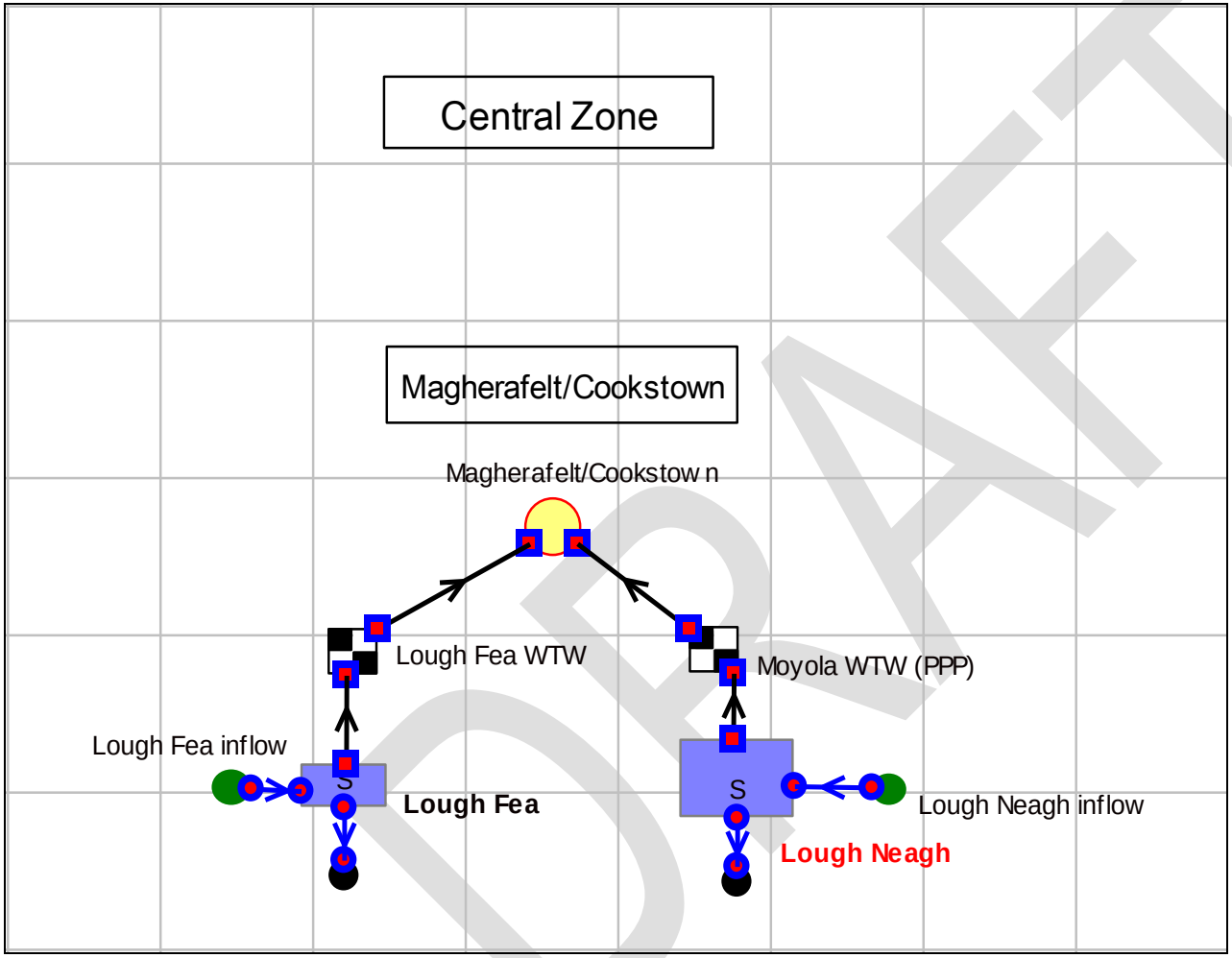


Figure A.5 – Central WRZ model schematic

Note that the links (black arrows) do not necessarily represent individual pipelines, rather a general movement of water

East WRZ Schematic

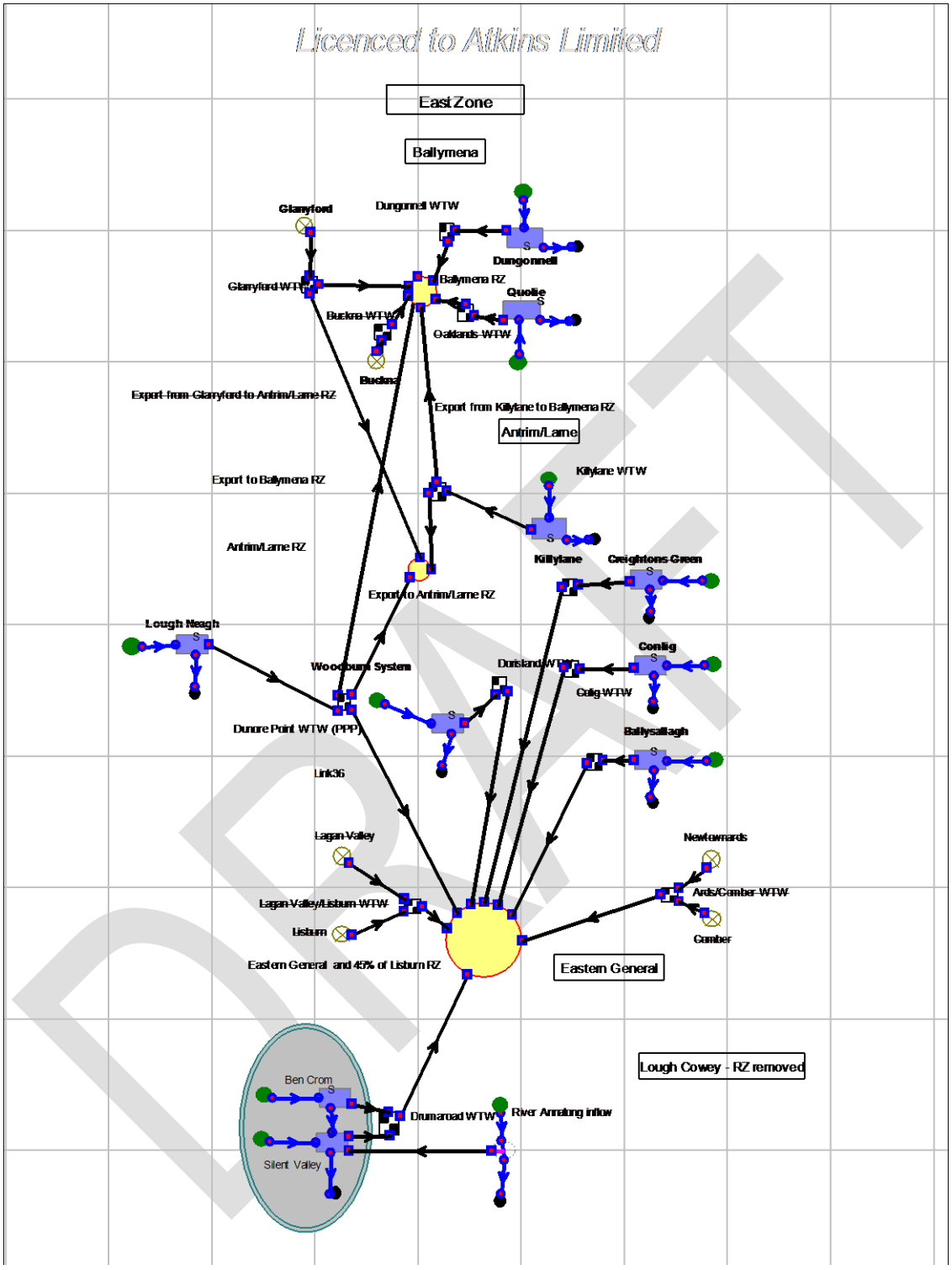


Figure A.6 – East WRZ model schematic

Note that the links (black arrows) do not necessarily represent individual pipelines, rather a general movement of water

South WRZ Schematic

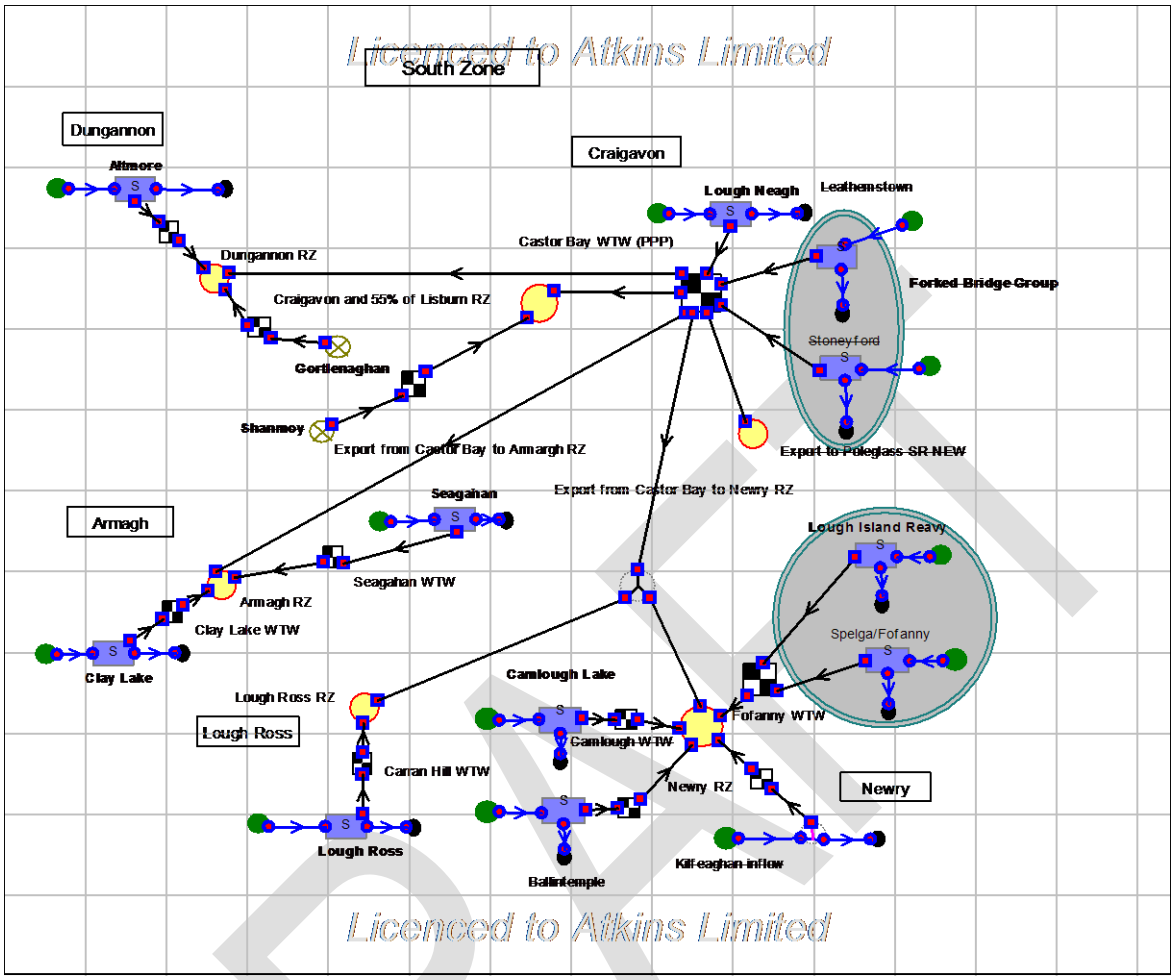


Figure A.7 – South WRZ model schematic

Note that the links (black arrows) do not necessarily represent individual pipelines, rather a general movement of water

Recommendations for improvement

There are a number of cross-WRZ transfers currently in operation in Northern Ireland. These transfers are not included in the current model structures as they have been developed for determining DO on an individual WRZ basis. However, it would relatively simple to model these transfers, either by merging separate WRZ models together (straightforward in Aquator) and adding in new links between sources and the relevant demand centres, or by incorporating transfers as an bulk imports into the WRZ with an assumption of some normal level of use. This is beyond the scope of work required for the WRMP.

As noted in the Provenance section above, the distribution network in Aquator is always a simplification of the real network. The level of detail in the current model setup is appropriate for use in WRMP 2010. However, if in future modelling work a more in-depth analysis of any particular area is required then the distribution system can be easily expanded to include more pipes and more complex operational rules. It is important to note that this will still be a limited physical representation of the system and not comparable to the TMM.

Similarly, the river system in the models can be expanded to allow a more comprehensive simulation of hydrology across the WRZ. This can be useful for a variety of purposes, for example examining the environmental impact downstream of river abstractions.

A.4.3 Input data

Data collation

Initially a full Aquator data request form was issued to NI Water and this is shown in section A.8.2. However, it became apparent that it would not be possible for NI Water to fulfil all of these requirements within the timescale set out for data collation. Therefore, the list was condensed to a shorter 'critical list' which was viewed as the minimum required for an appropriate DO assessment. It was still not possible for NI Water to provide all of these data, however, it was possible to replace those that were missing (noted in italics below) with data from an alternative source or with data that were derived as part of this investigation.

- Impounding reservoirs
  - storage capacity
  - inflow record – *not available so determined using LFE software* (*Catchment Hydrology*)
  - observed storage records
  - important operational rules – *not available so models optimised manually (section* A.5.2*)*
  - storage control curves - *not available so models optimised manually (section* A.5.2*)*
  - compensation releases
- Boreholes
  - confirmation of whether still in service
  - yields
- Abstraction licences
  - daily and annual quantities
  - minimum and environmental flow conditions
- Infrastructure (link mains and Water Treatment Works [WTW])
  - Critical capacities constraints (e.g. between the source (impounding reservoir, river, borehole etc.) and the water treatment works); i.e. is there a critical capacity limitation relating to the intake structure, pumping station or link (pipe, channel etc.) that will constrain the volume of water that is able to reach the works in addition to any licence constraints?
  - Treatment works capacities
- River and stream flows above each intake (flows into impoundments covered under impounding reservoirs)
  - Mean daily flow time series - obtained from Rivers Agency for all 106 gauges

The following sections describe the data collated during this period, along with the processing required to produce the input data for each element of the Aquator models used to determine DO.

Abstraction licences

Digital copies of all Northern Ireland abstraction licences, associated maps and abstraction licence applications were provided. The information from all the licences (which were issued in 2007) was translated into to a format suitable for Aquator and the current organisation of WRZs as shown in Table A.1. Only daily licences conditions were provided and there are no minimum flow conditions.

WRZ	Source	Daily Licence quantity (Ml/d)	Notes
North	Glenedra River / Altnaheglish	40	Licence covers both intakes (also covers Kerlins Burns but this is not modelled separately in Aquator and is combined with Altnaheglish)
	Altnahinch	14.5	
	Ballinrees / River Bann	50/40	The licence application separates out the component intakes (e.g. Ballyhacket River 25 Ml/d) but the actual licence just quotes 50 Ml/d overall with a maximum of 40 Ml/d of this coming from the River Bann
	River Faughan	55	
West	Belleek	2.5	
	Loughs Fingrean / Macrory	18.5	
	River Derg and River Strule	26.6	Only a draft licence at this stage. Current full licence is 15 Ml/d on River Derg alone.
	Lough Bradan	16	
	Lough Erne (Killyhevlin)	44	
	Lough Glenhordial	8	
Central	Lough Fea	17	
	Lough Neagh (Moyola)	20	
East	Woodburn system	50	
	Silent Valley, Ben Crom and Annalong River	115	In the licence document the licensed amount is 155 Ml/d. However, this includes 40 Ml/d which was pumped from Lough Island Reavy (South WRZ) so this has been subtracted from the licence quantity.
	Dungonnell	14.5	
	Lough Neagh (Dunore Point)	189	
	Killylane	16.1	

WRZ	Source	Daily Licence quantity (Ml/d)	Notes
South	Lough Neagh (Castor Bay)	154	The application requests 183 Ml/d. The amount sought for Castor Bay in the 2005 abstraction licence application was 155 Ml/d
	Camlough Lake	5	Camlough is decommissioned in 2015
	Clay Lake	10	The licence application only requests 5 Ml/d
	Lough Island Reavy	22	The licence allows 40 Ml/d to be abstracted from the Lough, but also states that only 22 Ml/d can be pumped to Fofanny the remainder to Drumaroad (Silent Valley – East WRZ). The full 40 Ml/d can be pumped to Drumaroad within the licence but there is no infrastructure to deliver this at present).
	Lough Ross	9.5	
	Seagahan	20	
	Spelga/Fofanny (+ Lough Island Reavy)	52	This is part of combined licence with Lough Island Reavy which also has a separate individual licence of 22 Ml/d

Table A.1 – Abstraction licence conditions

(based on licences re-issued in 2007 and licence application documents)

Demand centres

It is important that the Aquator models contain current information on demand across each of the WRZs. Demand values are attached to each demand centre (DC) so that as Aquator scales up demand across the WRZ (during a DO run) it can do so proportionally with respect to the demand centres. In this case, demand corresponds to post MLE (Maximum Likelihood Estimation) distribution input average values from the 2008-09 Water Balance. As this was based on a total of 21 WRZs it was necessary to combine some areas to produce values for the 15 demand centres included in the Aquator models. It was also necessary to split the Lisburn area across the East and South WRZs (Eastern General and Craigavon demand centres) as shown in Table A.2.

WRZ	Demand Centre	Demand (Ml/d)	Notes
North	Faughan/ Altnaheglish	45.04	
	Altnahinch	13.69	
	Ballinrees	17.62	
West	Derg/Bradan/ Macrory	37.22	
	Killyhevlin	25.68	
Central	Magherafelt/ Cookstown	26.70	

WRZ	Demand Centre	Demand (Ml/d)	Notes
East	Antrim/Larne	30.34	
	Ballymena	24.32	
	Eastern General	236.96	Includes Belfast, Carrick, Lough Cowey, Ards, Lisburn (45%) and Downpatrick
South	Newry	53.28	Includes Newry and Mournes (originally Mournes had some overlap with Eastern General but currently fully included in the South WRZ)
	Craigavon	94.74	Includes Craigavon, Lisburn (55%) and Craigavon SE
	Lough Ross	6.43	
	Armagh	18.33	
	Dungannon	5.20	
Total		**635.56**	

Table A.2 – Demand values applied to each demand centre in the Aquator models

(based on post MLE values from 2008-09 Water Balance)

Links

Links (black arrows) in Aquator are used to join together components of the supply system. They can represent pipelines, aqueducts or channels. As Aquator is a simplification of the real supply system, each link often represents a number of actual pipes on the ground. In the Aquator models developed here many links have no maximum capacity set. This is because the WTWs to which they are connected have maximum capacities which control flow through the distribution system. However, in some cases, particularity where links are transferring water from one area of a WRZ to another and where WTWs have multiple outputs, the application of capacity constraints to links can have a significant effect on model operation and hence DO results. Therefore, a lot of effort has been expended in assigning appropriate maximum capacity constraints to certain links.

Again it is important to stress that each of these links does not necessarily represent an individual pipeline – it is more convenient to think of the links as a general movement of water between areas across the supply network. Table A.3 gives a list of all links to which maximum capacities have been applied along with the reasons behind the limit. In addition to links in current operation, all new links which have approved funding under PC10 have also been included. If a link has been investigated but it did not prove possible to attach a reliable capacity the link was left as unrestricted. The reasons for this are noted against the link in Table A.3.

WRZ	Origin component	Destination component	Maximum capacity (Ml/d)	Provenance and reasoning
North	Ballinrees WTW	Ballinrees DC	35	This relates to the capacity of the main supplying Coleraine, Castlerock and Garvagh. In practice it would be difficult for the distribution network to utilise more than 30 Ml/d. There are several trunk mains from the works into the Ballinrees demand centre but the capacity of these are not known at this stage so 35 Ml/d is a reasonable capacity to use.
	Ballinrees WTW	Faughan/Altnaheglish DC	15	Known physical constraint on Ballinrees to Limavady and Londonderry Transfer[4]
	Ballinrees WTW	Altnahinch DC	10	Set to PPP contracted volume but physical capacity also known to be 10 Ml/d (determined during testing on project handover)
West	No link capacities applied			
Central	No link capacities applied			
East	Killylane WTW	Ballymena DC	3	Established during field tests and modelling carried out by Mouchel Parkman in 2009. The low capacity is due to low pressure problems on the main. There are proposals to upgrade this main but as there is no valid justification at the moment the link is restricted to 3 Ml/d.
	Dunore Point WTW	Ballymena DC	22	Established during field tests and modelling carried out by Mouchel Parkman in 2009
	Dunore Point WTW	Antrim and Larne DC	Unrestricted	The main from Dunore Point to Larne has a known capacity of 11 Ml/d. However, in the Aquator demand centre Larne is combined with Antrim and there are multiple inputs to Antrim making it impossible to assign a reliable overall flow capacity to this link.

[4] Capita Symonds (2008)

WRZ	Origin component	Destination component	Maximum capacity (Ml/d)	Provenance and reasoning
	Dunore Point WTW	Eastern General DC	160	The Dunore Point to Belfast link was completed in 2008 with a design flow capacity of 140 Ml/d. However, further upgrades were applied during construction taking the capacity to 160 Ml/d. This was established during field tests and modelling carried out by Mouchel Parkman in 2009
South	Castor Bay WTW	Dungannon DC	30	Castor Bay to Dungannon strategic transfer project tender document
	Castor Bay WTW	Craigavon and Lisburn DC	Unrestricted	The Castor Bay to Forked Bridge strategic transfer (29 Ml/d) is represented by this link but so are a number of other connections. When combined the overall capacity is above that of Castor Bay WTW and hence not restrictive. However, there is a complicated network of links in this area and it's not possible to assign one single constraint
	Castor Bay WTW	Jerretspass PS	18	Castor Bay to Newry Phase 1 PC10 scheme (capacity determined by Atkins TMM test). Phases 2 and 3 (taking capacity to 38 Ml/d) are very likely to go ahead but will be reviewed at PC13 so are not included in the baseline model
	Jerretspass PS	Lough Ross DC	5	PC10 and PC13 capacity. There is a design capacity of 9.8 Ml/d for the proposed main from Jerretspass to a new SR at Tullyhappy. This SR will then feed about 5 Ml/d into Newry distribution and then about 5 Ml/d into the Lough Ross area. The information available would indicate that 1 Ml/d can pass to Lough Ross through an existing system but there is uncertainty over the performance of the existing system once the new system is in place, so the capacity of the link is set to 5 Ml/d.

WRZ	Origin component	Destination component	Maximum capacity (Ml/d)	Provenance and reasoning
	Jerretspass PS	Newry DC	18	There is a 450mm downstream main via gravity and a 12" DI main via the pumps at Jerretspass into the Newry demand centre so Atkins TMM team don't envisage any other restriction than the amount of water that can pass along link 1 from Castor Bay. For PC13 the capacity of this link is been increased to 33 Ml/d.
	Castor Bay WTW	Armagh DC	10	The Castor Bay to Dungannon strategic transfer project tender document gives a value of 6.7 Ml/d as a current supply amount for this link. However, it is known that there is some surplus in capacity in this area so the maximum has been set to 10 Ml/d
	Lough Island Reavy Reservoir	Fofanny WTW	20	There is an actual infrastructure constraint on the pipe between Lough Island Reavy and Fofanny WTW.

Table A.3 – Supply network link capacities

Reservoirs

All significant impounding reservoirs were included in the Aquator models although some were combined together as one component, for example those of the Woodburn system. The most important parameter attached to the reservoir components was storage capacity but there were also a few compensation flow conditions that have been applied at the reservoir outlets. The determination of reservoir inflows is described in Catchment hydrology.

Storage capacity

The Aquator reservoir component storage volume parameter was set based on 'Maximum Usable Storage' values provided by NI Water for WRMP 2010 and shown in Table A.4.

Water Resource Zone	Reservoir	Aquator Storage Volume (Ml)
North	Altnaheglish	2227
	Ballinrees	1209
	Altnahinch	1250
	Altikeeragh	185

Water Resource Zone	Reservoir	Aquator Storage Volume (Ml)
West	Loughs Fingrean/Macrory	1282 (combined)
	Lough Glenhordial	92
	Lough Bradan	950
	Lough Erne	Assumed infinite storage relative to demands
Central	Lough Fea	1696
	Lough Neagh	Assumed infinite storage relative to demands
East	Lough Neagh	Assumed infinite storage relative to demands
	Lough Island Reavy	9092
	Woodburn System	8193
	Silent Valley	12913
	Ben Crom	7721
	Killylane	1327
	Dungonnell	942
South	Spelga/Fofanny	3932
	Camlough Lake	3300
	Lough Neagh	Assumed infinite storage relative to demands
	Lough Ross	No information provided so set to 20000
	Clay Lake	1467.6
	Seagahan	2453

Table A.4 – Reservoir storage capacity

Compensation flow conditions

Compensation flow requirements were provided for three reservoirs in the same NI Water table as the storage capacity values. These were applied to the relevant Aquator models and are shown in Table A.5. The compensation condition at Altnahinch is specifically stated in the abstraction licence but this is not the case for the Dungonnell or Spelga/Fofanny ones.

Water Resource Zone	Reservoir	Compensation flow condition (Ml/d)
North	Altnahinch	3.21
East	Dungonnell	0.454
South	Spelga/Fofanny	2.27

Table A.5 – Reservoir compensation flow conditions

Catchment hydrology - reservoir inflows & river flows

Introduction

As flow is not recorded at the majority of river intakes or reservoir inflows a bespoke method for determining hydrological model inputs was devised for the WRMP 2010. Aquator requires a time series of daily flow values at each of its catchment components (green circles in the model schematics shown in Figure A.3 to Figure A.7) which are located above each reservoir (blue rectangles) in the model schematics and at the start of each river reach (blue lines in the model schematics). The methodology employed utilises gauged data provided by the Rivers Agency along with software developed for Northern Ireland Environment Agency by Wallingford Hydrosolutions Ltd, and is described in the following sections. For the purpose of WRMP 2010, Lough Neagh and Lough Erne are considered as infinite supplies (abstractions are limited only by infrastructure constraints and licence conditions) and hence catchment inflows have not been calculated.

Data

Data available on the Rivers Agency's WISKI database were downloaded, checked by an experienced hydrologist and comments on the quality of the data with respect to this study were made. In addition, the Northern Ireland Environment Agency supplied information on the quality of recorded flows and the reasons why particular gauging stations were included or rejected for use in Low Flows Enterprise software. Reasons for rejection included artificial influences on the flow regime (abstractions or discharges) and insufficient record length. The information provided was used in the hydrological assessment. The available data are summarised in Table A.14.

Software

The Low Flows Enterprise (LFE) software was used to provide Flow Duration Curves (FDCs) at each of the licensed intake locations. Mapping information added to the software included the WISKI gauging stations, Licensed Intakes (taken from the Northern Ireland paper licences) and 1:50,000 scale OSNI maps. The software also included flow gauges selected by CEH Wallingford and the intakes from Northern Ireland Water GIS layer. No artificial influences on the flows or impoundments were included.

Approach

The aim of the hydrological analysis was to estimate mean daily flows from 29/12/76 to 11/07/09 (as this represented the full period of gauging station data available from Rivers Agency) at each of the Licensed Intakes shown in Table A.15 in section A.8.3. To do this the following method was developed:

- The LFE software was used to delineate a catchment (catchments maps are included in section A.8.3) draining to each of the Licensed Intakes. The software is able to use either a digital (using an inflow grid from the CEH-Wallingford Digital Terrain Model to identify watersheds) or analogue (defining the area contributing to a catchment by an

association of grid squares to the nearest reach of river) boundary. Generally a digital boundary was used unless the software was unable to find a digital climb thread (it should be noted that the analogue catchment outlets were generally located downstream of the Licensed Intakes). Boundaries were checked using OSNI mapping and amended where necessary. Detailed notes for the delineation of each catchment are given in section A.8.3 (Table A.16).

- For each catchment, similar gauged catchments were selected based on the Region of Influence (ROI) methodology which uses catchment characteristics that can be obtained for any ungauged catchment in the UK. These are called Region of Influence gauging stations, five were selected and ranked based on their distance in 'HOST space' from the Licensed Intake catchment, with rank 1 being the nearest (or most similar).
- Flow statistics were generated and the catchment boundaries saved. The flow statistics were generated using the ROI gauges and included annual mean flow, annual runoff, Base Flow Index, annual and monthly flow duration statistics for the natural flow regime (FDCs). Where available, geographically local data gauges were used to improve the estimation of these statistics.
- If it was necessary to use an analogue catchment downstream of the intake site, then the FDCs created were adjusted using area weighting.

A bespoke excel tool was created which contained data processing functions for estimating the flow time series for each Licensed Intake as follows:

- The annual FDC for the Licensed Intake site, the five ROI gauges and the recorded flow time series were imported into the Excel spreadsheet. For the ROI gauge ranked 1, the flow recorded each day was compared to the FDC for the gauge and the percentage time this flow is exceeded was noted. This was then related to the flow statistics obtained for the intake site from LFE to create a mean daily flow time series at the intake site. In Table A.6, for example, if the flow recorded at GS1 (203029) is 4.17 m3/s (flow exceeded 5% of the time), the corresponding flow at the intake site is 0.264 m3/s (flow exceeded 5% of time). If flow data for the particular date is not available then GS2 (203097) was used, then GS3 etc. until a complete time series from 29/12/76 to 11/07/09 was produced. In some cases it was necessary to replace ROI gauge 5 with a different gauge if insufficient flow data was available; gauges geographically close to the intake site were used to do this.

This methodology is illustrated graphically in Figure A.8 and with each aspect shown in full detail in section A.8.2.

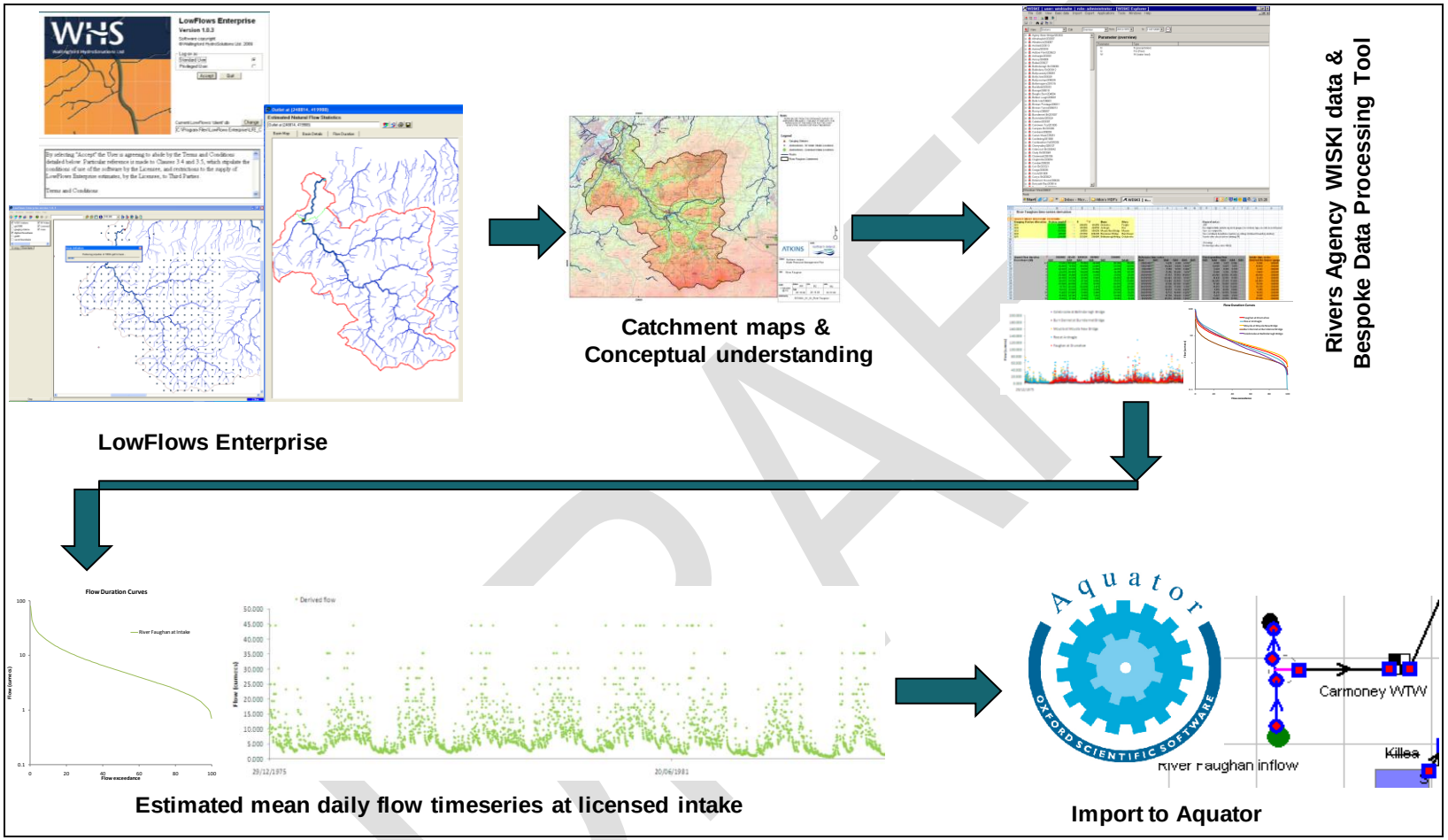


Figure A.8 – Graphical illustration of the methodology for the determination of catchment hydrology

Annual flow duration	ROI gauge 1	ROI gauge 2	ROI gauge 3	ROI gauge 4	ROI gauge 5	Intake
Exceedance (%)	203029	203097	203046	203093	203033	
0.1	23.620	66.120	4.296	177.700	47.330	0.988
1	8.656	39.260	2.286	106.800	23.480	0.505
2	6.514	30.400	1.761	80.420	18.020	0.390
3	5.333	24.600	1.491	70.970	14.740	0.328
4	4.631	21.150	1.342	62.430	12.420	0.290
5	**4.170**	19.170	1.243	57.320	11.070	**0.264**
6	3.888	17.450	1.150	53.340	9.872	0.244
7	3.635	15.700	1.073	50.070	9.112	0.226
8	3.384	14.310	1.000	46.590	8.422	0.210
9	3.207	13.320	0.935	44.030	7.831	0.197
10	3.073	12.530	0.880	41.830	7.309	0.187

Table A.6 – Example of flow duration curve sampling

Checking of the flow time series

As stated above, the gauged data from WISKI was checked and comments on the data were made. The time series were also plotted and examined for erroneous data, for example improbably high or low values (e.g. greater than 1,000 m^3/s or more), were removed.

An additional check was carried out at a gauged site: Martin's Bridge on the River Callan. This gauging station was chosen because it is not including in the LFE software and, according to the Hydrometric Register, the influence of abstractions and discharges is minimal. The methodology was followed as if the site was ungauged, and the flows calculated were compared with the recorded flows. Figure A.9 shows the results of this test for 1981. There is a generally good agreement between the two sets of flows.

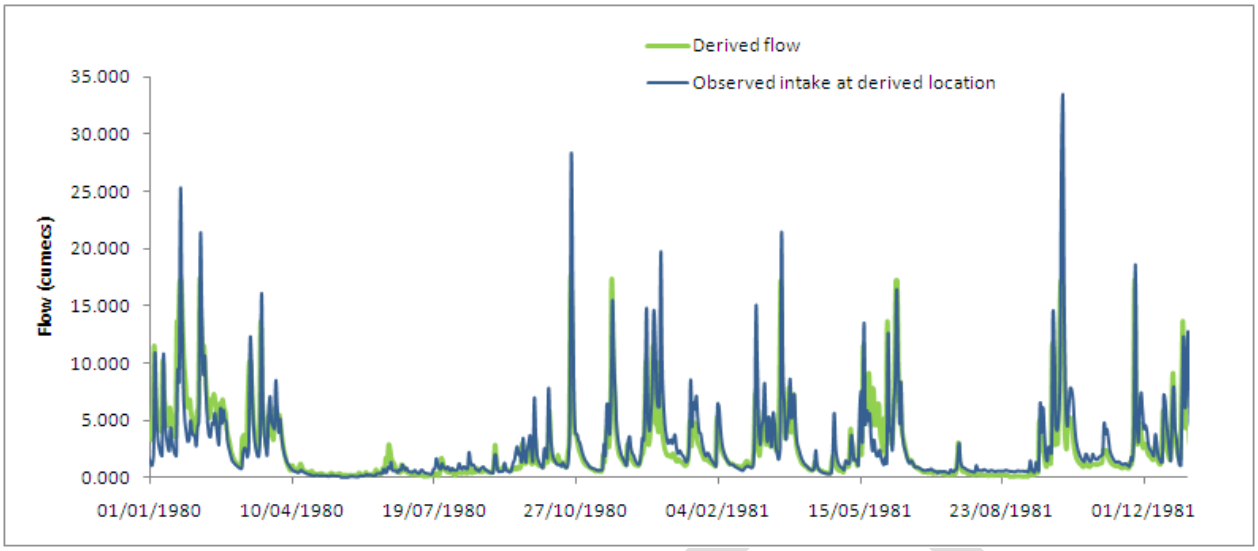


Figure A.9 – Recorded and Derived Flow at the Martin's Bridge gauging station during 1981

Limitations

The checks performed on the incoming data and the flows generated, illustrated that the method reliably produced flow time series for each of the Licensed Intakes. However, there were a few limitations and these are listed below:

- The length of the overall flow record is relatively short at 33 years (29/12/76 to 11/07/09);
- Not all the gauging stations have recorded data for the whole period of record and therefore the time series may be generated from more than one of the ROI gauges. When the record switches from one gauge to another the flows may show a relatively large increase or decrease. The time series were checked and no significant increases or decreases were found;
- The time series created will never be greater than the Q0.1 flow, which is the flow which is exceeded 0.1% of the time; and,
- The LFE software contains no abstractions, discharges nor impoundments.

Water treatment works

Physical capacity

During the data collation phase a number of sources of information regarding physical capacities of water treatment works (WTW) were provided. These included Water Service Works Overview sheets produced in 2005, NI Water GIS layers and AIR09 pumping station capacities. However, the most important source of information was a table assembled by the NI Water Water Supply Team for the purposes of WRMP 2010. This table provided values for each of NI Water's WTWs for both normal production and delivery capacity. These delivery capacity values were used to populate the Aquator models.

Whilst most data provided related to maximum flow capacity, the Water Service Works Overview sheets also stated a minimum flow capacity for some WTWs. Where possible, these have been incorporated into the Aquator models. For the PPP scheme WTWs a

separate table was provided outlining flow capacities at the various delivery points for each WTW. Table A.7 shows all maximum and minimum WTW capacities applied in the models.

WRZ	Water Treatment Works	Minimum flow (Ml/d)	Source	Maximum capacity (Ml/d)	Source
North	Altnahinch	-	-	10.3	WRMP 2010
	Ballinrees	-	-	50.0	PPP capacity table
	Carmoney	-	-	35.0	WRMP 2010
	Caugh Hill	8	Water Service 2005 Works Overview	24.0	WRMP 2010
West	Belleek	-	-	2.0	WRMP 2010
	Killyhevlin	-	-	35.0	WRMP 2010
	Lough Bradan	-	-	12.3	WRMP 2010
	Lough Glenhordial	-	-	6.0	WRMP 2010
	Loughs Fingrean/Macrory	-	-	12.0	WRMP 2010
	Derg			25.0	WRMP 2010
Central	Lough Fea	-	-	12.1	2002 WRS
	Moyola	-	-	19.0	PPP capacity table
East	Dorisland	25	Water Service 2005 Works Overview	46.0	WRMP 2010
	Drumaroad	-	-	116.0	WRMP 2010
	Dungonnell	-	-	11.0	WRMP 2010
	Dunore Point	-	-	180.0	PPP capacity table
	Killylane	-	-	12.0	WRMP 2010
South	Camlough	-	-	5.0	WRMP 2010
	Castor Bay	-	-	147.0	PPP capacity table
	Fofanny	18	Earthtech Project Profile Sheet	44.0	WRMP 2010
	Clay Lake	-	-	5.0	WRMP 2010
	Lough Ross/ Carran Hill	-	-	6.8	WRMP 2010
	Seagahan	-	-	13.0	WRMP 2010

Table A.7 – WTW flow capacity constraints

Production losses

Using 2009 estimated abstraction and measured delivery volume data provided by Dalriada (delivered through NI Water) it was possible to calculate typical losses for the PPP scheme WTWs. Therefore, a loss value of 2.44% was applied to each of these WTWs during modelling.

Data were also provided which allowed a loss value of 10% to be applied to Drumaroad WTW. All other NI Water WTWs were given a default loss value of 5% based on Atkins' experience of works in England.

Is it is important to note that where abstraction licence capacities are identical to WTW delivery capacities, for example at Ballinrees WTW, then the delivery capacity will be reduced as it is not possible to abstract additional water to compensate for losses.

Recommendations for improvement

The data provided for WRMP 2010 have facilitated a full and appropriate assessment of DO in each of the five WRZs. In any modelling exercise it is always possible to improve the accuracy of any outputs by increasing the volume and quality of input data. In this particular modelling exercise the most significant omission was the supply system operating rules, in particular the control curves for reservoirs. With these incorporated into the models it would be possible to base the DO assessment more on actual representation of operational practices and less on hypothetical model optimisation (section A.5.2) It would also be possible to use the models to explore how the different sources might be operated under non-drought conditions.

A.5 Deployable output

A.5.1 Introduction

For surface water systems, the DO is defined as the constant rate of supply that can be maintained from the water resources system except during periods of restriction. The DO values determined with the Aquator models are taken through to the supply demand balance where they will be converted to Water Available for Use (WAFU) through the application of an outage allowance.

With the exception of the Central WRZ, which only has one demand centre (DC), two separate Aquator models were developed to assess DO for each WRZ. The first model type incorporates multiple demand centres representing distinct supply areas (initially based on the 15 resource zones used for WRS 2002) and a simplified representation of the trunk main distribution system with some maximum capacity constraints included. The second model type has only one central DC to which all sources are connected with links that have no capacity constraints. The results from this second model type are intended to provide an estimate of the unconstrained DO of the WRZ. In this case unconstrained is a hypothetical condition in which there are no internal transfer capacity constraints. Therefore water can be moved freely around the WRZ and all demand anywhere in the WRZ has equal accessibility to all supplies.

The Aquator inbuilt DO analyser was employed to measure the DO of each constrained and unconstrained WRZ model. Aquator has two DO analysers that follow the guidance in the English & Welsh and Scottish methods of determining DO. The English & Welsh method, which is applicable to WRMP 2010, involves setting a minimum and maximum

overall demand in a resource zone and increasing the demand incrementally until failure is encountered. The DO of the system is defined as the overall demand that is one increment below the demand causing a failure. All reservoirs are set to 100% storage at the start of the run (29/12/1975). Unplanned outages from events such as pollution, poor raw water quality, and power failure are not included in the DO assessment but are included later in the supply demand balance.

A.5.2 Model optimisation

In the absence of any operational rules such as reservoir control curves it was necessary to exert some additional control on the models to ensure that they would behave sensibly during the determination of DO. The main aims of the optimisation carried were to:

a) Ensure that demand was fulfilled at each of the demand centres in the WRZ on any given day unless there was insufficient water across the WRZ to do so; and

b) Ensure that for conjunctive use the sources most sensitive to low-flow conditions were used least preferentially in order to maintain the highest level of storage and hence the best protection to supplies during dry periods.

In addition to this general optimisation, as mentioned above the models were also optimised so that the non-NI Water WTWs operated under the PPP scheme were used most preferentially. This is because these Dalriada WTWs are contracted to supply their full amounts to NI Water at any time requested and also because they are all connected to large sources with very little chance of failure due to hydrological conditions (with exception to Ballinrees WTW, they are all connected to Lough Neagh which, for the WRMP 2010 supply forecast, is assumed to be infinite relative to demands). Under the design condition for the supply demand balance, the PPP schemes will be expected to deliver at the contracted volumes.

There are two main types of parameter that have been adjusted during optimisation; the minimum flow parameter (units of Ml/d) and the cost of supply parameter (units of £/Ml). Neither parameter was set on the basis of known costs or known physical constraints at this stage; this was purely done to achieve sensible model behaviours as described above. The minimum flow parameter was adjusted on a number of links and WTWs. When the parameter was set above zero the model aimed to supply water from this link or WTW at this level or higher for as long as there is sufficient demand to support such a movement of water. This is an effective means of moving water from certain sources in a preferential fashion but in some cases it can lead to the model behaving in an unrealistic manner with respect to fulfilling demand across a number of demand centres. For this reason it was used in combination with the cost of supply parameter which was also adjusted on a number of links and WTWs. This parameter allows a cost to be added to supply and hence reduces the preferentiality at which sources are used. Using a number of different costs across a WRZ is a particularly effective optimisation technique.

With manual optimisation the model setup is only generally valid for one set of conditions. For a DO run, the critical period with respect to total demand in the WRZ is determined using the DO analyser. The model is then run in normal time series mode up to the failure date. The total demand is set to the same level as the demand that caused the failure in the DO analyser. If the model does not appear to behave sensibly (for example demand is not satisfied at one demand centre whilst another connected demand centre has surplus supply available) then some of the above parameter changes are made and the DO analyser is repeated to determine the new demand that can be met. This iterative process continues until the model is fully optimised.

There are a number of drawbacks to this method. Firstly, every time that model conditions are changed, for example when looking at conditions anticipated under climate change (section A.6.2) or examining the effects of adding new infrastructure during the optioneering process (section A.6.3), the models must be re-optimised which can be a time consuming process. Secondly, the models are optimised to behave most effectively for just one set of conditions. It is therefore unlikely that real operational rules would be able to achieve the same level of supply under that one set of conditions, resulting in a lower DO.

Finally, the models now contain parameter settings that are no longer based on actual processes occurring in the field. Therefore it is imperative that the audit trail which sits alongside the models clearly states which parameters have been set for model optimisation and which have been set to represent reality.

Despite these issues, this type of optimisation is necessary and appropriate in the absence of real operational rules and a satisfactory automatic optimisation procedure. It should be noted that one such application may become available in a future version of Aquator in which case it will likely be possible to apply this to the NI Water models retrospectively.

The model optimisation that has been applied is shown for the DO runs in Table A.8 and Table A.9 in the 'Model optimisation required' row. The additional optimisation required in the climate change runs is shown in section A.8.4. At the time of writing the optioneering model runs have not been completed but details of optimisation carried out will be provided along with the model run results.

A.5.3 Results

The following tables give the results of the DO determination for each WRZ along with the constraints linked to the failure to meet higher demand and the model optimisation that was required (North, West and Central in Table A.8 and South and East in Table A.9). The tables contain the following information:

- Actual demand centre demand – based on 2008-09 average distribution input figures.
- WRMP 2010 WRZ DO – multi demand centre model.
- WRMP 2010 Unconstrained WRZ DO – single demand centre model.
- Demand factor – the ratio of DO to 2008-09 distribution input.
- Model optimisation requirements – measures taken to control model operation where no information had been provided on NI Water operating rules, for example reservoir control curves. The optimisation applied is not intended to replicate NI Water operating manuals, but only to achieve sensible behaviour in the model.
- Failure year – the critical year in which resources are most constrained by hydrology or licence/ asset constraints and hence the period over which DO is defined.
- Critical demand centre – the demand centre at which resources are most constrained and hence where DO is defined.
- Cause of failure – an explanation of the events that determine the condition under which DO is calculated.
- Failure analysis – some additional work to investigate the sensitivity of results to changes in hydrology and also the temporal extent of the failures that determine the DO results.
- Assets constraints – the relevant WTW and link capacities, along with the corresponding licence conditions.

WRZ	North			West		Central
Demand Centre (DC)	**Altnahinch**	**Ballinrees**	**Faughan/ Altnaheglish**	**Derg/ Bradan/ Macrory WRZ**	**Killyhevlin WRZ**	**Magherafelt/Cookstown**
Actual Demand (2008-09 post MLE Distribution Input (DI)) (Ml/d)	**13.69**	**17.62**	**45.04**	**37.22**	**25.68**	**26.70**
WRMP 2010 WRZ DO (Ml/d)	106.2			88.2		31.1
Demand factor	1.391			1.402		1.165
Model optimisation required	1. Assign cost of £10/Ml to all WTWs apart from Ballinrees to force preferential use of PPP. 2. Add minimum flow of 35 to Ballinrees WTW to Ballinrees DC link to prevent above costs from causing a failure at Ballinrees DC. 3. Add cost of £5/Ml to link between Caugh Hill WTW and Faughan DC to promote use of Faughan River intake and protect Altnaheglish storage (important to prevent early failure). 4. Add minimum flow of 10Ml/d to the link between Ballinrees WTW and Altnahinch DC to prioritise the DC with the more serious hydrology constraints			1. Add a £10/Ml cost to Lough Bradan WTW as this is the most hydrologically challenged source. This source still causes the failure in the DO run so no further optimisation required.		1. Added cost of £10/Ml to Lough Fea WTW to ensure full use of PPP Moyola (not required for DO run anyway but may be useful for CC)
Failure year	1984			1984		1975
Critical demand centre	Altnahinch			Derg/Bradan/Macrory		WRZ
Cause / observations	Altnahinch reservoir empties on 20/09/1984. The model supplies a continuous 10Ml/d from Ballinrees to the Altnahinch DC. Increasing the capacity of this link would appear to be key to increasing overall WRZ DO but there isn't too much more that can be extracted anyway, based on current asset constraints			Lough Bradan empties on 19/09/1984. This is despite all other sources being used in preference over the full run. At this point Killyhevlin DC is receiving 36Ml/d out of a possible 37Ml/d so there's not much scope for inter-zonal transfers in improving overall DO. This is highlighted in the unconstrained run DO.		Asset constraints
WRMP 2010 Unconstrained WRZ DO (Ml/d)	116.8			89.1		31.1
Demand factor	1.530			1.530		1.165
Model optimisation required	1. Minimum flow of 50Ml/d assigned to Ballinrees WTW to force full supply. 2. Cost of £10/Ml added to Altnahinch WTW to preserve the source with the highest hydrology constraints			1. Add a £10/Ml cost to Lough Bradan WTW as this is the most hydrologically challenged source. This source still causes the failure in the DO run so no further optimisation required.		1. Added cost of £10/Ml to Lough Fea WTW to ensure full use of PPP Moyola (not required for DO run anyway but may be useful for CC)
Failure year	1984			1984		1975
Cause	Altnahinch reservoir empties on 19/09/1984.			Lough Bradan empties on 18/09/1984. This is despite all other sources being used in preference over the full run.		Asset constraints
Failure analysis	1. If not hydrologically constrained would expect a WRZ DO of 113.2Ml/d based on this ratio between demands on each DC and the maximum that can be supplied to Altnahinch based on infrastructure constraints. 2. If not hydrologically constrained would expect an Unconstrained WRZ DO of 118.1Ml/d based on the WTW capacities and specified losses (i.e. DO run is just 1.3Ml/d down at Altnahinch rest at full capacity) 3. Licence is also constraining Ballinrees as 50Ml/d limit on abstraction is then subject to 2.44% losses 4. DO failure is just for one day if the run is extended beyond the initial failure. The model can meet higher demands as a WRZ DO with very few failures; achieved a maximum asset delivery of 113.2Ml/d with 22 failure days all essentially in one block around September 1984. We may want to check flows at that time, but the hydrograph looks OK - just a prolonged dry spell.			1. If not hydrologically constrained would expect a WRZ DO of 90.6Ml/d based on this ratio between demands on each DC and the maximum that can be supplied to Killyhevlin based on infrastructure constraints. 2. If not hydrologically constrained would expect an Unconstrained WRZ DO of 92.3Ml/d based on the WTW capacities and specified losses (i.e. 3.2 Ml/d down). 3. DO failure is just for 3 days if the run is extended beyond the initial failure. The model can meet higher demands as a WRZ DO with relatively few failures; but to achieve a maximum asset delivery of 90.6Ml/d there would be 32 failure days all primarily in August and September in the 1980s.		1. Not hydrologically constrained so WRZ DO matches some of infrastructure delivery capacities. 2. Apparently some issues around how readily Moyola could be extended if needed as an option so could be more focus on Lough Fea if options needed for additional supply in Central Zone. A quick check suggests that the hydrology would (just) support full use of the Lough Fea licence (17Ml/d) if the works capacity was increased.
DC WTW capacities (Ml/d)	10.3 at Altnahinch WTW	50 at Ballinrees WTW (PPP)	35 at Carmoney WTW, 24 at Caugh Hill WTW	25 at Derg WTW, 12.3 at Lough Bradan WTW, 6 at Glenhordial WTW, 12 at Fingrean/Macrory WTW	2 at Belleek WTW, 35 at Killyhevlin WTW	12.1 at Lough Fea WTW, 19 at Moyola WTW (PPP)
DC licence constraints (Ml/d)	14.5 at Altnahinch Reservoir	50 at Ballinrees Reservoir, 40 at River Bann	55 at River Faughan, 40 at Altnaheglish Reservoir and Glenedra (group)	26.6 at Derg/Strule, 16 at Bradan, 8 at Glenhordial, 18.5 at Fingrean/Macrory	2.5 at Belleek, 44 at Lough Erne	17 at Lough Fea, 20 at Lough Neagh
Link capacities (Ml/d)	Ballinrees WTW to Ballinrees DC 35, Ballinrees WTW to Faughan/Altnaheglish DC 15, Ballinrees WTW to Altnahinch DC 10.			None applied	None applied	None applied
Notes	Ballinrees can only deliver 48.8 because licence is 50 - 2.44% loss			The River Strule abstraction has now been added and the licence updated.	Lough Erne is assumed an infinite resource	Lough Neagh is assumed an infinite resource

Table A.8 – WRMP 2010 DO results; North, West and Central WRZs

WRZ	East			South				
Demand Centre (DC)	**Antrim/Larne WRZ**	**Ballymena WRZ**	**Eastern General WRZ (with 45% of Lisburn)**	**Newry WRZ**	**Craigavon WRZ (with 55% of Lisburn)**	**Lough Ross WRZ**	**Armagh WRZ**	**Dunganno n WRZ**
Actual Demand (2008-09 post MLE Distribution Input (DI)) (Ml/d)	**30.34**	**24.32**	**236.96**	**53.28**	**94.74**	**6.43**	**18.33**	**5.20**
WRMP 2010 WRZ DO (Ml/d)	329.5			218.6 (204.5 after 2015)				
Demand factor	1.130			1.228 (1.149 after 2015)				
Model optimisation required	1. Add 100% control curve-fill (not normal curve) to Silent Valley to encourage maximum filling of the reservoir from the River Annalong intake. 2. Add cost of £10/Ml to Dorisland and Drumaroad WTWs to encourage full use of PPP. This was not applied to Dungonnell and Killylane as it meant that these sources were grossly under-utilised. Therefore, a cost of £1/Ml was applied to these WTWs. 3. Add minimum flow of 9Ml/d to link between Dungonnell WTW and Ballymena DC to encourage use of own source over PPP water thus sending more PPP water towards E General. 9 found by trial and error as too high a number causes failure at Ballymena (not enough flow from PPP) 4. Add minimum flow of 8Ml/d to link between Killylane Reservoir and Killylane WTW to encourage use of own source over PPP water thus sending more PPP water towards E General. The 8 is set by trial and error to prevent over-utilisation of Killylane Reservoir. 5. Add minimum flow of 33Ml/d to link between Dorisland WTW and Eastern General DC to balance use of Dorisland and Drumaroad			1. Assign cost of £10/Ml to all WTWs apart from Castor Bay to force preferential use of PPP. 2. Add minimum flow of 5 Ml/d to link between Clay Lake WTW and Armagh RZ to minimise use of Castor Bay water 3. Add minimum flow of 13 Ml/d to link between Seagahan WTW and Armagh RZ to minimise use of Castor Bay water 4. Add minimum flow of 10 to link between LIR and Fofanny WTW to balance use of LIR and Spelga/Fofanny (not that relevant at this demand but may need further optimisation for option runs) 5. Add minimum flow of 16 Ml/d (17 Ml/d after 2015) to link between Jerretspass PS and Newry demand centre to balance use of water from Jerretspass PS between Lough Ross and Newry demand centres.				
Failure year	1978			1975				
Critical demand centre	Eastern General			Newry				
Cause / observations	Silent Valley and Ben Crom reservoirs become empty on 15/11/1978. However, the model is optimised to balance storage between Silent Valley/Ben Crom and the Woodburn system so with slightly different optimisation Woodburn could cause the failure. In relation to other WTWs, they are both utilised as little as possible throughout the run.			Asset constraints at Newry both before and after decommissioning of Camlough in 2015. However, this could easily have been Lough Ross with slightly different optimisation which has the same access to Castor Bay water.				
WRMP 2010 Unconstrained WRZ DO (Ml/d)	334.2			224				
Demand factor	1.146			1.259				
Model optimisation required	1. Add costs of £10/Ml to all WTWs apart from PPP to encourage PPP use. Increase to £20/Ml for Drumaroad and Dorisland; the most hydrologically challenged sources. 2. Apply minimum flow of 88Ml/d (trial and error) to link between Drumaroad WTW and E General DC to balance utilisation between Drumaroad and Dorisland.			1. Add minimum flow to Castor Bay of 127Ml/d to force use 2. Add 100% control curve to Spelga/Fofanny to balance use with LIR 3. Add cost of £10/Ml to Clay Lake to preserve the most hydrologically challenged source. 4. Add minimum flow of 44Ml/d to the link between Fofanny WTW and DC to force full use of Fofanny				
Failure year	1978			1991				
Cause	Woodburn Reservoir becomes empty on 13/11/1978. However, the model is optimised to balance storage between Silent Valley/Ben Crom and the Woodburn system so with slightly different optimisation Silent Valley/Ben Crom could cause the failure. In relation to other WTWs, they are both utilised as little as possible throughout the run.			Clay Lake empties on 30/10/1991 despite other sources being used preferentially for the duration of the run.				
Failure analysis	1. If not hydrologically constrained might expect an Unconstrained WRZ DO of 364.6Ml/d based on the licences, WTW capacities and specified losses (i.e. 30Ml/d down), but we know that 16Ml/d could reliably come from LIR, which is not in this model and there are constraints within the zone (see below) as well a hydrological ones. 2. DO failure is just for 3 days if the run is extended beyond the initial failure, with a demand of 329.8Ml/d. The model can meet 343Ml/d as a WRZ DO with 'only' 179 hydrological failures in late summer and autumn of many years. Any attempts to increase the WRZ DO beyond this point are limited by delivery constraints to the Ballymena DC where the DI ratio combined with capacity limits in the model mean that no greater demand can be met (it may be worth looking at sensitivity to DI if hydrological constraints are mitigated).			1. If ignore failures on Lough Ross, WRZ can achieve 196.3Ml/d so not just constrained by Lough Ross and it is the Newry DC that then constrains further water use. Running at a capacity limit of 225.1Ml/d produces 490 failure days generally in late summer and autumn and in most years. Increasing the link from Castor Bay looks to be the best option here maybe achieving about 220Ml/d.				
DC WTW capacities (Ml/d)	12 at Killylane WTW, 1 80 at Dunore Point WTW (PPP), 46 at Dorisland WTW	11 at Dungonnell WTW, 12 at Killylane WTW, 180 at Dunore Point WTW (PPP)	180 at Dunore Point WTW (PPP), 46 at Dorisland WTW, 140 at Drumaroad WTW	44 at Fofanny WTW, 5 at Camlough WTW (decomm'd in 2015), 147 at Castor Bay WTW (PPP)	147 at Castor Bay WTW (PPP)	6.8 at Carran Hill WTW	5 at Clay Lake WTW, 13 at Seagahan WTW, 147 at Castor Bay WTW	147 at Castor Bay WTW (PPP)
DC licence constraints (Ml/d)	16.1 at Killylane, 50 at Woodburn, 189 at Lough Neagh	14.5 at Dungonnell, 16.1 at Killylane, 189 at Lough Neagh	189 at Lough Neagh, 50 at Woodburn, 115 group licence for Silent Valley, Ben Crom and Annalong River	22 at Lough Island Reavy (paper licence states 22 to Fofanny but 40 to Drumaroad- no link at present, 52 at Spelga/Fofanny and LIR group) , 5 at Camlough Lake (decomm'd in 2015), 154 at L. Neagh	154 at Lough Neagh	9.5 at Lough Ross	10 at Clay Lake, 20 at Seagahan, 154 at Lough Neagh	154 at Lough Neagh
Link capacities (Ml/d)	Killylane WTW to Ballymena WRZ 3, Dunore Point to Ballymena WRZ 22, Dunore Point to Eastern General 160			Castor Bay to Dungannon WRZ 30, Castor Bay to Armagh WRZ 10, Castor Bay to Jerretspass PS 18, Jerretspass PS to Lough Ross DC 5, Jerretspass PS to Newry DC 18. Also added link of 20 between LIR and Fofanny to enforce Stuart Walsh view that LIR can supply 20 this way (licence 22)				
Notes	Lough Neagh is assumed an infinite resource		Drumaroad losses set to 10% based on information from Stuart Walsh	Storage capacity of Lough Ross set to 20000 Ml as had no info. In 2015 Camlough is decomm'd	Lough Neagh is assumed an infinite resource			Altmore now disabled

Table A.9 – WRMP 2010 DO results; South (before and after decommissioning of Camlough in 2015) and East WRZs

Based on the constrained modelled view of WRZ, i.e. according to the English & Welsh guidance, the overall DO for NI Water is 773.6 Ml/d until 2015 and 759.5 Ml/d after the decommissioning of the Camlough source in the South WRZ. A summary of the DO assessment in each WRZ is given below.

North WRZ

The DO for the North WRZ is 106.2 Ml/d which is equivalent to 1.4 times the 2008-09 post MLE Distribution Input (i.e. the DO is 1.4 times higher than the average demand met in those years). The DO is determined by Altnahinch reservoir emptying in September 1984. If there were no hydrological constraints, i.e. DO was only constrained by assets in place across the WRZ, then the result would be increased to 113.2 Ml/d.

With the unconstrained model, where all sources are connected to one central demand centre, DO is increased to 116.8 Ml/d which again is determined by Altnahinch reservoir emptying in September 1984. Removing the hydrological constraints to leave only the asset constraints would further increase DO to 118.1 Ml/d.

With the current model setup a continuous 10 Ml/d is supplied from Ballinrees to Altnahinch. Increasing the capacity of this link would appear to be the key to increasing overall WRZ DO.

West WRZ

The DO for the West WRZ is 88.2 Ml/d which is equivalent to just over 1.4 times the 2008-09 post MLE Distribution Input. The DO is determined by Lough Bradan emptying in September 1984. If there were no hydrological constraints then the result would be increased to 90.6 Ml/d.

With the unconstrained model DO is increased to 89.1 Ml/d which again is determined by Lough Bradan emptying in September 1984. Removing the hydrological constraints to leave only the asset constraints would further increase DO to 92.3 Ml/d.

This DO is achieved with all other sources being used in preference over the full run. In terms of inter-WRZ connectivity, the Killyhevlin demand centre is receiving 36 Ml/d out of a possible 37 Ml/d so there's not much scope for moving inter-zonal transfers to Derg/ Bradan/ Macrory demand centre in improving overall DO. This is highlighted in the unconstrained run DO.

At this time the licence application for the Strule PC10 scheme is still being considered (although like all PC10 schemes it is included in the baseline DO). It is known that under very low flow conditions the draft licence limits could result in a worst-case reduction in yield from the Derg and Strule from 26.6Ml/d to 8Ml/d during the lowest flow conditions predicted[5]. A lack of interconnectivity in the WRZ means that at times of minimum flow conditions, there are no alternative sources of supply to make up any short term deficits caused by reduced abstraction from the Strule. The available flow record suggests that low flow conditions that could severely restrict abstraction only arise about 1% of the time, but these events could last for up to 3 weeks.

Discussions between NI Water and NIEA have reached an agreement whereby in the event of such water scarce periods arising, the output from the Derg WTW could be maintained by following normal drought planning procedures under Article 4.6 of the WFD. It is therefore appropriate for NIW to consider mitigating the risks to public water supply within the Derg area during drought periods, although such measures are outside the scope of the Water Resources Management Plan process. Further consideration is included in Section 9.4 of the main report.

[5] 8Ml/d represents the maximum abstraction level from the Strule that would meet the UKTAG requirements at all times of the flow record.

Central WRZ

The DO for the Central WRZ is 31.1 Ml/d which is equivalent to just less than 1.2 times the 2008-09 post MLE Distribution Input. At present there are no hydrological constraints and the result for this WRZ with a single demand centre is determined only by asset constraints and not hydrological constraints.

East WRZ

The DO for the East WRZ is 329.5 Ml/d which is equivalent to just over 1.1 times the 2008-09 post MLE Distribution Input. The DO is determined in the Eastern General area by Silent Valley[6] and Ben Crom reservoirs emptying in November 1978. However, the model is optimised to balance storage between Silent Valley/ Ben Crom and the Woodburn system so with slightly different optimisation Woodburn could cause the failure.

With the unconstrained model, where all sources are connected to one central DC, DO is increased to 334.2 Ml/d which this time is determined by the Woodburn system emptying in November 1978 (again this could easily have been Silent Valley and Ben Crom). Removing the hydrological constraints to leave only the asset constraints would further increase DO to 364.6 Ml/d.

South WRZ

The DO for the South WRZ is 218.6 Ml/d which is equivalent to about 1.3 times the 2008-09 post MLE Distribution Input. In 2015 the Camlough source (5Ml/d consistent with the previous safe yield assessment) is planned to be decommissioned which leads to a decrease in DO to 204.5 Ml/d. This DO reduction of 14.1 Ml/d is larger than the supply capacity of Camlough which is 5 Ml/d due to the conjunctive nature of the model[7]. The capacity of the link between Castor Bay and Newry is 18 Ml/d and means that additional water from Castor Bay cannot be moved towards the Newry DC to compensate for the loss of the Camlough supply to the Newry demand centre.

Both before and after the loss of Camlough in 2015, DO is determined by asset constraints at Newry. However, the model is optimised to share water from Castor Bay between the Newry and Lough Ross DC's. With slightly different optimisation, Lough Ross could easily cause the failure. Using the unconstrained model, DO is increased slightly to 224.0 Ml/d which is determined by Clay Lake emptying in October 1991. After 2015, with the loss of Camlough, DO in the unconstrained model is 219 Ml/d.

A.5.4 Looking back to WRS 2002

Table A.10 shows a comparison of the WRMP 2010 DO results with the WRS 2002 DO assessment. Overall, it seems that there is little change in the total DO for Northern Ireland. The WRMP 2010 unconstrained DO is about 25 Ml/d higher than the WRS 2002 DO of 771 Ml/d; the WRMP 2010 constrained DO is about 3 Ml/d higher than the WRS 2002 DO of 771 Ml/d. From 2015, with the decommissioning of Camlough, overall DO would be reduced to 759.5 Ml/d (unconstrained 790.2 Ml/d); i.e. below the WRS 2002 total.

On an individual WRZ level, the major differences are due to the repositioning of WRZ boundaries, decommissioning of older sources and inclusion of approved sources. There is the opportunity to transfer water between the South and East WRZs but how and indeed whether this should contribute to individual WRZ DO results has still to be established.

[6] Table A.1 shows that while the licensed amount that can be abstracted from Silent Valley is 155 Ml/d, this includes 40 Ml/d to be pumped from Lough Island Reavy (South WRZ) so this has been subtracted from the licence quantity in the East WRZ calculations

[7] Where there is more than one demand centre in a single zone model, the demands are increased proportional to one another in following a standard DO assessment approach. This means that yield changes for single sources can have affects on DO that are greater or less than the direct change in source yield

WRMP 2010 WRZ	Sub-Zone Demand Centre (based on WRS 2002 WRZs)	WRS 2002 DO (Ml/d)		WRMP 2010 WRZ DO (Ml/d)	WRMP 2010 Unconstrained WRZ DO (Ml/d)	Comments
North	Altnahinch	17.0	101.2	106.2	116.8	A number of groundwater sources have been decommissioned since the WRS 2002
	Ballinrees	25.0				
	Faughan/ Altnaheglish	59.2				
West	Derg/ Bradan/ Macrory	32.0	68.9	88.2	89.1	The WRMP 2010 incorporates the planned River Strule abstraction but all groundwater sources have been decommissioned
	Killyhevlin	36.9				
Central	Magherafelt/ Cookstown	29.3	29.3	31.1	31.1	
East	Antrim/ Larne	33.9	418.9	329.5	334.2	The boundary between the WRMP 2010 South and East WRZs has divided some of the WRS 2002 WRZs, with Lough Island Reavy and a portion (55%) of Lisburn area demand moving into the South WRZ. The current model setup does not include transfers from Lough Island Reavy to Drumaroad WTW (16 Ml/d safe yield - calculated prior to WRMP 2010, 10 Ml/d normal summer use), or from Castor Bay to the East WRZ (no information provided by NI Water but could be around 20 Ml/d into the Eastern General DC). There are a number of sources that have been decommissioned since the WRS 2002, as well as Forked Bridge WTW.
	Ballymena	26.2				
	Lough Cowey	3.8				
	Eastern General	355.0				

WRMP 2010 WRZ	Sub-Zone Demand Centre (based on WRS 2002 WRZs)	WRS 2002 DO (Ml/d)		WRMP 2010 WRZ DO (Ml/d)	WRMP 2010 Unconstrained WRZ DO (Ml/d)	Comments
South	Newry	53.0	152.4	218.6 (204.5 beyond 2015)	224 (219 beyond 2015)	The Craigavon demand centre now incorporates 55% of the Lisburn area demand (100% in Eastern General for WRS2002)
	Craigavon	67.6				
	Lough Ross	6.8				
	Armagh	21.0				
	Dungannon	4.0				
Total DO (Ml/d)		**770.7**		**773.6 (759.5 beyond 2015)**	**795.2 (790.2 beyond 2015)**	

Table A.10 – Comparison of WRMP 2010 DO results with the WRS 2002 DO assessment

A.5.5 Recommendations for improvement

In comparison with the assessment completed by many water companies in England the length of record used to determine DO here is relatively short at 1975 to 2009. The longer the record used the more chance that there is of encountering drought conditions and the higher the resilience of the DO determined by analysis is likely to be to future droughts. As recordings of river flow generally started later in Northern Ireland than England, in order to start the analysis before 1975, it would be necessary to infer river flow from rainfall records which are likely to go back further. The best method for this is to construct rainfall-runoff models which would be calibrated against post 1975 river flow records. This would require an extensive programme of hydrological work to collect and quality control the basic hydrometric data, and to develop, calibrate and validate appropriate rainfall-runoff models. Another benefit of using a longer record is that it increases the value of statistical analysis.

At the outset of the WRMP 2010 programme there was an expectation that NIEA would have been able to advise NIW on the scope and timetable of its programme of work to review existing abstraction licences and hence the possible location and magnitude of sustainability reductions. However, at the time of writing NIEA has not provided any further information to NIW for consideration in the Draft WRMP. Therefore the Aquator model includes current licence conditions only; there are no constraints built into the model to prevent abstractions from removing all flow up to the licence limit.

A.6 Scenarios

A.6.1 Introduction

Once the baseline DO had been determined the focus of modelling shifted towards looking at future scenarios which need to be investigated for WRMP 2010. These include the anticipated effects of climate change and the investigation of new supply options during the optioneering process.

A.6.2 Climate change

Introduction

The models were configured to investigate the potential impacts of anticipated changes that could be brought about in Northern Ireland due to climate change. The river flow series in the model were perturbed in accordance with the UKWIR UKCP09 Rapid Assessment. As explained in section A.5.2, the models required some further optimisation and this is outlined, along with full detail model outputs in Table A.17.

Methodology

The update of previous flow meteorological and flow factors for UKCP09 – referred to as the 'UKWIR UKCP09 Rapid Assessment' – provides a revised set of monthly and seasonal flow factors based on the updated projections. The factors are produced for 183 catchments in the UK, and for the 2020s.

The more complex approach within the UKWIR methodology would require rainfall-runoff models to convert perturbed precipitation and PET time series into associated flow perturbations. Without

these models for Northern Ireland, it is necessary to use the more simple method, perturbing river flow series instead. UKWIR flow factors[8] are provided for five catchments in Northern Ireland:

- Six Mile Water at Antrim;
- Claudy at Glenone Bridge;
- Burn Dennet at Burndennet;
- Camowen at Camowen Terrace; and
- Fairywater at Dudgeon Bridge[9].

As these catchments do not cover all of the required area of Northern Ireland, it was necessary to examine key meteorological, geographical and hydrological characteristics of the catchments draining to these gauging stations, with each of the supply catchments; thus enabling the flow factors to be transferred (i.e. applied) to other catchments. This is a way of estimating the flow factors in the absence of hydrological models and without detailed examination of the UKCP09 projections (in a similar manner to the UKWIR Rapid Assessment).

The data comparison uses the following four factors:

- Region of Influence (ROI) stations (top 5);
- Hydrometric Area (location);
- Rainfall; and
- Base Flow Index (BFI).

The ROI data was derived from the LFE software, which provides a variety of information on each catchment, from which a gauged catchment can be selected for use as a proxy. This software is the same as has been used already to generate daily time series for Aquator catchment inflows. Each catchment of interest was scored, based on the four factors, in its similarity to the catchments for which flow factors were available. The outcome of this and the factors applied are presented in section A.8.4, but an example for Six Mile Water is included here in Figure A.10. The perturbations to the baseline flow series for each supply catchment provide a quantified estimate of the impact of climate change on river flows for the 2020s timeslice.

[8] Von Christierson, B., Wade, S. and Rance, J. 2009. Assessment of the significance to water resource management plans of the UK Climate Projections 2009, UKWIR, London.

[9] Fairywater was not included in the assessment as it is mislabelled as 'Scotland' in the UKWIR Rapid Assessment spreadsheets and was thus overlooked. This fifth catchment could be included in any subsequent assessment.

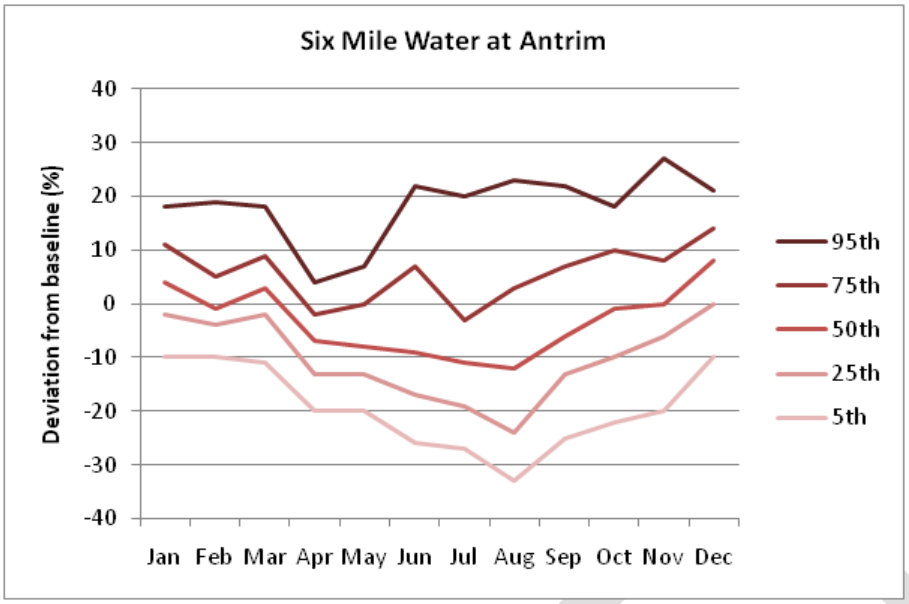


Figure A.10 – Flow factors for Six-Mile Water at Antrim

Results

The absolute changes to DO are shown in Table A.11 for the three climate changes scenarios investigated with the Aquator models (5th, 50th and 95th percentile) and Table A.12 gives the results in percentage terms. Looking across the whole of Northern Ireland, the 50th percentile scenario showed virtually no change from the baseline. Under the 5th percentile perturbations there was a DO reduction of just below 27 Ml/d (3.5%) simulated. Under the 95th perturbations simulated DO was increased by 23 Ml/d (3.0%).

In percentage terms the biggest individual WRZ reduction in DO seen under the 50th percentile projections was a 0.9% decrease in DO simulated in the North WRZ. For the 5th percentile projection there was a 5.8% reduction in the North zone, and at the 95th percentile, the largest increase in DO simulated was a 5% increase in the East WRZ.

WRZ	Deployable output (DO) Result (Ml/d)	Climate Change Scenario DO Results (Ml/d)			Notes
		5th Percentile	50th Percentile	95th Percentile	
North	106.2	100.0	105.2	111.3	Altnahinch reservoir is always critical with supplies running out at the same time in each scenario.
West	88.2	86.8	88.0	89.5	Lough Bradan is always critical with supplies running out at the same time in each scenario.
Central	31.1	31.1	31.1	31.1	Hydrological conditions do not become limiting under any of the climate change scenarios.

WRZ	Deployable output (DO) Result (Ml/d)	Climate Change Scenario DO Results (Ml/d)			Notes
		5th Percentile	50th Percentile	95th Percentile	
East	329.5	314.4	328.1	346.1	DO responds to changing hydrological conditions across the WRZ under the climate change scenarios.
South	218.6 (204.5 after 2015)	215.1 (200.4 after 2015)	218.6 (204.5 after 2015)	218.6 (204.5 after 2015)	The DO for this WRZ is determined by the isolated Lough Ross demand centre. If this is removed from the analysis, the remaining DO under all scenarios but one is 189.2 Ml/d. This value is determined by asset constraints but for the 5th percentile climate change scenario the additional hydrological constraints are such that they Spelga/Fofanny reservoirs to empty in 1977 and DO is further reduced to 185.1 Ml/d.
NI Total	**773.6 (759.5 after 2015)**	**747.4 (732.7 after 2015)**	**771.0 (756.9 after 2015)**	**796.6 (782.5 after 2015)**	

Table A.11 – Climate change run results showing revised DO values under the 5th, 50th and 95th percentile climate change scenarios

WRZ	Climate Change Scenario DO Results (Ml/d)			Range (%)
	5th Percentile	50th Percentile	95th Percentile	
North	94.2%	99.1%	104.8%	10.6%
West	98.4%	99.8%	101.5%	3.1%
Central	100.0%	100.0%	100.0%	0.0%
East	95.4%	99.6%	105.0%	9.6%
South	98.4% (98.0% after 2015)	100.0% (before and after 2015)	100.0% (before and after 2015)	1.6% (2.0% after 2015)
Total	**96.6% (96.5% after 2015)**	**99.7% (before and after 2015)**	**103.0% (before and after 2015)**	**6.4% (6.6% after 2015)**

Table A.12 – Climate change impact on baseline DO

A.6.3 Optioneering

These Aquator models form a strong basis for the high level strategic testing of new options for supply in the optioneering process (section 8).

A.7 Conclusions

A number of Aquator models have been built to represent the five WRZs of Northern Ireland. The structure of each model was initially based on the WRS 2002 and updated using the expertise of key NI Water personnel and the Atkins TMM team. An extended data collation period was undertaken to assemble model input data. There were difficulties in collating the full data set required for Aquator but enough data were either collected or derived for an appropriate assessment of DO using Aquator's inbuilt English & Welsh method DO analyser.

The overall DO output for Northern Ireland was determined as 773.6 Ml/d until 2015 and 759.5 Ml/d after the decommissioning of the Camlough source in the South WRZ. The individual WRZ results are as follows:

- North WRZ – 106.2 Ml/d (116.8 Ml/d if transfers are unconstrained within the WRZ);
- West WRZ – 88.2 Ml/d (89.1 Ml/d if unconstrained);
- Central WRZ – 31.1 Ml/d (no different if unconstrained);
- East WRZ – 329.5 Ml/d (334.2 Ml/d if unconstrained); and
- South WRZ – 218.6 Ml/d and 204.5 Ml/d beyond 2015 (224 and 219 Ml/d if unconstrained).

The results from the unconstrained models (all sources linked to one central DC) suggest that there is most scope for increasing DO by increasing connectivity of the distribution system in the North WRZ.

Comparison of the results from this analysis with WRS 2002 shows that there is little change in the total DO for Northern Ireland. The WRMP 2010 unconstrained DO is about 25 Ml/d higher than the WRS 2002 DO of 771 Ml/d; the WRMP 2010 constrained DO is about 3 Ml/d higher than

the WRS 2002 DO of 771 Ml/d. On an individual WRZ level, the major differences are due to the repositioning of WRZ boundaries, decommissioning of older sources and inclusion of approved sources.

The models have also been used to determine the potential impacts of anticipated changes to river flows patterns due to climate change. On a Northern Ireland wide basis the largest simulated changes only showed a 3.5% change to the baseline DO values. At individual WRZ level this was only increase to a maximum impact of just under 6%. However, it is important to state that there could be a much greater effect on DO if minimum flow conditions were applied to river abstractions.

At the time of writing the models are set to test options set out for the optioneering process.

The work described in this Appendix provides a robust basis for the DO values to be used in the supply/demand balance elements of the WRMP. The approach makes best use of available data and techniques. The analysis can be updated as and when improved data and information becomes available, for example using longer (pre 1975) flow time series. In any modelling exercise it is always possible to improve the accuracy of any outputs by increasing the volume and quality of input data. In this particular modelling exercise the most significant omission was the supply system operating rules, in particular the control curves for reservoirs which were not available for use in WRMP 2010. With such information incorporated into the models it would be possible to base the DO assessment on actual representation of operational practices and less on hypothetical model optimisation (section A.5.2). It would also then be possible to use the models to explore different operating procedures under average and wet (rather than drought) hydrological conditions.

A.8 Additional information

A.8.1 Unconstrained model schematics

The following schematics represent the unconstrained version of each WRZ (North WRZ in Figure A.11; West WRZ in Figure A.12; East WRZ in Figure A.13; and South WRZ in Figure A.14), where all sources are connected to a single demand centre (explained in section A.5.1). There is no schematic for the Central WRZ which is already structured in this way.

North Zone

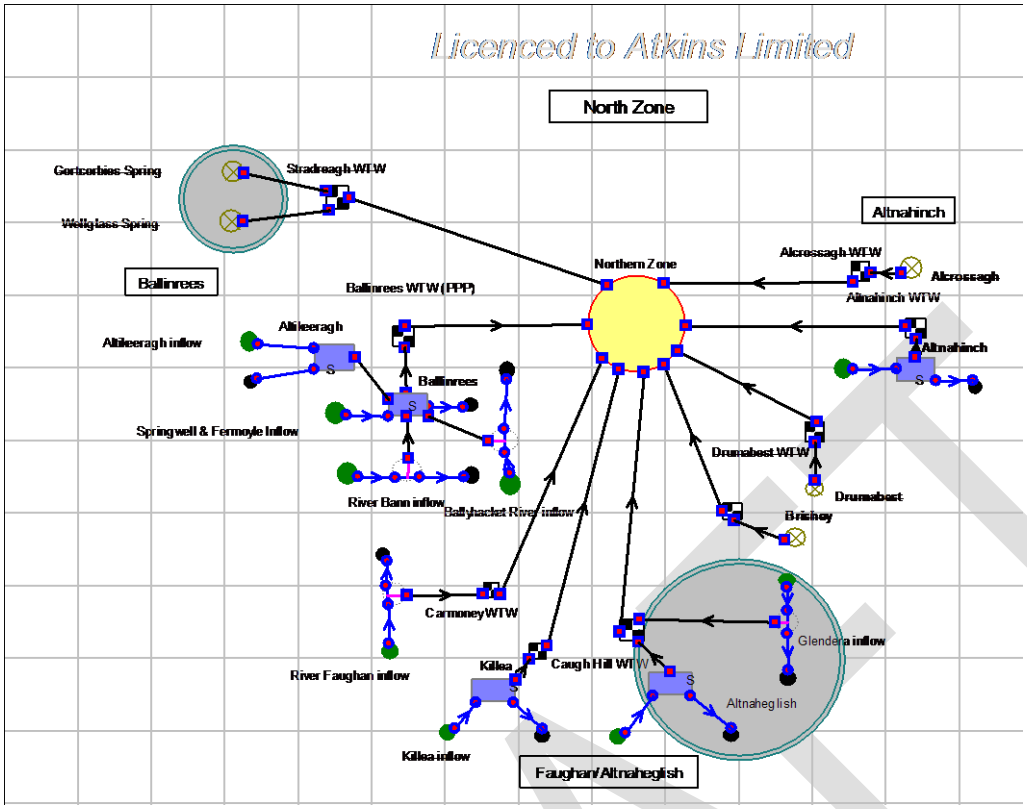


Figure A.11 – North WRZ unconstrained model schematic

West Zone

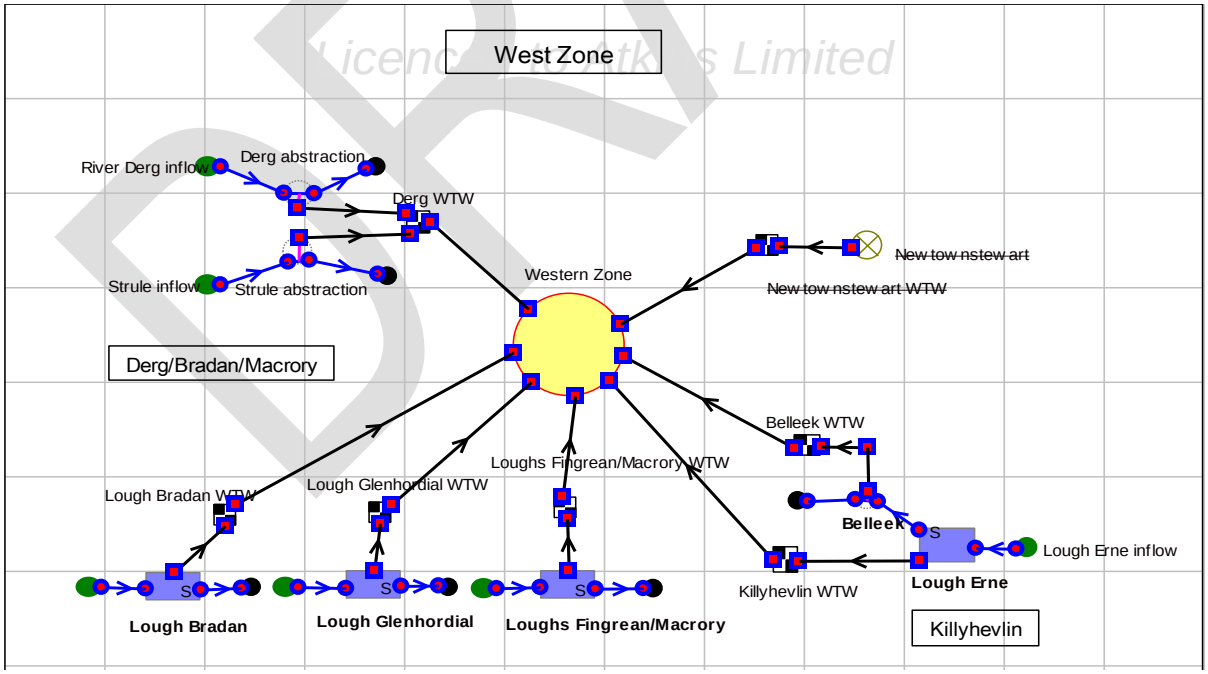


Figure A.12 – West WRZ unconstrained model schematic

East Zone

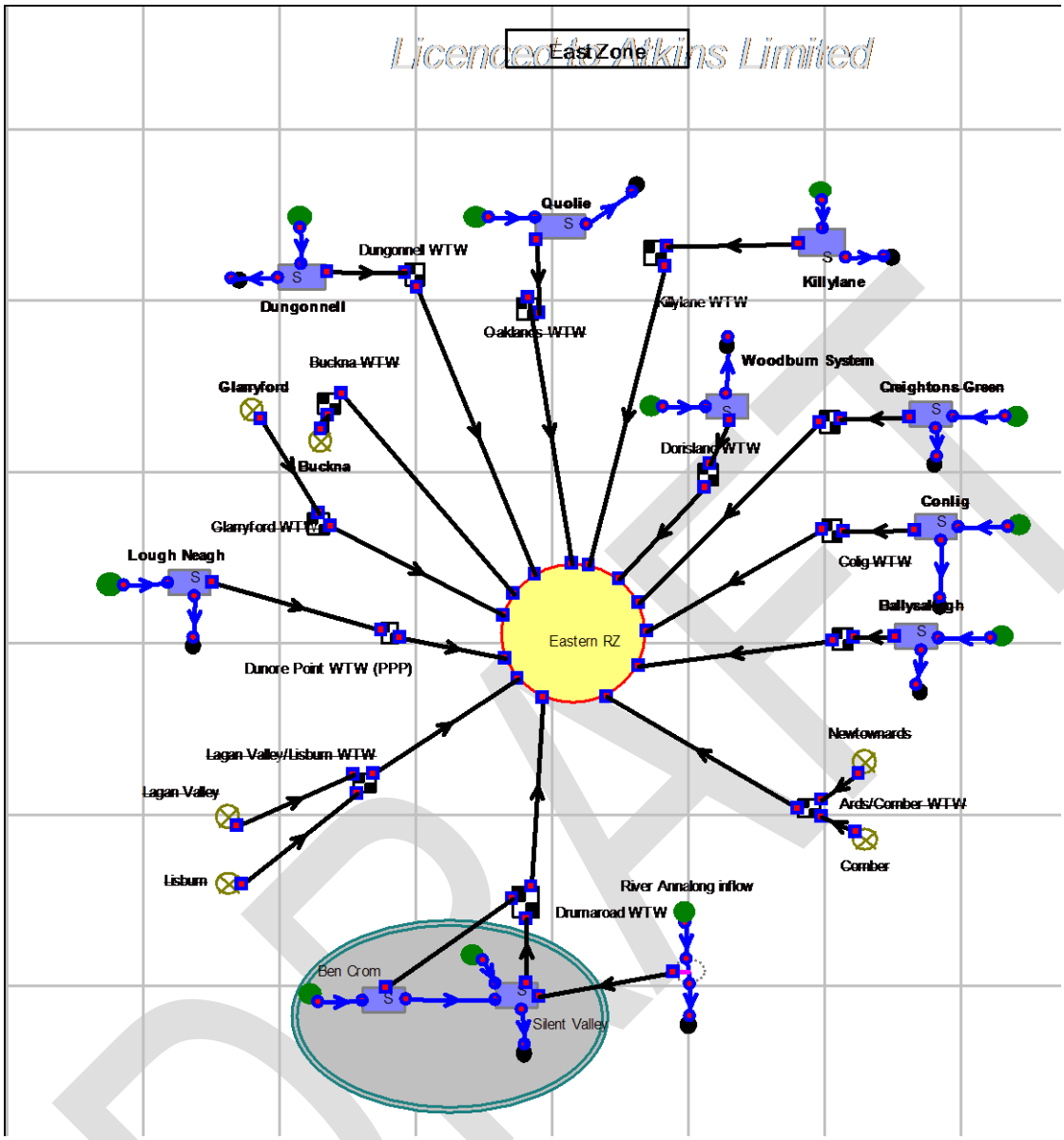


Figure A.13 – East WRZ unconstrained model schematic

South Zone

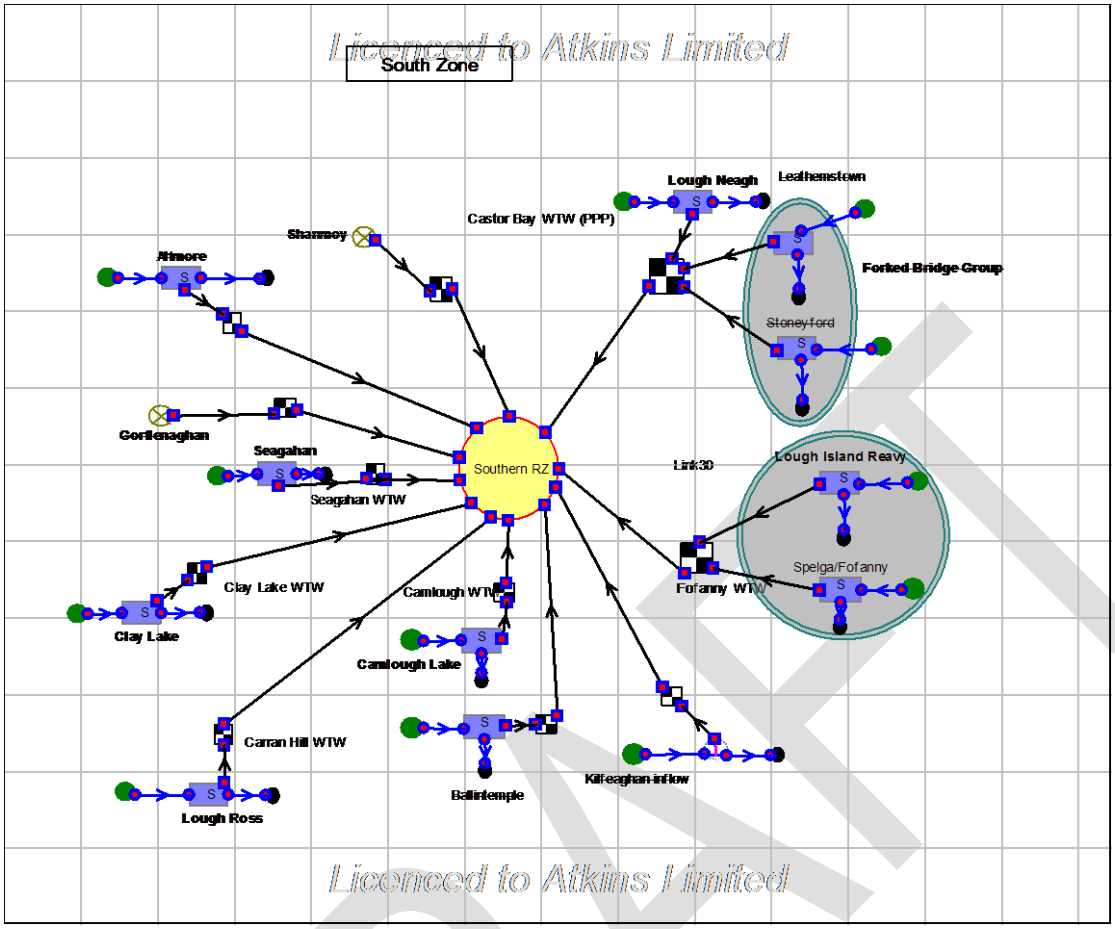


Figure A.14 – South WRZ unconstrained model schematic

A.8.2 Data request list

Expected data requirements for the Aquator modelling

Note that 'time-series' can refer to a single value, time series (daily, weekly, monthly or annual), or a fixed profile (daily, weekly, monthly or annual) to be used each year

Blenders (mixes water in supply to meet minimum quality standards)

Parameter	Format / Data type	Likelihood of requirement
Operational?	Yes/no	
Sources	Component name or ID	
Blend method (fraction or determinand based)	Drop-down selection	Not likely required – only if significant blending operations exist
Fraction	Percentage distribution	
Determinand levels	Values	

Bulk supplies

Parameter	Format / Data type	Likelihood of requirement
Operational?	Yes/no	
Amount	Time-series	Definitely required
Must use entire amount?	Yes/no	

Catchment

Parameter	Format / Data type	Likelihood of requirement
Flow	Time-series	Definitely required but may come from outside NI Water

Discharge

Parameter	Format / Data type	Likelihood of requirement
Flow	Time-series	Not likely required

Gauging stations

Parameter	Format / Data type	Likelihood of requirement
Operational?	Yes/no	
Flow constraint	Time-series	Not likely required
Flow	Time-series	

Groundwater abstractions

Parameter	Format / Data type	Likelihood of requirement
Operational?	Yes/no	
Efficiency	Percentage	
Daily maximum abstraction	Time-series	Definitely required
Monthly maximum abstraction	Time-series	
Minimum flow	Time-series	

Groundwater abstraction licences

Parameter	Format / Data type	Likelihood of requirement
Individual or group?	Drop-down selection	
Type of licence	Drop-down selection	
Enforced?	Yes/no	Definitely required
Amount	Time-series	
Start month	Drop-down selection	

Links (supply system pipes, aqueducts etc.)

Parameter	Format / Data type	Likelihood of requirement
Operational?	Yes/no	
Bi-directional?	Yes/no	
Maximum flow - forward	Time-series	
Maximum flow - reverse	Time-series	Definitely required – some help may be available from Atkins Network Modelling Team
Minimum flow - forward	Time-series	
Minimum flow - reverse	Time-series	
Licence constraints?	Constraint component name or ID	

Pumping stations

Parameter	Format / Data type	Likelihood of requirement
Operational?	Yes/no	
Minimum flow	Time-series	
Maximum flow	Time-series	Not likely required
Monthly maximum flow	Time-series	

Reservoirs

Parameter	Format / Data type	Likelihood of requirement
Operational?	Yes/no	Definitely required
Compensation	Time-series	Definitely required
Additional outflow	Time-series	Not likely required
Hydropower	Time-series	Not likely required
Irrigation	Time-series	Not likely required
Flood drawdown	Time-series	Not likely required
Level Area Storage	Array of single values	Required if available
Abs. emergency level	Single value	Required if available
Rel. emergency level	Percentage	Required if available
Abs. dead water level	Single value	Required if available
Rel. dead water level	Percentage	Required if available
Control curves (time series or profile of storage)	Time-series	Definitely required
Rainfall	Time-series	Required if available
Evaporation	Time-series	Required if available
Observed levels or storage	Time series (daily, weekly, monthly or annual) to be used each year	Definitely required

Reservoir licences

Parameter	Format / Data type	Likelihood of requirement
Individual or group?	Drop-down selection	
Type of licence	Drop-down selection	
Enforced?	Yes/no	Definitely required
Amount	Time-series	
Start month	Drop-down selection	

River reach		
Parameter	**Format / Data type**	**Likelihood of requirement**
Abstraction	Time-series	Not likely required
Discharge	Time-series	

Surface water abstractions		
Parameter	**Format / Data type**	**Likelihood of requirement**
Operational?	Yes/no	
Flow constraint	Time-series	
Daily maximum abstraction	Single value, time series (daily) or fixed profile (daily) to be used each year	Definitely required
Monthly maximum abstraction	Single value, time series (monthly) or fixed profile (monthly) to be used each year	

Surface water abstraction licences		
Parameter	**Format / Data type**	**Likelihood of requirement**
Individual or group?	Drop-down selection	
Type of licence	Drop-down selection	
Enforced?	Yes/no	Definitely required
Amount	Time-series	
Start month	Drop-down selection	

Water treatment works		
Parameter	**Format / Data type**	**Data availability / source / contact details**
Operational?	Yes/no	Definitely required
Minimum flow	Time-series	Required if available
Daily maximum flow	Single value, time series (daily) or fixed profile (daily) to be used each year	Definitely required
Monthly maximum flow	Single value, time series (monthly) or fixed profile (monthly) to be used each year	Definitely required
Losses	Percentage	Required if available

Table A.13 – Data request list

A.8.3 Hydrological analysis

WISKI gauging stations and quality checks

Station number	Gauge Name	River	Atkins' Quality Check	Start Date	End Date	No. of gaps in record
203017	Dynes Bridge	Upper Bann	Record ok	28/12/1978	05/07/1994	1082
203039	Tullynewy Bridge	Clogh	Record ok	19/12/1983	08/07/2009	91
203043	Shanmoy	Oona Water	Record ok	11/11/1986	11/07/2009	12
205033	Woodburn East	Woodburn	Record ok	07/06/2000	11/07/2009	0
203024	Gambles Bridge	Cusher	Record ok	29/12/1975	11/07/2009	8
205029	Feeny	Lagen	Record ok	30/09/2004	31/12/2008	0
203947	Flat Vee Weir	Four Mile Burn	Record ok	06/10/1977	12/08/1986	479
204001	Seneirl	Bush	Record ok	29/12/1975	02/07/2009	81
203024	Gambles Bridge	Cusher	Record ok	29/12/1975	11/07/2009	8
203019	Glenone Bridge	Claudy	Record ok	29/12/1975	11/07/2009	1443
205015	Grandmere Park	Cotton	Poor Data Set in 1980-1990 where flows need adjusting	01/03/1987	11/07/2009	163
206002	Jerretts Pass (River)	Jerretts Pass	Record ok	02/01/1980	11/07/2009	47
203096	Kilraghts	Breckagh Burn	Record ok	26/03/1996	31/12/2008	0
203063	Leap Bridge	Glenavy	Record ok	23/05/2001	11/07/2009	91
203619	Lough Neagh Inflow	Lough Neagh	Record ok	30/08/1995	02/01/2001	8
203010	Maydown Bridge	Blackwater	Record ok	29/12/1975	11/07/2009	1
203097	Moyallan	Upper Bann	Poor Data Set in 2000 and 2002 where flows need adjusting	19/08/1990	16/08/2008	15
205004	Newforge	Lagan	Record ok	28/12/1977	11/07/2009	0
205110	Park Centre	Clowney	Record ok	23/09/1988	03/01/2001	209
236053	Ratoran	Pubble	Record ok	27/06/1994	31/12/2007	0
205102	Townsend Street	Farset	Record ok	30/12/1987	08/04/2002	743
203041	Tullybryan	Ballygawley Water	Record ok	05/11/1980	11/07/2009	278
236052	Rawbridge	Corlough	Record ok	28/06/1994	11/07/2009	11
235052	Rockstown	County River	Record ok	27/11/2002	30/06/2009	0
203050	UUC	Ballysallyblagh	Record ok	02/06/1993	08/07/2009	0
205309	Lusky Mill	Blackwater (Down)	Record ok	31/12/1975	07/01/1982	1
203090	Recorder F	Braid	Record ok	29/12/1975	18/03/2007	8788
205031	Woodburn West	Woodburn	Record ok	19/05/2000	11/07/2009	8

Station number	Gauge Name	River	Atkins' Quality Check	Start Date	End Date	No. of gaps in record
205005	Ravernet	Ravernet	Poor Data Set in 1999 where flows need adjusting	27/12/1979	06/07/2009	224
203046	Rathmore Bridge	Rathmore Burn	Record ok	31/12/1983	31/12/2008	0
203052	Pollands Bridge	Upper Bann Tributary	Record ok	31/12/1999	02/07/2009	1219
205105	Orangefield	Knock	Record ok	30/09/1983	02/06/2009	114
206015	Ohares, Castlewellan	Burren	Poor Data Set in 1999 where flows need adjusting	17/10/1994	31/12/2007	20
202005	Muff Glen	Muff	Record ok	15/02/1995	11/07/2009	0
205108	Rosepark	Knock	Record ok	03/07/2003	30/06/2009	62
203020	Moyola New Bridge	Moyola	Record ok	29/12/1975	11/07/2009	796
203040	Movanagher	Lower Bann	Record ok	25/06/1980	27/06/2009	2921
205023	Meaghlough Road	Carryduff	Record ok	29/12/1988	29/06/2009	3316
204007	Altnahinch	Bush	Record ok	21/09/2000	02/06/2009	15
202007	Altnaheglish	Roe	Record ok	27/09/2001	31/03/2009	0
205032	Woodburn Central	Woodburn	Record ok	19/05/2000	04/07/2009	2
203028	White Hill	Agivey	Record ok	15/03/1976	11/07/2009	280
205012	Watsons Bridge	Annahilt	Record ok	31/12/1980	26/09/1984	0
236058	Tilery Bridge	Arney	Record ok	01/02/1999	11/07/2009	183
203045	Springmount	Engine Burn	Poor Data Set	31/12/1981	29/12/1987	1388
203093	Shane's Viaduct	Main	Record ok	30/12/1983	11/07/2009	0
203038	Rocky Mountain	Rocky	Record ok	25/12/1985	02/07/2009	332
201304	Stonebridge	Strule	Record ok	22/12/1986	16/10/1997	0
203023	The Moor Bridge	Torrent	Record ok	01/01/1980	11/07/2009	1025
22565	#N/A	#N/A	#N/A	11/08/2004	05/08/2008	0
236009	Thompsons Bridge	Swanlinbar	Record ok	24/02/1987	07/03/1995	1
203025	Martin's Bridge	Callan	Record ok	29/12/1975	11/07/2009	7
203620	Lough Neagh Outflow	Lough Neagh	Record ok	25/06/1980	11/07/2009	2921
206009	Tipperary Wood	Shimna	Record ok	17/10/1994	11/07/2009	0
203012	Ballinderry Bridge	Ballinderry	Record ok	30/08/1995	11/07/2009	5
203018	Antrim	Six Mile Water	Record ok	29/12/1975	11/07/2009	0
203027	Ballee	Braid	Record ok	01/01/1980	11/07/2009	0
236005	Ballindarragh Bridge	Colebrooke	Record ok	30/12/1986	11/07/2009	0
202001	Ardnagle	Roe	Record ok	29/12/1975	11/07/2009	0
203013	Andraid	Main	Record ok	21/12/1982	31/12/1990	1105

Station number	Gauge Name	River	Atkins' Quality Check	Start Date	End Date	No. of gaps in record
236051	Ballycassidy	Ballinamallard	Record ok	16/04/1991	11/07/2009	1
201015	Ballymagory	Glenmorgan	Record ok	29/08/1995	11/07/2009	0
203029	Ballyclare	Six Mile Water	Record ok	03/01/1980	01/01/2000	1493
205036	Dromore Street	Ballynahinch	Record ok	17/10/2001	02/07/2009	12
203033	Bannfield	Upper Bann	Record ok	29/12/1975	11/07/2009	24
205010	Banoge	Lagan	Record ok	27/12/1983	25/07/1994	0
204004	Glendurn	Beaghs Burn	Poor Data Set in 1996 and 1998 where flows need adjusting	19/11/1995	11/07/2009	1226
206007	Bonnys	Tullybranigan	Record ok	19/10/1994	11/07/2009	0
201007	Burndennet Bridge	Burn Dennet	Record ok	29/12/1975	11/07/2009	15
205024	Burrendale	Burren	Record ok	01/03/1989	25/06/1994	0
201005	Camowen Terrace	Camowen	Poor Data Set in 1976 where flows need adjusting	29/12/1975	01/07/2009	1
201006	Campsie Bridge	Drumragh	Record ok	29/12/1975	11/07/2009	27
206004	Carnbane	Bessbrook	Record ok	13/12/1983	03/07/2009	285
205109	Loop Bridge	Loop	Record ok	29/12/1986	30/06/2009	3904
203044	Looblands	Ballinaloob	Record ok	10/09/1981	07/01/1988	0
236056	Larkhill	Garvary River	Poor Data Set in 1976 where flows need adjusting	16/08/1995	11/07/2009	138
205011	Kilmore	Annacloy	Record ok	22/11/1979	11/07/2009	12
236006	Killhevlin	Erne	Record ok	24/09/1984	11/07/2009	100
203091	Kernoghan	Devenagh Burn	Record ok	29/12/1976	05/11/1981	927
206005	Hockey Club	Newry	Record ok	13/06/1994	18/06/2009	819
205022	Gransha Road	Ward Park Stream	Record ok	31/12/2003	04/12/2008	104
202006	Gortenny	Castle	Poor Data Set in 1999 where flows need adjusting	27/02/1995	27/05/1999	142
203026	Glenavy	Glenavy	Record ok	02/01/1980	02/01/2001	8
203098	Galgorm (formerly Gallahers)	Main	Record ok	26/09/1984	11/07/2009	1075
203055	Flume 4	Fourmileburn	Record ok	31/12/1976	30/12/1979	0
203053	Flume 3	Fourmileburn	Record ok	18/12/1979	31/12/1985	0
203054	Flume 2	Fourmileburn	Record ok	17/01/1979	31/12/1985	3
203051	Flume 1	Fourmileburn	Record ok	18/12/1979	31/12/1985	0
205111	Fire Authority	Blackstaff	Record ok	01/11/2001	15/05/2007	626
202004	Eglinton	Muff	Record ok	19/12/1994	11/07/2009	6
205101	Easons	Blackstaff	Record ok	11/10/1983	04/04/2001	156

Station number	Gauge Name	River	Atkins' Quality Check	Start Date	End Date	No. of gaps in record
203092	Dunminning - Lower	Main	Poor Data Set in 1984, 1999 and 2000 where flows need adjusting	24/08/1983	11/07/2009	59
201002	Dudgeon Bridge	Fairy Water	Poor Data Set in 2000 where flows need adjusting	29/12/1975	11/07/2009	782
201010	Drumnabuoy House	Mourne	Record ok	17/06/1982	31/12/2008	0
236007	Drumrainy Bridge	Sillees	Record ok	22/09/1981	11/07/2009	14
205008	Drummiller	Lagan	Record ok	27/12/1977	11/07/2009	82
203911	Dromona (Kennaways)	Main	Record ok	29/12/1975	18/11/1980	0
201008	Castlederg	Derg	Record ok	29/12/1975	11/07/2009	0
203042	Cidercourt Bridge	Crumlin	Poor Data Set in 1999 and 2001 where flows need adjusting	29/12/1982	11/07/2009	3
202002	Drumahoe	Faughn	Poor Data Set in 1999 where flows need adjusting	27/08/1976	11/07/2009	31
203049	Clady Bridge	Clady	Record ok	19/12/1983	11/07/2009	5
203011	Dromona	Main	Record ok	08/09/1980	11/07/2009	1154
205020	Comber	Enler	Record ok	29/12/1983	11/07/2009	8
203022	Derrymeen Bridge	Blackwater (Armagh)	Record ok	04/01/1983	06/07/2009	4993
205025	Delamont Bridge	Delamont	Record ok	27/09/1989	02/07/2009	3150
203021	Currys Bridge	Kells Water	Poor Data Set in 2000-2002 where flows need adjusting	29/12/1975	11/07/2009	77
203035	Craigs	Aghill Burn	Record ok	21/12/1982	15/09/1992	2
201009	Crosh	Owenkillew	Poor Data Set in 2001 where flows need adjusting	14/02/1980	11/07/2009	24

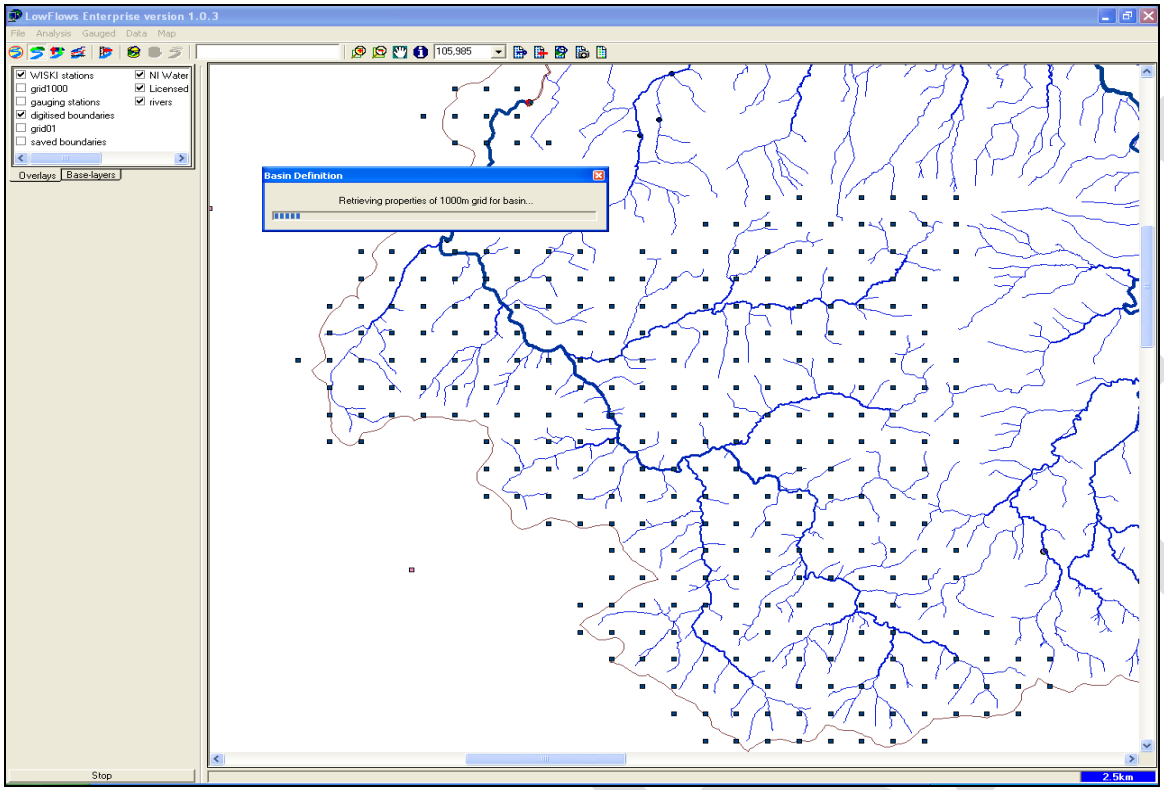
Table A.14 – WISKI gauging stations and record checks

Licensed abstraction intakes

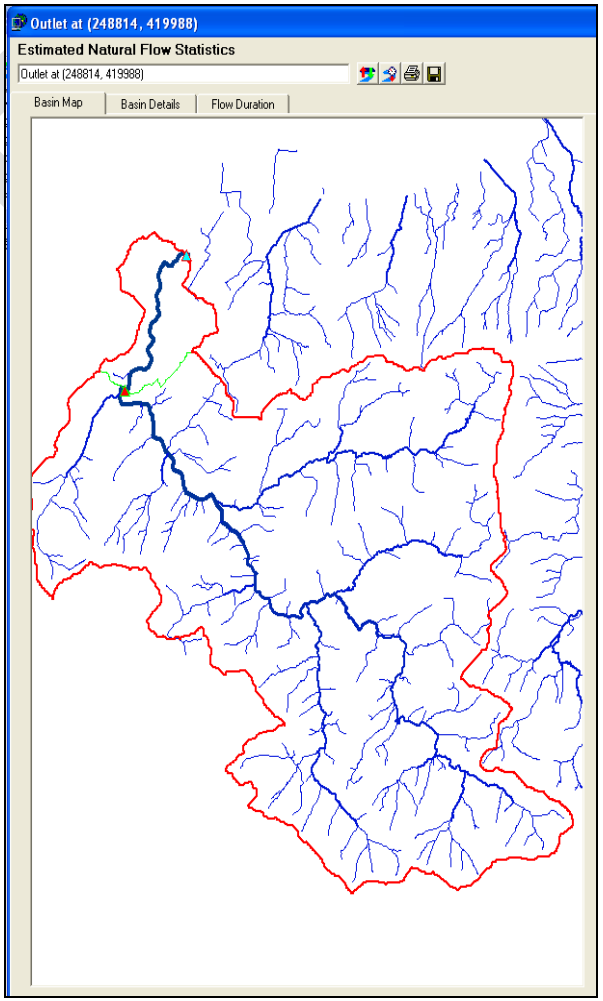
Local Name	Easting	Nothing	Source	Licence Name
Altmore Reservoir	267313	367499	Reservoir	Altmore
Cappagh Reservoir	269122	366943	Reservoir	Altmore
Altnahinch Impounding	312100	423500	Reservoir	Altnahinch
Springwell No 1	277148	428037	River	Ballinrees
Springwell No 2	277094	427899	River	Ballinrees
Springwell No 3	277074	427627	River	Ballinrees
Fermoyle	277286	428992	River	Ballinrees
Altikeeragh No 1	275478	430096	River	Ballinrees
Altikeeragh No 2	274474	430914	River	Ballinrees
Altikeeragh No 3	273925	431142	River	Ballinrees
Ballyhacket	274423	432692	River	Ballinrees
River Bann	286201	430098	River	Ballinrees
Lough Erne Belleek	194530	358640	Lough	Belleek
Camlough	302920	325854	Lake	Camlough
River Faughan	248880	420000	River	Carmoney
Lough Ross	288000	315700	Reservoir	Carron Hill Lough Ross
Glenedra River	268410	402380	River	Caugh Hill
Kerlins Burn	265310	403490	River	Caugh Hill
Altnaheglish	269650	403490	River	Caugh Hill
Clay Lake	283852	332806	Reservoir	Clay Lake
Gentle Owen Lake	283608	330035	Lake	Clay Lake
River Derg	232473	386169	River	Derg
Beltoy Water Course	341340	394423	River	Dorisland
Bellyvallagh Course	337720	393820	River	Dorisland
Frenchpark Conduit	339260	389750	River	Dorisland
Lough Mourne	341600	392380	Reservoir	Dorisland
Copeland	342810	391400	Reservoir	Dorisland
North Woodburn	337090	391140	Reservoir	Dorisland
Up South Woodburn	336660	388740	Reservoir	Dorisland
Mid South Woodburn	337280	388890	Reservoir	Dorisland
Low South Woodburn	337770	389120	Reservoir	Dorisland
Dorisland	338600	388100	Reservoir	Dorisland
Annalong	334800	323280	River	Drumaroad
Annalong	334820	323210	River	Drumaroad
Ben Crom	331470	325540	River	Drumaroad
Silent Valley	330840	321840	Reservoir	Drumaroad
Collin Burn	321800	418400	River	Dungonnell
Lough Garve 1	320800	417900	River	Dungonnell
Lough Garve 2	320487	417870	River	Dungonnell
Inver River	321968	419118	River	Dungonnell
Dungonnell IR	319268	417140	Reservoir	Dungonnell
Spelga	326600	327300	Reservoir	Fofanny
Fofanny	328603	329122	Reservoir	Fofanny
Slievemeel	329425	329300	Watercourse	Fofanny
Glenhordial Burn	248250	375650	River	Glenhordial
Crosh	249550	376350	River	Glenhordial
Camowen	247360	371220	River	Glenhordial
Glenhordial	248090	375250	Reservoir	Glenhordial
Lough Erne Killyhevlin	224710	342250	Lough	Killyhevlin
Donaghy's	330858	399497	Reservoir	Killylane
Crosswater 2	330187	401155	Reservoir	Killylane
Crosswater 3	329390	401308	Reservoir	Killylane

Local Name	Easting	Nothing	Source	Licence Name
Curraghmacall Stream 2	226050	374160	Stream	Lough Bradan
Curraghmacall Stream 1	225900	374440	Stream	Lough Bradan
Scraghey Burn	224280	372560	River	Lough Bradan
Lough Bradan	225950	371440	Reservoir	Lough Bradan
Lough Lee	225800	376240	Reservoir	Lough Bradan
Whitewater	278400	389600	Reservoir	Lough Fea
Sruhannaclogh	277900	389400	River	Lough Fea
Sruhanpollakeeran	276900	389100	River	Lough Fea
Lough Fea	276400	386500	Reservoir	Lough Fea
Muddoch	328470	332680	River	Lough Island Reavy
Moneyscalp	331480	334020	River	Lough Island Reavy
Lough Island Reavy	329230	333830	Reservoir	Lough Island Reavy
Bauck Hill	259350	378250	River	Loughmacrory
Loughanadarragh	256760	377770	Lough	Loughmacrory
Loughnepeast	256540	377480	Lough	Loughmacrory
Lough Carn	257460	378890	Lough	Loughmacrory
Stradowan No 1	253450	379750	River	Loughmacrory
Stradowan No 2	253450	379850	River	Loughmacrory
Glencolpy	253450	381050	River	Loughmacrory
Cornagillagh Bridge	254050	380650	River	Loughmacrory
Lenagh Bridge	254050	381850	River	Loughmacrory
Lough Fingrean	257220	377720	Reservoir	Loughmacrory
Lough Macrory	257550	376450	Reservoir	Loughmacrory
Seaghan Dam	326600	327300	Reservoir	Seaghan
Leathenstown Reservoir	321440	372444	Reservoir	Forked Bridge
Andersons	321949	370457	River	Forked Bridge
Stoneyford River Pumping Station	322005	370487	River	Forked Bridge
Stoneyford Reservoir	321475	369899	Reservoir	Forked Bridge
Dornans Intake	321056	372361	River	Forked Bridge

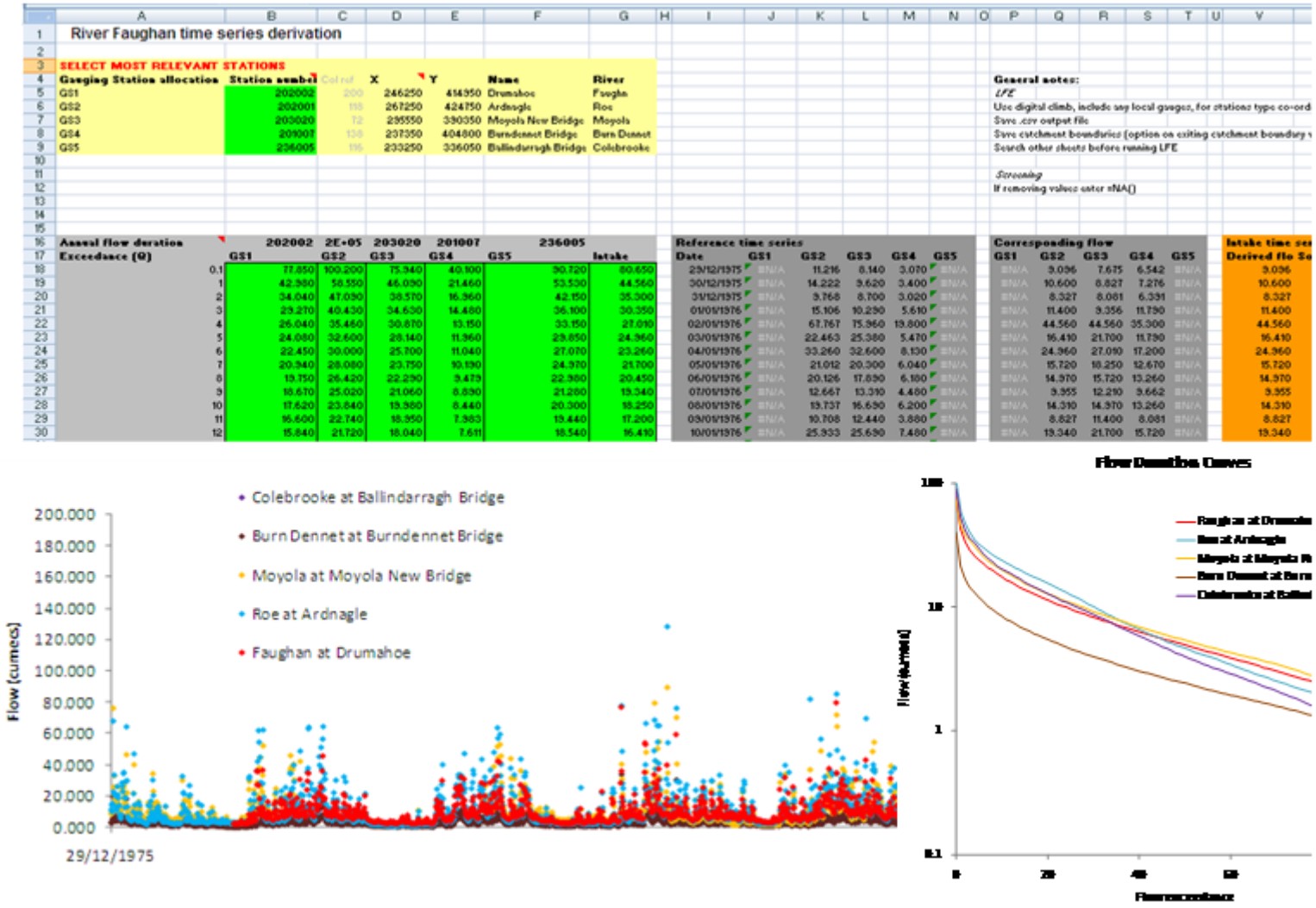
Table A.15 – Licensed abstraction intakes



a) An example of delineation using LFE software



b) LFE sotfware showing cathchment boundary with a local gauging station just upstream



c) Bespoke excel spreadsheet containing data from ROI gauged catchments used to estimate flow time series

Figure A.15 – Catchment delineation maps and estimate flow time series

North WRZ	Notes
River Faughan	There is a WISKI station nearby (Altnaheglish, River Roe, 270800, 402650) but this does not appear in LFE or the Hydrometric Register. It is also a fairly short record of low flow values. Therefore, it was not included in the derivation of any of these flow series.
Altnaheglish and Kerlins Burn	There is a WISKI station nearby (Altnaheglish, River Roe, 270800, 402650) but this does not appear in LFE or the Hydrometric Register. It is also a fairly short record of low flow values. Therefore, it was not included in the derivation of any of these flow series.
Glenedra River	There is a WISKI station nearby (Altnaheglish, River Roe, 270800, 402650) but this does not appear in LFE or the Hydrometric Register. It is also a fairly short record of low flow values. Therefore, it was not included in the derivation of any of these flow series.
Ballyhacket	In area 202 although rest of intakes for same licence are in area 203.
River Bann	Comprises most of area 203 including Lough Neagh, but LFE does not yet represent impoundments
Altikeeragh No.1, Altikeeragh No.2, Altikeeragh No.3	Could not generate correct boundary in LFE, so seems too large and overlapping with Altikeeragh2
Springwell No.1, Springwell No.2, Springwell No.3 and Fermoyle	Some issues with defining small catchments. Also Springwell 2 and 3 using gauges still needing screening
Altnahinch Impounding	Catchment definition runs too far downstream below the intake but may not be too great an error. Have used the local GS at Altnahinch but this was not one of the LFE GS so should check why it was omitted
West WRZ	**Notes**
River Derg	Digital used. Derg gauge used as local gauge.
Curraghmacall Stream 1&2, Scraghey Burn, Lough Bradan, Lough Lee	Curraghmacall Stream 2 digital area 3.26km^2, analogue 1.66km^2, both saved, digital used. Curraghmacall Stream 1 digital used. Scraghey Burn used digital. Lough Bradan digital 3.22km^2, analogue 5.15km^2, used digital but weighted by are as catchment area into reservoir approx 1.4km^2. Lough Lee digital 0.82km^2 (just downstream of lake), analogue 1.88km^2, digital used. For Lough Lee needed to replace ROI gauges 4 and 5 to get a complete time series, so 204001 replaced 201010 at 4th and 201002 replaced 203028 at 5th.
Glenhordial Burn, Crosh, Camowen, Glenhordial	Crosh analogue area almost twice as big as digital, used digital. Nearest WISKI station upstream at Camowen. Camowen nearest WISKI stations Camowen Terrace (201005) and Campsie bridge (201006). Glenhordial: digital area 6.23km^2, analogue 0.34km^2, used digital, cannot see WISKI station nearby.
Bauck Hill, Loughanadarragh, Loughnepeast, Lough Carn, Stradowan No1&2, Glencolpy, Cornagillah Bridge, Lenagh Bridge, Lough Fingrean, Lough Macrory	Bauck Hill digital used, but additional station 201008 added as ROI gauge 5 to obtain complete time series. No WISKI station nearby. Loughnepeast, Lough Fingrean and Lough Macrory are all included in the Lough Macrory catchment, digital at Lough Macrory used for these. Lough Carn saved as digital and analogue, used digital for calculations (the digital one selected is further downstream than Licence site) but adjusted FDC by 0.84/1.4 (0.84 is approx area at the Licence site). Stradowan 1 and 2 upstream of Cornagillah so just used Cornagillah digital for all 3. Glencolpy digital area 2.17km^2, analogue 3.03km^2. used digital as point seemed closer to the intake grid reference. Lenagh Bridge message that could not find climb thread in digital, used analogue instead, but adjusted analogue by 0.6/0.96 (area weighting, approx area at License point is 0.6km^2).

East WRZ	Notes
Collin Burn, Lough Garve 1, Lough Garve 2, Inver, Dungonell	Collin Burn 206001 ranked 5th ROI gauge, but no data available therefore used 203021. Lough Garve 1&2 couldn't select digital for either, used analogue which is downstream and weighted FDC by area, both included 206001 ranked 4th ROI gauge (for which no data is available), moved 203028 from 5th to 4th and added 203021 as 5th ROI GS. Inver used digital. Dungonell digital not representative, used analogue which is only a little way downstream.
Donaghy's, Crosswater1, Crosswater 2	Donaghy's digital seems fine. Crosswater2 and Crosswater3 digital boundaries cross a drainage path, but boundaries don't overlap so overall flow probably OK. Analogue site is further downstream of licence sites so used digital.
Lough Neagh	Assumed infinite.
Bellyvallagh, Frenchpark, Lough Mourne, Beltoy Copeland, North Woodburn, South Woodburn, Dorisland	Bellyvallagh used digital, but not enough data to produce time series so replaced 203019 with 203018 as 5th ROI GS. North Woodburn used digital. South Woodburn all on same river reach so only one inflow, analogue used and weighted by area, not enough data to produce time series so used 203018 instead of 203019 as 5th ROI GS. Lough Mourne and Beltoy upstream of Copeland, Copeland flows only required. Dorisland analogue used but weighted by area (0.16/0.983)
Silent Valley	Just downstream of Ben Crom, but separate inflow required for Aquator. This was obtained by subtracting Ben Crom from the Silent Valley flows. Digital used.
Ben Crom	Digital used.
Annalong	Nearly in the same location so just one inflow created. Digital used.
Central WRZ	**Notes**
Lough Fea, Whitewater, Shruhannaclogh, Shruhapollakeeran	Whitewater digital 5.29km^2, analogue 7.12km^2, used digital (looks like the analogue point is quite a lot further downstream). Sruhanpollakeeran: digital 0.43km^2, analogue is further downstream 1.87km^2, digital boundary upstream not same as analogue but if you were to draw the boundary manually looks like it would be the same size roughly as the digital. Lough Fea climb thread could not be found in digital, analogue used, catchment area drawn manually 4.1km^2, FDC adjusted by area weighting (4.1/7.34). For Sruhapollakeeran and Shruhannaclogh the 5 ROI gauges did not provide a complete time series, therefore gauge 201007 added in as the 5th GS for both.
Lough Neagh	Assumed infinite.
South WRZ	**Notes**
Altmore Reservoir, Cappagh Reservoir	Altmore is upstream of Cappagh on the same river, therefore Cappagh used for both. Digital used and boundary looks OK.
Clay Lake, Gentle Owen Lake	Clay Lake analogue area = 7.9km^2, not possible to select digital, but analogue is downstream of licence point so adjusted FDC by area weighting (5.9/7.9). Gentle Owen Lake is in a different catchment (and hydrometric region) so water must be transferred from Gentle Owen Lake to Clay Lake. Not possible to select digital boundary so used analogue and adjusted FDC by area weighting (0.56/2.25), manual area draining to Gentle Owen Lake is approx 0.56km^2.
Lough Neagh	Assumed infinite.
Lough Ross	Analogue didn't include all the area draining to the lake so used digital. Selected point just downstream of the lake so captured all inflows. 206001 first ROI gauge, however no data available, 203025 added in at 5 to provide complete time series.

Seagahan Dam	All fine.
Camlough Lake	Digital boundary looks odd and crosses a drainage path. Used analogue and adjusted using area weighting. Approx manual area at licence point is 2.3km^2 and analogue area is 3.02km^2, so adjusted by 2.3/3.02. 206001 is ROI gauge 1 but no data available, therefore 203033 added in at 5 to provide complete time series. NB only selected catchment at the upstream inflow to the lake since this is the licence location shown on the map; if the abstraction is for the whole lake then the catchment area will be larger.
Spelga, Fofanny and Slievemeel	Spelga, local gauge found but not used because generated negative value for mean flow. At Fofanny there seems to be a bypass channel round the reservoir. Just took the location at the dam. Slievemeel used digital (both analogue and digital saved).
Muddoch, Moneyscalp and Lough Island	The catchments are difficult to define, however an analogue catchment downstream of the reservoir was chosen and used for all the licence points.
Leathenstown Reservoir and Dornan's Intake	Dornan's Intake downstream of Leathenstown reservoir. Dornan's flows only used.

Table A.16 – Catchment delineation notes and comments

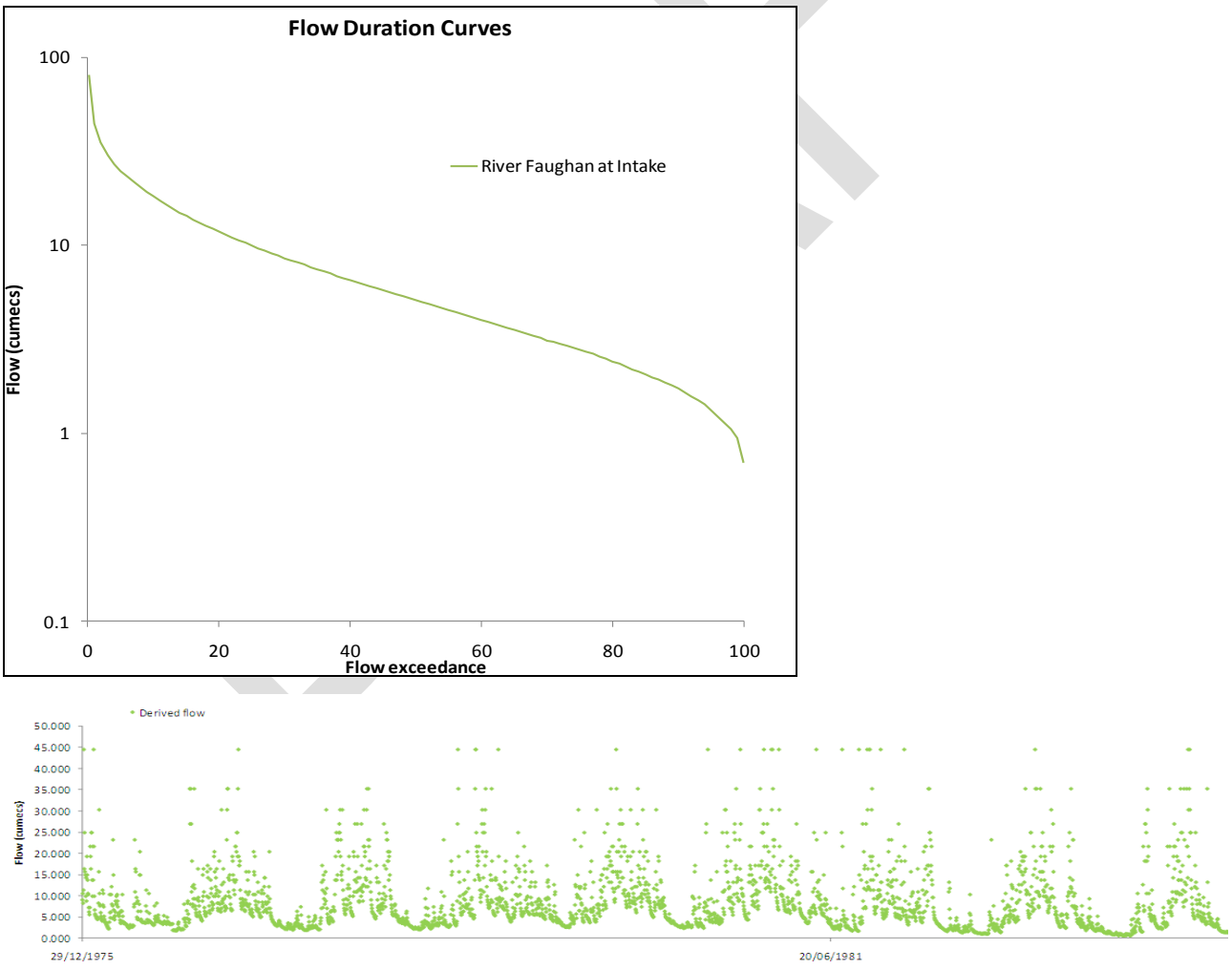


Figure A.16 – Example of flow duration curves and times series generated at each Licensed intake

A.8.4 Climate change

Climate change Flow factors

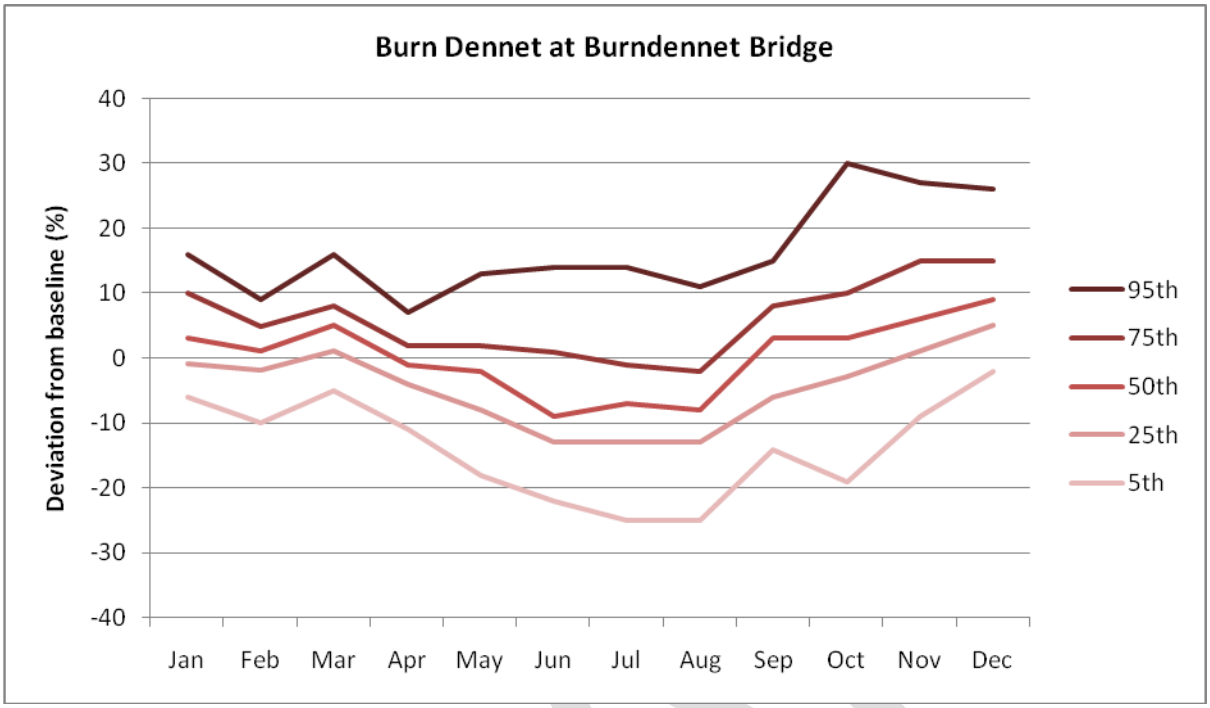


Figure A.17 – Flow factors for Burn Dennet at Burndennet Bridge

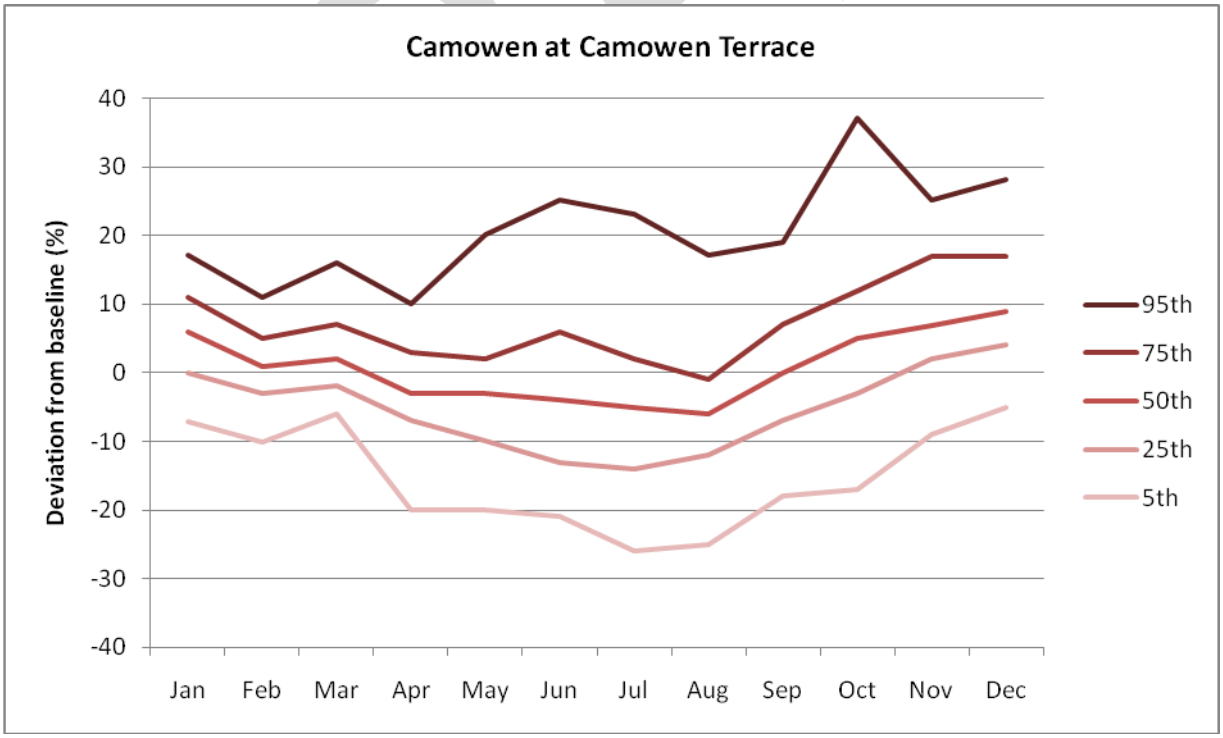


Figure A.18 – Flow factors for Camowen at Camowen Terrace

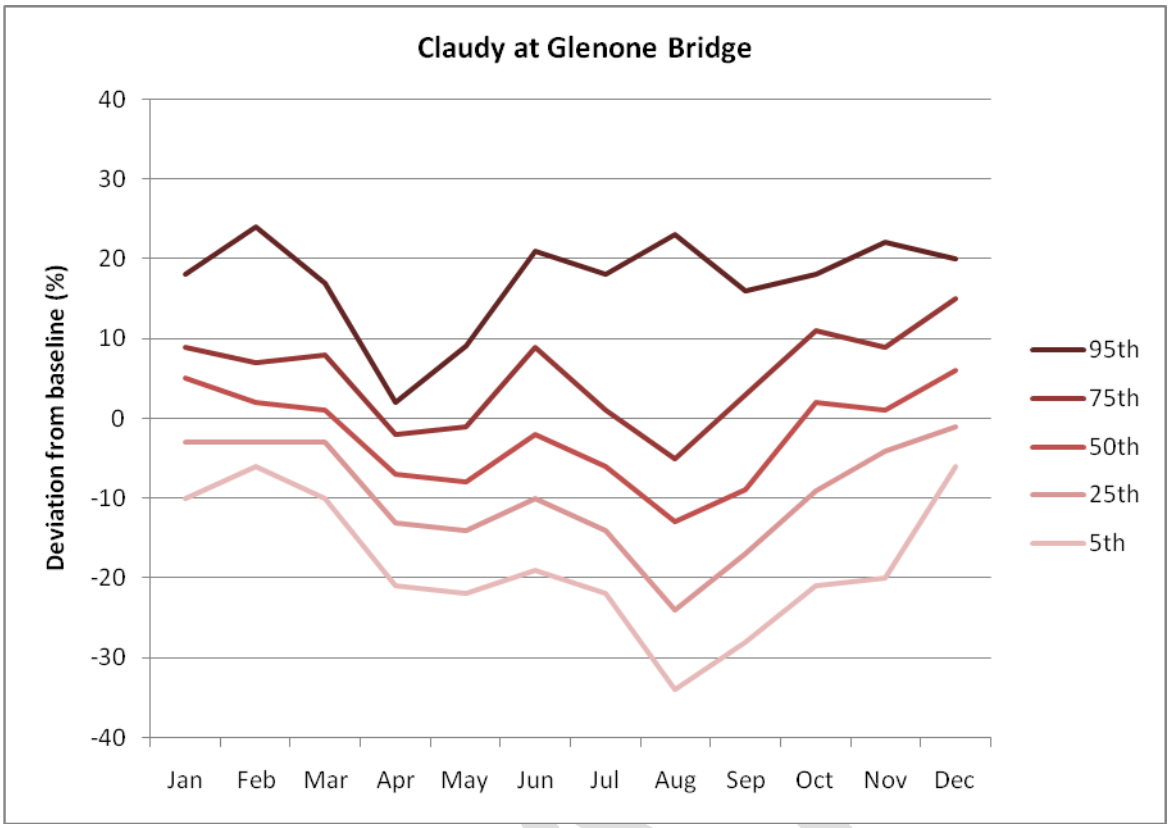


Figure A.19 – Flow factors for Claudy at Glenone Bridge

Simulation details and results

			5th Percentile Climate Change Runs						50th Percentile Climate Change Runs						95th Percentile Climate Change Runs					
WRZ	**Demand Centre**	**Demand (2008-2009 post MLE DI) (Ml/d)**	**RZ DO (Ml/d)**	**Demand factor**	**Additional model optimisation**	**Failure year**	**Demand Centre**	**Cause / observations**	**RZ DO (Ml/d)**	**Demand factor**	**Additional model optimisation**	**Failure year**	**Demand Centre**	**Cause / observations**	**RZ DO (Ml/d)**	**Demand factor**	**Additional model optimisation**	**Failure year**	**Demand Centre**	**Cause / observations**
North	Altnahinch	13.69	100	1.310	None required as the model is already set up to conserve Altnahinch supplies whenever possible	1984	Altnahinch	Same failure date and conditions as non-CC run	105.2	1.378	None required as the model is already set up to conserve Altnahinch supplies whenever possible	1984	Altnahinch	Same failure date and conditions as non-CC run	111.3	1.458	None required as the model is already set up to conserve Altnahinch supplies whenever possible	1984	Altnahinch	Same failure date and conditions as non-CC run
	Ballinrees	17.62																		
	Faughan/Altnaheglish	45.04																		
West	Derg/Bradan/Macrory RZ	37.22	86.8	1.380	None required as the model is already set up to conserve Lough Bradan supplies whenever possible	1984	Derg/Bradan/Macrory	Same failure date and conditions as non-CC run	88.2	1.399	None required as the model is already set up to conserve Lough Bradan supplies whenever possible	1984	Derg/Bradan/Macrory	Same failure date and conditions as non-CC run	89.5	1.423	None required as the model is already set up to conserve Lough Bradan supplies whenever possible	1984	Derg/Bradan/Macrory	Same failure date and conditions as non-CC run
	Killyhevlin RZ (DC1)	25.68																		
Central	Magherafelt/Cookstown (DC5)	26.70	31.1	1.165	None	1975	Hydrological conditions still not limiting		31.1	1.165	None	1975	Hydrological conditions still not limiting		31.1	1.165	None	1975	Hydrological conditions still not limiting	
East	Antrim/Larne RZ (DC8)	30.34	314.4	1.0781	Changed the balance of minimum flows to reflect the changes in hydrology (all found by trial and error) 1) Dungonnell WTW to Ballymena DC - reduced to 7 Ml/d 2) Killylane Reservoir to Killylane WTW - retained at 8 Ml/d 3) Dorisland WTW to Eastern General DC - reduced to 30 Ml/d	1978	Eastern General	Silent Valley and Ben Crom reservoirs become empty on 23/11/1978. However, the model is optimised to balance storage between Silent Valley/Ben Crom and the Woodburn system so with slightly different optimisation Woodburn could cause the failure. Dungonnell can supply more water at this time but increasing its utilisation means that it fails later in the record and ultimately reduces DO	328.1	1.125	Changed the balance of minimum flows to reflect the changes in hydrology (all found by trial and error) 1) Dungonnell WTW to Ballymena DC - reduced to 7 Ml/d 2) Killylane Reservoir to Killylane WTW - reduced to 7 Ml/d 3) Dorisland WTW to Eastern General DC - increased to 34 Ml/d	1978	Eastern General	Silent Valley and Ben Crom reservoirs become empty on 15/11/1978. However, the model is optimised to balance storage between Silent Valley/Ben Crom and the Woodburn system so with slightly different optimisation Woodburn could cause the failure.	346.1	1.187	Changed the balance of minimum flows to reflect the changes in hydrology (all found by trial and error) 1) Dungonnell and Killylane minimum flow controls retained from non-CC model - no further water can be moved away from the Ballymena and Antrim/Larne DCs 2) Dorisland WTW to Eastern General minimum flow removed to protect the over-utilised Woodburn system 3) Add minimum flow of 105 Ml/d (currently max supply just less than 105 Ml/d) to link between Drumaroad WTW and Eastern General to minimise use of Woodburn	2005	Eastern General	The Woodburn System becomes empty on 17/10/2005 despite optimisation to maximise preferential use of other sources
	Ballymena RZ (DC7)	24.32																		
	Eastern General RZ (DC2)	236.96																		

			5th Percentile Climate Change Runs						50th Percentile Climate Change Runs						95th Percentile Climate Change Runs					
WRZ	**Demand Centre**	**Demand (2008-2009 post MLE DI) (Ml/d)**	**RZ DO (Ml/d)**	**Demand factor**	**Additional model optimisation**	**Failure year**	**Demand Centre**	**Cause / observations**	**RZ DO (Ml/d)**	**Demand factor**	**Additional model optimisation**	**Failure year**	**Demand Centre**	**Cause / observations**	**RZ DO (Ml/d)**	**Demand factor**	**Additional model optimisation**	**Failure year**	**Demand Centre**	**Cause / observations**
South	Newry RZ (DC5)	53.28	215.1 (200.4 after 2015)	1.209 (1.126 after 2015)	1) Increase minimum flow between FIR and Fofanny WTW to 20 Ml/d to maximise use of LIR against the heavily utilised Spelga/Fofanny. Further optimisation was limited by the maximum capacity of 20 Ml/d on this link. 2) Increase minimum flow on link between Jerretspass PS and Newry demand centre to 16.5 (17.5 after 2015) to re-balance supply with Lough Ross	1977 (1975 after 2015)	Newry (Lough Ross after 2015)	218.6 (204.5 after 2015)	1.228 (1.149 after 2015)	1) Increase minimum flow between FIR and Fofanny WTW to 20 Ml/d to maximise use of LIR against the heavily utilised Spelga/Fofanny. Further optimisation was limited by the maximum capacity of 20 Ml/d on this link.	1975	Newry	Not hydrologically constrained in baseline so increasing water in catchment has not effect. Failure could easily be in Lough Ross demand centre with slightly different optimisation	218.6 (204.5 after 2015)	218.6 (204.5 after 2015)	1.228 (1.149 after 2015)	1) Increase minimum flow between FIR and Fofanny WTW to 20 Ml/d to maximise use of LIR against the heavily utilised Spelga/Fofanny. Further optimisation was limited by the maximum capacity of 20 Ml/d on this link.	1975	Newry	Not hydrologically constrained in baseline so increasing water in catchment has not effect. Failure could easily be in Lough Ross demand centre with slightly different optimisation
	Craigavon RZ (DC4)	94.74																		
	Lough Ross RZ (DC3)	6.43																		
	Armagh RZ (DC2)	18.33																		
	Dungannon RZ (DC1)	5.20																		

Table A.17 – Climate change run results (5th, 50th and 95th percentile) and model optimisation

Appendix B – Outage

B.1 Introduction

The WRP Guideline (produced by the Environment Agency for England and Wales) recommends that companies follow the principles set out in the operating methodology section of the report Outage allowances for water resources planning (UKWIR 1995) to determine their outage allowance. However, the WRPG also notes that the degree to which a company explores outage will vary according to need and circumstance. The Guideline thus notes that the minimum approach is for a company to justify outage allowances in relation to the likelihood of events occurring, given the magnitude, duration and timing of actual outage circumstances, as supported by recorded data.

In the glossary of the WRP Guideline, outage is defined as:

> *A temporary loss of deployable output. (Note that an outage is temporary in the sense that it is retrievable, and therefore deployable output can be recovered. The period of time for recovery is subject to audit and agreement. If an outage lasts longer than 3 months, analysis of the cause of the problem would be required in order to satisfy the regulating authority of the legitimacy of the outage).*

The UKWIR (1995) methodology notes that outages may occur from either planned or unplanned events.

Unplanned outages are caused by an unforeseen or unavoidable events affecting any part of the source works and occurring with sufficient regularity that the probability of occurrence and severity of effect may be predicted from previous events or perceived risk. The methodology provides a definitive list of events that could be considered as unplanned outages:

- Pollution of sources;
- Turbidity;
- Nitrates;
- Algae;
- Power failures; and
- System failures.

Planned outages arise from maintenance, inspection, refurbishment, and repair of source works. These outage events would not generally be considered where the loss of deployable output (DO) resulting from such regular maintenance issues was already taken into account in the calculation of DO for the source works in question. The company would not generally undertake major planned maintenance during periods or prolonged dry weather when reservoir storage has been drawn down and rivers are experiencing low flows.

B.2 Outage assessment

B.2.1 Data gathering

In the previous Water Resource Strategy (WRS 2002), the assessment of outage was based on discussions with each of the four Water Service Divisions in existence at the time, but no historic outage data was available. A nominal outage allowance of 3% of distribution input was assumed. It is understood that this was an allowance for unplanned outage only. No comment was made regarding planned outages.

Unplanned outage would normally be assessed using both observed outage from historical data and expected outage based upon interviews. Ideally there would be sufficient historical data to allow calculated outage values to be simply checked by operations staff to ensure that they were still consistent with the present state and expected future state of the source works.

A meeting was arranged with key NI Water staff to try to develop an understanding of outage, identify sources most at risk from specific outage events, and where possible to quantify these risks in terms of frequency, magnitude and duration of event. In an effort to provide a robust update to the estimation of outage for this WRMP, Atkins developed a pro forma to capture outage events. The staff interviewed were:

- Charles Gallagher – Head of Water Supply
- Gordon Nicholl – Business Unit Manager for Water Supply

During this meeting each source works was assessed in terms of risk of unplanned and planned outage events. The results are included in Table B.2 in section B.4. This summary represents relative risk at each source works. The key points to note from the meeting were:

- Production capacity estimates are based on the “20 hours rule” – i.e. if the works is shut for 4 hours, it can be run at a higher rate for 20 hours to catch up any lost capacity. As a result, planned outages are assumed to be zero.
- The supply system is, out of necessity, run with minimal outage as there is insufficient security in the system. So any outage event must be dealt with immediately. Therefore, even if data/information of historic outage events is available, the level of overall unplanned outage would be expected to be low.
- All sources have back-up power generators, so there are no “power failure” outage events.
- It was not possible to derive more detailed quantification of outage events than the relative risk assessment included in Table B.2 in section B.4. Therefore, no estimates of frequency, duration or magnitude of outage events were made.
- Water treatment works production capacity (July 2009) figures are based on estimates of safe yield (WRS 2002), plus allowances for safety factors. The safety factors make some allowance for uncertainty, outage, etc. However the NI Water staff noted that it was not possible to disaggregate and separate out each component making up the general safety factor.

However, there was little historical outage data available to support the assessment. The only data available was from Upwards Reports, which detail issues at WTWs. These were available from July 2008 to November 2009. They were assessed as the primary means to gather information on historical outage events.

The Upwards Reports data has been collated and entered into the outage pro forma for each source works. The results suggest that over a period of approximately 17 months, there was a total of nearly 17 days of outage events at the source works, as summarised in Table B.1 below.

Source works	Total outage duration days (Jul 2008 – Nov 2009)	Approximate outage (days / year)
Carmoney	2.8	2.0
Moyola	8.0	5.6
Clay Lake	0.2	0.1
Dunore	0.5	0.4
Derg	0.5	0.4
Castor Bay	0.5	0.4
Camlough	1.2	0.8
Killyhevlin	0.1	0.1
Altnahinch	1.2	0.8
Lough Macrory	1.1	0.8
Dorisland	0.2	0.1
Foffany	0.2	0.1
Seagahan	0.2	0.1
Total days outage	16.7	11.8

Table B.1 – Summary of Upwards Report unplanned outage events, Jul 2008 to Nov 2009

However whilst the Upwards Report data provides an indication of outage events experienced over approximately 17 months, they provide no indication of the magnitude of the impact.

B.2.2 Planned outages

No data was available regarding planned maintenance, inspection, refurbishment, and repair of source works. However, planned outages were discussed at the outage meeting with NI Water staff. They stated that the production capacity estimates are based on the “20 hours rule” – i.e. if the works is shut for 4 hours, it can be run at a higher rate for 20 hours to catch up any lost capacity. Thus, planned outages are already considered in the WTW capacity estimates. If an allowance for planned outages were to be included this would result in double counting. Therefore planned outage is assumed to be zero.

B.2.3 Unplanned outages

Due to the lack of suitable historic data, and the difficulties of operations staff in quantifying potential outage risks through interviews, the assessment again has to be based on expert judgement. However, recommendations for improved data collection for the future assessment of outage events have been made.

PPP source works are assumed to act effectively like bulk imports, as these are contracted amounts of water. Therefore, no allowance has been made for potential outages at these source works.

B.3 Conclusions

An attempt to collect relevant outage data was made through interviews with key operational staff aided by a pro forms developed to capture information and judgements in a robust and auditable manner. Potential data capturing historical outage events was also investigated, of which the only relevant available source were the Upwards Reports, but these were only available since July 2008, and did not capture information on magnitudes of impact.

Due to the lack of suitable historic data, and the difficulties of operations staff in quantifying potential outage risks through interviews, the assessment has again been based on expert judgement. However, approaches for improved data collection for future assessment of outage events have been considered.

The operations staff interviewed stated that the supply system is run with minimal outage as there is insufficient security in the system. So any outage event must out of necessity be dealt with immediately. Therefore, they felt that overall unplanned outage would be expected to be low – in the region of 1%-2%. Planned outages are already allowed for within WTW capacity estimates, so no additional allowance for these has been made.

Therefore, the outage allowance used for this Draft WRMP is 2% of deployable output, based on expert judgement. This is relatively low by comparison with many water companies in England and Wales, however, it is felt to represent a reasonable estimate in the context of the operating conditions experienced in Northern Ireland. The total deployable output of NI Water sources (i.e. excluding PPP schemes) is approximately 378 Ml/d (section A.1). Thus the assumed 2% allowance for outage equates to approximately 7.54 Ml/d.

B.3.1 Recommendations

In order to increase confidence in the estimates of outage for future planning purposes, and given the difficulties operational staff had in trying to quantify potential outage events, consideration should be given to the development of a data collection system.

Currently, the outage allowance is relatively low, although is felt to represent the conditions experienced in Northern Ireland – i.e. operations staff must currently ensure that outages are minimised and any events resolved in a short period of time, as there is insufficient security and resilience within the supply system. However, as steps are taken to improve the resilience of the system, the issue of outage may become more critical to the planning process. Therefore it will be necessary to base future outage allowances on reliable data sets.

Improved data collection will also facilitate a move towards a probabilistic determination of outage, so that an allowance may be chosen at which the company understands the risk that it may be exceeded in any given year. For instance, if the outage value is taken from the 95th percentile of cumulative probability, then there would be a 5% chance that the level of outage that actually occurs would be greater than this value.

Data capture systems

A data capture system could follow the template currently used in the Upwards Reports (an example of which is below), but perhaps with a section to estimate the magnitude of the impact in Ml/d terms, as well as the duration. For ease with outage assessment, events could also be classified under one of the definitive categories of unplanned outages.

Standard Upwards Report

Event type/classification:	*Carmoney Water Treatment Works*	**Report N°.:** *1*
Event category:	*2*	
Basis for categorisation;	*Received a telephone call form NIEA to inform plant staff that there was white foam covering over the full width of the River Faughan intake at Cloghole road. This is a possible detergent used for the oil spill clean up from last week on the river. Oil pollution in River Faughan last week resulted in plant shutdown of Faughan PS and Carmoney WTW for 36 hours. May give rise to local public or media interest.*	
Name of Reporter:	*Shaun Kelly*	
Date and time of Event:	*15/11/009*	*14.00*
Report Date and time:	*15/11/09*	*16.30*
Functional Area:	*Water Supply & Networks*	
Site Name/Location:	*Carmoney WTW, Londonderry*	
Asset Name:	*Faughan PS & Carmoney WTW*	
Event Details: • *Plant operational staff were informed of white foam in the river by at approx. 14.00 hrs and as a precaution shut down the pumping station and treatment works immediately.* • *NIEA staff to check river for source of pollution including site where oil pollution occurred last week.* • *Water Supply on site to establish extent of pollution. Carried out manual checks for Ammonia, phosphates & taste & odour tests through out the treatment plant & nothing was detected* • *White foam is clearly visible in the river below the Weir gates where the water is turbulent.* • *Water Supply staff currently investigating whether any pollution has got into the works but no visible signs of foam anywhere in the works.* • *A boom has been installed at the works intake to deflect river flow away from the works.* • *Monitoring of the river intake ongoing.* • *Current storage level at Carmoney sufficient for24-30 hour's min. Rezoning not required at this time* • *NIEA have contacted ENVA who were used to clean up the oil spill last week to check if any detergent was used in the clean up. ENVA were adamant that no detergent was used by them.* • *Scientific staff will be on site shortly to conduct checks in the Raw Water and through out the works.* • *Plant will remain shutdown while further analysis of the river and plant takes place.*		
Population Affected including potential:	*No customers are affected at present.* *WTW currently produces about 25 ML/day to about 100,000 population.*	
Action Taken: • *Supply and scientific staff on site to ascertain extent of problem* • *Approximately 24 -30 hours storage in the system.* • *Telemetry & Networks have been informed of the problems*		
Estimated time of restoration:	*As a precaution Treatment works has been shut down. Hopefully plant will be started up at 08:00hrs tomorrow with the guidance of scientific section*	
Information passed to the following:	*A Law, B McKee, C Gallagher, M Wright, M Mailey, G McKeague, G Murphy, D Devaney*	
Line to take:	• *NI Water is monitoring the situation and will take all necessary action to protect and maintain supplies to customers.* • *Final water quality is not affected.*	

Figure B.1 – Example of current Upwards Report

An alternative, although similar system, could make use of the pro forma already developed as part of this assessment. For any legitimate outage event, the pro forma could be completed and issued to a designated member of staff responsible for data collection, and then entered into a data base to allow easy access to the data in future assessments.

Sourceworks:		**Date of Review:**	26/11/2009				
Source type:	**Water Treatment Works**	**NIW Staff:**					
		Atkins Staff:					
UNPLANNED OUTAGE							
Event Group	**Outage Event**	**Data available (identify source)**	**Estimated return period (years)**	**Duration (days)**	**Outage (days/year)**	**Proportion (%) of treatment affected**	**Comments**
Pollution of Source	Contamination risk						
	Accidental spills						
	Pollution of nearby river						
	Algae						
	Cryptosporidium/Giardia						
	Nitrates / agriculture (e.g. pesticides)						
	Turbidity - operational / air						
	Turbidity - rain induced						
Power failure	Loss of Supply - rural & no generator						
	Loss of Supply - urban						
System failure	Flooding - fluvial						
	Flooding - drainage						
	Flooding - pipe burst						
	Control Failure (e.g. telemetry)						
	Disinfection problems (incl UV failure)						
	Ortho-Phosphate control problems						
	Pump failure (including multiple failures)						
	Age related (general M&E/ICA)						
	New process (microfiltration etc)						
	Complex process (iron removal etc)						
	Burst main (raw water transfer to WTW)						
	Catastrophic failure (e.g. fire)						
	Operator Error						
	Other works failures						
		Total days outage experienced		0.0			
PLANNED OUTAGE							
Event Group	**Outage Event**	**Data available (name source)**	**Estimated return period (years)**	**Duration (days)**	**Outage (days/year)**	**Proportion (%) of treatment affected**	**Comments**
Planned	Inspections						
	Maintenance						
	Repair						
	Refurbishment						

Figure B.2 – Example of outage pro forma

Another approach could be to conduct regular analysis of water into supply data from each source works. This could be done, for example, on a monthly basis. Occurrences of significant decreases of water into supply could be followed up with the operations manager to understand the reason for the variation, and determine if it is due to a legitimate outage event or not. If so, the approximate magnitude could be determined from the data. At the time of inquiry with the operations manager, the approximate duration of the outage event could also be assessed. Note that not all reductions in output would be due to outage events, and it may also be possible to maintain supply through increased output from alternative sources or storage (and then catch up to replace “lost” storage from covering the outage event).

B.4 Outage records

B.4.1 Unplanned outage risks

Add a tick (✓) to the top-left section of box to indicate if the type of outage has been experienced historically. Add a tick in the bottom-right (using spaces to align) to indicate if data might be available. An example is here:	✓ ✓

Production Source	Head WTWs	Unplanned Outage						Comments
		Source pollution	Turbidity	Nitrates	Algae	Power failures	System failures	
Altnahinch Impounding Reservoir	Altnahinch	× ×	× ×	× ×	× ×	× ×	✓ ×	medium risk system failure
Lough Erne	Belleek	× ×	× ×	× ×	× ×	× ×	✓ ×	Low risk system failure
Camlough Lough	Camlough	× ×	× ×	× ×	× ×	× ×	✓ ×	Low risk system failure
River Faughan	Carmoney	✓ ×	× ×	× ×	× ×	× ×	✓ ×	High risk system faliure surrently, but upgrade now underway
Lough Ross	Carran Hill	× ×	× ×	× ×	✓ ×	× ×	✓ ×	Low risk system failure
Altnaheglish Impounding Reservoir	Caugh Hill	× ×	× ×	× ×	× ×	× ×	✓ ×	Low risk system failure
Glenedera River	Caugh Hill	✓ ×	× ×	× ×	× ×	× ×	✓ ×	Low risk system failure. Low risk source pollution
Clay Lake Impounding Reservoir	Clay Lake	× ×	× ×	× ×	✓ ×	× ×	✓ ×	medium risk system failure (due to membrane plant)
River Derg	Derg (Tievenny)	✓ ×	× ×	× ×	× ×	× ×	× ×	
Woodburn Combined Impounding Reservoirs	Dorisland	✓ ×	× ×	× ×	× ×	× ×	✓ ×	Low risk system failure

Production Source	Head WTWs	Unplanned Outage						Comments
		Source pollution	Turbidity	Nitrates	Algae	Power failures	System failures	
Silent Valley/Ben Crom Impounding Reservoirs River Annalong	Drumaroad	× ×	× ×	× ×	× ×	× ×	✓ ×	Low risk system failure
Dungonnell Impounding Reservoir	Dungonnell	× ×	× ×	× ×	× ×	× ×	✓ ×	Low risk system failure
Fofanny/Spelga Impounding Reservoirs	Fofanny	× ×	× ×	× ×	× ×	× ×	× ×	
Lough island Reavy	Fofanny	× ×	× ×	× ×	× ×	× ×	× ×	
Glenhordial Impounding Reservoir	Glenhordial	× ×	✓ ×	× ×	× ×	× ×	✓ ×	Low risk system failure. Low risk turbidity
Lough Erne	Killyhevlin	× ×	× ×	× ×	× ×	× ×	✓ ×	medium risk system failure (due to process issues)
Killylane Impounding Reservoir	Killylane	✓ ×	× ×	× ×	× ×	× ×	✓ ×	medium risk system failure. Low risk source pollution
Lough Bradan Impounding Reservoir	Lough Bradan	× ×	× ×	× ×	× ×	× ×	✓ ×	High risk system faliure surrently, but scheme is in capital programme
Lough Fea Impounding Reservoir	Lough Fea	✓ ×	× ×	× ×	× ×	× ×	✓ ×	Low risk system failure
Lough Macrory/Lough Fingrean Impounding Reservoirs	Lough Macrory	× ×	× ×	× ×	× ×	× ×	× ×	
Seagahan Impounding Reservoir	Seagahan	× ×	× ×	× ×	✓ ×	× ×	× ×	No system failure risk subject to successful comissioning. Low risk of algae
Ballinrees & Altikeeragh Impounding Reservoirs Rivers Bann and Ballyhacket	Ballinrees							PPP
Lough Neagh	Castor Bay							PPP
Lough Neagh	Dunore Point							PPP
Stoneyford and Leathemstown Impounding Reservoirs	Forked Bridge							PPP
Lough Neagh	Moyola							PPP

Table B.2 – Summary of unplanned outage risks at each source works

Table 11

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

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

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**ASSET BALANCE AT APRIL 1**										
1	Total length of mains	km	2	25921.72	C3	25972.00	B3	26067.07	B3	26349.22	B3
B	**CHANGES DURING REPORT YEAR**										
2	Mains renewed	km	2	239.87	B3	136.00	A2	288.62	C2	172.22	A2
3	Mains relined	km	2	10.05	B3	0.00	A2	0.00	A2	0.00	A1
4	Mains cleaned (total)	km	2			8259 jobs	C5	1925.35	B4	1487.62	B3
5	Distribution mains cleaned for quality	km	2			0.00	A2	96.41	C5	376.27	B3
6	New mains	km	2	199.18	B3	238.00	A2	354.01	C2	298.88	A2
7	Mains abandoned and other changes	km	2	148.90	B3	259.00	A2	360.48	C2	325.10	A2
8	Lead communication pipes replaced - quality	nr	0					168	B3	380	B3
9	Lead communication pipes replaced - maintenance or other	nr	0			659	B3	385	B3	1371	B3
10	Communication pipes replaced - other	nr	0			9809	B4	8801	B3	6418	B3
11	Mains bursts per 1000km	nr	0			139	C3	141	B3	147	B3
C	**ASSET BALANCE AT MARCH 31**										
12	Total length of mains	km	2	25972.00	B3	26067.07	B3	26349.22	B3	26435.45	B3
D	**DISTRIBUTION STUDIES**										
13	Cumulative number of distribution zone studies completed	nr	0	22	A1	30	A1	46	A1	54	A1
14	Distribution zone studies ongoing	nr	0	27	A1	21	A1	19	A1	17	A1
15	Total distribution zones identified for study	nr	0	71	A1	71	A1	71	A1	71	A1
16	Cumulative % distribution zone studies completed	%	1	31.0	A1	42.3	A1	64.8	A1	76.1	A1
17	Percentage population/properties - completed studies	%	1	31.0	A1	43.1	A1	60.8	A1	71.9	A1
E	**OTHER WATER SERVICE ACTIVITIES**										
18	Length of aqueducts refurbished for maintenance	km	2								
19	Substantive refurb. work - dams & impounding reservoirs (maintenance)	nr	0								
20	Number of existing water treatment works refurbished for maintenance	nr	0								
21	Capacity of refurbished water treatment works for maintenance	Ml/d	3								
22	Number of new or enhanced water treatment works for quality	nr	0								
23	Distribution input of new or enhanced water treatment works for quality	Ml/d	0								
24	Number of pumping stations refurbished for maintenance	nr	0								
25	Number of service reservoirs & water towers refurbished for maintenance	nr	0								
26	Number of household meters renewed	nr	0								
27	Number of security related improvements	nr	0								
28	Environmental impact - number of investigations	nr	0								
29	Environmental impact - number of options appraisals	nr	0								
30	Other environmental improvements	nr	0								

Table 11 - Non Financial Measures - Water Service Activities (NIW only)

General

The Reporter recommended consolidation of Table 11 methodologies to improve visibility and avoid possible conflicts to this end the Asset Management Section (AMS) has co-ordinated the input into this table from a number of sources.

Line 1 – Total length of mains at 1 April

The value of 26349.22km has been extracted from line 12 of the AIR09 Table 11.

Lines 2 – 10 – Changes during the reporting year

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

The confidence grades have been reviewed by AMS, taking into consideration those proposed by both NIW sections, as follows:

The confidence grades for lines 2, 6, 7 and 9 have been proposed as A2, as:

1. The EP Procurement Business Unit's confidence grades for these lines were A1, and those from Networks Water Operations were B3; and

2. The proportion of the data, from Networks Water Operations, for these lines is minimal.

The confidence grades for line 3 remains as A1 is proposed by EP Procurement Business Unit, as this operation has not been carried out by Networks Water Operations.

The confidence grades for lines 4, 5 and 8 remain as proposed by Networks Water Operations i.e. B3, as either these lines are not relevant to EP or they have zero as a return.

The confidence grade for line 10 has been proposed as B2 as:

1. The EP Procurement Business Unit's confidence grades for this line was A1, and that from Networks Water Operations was B3; and

2. The proportion of the data, from Networks Water Operations, for this line amounts to 20% of the total value populated in table.

The commentaries from EP Procurement Business Unit and from Water Supply are contained below.

The Reporter recommended re-assessing the method for reporting of line 7; a process still has to be developed to ensure that CAR can provide a single source of data for this line. However the latter is presently not possible with

the current software and NIW procedures, hence NIW has not been able to alter it's method for reporting the total length of abandoned mains in Table 11 Line 7, for AIR10.

Commentary from EP Procurement Business Unit for Lines 2, 3, 6-10

B	CHANGES DURING REPORT YEAR			
2	Mains renewed	km	166.67	A1
3	Mains relined	km	0	A1
4	Mains cleaned (total)	km	N/A	N/A
5	Distribution mains cleaned for quality	km	N/A	N/A
6	New mains	km	298.30	A1
7	Mains abandoned and other changes	km	319.9	A1
8	Lead communication pipes replaced - quality	nr	0	A1
9	Lead communication pipes replaced - maintenance or other	nr	1337	A1
10	Communication pipes replaced - other	nr	5075	A1

General

NIW intends to replace/rehabilitate approximately 1.3% of the water mains network on an annual basis. This is equivalent to 915 km over the 3 year period of 07/08, 08/09 and 09/10.

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.

Lines 2, 3, 6 – 10 – Changes during the Reporting Year

All information is compiled from EP contract management information monthly returns. This is an accurate measurement of the actual lengths of water mains laid, renovated or replaced, compiled from contractor's on-site records. The information is collated from each individual contract on a monthly basis and aggregated into an overall annual figure. The EP data is assessed as confidence grade A1 on the basis of the competency of our long term contracting partners' understanding of their reporting requirements, the quality and robustness of their on-site measurements and NI Water's 'Captrax' management system which stores the information and is used to populate the AIR table.

Please note: NI Water has maintained its method of reporting of new and renewed mains in lines 2 and 6 as from previous years. The Reporter in his report of August 2009 indicated that this reporting method resulted in double counting and the Regulator in his Annual Information Return reporting requirements and definitions manual, March 2010 requires that mains activity lengths should only be reported on Lines 2, 3, and 6 on the basis of primary purpose for the activity. NI Water had maintained it's method of capturing information from source throughout the year pending confirmation of reporting requirements from the Regulator. The possibility of interrogating the records

retrospectively to address the double counting has been considered and determined to be very labour and time intensive. Consequently we are of the opinion that it is an inappropriate use of resources to comply with the recent guidance. The new reporting requirements are in place for pipes laid from 1 April 2010.

Please note: The expenditure on water mains infrastructure for 09/10 is almost exactly the same as that for 08/09; however, the outputs for mains renewed and new mains (lines 2 & 6) are less than 08/09. This reduction is due to a greater expenditure on trunk mains in 09/10 and more activity in urban areas, at a more expensive rate than rural activity. Also, the numbers of lead communications pipes (lines 8 & 9) has increased, consistent with an increased activity in urban areas.

The Reporter had recommended that NIW should improve field data records to enable more direct categorising of replaced communication pipe materials. For the last elements of the current framework, the clerk of works on site has had to sign the track sheets clearly identifying lead services from any other services. For the new framework, that is now awarded, there has been a change of coding to clearly identify lead services and this is incorporated into the new Cost Management System.

The confidence grades for EP information for these lines 2, 3, 6 - 10, remain as last year.

Lines 4 & 5
EP does not undertake any of these functions as part of construction projects.

Commentary from Network Water Operations for Lines 2 - 10

B	CHANGES DURING REPORT YEAR			
2	Mains renewed	km	5.548	B3
3	Mains relined	km	0	
4	Mains cleaned (total)	km	1487.62	B3
5	Distribution mains cleaned for quality	km	376.272	B3
6	New mains	km	0.575	B3
7	Mains abandoned and other changes	km	5.195	B3
8	Lead communication pipes replaced - quality	nr	380	B3
9	Lead communication pipes replaced - maintenance or other	nr	34	B3
10	Communication pipes replaced - other	nr	1343	B3

The following provides the commentary on lines for Network Water Operations which record the amount of maintenance activity carried out in the report year 09/10 on water mains and communication pipes.

Detailed data for March 09 – April 10 was collated by Field Managers using system reports which when checked and confirmed were transferred onto a spreadsheet and sent to the Clean Water Business Unit who collate the data for the annual reporting period.

Line 3 - Mains relined – per km
At present this operation is not carried out by Networks Water.

Line 4 - Mains cleaned per km
The recorded units were number of fire hydrant flushes which are then converted from units to km using the factor of 0.156.

2010 information return is 9536 flushings (x 0.156) = 1487.62 Kms

A flushing programme has been established and Work Orders are generated and sent to the Field Operators. This information is captured on the MWM system.

Confidence Grade: B3 - Although the AIR09 Reporter's Recommendations had indicated that C5 was more applicable to line 4, B3 (minor short comings with Accuracy within +/- 10%) is more applicable for the AIR10 return as there is a full years data from Mobile Work Management (MWM). MWM performance is improving year on year.

- As per audit recommendations the number of flushings has been converted to km.
- The number of flushings has been captured March 09 – April 10 year using base information from MWM and then converted to km using the factor of 0.156.

Line 5 - Distribution Mains cleaned for quality – km
The recorded units were number of fire hydrant flushes which are then converted from units to km using the factor of 0.156.

2010 information return is 2412 flushings (x 0.156) = 376.27 Kms

Future Reporting
For AIR10 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 11 - Mains bursts per 1000km
The specified unit for Line 11 is Mains Bursts per 1000km. NIW do not currently record Mains Bursts per 1000km but record the number of Mains Bursts Repairs. Detailed data for reporting period March 09 – April 10 was collated by Field Managers using system reports which when checked and confirmed were transferred onto a spreadsheet and sent to the Clean Water Business Unit who collate the data for the annual reporting period.

The totals for Networks Water were then converted from units to bursts/km.

Calculation of Mains Bursts per 1000kms
Total Burst Mains divided by Total length of mains multiplied by 1000
3910 / 26,625.6 = 0.1414 x 1000 = 146.85
Total Bursts per 1000kms = 146.85

2007 information return was 5054
2008 information return was 3611
2009 information return was 3764

Proportion of Bursts within Line 11 detected by Proactive Methods.
The number of Mains Repairs carried out by Networks Water Function was 2541. The number of Mains Repairs carried out by Leakage Function was 1369. The total number of Mains Repairs carried out by NIW was 3910.

Confidence Grade B3
The number of bursts for Networks Water have been captured for the complete year using base information from MWM plus information captured by the Leakage function.

Future Reporting
For AIR10 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 at 31 March
The value of 26435.45km has been extracted from NI Water digital data which is held in the Asset Mapper GIS.

There has been no change to the structure of the data reported on this year from the previous years that would directly affect the total. The same queries have been used to extract the data from the Corporate Asset Register and have been checked to ensure that they are still relevant. The confidence grade of the data will remain as B3, the same as that in AIR09. There have been no significant improvements in data quality since the AIR09 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.

Consideration of lines 6 and 7 (on Table 12) in conjunction with line 1 will not equate to the figure entered for line 12, due to the fact that information may be pending for uploading onto Asset Mapper GIS.

Line 13 – Distribution zone studies completed
NIW's Distribution Zonal Studies conform to industry best practice and have received favourable comments following audits on several occasions.

This value is derived from the number of zones studied year by year against a total of 71 no. zones in Northern Ireland with start/finish dates held on the following spreadsheet.

54 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 2010)				
Zone	**Area**	**Start Date**	**Completion Date**	**AIR10 Population**
Craigavon West	SE	11/11/99	Aug-01	21494
B'mena Borough	NW	20/04/00	Dec-02	28095
Silent Valley	SE	16/07/01	Jan-Mar 2004	3450
Fofanny Newry	SE	16/07/01	Jan-Mar 2004	51206
Camlough	SE	10/10/01	Jan-Mar 2004	14579
Ballinrees West	NW	07/01/02	Apr-Jun 2003	16768
Breda South	SE	20/03/01	Oct-02	37885
Cityside	NW	09/08/00	Oct-04	57510
Castor Bay/Armagh	NW	18/12/02	Feb-06	16054
Seagahan	NW	18/12/02	Feb-06	31675
Clay Lake	NW	18/12/02	Feb-06	6682
Ards North	SE	24/06/03	Nov-05	27764
Lough Cowey	SE	24/06/03	Nov-05	9509
Bangor Outer	SE	24/06/03	Nov-05	43788
Castor Bay/M'liskmisk	SE	19/11/03	Nov-05	16490
Altnahinch	NW	04/06/01	Feb-03	30934
Drumabest	NW	05/06/01	Feb-03	13248
Ballinrees East	NW	07/01/02	Apr-Jun 2003	22894
Ballinrees Central	NW	07/01/02	Apr-Jun 2003	25612
Dungonnell	NW	30/05/01	Jan-05	36971
North Tyrone	NW	10/05/01	May-Jun 2006	29657
South West	NW	10/05/01	May-Jun 2006	13461
Tardree	NW	04/09/03	Mar-09	10483
Dunore West	NW	04/09/03	Mar-09	43797
Lough Fea	NW	23/04/01	Dec-07	29652
Castlereagh	SE	19/05/02	Nov-07	25683
Purdysburn East	SE	19/05/02	Nov-07	31641
Castor Bay Shanmoy	NW	12/11/02	Dec-09	21919
Altmore/Gortlenaghan	NW	12/11/02	Dec-09	11452
Newtownards Town	SE	02/11/04	Dec-07	32195
Ballintemple	SE	02/07/02	Apr-09	15418
Lough Ross	SE	02/07/02	Apr-09	10398
Fofanny B'bridge	SE	05/04/01	Dec-07	19037
Castor Bay/Banbridge	SE	05/04/01	Dec-07	30103
Carmoney East	NW	04/07/01	Mar-08	16461
Waterside	NW	04/07/01	Mar-08	25284
Moyola	NW	01/10/01	Aug-09	40322
Lisburn Town	SE	29/04/03	Jan-08	40730
Lisburn Rural	SE	29/04/03	Jan-08	10249
Mid Down	SE	02/11/04	Feb-09	29173
Ballygowan	SE	02/11/04	Feb-09	6369
Comber	SE	02/11/04	Feb-09	12927
Craigavon North	SE	19/11/03	Feb-08	35217
Craigavon South	SE	19/11/03	Feb-08	20879
Limavady	NW	19/05/04	Sep-08	30702
North East	NW	19/05/04	Sep-08	4181
South	NW	06/01/08	Dec-10	20656

Zone	Area	Start Date	Completion Date	AIR10 Population
South East	NW	06/01/08	Dec-10	14108
N Down/Bangor	SE	01/04/06	Jan-08	31436
South Down	SE	15/06/07	Mar-09	15630
Downpatrick	SE	15/06/07	Mar-09	8297
Newcastle	SE	15/06/07	Mar-09	10098
Mourne Coastal	SE	15/06/07	Mar-09	12371
Breda North	SE	22/02/08	Oct-09	53227
Belfast East	SE	22/02/08	Oct-09	37066
Holywood	SE	22/02/08	Oct-09	8308
Dunmurry	SE	Jul-08	Dec-10	34730
Lisburn South Rural	SE	Jul-08	Dec-10	20228
Ballywonard/Dunanney	SE	Jun-08	Jun-10	38826
Ballysillan/Ballyaghagan	SE	Jun-08	Jun-10	33625
West Belfast rural	SE	Jun-08	Jun-10	10171
Omagh	NW	Jul-08	Jan-11	38921
Dunore East	NW	Jun-09	2011/12	20673
Killylane	NW	Jun-09	2011/12	32365
Lough Mourne	SE	05/02/09	Jun-10	7557
Carrickfergus	SE	05/02/09	Jun-10	37843
Newtownabbey	SE	05/02/09	Jun-10	34630
Whiterock	SE	Jun-09	2011/12	32575
B'gomartin/P'burn West	SE	Jun-09	2011/12	33506
Oldpark	SE	Jun-09	2011/12	63997
Ballygomartin North	SE	Jun-09	2011/12	29308

KEY			
Started/finished	54	Studies completed population	1286431
Started/ongoing	17	N Ireland population	1790150
Programmed to start	0		
Remaining zones to start	0	Percentage Complete	71.9%

Line 14 – Distribution zone studies ongoing
The number of zonal studies ongoing, 17 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 percentage distribution zones studies completed
The percentage figure is calculated from the Zonal studies completed (54 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. Hence the population (1,790,150) which has been used has been cross checked with

that being used in AIR10 by the Leakage Section, and by Customer Services. The 71.9% accounts for updated studies up to the 31st March 2010.

Table 11a

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 11A NON FINANCIAL MEASURES
WATER SERVICE SERVICEABILITY INDICATORS (NIW Only)

	DESCRIPTION	1		2		
		NUMBER OF WTWs		OUTPUT FOR CALENDAR YEAR		CG
		UNITS	DP	UNITS	DP	
A	WATER TREATMENT WORKS - TURBIDITY	nr	0	Ml/d	2	
1	95%ile greater than or equal to 0.5NTU	7		65.19		A3
2	95%ile less than 0.5NTU	18		293.63		A3
3	Turbidity not recorded	6		2.73		A3
4	Total	31		361.55		A3

Table 11a –Non Financial Measures – Water Service Serviceability Indicators

Background – Year on Year

During the period 2005 to date, a number of non-compliant water treatment works (WTWs) and small sources have either been completely replaced with new works, or else taken out of service as and when a replacement supply is available. During 2008, 5 existing major WTWs were replaced/upgraded as part of the Alpha PPP project. This contributed to the closure during 2009 of 6 non-compliant small water treatment works/sources.

The turbidity compliance at WTWs has stabilised in 2009 with 43 exceedances of the limit in 2009, compared to 42 in the equivalent period in 2008.

Now that full year data is available for the above 5 PPP sites, these sites have been assessed in their own separate table.

Lines 1 – 4 - Turbidity

The data used for the estimation of average flow at WTWs in Table 11a lines 1 - 4 was supplied from operations leakage metering. This data was estimated prior to 2005 to allow the scheduling of audit samples to meet regulatory requirements during the year. This scheduling was audited by DWI. For the purposes of scheduling from 2007, an estimate of expected daily throughput by works was received from operational scientists in order to populate the LIMS system for frequency of sampling. For 2008 and 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.

The calculations were carried using the following data criteria:

- Only scheduled audit final water samples lifted to meet Water Supply regulatory requirements during the calendar year were used, and using accredited laboratory analyses rather than onsite analyses.
- Only those WTWs which had more than 11 months worth of data were included. This led to the exclusion of 6 sites which were put out of service during the reporting period, with 25 other NI Water sites reported on. These 6 sites have been included in the report on line 3 “Turbidity not recorded”.
- In addition to the 31 NI Water sites, the 5 PPP sites have been reported on separately in their own table.
- In its Drinking Water Quality Report for 2009, NI Water will be reporting overall on 36 sites.

During 2009, one of the reported sites (W2515) had its sampling point moved downstream for operational reasons. This necessitated now sampling at a service reservoir which had flows from other WTWs incorporated. For the purpose of this return, although there is a higher distribution input at the new

sample point than at the original sample point, the distribution input from the original sample point is the one used to avoid double counting.

2009 WTW Excluded from calculations

Site Code	Site Name	Reason
W1307	Buckna Borehole	Out of service at year end
W1704	Alcrossagh Borehole	Out of service at year end
W1705	Drumabest Borehole at Dunaghy	Out of service at year end
W3320	Creightons Green (Whinney Hill)	Out of service at year end
W4324	Stradreagh	Out of service at year end
W4326	Brishey	Out of service at year end
6 Sites		

2009 NIW WTW Included in calculations

Site Code	Site Name	ML/d	95%ile	≥ 0.5NTU	Ml/d ≥ 0.5	Ml/d < 0.5
W1302	Lough Fea	11.84	0.4	0		11.84
W1303	Dungonnell	9.27	0.3	0		9.27
W1310	Glarryford Borehole	4.32	0.3	0		4.32
W1501	Killylane	10.81	0.5	1	10.81	
W1702	Altnahinch	8.33	0.4	0		8.33
W1706	Rathlin Borehole	0.10	0.445	0		0.10
W2501	Altmore	3.74	1.28	1	3.74	
W2509	Clay Lake	4.13	0.4	0		4.13
W2512	Gortlenaghan Borewell	0.87	10.205	1	0.87	
W2514	Seagahan	10.92	0.4	0		10.92
W2515	Shanmoy Borewell	1.89	0.5	1	1.89	
W2706	Camlough	4.30	0.6	1	4.30	
W2801	Fofanny (New Works)	38.72	0.31	0		38.72
W2802	Carron Hill (New works)	6.78	0.2	0		6.78
W3317	Dorisland	26.47	0.3	0		26.47
W3801	Drumaroad	112.67	0.4	0		112.67
W4301	Carmoney	18.56	0.5	1	18.56	
W4306	Caugh Hill	20.31	0.4	0		20.31
W4501	Derg	13.18	0.3	0		13.18
W4513	Lough Bradan	8.32	0.4	0		8.32
W4523	Lough Macrory	11.73	0.3	0		11.73
W4541	Glenhordial	4.43	0.4	0		4.43
W4542	Lenamore Springs	0.44	0.4	0		0.44
W4701	Killyhevlin	25.01	0.5	1	25.01	
W4722	Belleek	1.65	0.3	0		1.65
25 Sites	**Overall DI Input**	**361.55**				

2009 PPP WTW Included in calculations

Site Code	Site Name	ML/d	95%ile	≥ 0.5NTU	Ml/d ≥ 0.5	Ml/d < 0.5
W1301P	Moyola PPP	14.51	0.16	0		14.51
W1701P	Ballinrees PPP	25.69	0.2398	0		25.69
W2308P	Castor Bay PPP	80.74	0.1944	0		80.74
W3301P	Dunore Point PPP	119.40	0.17	0		119.40
W3315P	Forked Bridge PPP	21.18	0.18	0		21.18
5 Sites	**Overall DI Input**	**261.52**				

Table 12

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (NIW Only)

	DESCRIPTION	UNITS	DP	1 NR OF SOURCES	2 PROP'N DIST INPUT	3 BULK PROP'N OF D.I.	4 REPORT YEAR 2009-10	CG
				UNITS / DP	UNITS / DP	UNITS / DP		
A	**SOURCE TYPES AND PUMPING**			nr / 0	Prop'n (0-1) / 3	Prop'n (0-1) / 3		
1	Impounding reservoirs			15	0.776			B2
2	River abstractions			6	0.198			B2
3	Boreholes			9	0.026			B2
4	Source types and pumping; total			30	1.000	0.000		B2
5	Average pumping head - total	m.hd	1				87.1	B4

		TOTAL PROP'N OF D.I.	TOTAL NR OF WORKS
		UNITS / DP	UNITS / DP
B	**TREATMENT TYPE**	Prop'n (0-1) / 3	nr / 0
6	Proportion of distribution input - simple disinfection	0.011	6
7	Proportion of distribution input - W1	0.000	0
8	Proportion of distribution input - W2	0.014	3
9	Proportion of distribution input - W3	0.597	12
10	Proportion of distribution input - W4	0.378	9
11	Proportion of distribution input - total	1.000	
12	Total numbers of works		30

				BAND 1 <= 165mm	BAND 2 166 - 320mm	BAND 3 321 - 625mm	BAND 4 > 625mm
C	**POTABLE MAINS**						
13	Potable mains (nominal bore)	km	2	21067.32	3871.65	1275.57	220.91

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS (PPP Only)

	DESCRIPTION	UNITS	DP	1 NR OF SOURCES	2 PROP'N DIST INPUT	3 BULK PROP'N OF D.I.	4 REPORT YEAR 2009-10	CG
				UNITS / DP	UNITS / DP	UNITS / DP		
				nr / 0	Prop'n (0-1) / 3	Prop'n (0-1) / 3		
A	**SOURCE TYPES AND PUMPING**							
1	Impounding reservoirs			1	0.103			B2
2	River abstractions			3	0.897			B2
3	Boreholes			0	0.000			B2
4	Source types and pumping; total			4	1.000	0.000		B2
5	Average pumping head - total	m.hd	1				51.5	B4

TOTAL	TOTAL NR

				UNITS / DP	UNITS / DP
				Prop'n (0-1) / 3	nr / 0
B	**TREATMENT TYPE**				
6	Proportion of distribution input - simple disinfection			0.000	0
7	Proportion of distribution input - W1			0.000	0
8	Proportion of distribution input - W2			0.000	0
9	Proportion of distribution input - W3			0.000	0
10	Proportion of distribution input - W4			1.000	4
11	Proportion of distribution input - total			1.000	
12	Total numbers of works				4

				BAND 1 <= 165mm	BAND 2 166 - 320mm	BAND 3 321 - 625mm	BAND 4 > 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 2010

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (Total)

DESCRIPTION		UNITS	DP
A	**SOURCE TYPES AND PUMPING**		
1	Impounding reservoirs		
2	River abstractions		
3	Boreholes		
4	Source types and pumping; total		
5	Average pumping head - total	m.hd	1

1	2	3	4	
NR OF SOURCES	**PROP'N DIST INPUT**	**BULK PROP'N OF D.I.**	**REPORT 2009-10**	**CG**
UNITS / **DP**	**UNITS** / **DP**	**UNITS** / **DP**		
nr / 0	Prop'n (0-1) / 3	Prop'n (0-1) / 3		
16	0.493			B2
9	0.492			B2
9	0.015			B2
34	1.000	0.000		B2
			138.6	B4

TOTAL	**TOTAL NR**
UNITS / **DP**	**UNITS** / **DP**
Prop'n (0-1) / 3	nr / 0
0.007	6
0.000	0
0.008	3
0.346	12
0.639	13
1.000	
	34

B	**TREATMENT TYPE**
6	Proportion of distribution input - simple disinfection
7	Proportion of distribution input - W1
8	Proportion of distribution input - W2
9	Proportion of distribution input - W3
10	Proportion of distribution input - W4
11	Proportion of distribution input - total
12	Total numbers of works

BAND 1 <= 165mm	**BAND 2** 166 - 320mm	**BAND 3** 321 - 625mm	**BAND 4** > 625mm
21067.32	3871.65	1291.99	220.91

C	**POTABLE MAINS**		
13	Potable mains (nominal bore)	km	2

Table 12 – Water Explanatory Factors

General

The Reporter recommended consolidation of Table 12 methodologies to improve visibility and avoid possible conflicts, to this end the Asset Management Section (AMS) has co-ordinated the input into this table from a number of sources.

Lines 1 – 4 - Sources and Types Column 1 NIW only

AIR 09 Decommissioning List
April 08 Glenburn (BH,SD) & Lesters Dam (BH,SD) removed as not in service 08-09
Nov 08 Ballycullen combined BHs Decommissioned.(SD)
Nov 08 Kilwee BH Decommissioned.(SD)
Nov.08 Bellsize Rd BH Decommissioned.(SD)
Nov. 08 Barbour No. 2 Decommissioned.(SD)
Nov. 08 Ballysallagh WTWs Decommissioned.(W4 & IR Source))
Nov 08 Lough Cowey WTWs Decommissioned.(W3 & IR Source))
Dec 08 Forked Bridge WTW Decommissioned.(W3 & IR Source)
Jan 09 Drumabest BH Decommissioned (W2 & BH Source) – was in use during AIR10
March 09 Crieghtons Green Decommissioned.(W3 & IR Source) – was in use during AIR10

The Supply Function on the 31st March 2009 had 29 NR Sources In-Service consisting of 14 NR Impounding Res., 6 NR River/Lough Abstraction & 9 NR BH Sources.

Buckna BH source was decommissioned on 1st April 2009 (hence a reduction to 28 sources). During the year Brishley and Stradreagh were decommissioned, hence reducing the number of sources in service on 31st March 2010 to 26. It should be noted that during the AIR10 period Creightons Green (which had been decommissioned in March 2009) and Drumabest (which had been decommissioned in Jan 2009) were in service to a minimum extent. Therefore it is viewed that NIW had 30 sources in service during the AIR10 period. In addition Alcrossagh BH was decommissioned in Sept 09, but brought back into service temporarily under the Cat 1 Incident.

The Supply Function on the 31st March 2010 had. 26 NR Sources In-Service consisting of 14 NR Impounding Res., 6 NR River/Lough Abstraction & 6NR BH Sources.

The Site Status Information throughout the Reporting Year is as Follows;

1st April 09 Buckna BH Decommissioned (Not in Service During AR10) (BH)
July 09 Stradreah BH Decommissioned (BH)
Sept 09 Alcrossagh BH Decommissioned (BH)
Nov 09 Brishy BH Decommissioned (BH)
Dec 09 Alcrossagh BH brought back into service under Cat 1 Incident. (BH)

The Reporter's comments and recommendations from last year's AIR have been considered and taken into account in drafting the commentary.

Lines 6-12 - Water Source Treatment Types

The Supply Function on the 31st March 2009 had 29 NR WTW's In-Service consisting of the following treatment types; 6NR (SD), 3NR (W2), 11NR (W3) & 9NR (W4).

The Supply Function on the 31st March 2010 had 26 NR WTW's In-Service consisting of the following treatment types; 4NR (SD), 2NR (W2), 11NR (W3) & 9NR (W4).

Seagaghan had new processes commissioned Nov 2009.Although Process changed from SSF-GAC to DAF-Prim Filtration-GAC-Mng Filtration the treatment type remained as AR09 at W4.

The Site Status Information throughout the Reporting Year is as Follows:

1st April 09 Buckna BH Decommissioned (Not in-service during AR10) (W2)
July 09 Stradreah BH Decommissioned (SD)
Sept 09 Alcrossagh BH Decommissioned (W2)
Nov 09 Brishy BH Decommissioned (SD)
Dec 09 Alcrossagh (W2) Temporally brought back into service under Cat 1 Incident.(W2)

Summary of status of NIW only water sources and their treatment types in service during the AIR10 period, and those in service on 31st March 2010.

Location	Source Type	Treatment Type	In Service during AIR10 Period	In Service at 31st March 2010
Gortlenaghan	Borehole	SD	Yes	yes
Shanmoy BHs	Borehole	SD	Yes	yes
Lenamore Spring	Borehole	SD	Yes	yes
Brishley	Borehole	SD	Yes	no
Stradreagh Springs	Borehole	SD	Yes	no
Rathlin	Borehole	SD	Yes	yes
Buckna-decommissioned 1st Apr 2010	Borehole	W2	No	no
Alcrossagh	Borehole	W2	Yes	yes
Glarryford	Borehole	W2	Yes	yes
Drumabest - - was decommissioned in Jan 2009 - but brought back into service during AIR10	Borehole	W2	Yes	no
Killylane	Imp. Reservoir	W3	Yes	yes
Dungonnell	Imp. Reservoir	W3	Yes	yes
Altnahinch	Imp. Reservoir	W3	Yes	yes
Lough Fea	Imp. Reservoir	W3	Yes	yes
Drumaroad	Imp. Reservoir	W3	Yes	yes
Caugh Hill	Imp. Reservoir	W3	Yes	yes
Glenhordial	Imp. Reservoir	W3	Yes	yes
Lough Bradan	Imp. Reservoir	W3	Yes	yes
Altmore	Imp. Reservoir	W3	Yes	yes

Location	Source Type	Treatment Type	In Service during AIR10 Period	In Service at 31st March 2010
Dorisland	Imp. Reservoir	W3	Yes	Yes
Lough Macrory	Imp. Reservoir	W4	Yes	Yes
Clay Lake	Imp. Reservoir	W4	Yes	Yes
Fofanny	Imp. Reservoir	W4	Yes	Yes
Seagahan	Imp. Reservoir	W4	Yes	Yes
Creightons Green - was decommissioned in March 2009, but brought back into service during AIR10	Imp. Reservoir	W3	Yes	No
Camlough	Lough	W4	Yes	Yes
Killyhevlin	Lough	W4	Yes	Yes
Carran Hill	Lough	W4	Yes	Yes
Belleek	Lough	W3	Yes	Yes
Carmoney	River	W4	Yes	Yes
Derg	River	W4	Yes	Yes
		Total	**30**	**26**

The Reporter's comments and recommendations from last year's AIR have been considered and taken into account in drafting the commentary.

Lines 1 - 4 and 6 - 11 - Distribution Input
Leakage Section have provided the Distribution Input of 625.40 Ml/d (which is the pre Maximum Likelihood Estimate leakage DI value) against the individual impounding reservoirs, river abstractions and borehole sources, as identified by Water Supply Section.

The Distribution Input has been assigned a Confidence Grade of B2.

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.

This figure of 625.40 Ml/d has been employed to derive the derivation of the Average Pumping Head.

Proportional Distribution Input (DI) - for 'NIW only', 'PPP' and 'Total' tables

The proportional distributional input has been calculated using the spreadsheet provided by Leakage, depicting the 625.40 Ml/d Distribution Input, with sources (NIW and PPP) as listed below, with associated DIs.

Supply Source	Average DI (ML/d)
Ballinrees	27.02
Rathlin	0.09
Alcrossagh	0.31
Drumabest	0.38
Altnahinch	8.97
Glarryford	4.42
Dungonnell	9.13
Killylane	9.89
Moyola	14.80
Lough Fea	12.04
Stradreagh	0.69
Brishey	0.56
Caugh Hill	20.12
Carmoney	19.30
Lenamore	0.44
Lough Macrory	12.15
Derg	13.79
Glenhordial	4.47
Lough Braden	8.54
Belleek	1.66
Killyhevlin	26.01
Altmore	3.80
Gortlen	0.86
Shanmoy	1.59
Seagahan	11.08
Clay Lake	4.28
Castor Bay	102.16
Carron Hill	6.85
Camlough	4.24
New Fofanny	39.12
Dunore	119.47
Drumaroad	111.42
Creightons Green	0.03
Dorisland	26.50
Total DI	**626.19**

However it should be noted that DI is calculated by Leakage as an average monthly DI (based on an average daily production), and subsequently

determined by taking the average of the 12 months. Since the proportional DI has been computed, by AMS, on the basis of the yearly average of the individual supply sources the resultant overall DI totals 626.19Ml/d (although the AMS Proportional DI calculation spreadsheet depicts an overall DI of 626.18 Ml/d) rather than the 625.40Ml/d.

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.

Line 5 - Average Pumping Head

Introduction
Efforts for the AIR10 Average Pumping Head calculation continue to centre on using a greater proportion of the completed DZS area data. This includes the remaining western and eastern study areas that have become available since AIR09 and are included in the calculation.

Distribution Pump Data in Master Pump Table
The Average Pumping Head for NI Water Ltd. 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, except for two DZS areas in the Antrim/Larne region (Killylane & Dunore East).

Additional zones comprising;

- Omagh;
- South;
- South East;
- Ballygomartin;
- South/Purdysburn West;
- Dunmurry;
- Lisburn South Rural;
- Belfast West Rural;
- Ballysillan/Ballyaghagan;
- Ballygomartin North;
- Oldpark;
- Ballywonard;
- Newtownabbey;
- Carrickfergus;
- Lough Mourne;
- Belfast East;
- Whiterock;
- Holywood; and
- Breda North.

have been completed to field test stage/Calibrated Network Model stage since AIR09 and data has now been included in the Master Pump Table. These zones have also been incorporated into the Average Pumping Head calculation for AIR10.

Aside from the above changes, there have been no further updates to the distribution pump data obtained from the DZSC's for completed zonal study areas. The models, and hence data from the models, still represent the best data available for these areas. In future returns, the confidence in old models will decrease as network and usage changes occur in Northern Ireland. The models will eventually become obsolete and an alternative source of distribution pump data will be required.

Where calculated mean lift and average ADD flow cannot be obtained from a suitable network model or where flow and pressure data from field test installations is missing, no estimation of these parameters has been included for distribution pumps in the Master Pump Table.

Supply Pump Data in Master Pump Table

Abstraction pumps, treatment process pumps and WTW outlet pumps have not generally been included in the DZS network models. Therefore, local NI Water Ltd. supply personnel have provided data from a variety of sources, listed below, for the determination of mean lift and average current flow for each pump supplying the distribution zones.

- Telemetry Data Monitoring System (TDMS),
- Direct readings of dials from pump sites,
- Record Drawings for pump lift,
- NIW Total Flow Calculations for WTW in NI.

Supply pump data collection in AIR10 focused on where changes to the network have been put into effect since AIR09. This is particularly evident in the Northern region where 7 No. BH's have been taken out of service since AIR09. The boreholes in question are: -

- Alcrossagh (3no),
- Drumabest and
- Buckna (3no).

With the increase in data from DZS's for the Belfast/Eastern area, this has allowed most of the Dunore WTW pumps Average Daily Demand (ADD) to be included in the calculation. Excluded is the ADD for the 2 DZS not complete within the Antrim/Larne zone. The ADD for the Dunore pumps and for the DZS excluded, have been extracted from the Telemetry Data Monitoring System (TDMS). No other update to the data was obtained on lift and flow for pumps within Supply for inclusion in the AIR10 return (data used remains unchanged from AIR09 return except as mentioned above).

Data is available for all supply pumps in Northern Ireland; however, all supply pumping requires matching to the distribution pumping fed by it to allow division by the distribution input for that area.

Distribution Input
With the increase in Distribution Pump data being provided through the Detailed Zonal Studies, the whole of NI is covered, apart from the Antrim/Larne region. As a result the whole NI Water DI has been used except for the DI relating to Antrim/Larne, which has been excluded from the calculation. Therefore, total DI for calculation will not be the complete DI reported for whole of NI.

PPP Only and NIW Only 'Average Pumping Head' Calculations
Average Pumping Head is by definition the amount of pumping required to transport an average ML of water from abstraction at source to supply the customer through the Distribution Network.

The NIAUR AIR10 Guidance for Table 12 has requested an 'Average Pumping Head' to be calculated for NIW only and PPP only. It should be noted that it is NIW's interpretation that the true definition (as stated above) of Average Pumping Head is not being reflected through the splitting up of the overall NIW Average Pumping Head value.

PPP WTW's do not have specific Distribution Networks, and therefore the water is extracted, treated and then exits the works into the NIW Distribution Network. Within the Distribution Network, PPP water then mixes with NIW water, therefore making it impossible for NIW and PPP flows to be truly separated for use in PPP only and NIW only average pumping head calculations. Hence the value of 51.47m calculated for PPP only is more in relation to the Pumping Head within the works.

Hence a confidence grade of 'C5' has been allocated to these values of 87.10m.hd and 51.47m.hd for the 'Average Pumping Head' for NIW only and PPP only respectively.

Updated information, as below, was received through reconciliation work with the PPP Section

- Three pumps, River Bann LL, Moys HL & Castor Bay to Forked Bridge, were not returned on in the past as they were installed post DZS, so no information was returned by the DZS Consultant. The DZS for River Bann & Moys was completed in 2003. The DZS for Caster Bay to Forked Bridge was completed in 2005. When a more in-depth look was carried out for the PPP/NIW only split, the PPP section was able to provide details on the 3 pumping stations, which came into operation in 2008/09. The details for the 3 pumping stations are now included in the AIR10 APH calculation sheet.

- PPP section has provided updated flow figures. These have now replaced the flows previously provided by Atkins. All flow figures used for PPP pumps have been supplied by PPP except for Dunore LL & HL pumps which have been sourced from the DI spreadsheet. It should be noted that the flow figures for the two Dunore pumps exclude flows to Killylane/Dunore East Zonal area. The zonal study for these two areas is

not at a stage to provide information for APH returns so have been excluded this year.

- The flow figure for the interstage pump at Moyola WTW previously was 13Ml/d. Flow figures for the LL & HL pumps provided by PPP is 15Ml/d. It is assumed that the interstage pump flow should match the LL & HL, so the value of 15Ml/d has been used.

With ref to the NIAUR's Guidance, regarding the 'proportion of water taken from Lough Neagh that is included within Block A of each table and identify which source type'. – the PPP sources Castor Bay, Moyola and Dunore extract from Lough Neagh, with no extraction by NIW sources.

Data Shortcomings
Calibrated hydraulic network models used in the data collection of pump lift and head have been built by a framework of DZSC's over a period of more than five years. Thus, models used have various calibration days.

Leakage reduction and changes to the system subsequent to the field test and model construction have not been taken into account. New pumps or pumps not field tested / modelled will also have no data available from DZSC's.

NI Water distribution input for WTW's / sources in NI are current 2009/10 figures which may not absolutely match pump data available from the older network models but this represents the best combination available.

Confidence Grade – NIW total average pumping head
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 Ltd personnel; **B2.**

When the supply and distribution data source confidence grades are combined for the Average Pumping Head Calculation, the overall confidence grade is **B3,** given the variety of sources and periods of data used.

The NIW total average pumping head for AIR10 is 138.57m.hd.

Future Improvements
Data taken from record drawings / site supervision staff regarding pump lift for high and low lift pumps in WTW's could be improved if pressure gauges were

available up - and downstream of the pumps and could be recorded via TDMS.
The whole of NI is covered by DZS, apart from two areas in the Antrim/Larne region. Where returned data exists in partial completed model/field test data format, with these progressing to Calibrated Network Models, and with the data from the DZS area in Antrim/Larne, will help towards completing missing data.

Recommendations for Future Returns

- Devising a programme of flow and pressure monitoring in locations where pump data is not available under the Detailed Zonal Study Framework to gap fill,
- A long term plan should be developed to determine when distribution pump data will require updating and where this data will be obtained. A period of time should be established after which a network model may be considered too old to supply suitable data for the return, particularly in areas where facilities have passed over to Dalriada or where significant changes to the network make a network model obsolete.
- Installing flow / pressure monitors via TDMS for future returns,
- Developing a list of NI Water personnel responsible for supplying data in particular locations, and
- Developing a programme of when pump data should be gathered and delivered to Asset Management to reduce time required to source information each year.

Data coverage of Average Pumping Head Return calculation in NI

Data Coverage	**2007 Return**	**2008 Return**	**2009 Return**	**2010 Return**
No of Modelled Properties in Calculation	14.94%	41.91%	65.4%	95.8%

The above table demonstrates per year improvement of properties covered by full modelled DZS. The percentage of properties covered is based on pointer data provided by Ordinance Survey (NI).

Distribution Input used in Average Pumping Head Calculation

DI Used in APH Calculation as % of Total	**2007 Return**		**2008 Return**		**2009 Return**		**2010 Return**	
Total DI (from NIW Total Flows 2006 -2007)	585.91							
Total DI (from NIW Total Flows 2007 -2008)			616.575					
Resource Zone DI Apr 08 to Mar 09					633			
Resource Zone DI Apr 09 to Mar 10							625.4	
DI Used in Calculation	117.82	20.11%	284.459	46.14%	420.93	66.5%	609.57	97.48%

The above table details DI used in the calculation. Dunore East and Killylane have not been included in DZS to date and so there has been no average pumping head calculation undertaken for these areas. As a result the DI for these two areas has not been included in the overall calculation.

Average Pumping Head Result Comparison from 2007 to 2010

	2007 Assessment	**2008 Assessment**	**2009 Assessment**	**2010 Assessment**
Total DI ml/day	117.82	284.459	420.93	609.57
Sum (flow x lift)	8325.66	31655.54	47845.27	84470.31
Average Pumping Head m	70.66	111.28	113.67	138.57

The significant increase in the Average Pumping Head from AIR09 can be attributed mainly to the increase in coverage for the eastern areas. The inclusion of additional Dunore Pumps (low and high lift) make a major contribution to this increase.

Lines 1 - 3 – Number of sources (PPP)
There have been no changes to the PPP Water sources over the reporting period.

Line 5 Column 4 only – Average pumping head (PPP)
This has been requested by the Regulator and has been evidenced by the Table produced for Table 42; see Methodology for Table 42 Line 27.

Lines 6 - 10 Column – Types of Treatment (PPP)
There have been no changes to the PPP types of treatment over the reporting period.

Lines 6 – 10 Column 2 - Total number of Units referred to type (PPP)
There have been no changes to the PPP types of treatment over the reporting period.

Lines 13 – Potable Mains (PPP)
There have been no changes to the length of Potable Mains operated by the PPP Contractor over the reporting period.

The data represents the length of the DBFO Link Main, it does not represent the length of the Limavady and Ballymoney Link Mains which were commissioned and transferred to NI Water in 2008.

Table 13

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 13 NON FINANCIAL MEASURES
SEWERAGE PROPERTIES & POPULATION (TOTAL)

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**PROPERTIES**										
1	Households properties connected during the year	000	3	5.078	C4	6.380	C4	7.447	C3	3.493	B3
2	Non-households properties connected during the year	000	3	5.859	B4	1.319	B3	0.723	C3	0.167	B3
B	**BILLING**										
3	Households billed unmeasured sewage	000	3	539.625	C4	533.506	C4	564.052	C3	568.886	B3
4	Households billed measured sewage	000	3	25.639	C4	25.616	C4	0.000	C3	0.000	B3
5	Households billed sewage	000	3	565.264	C4	559.122	C4	564.052	C3	568.886	B3
6	Non-households billed unmeasured sewage	000	3	48.690	B2	30.638	B2	27.881	C3	13.635	B3
7	Non-households billed measured sewage	000	3	50.420	B2	38.002	B2	32.063	C3	22.067	B3
8	Non-households billed sewage	000	3	99.110	B2	68.640	B2	59.944	C3	35.702	B3
9	Void properties	000	3	39.104	C4	38.357	C4	39.469	C3	41.508	B3
C	**POPULATION**										
10	Total connected population	000	3	1464.617	C4	1495.054	C4	1423.480	C4	1453.610	B3

Table 13 – Non Financial Measures - Sewerage Properties and Population

Table 13 focuses on the number of properties and population connected to the public sewerage supply system. It extends to 10 lines, set out in three blocks:

Block A Properties (Lines 1 & 2)	Reports properties connected during the year
Block B Billing (Lines 3-9)	Includes a breakdown of all measured and unmeasured household and non-household properties billed by the company. The property numbers should be the average for the report year.
Block C Population (Lines 10)	This records the population within each of the measured and unmeasured household and non-household categories. The population numbers should be the average for the report year.

The information in this table is used for the water balance calculation and also in tariff and charging analysis and determination (water delivered unit cost).

Definition of 'Billed' Properties
Domestic customers were originally due to be charged for water and sewerage charges from April 2007. However this has been deferred and is not planned to be implemented during 2010/11.

In April 2008, 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. These charges are based on the NAV of the non-household property.

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 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 and Data Validation
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 (to confirm and cleanse data on voids, site meters and duplicates) or universal non-domestic metering programme.

There has been significant focus on customer numbers during 2009/10, primarily due to the PC10 draft and final determination process and NIW Undertakings. As a result, there will be data shifts from AIR09 especially in unmeasured non-domestic numbers as test meters have been omitted in AIR10 (see detailed comments below).

In addition, the roll-out of the metering programme has continued. Overall the number of non-domestic unmeasured properties has decreased from circa 14900 to 12300. This shows a reduction of 2600 in year and circa 12500 since March 2008.

Even though NIW has been installing meters on all new household connections since April 2008, as explained above, customers are not being charged on a measured basis, so the property is still being reported as unmeasured for both water & sewerage. Depending on the basis for charging when domestic billing is introduced in April 2010, these customers can be activated as measured household if required.

Data on property counts and classifications continue to be reported monthly and reconciled (where possible) with other data collection activities, such as the metering programme.

Data on population is obtained from Northern Ireland Statistics and Research Agency (NISRA), adjusted for the summer months based on information received from Northern Ireland.

For the purposes of the Annual Information Reporting, these have been subtracted manually and added to the non-households billed measured water category.

There are deemed to be 625 (gross) unmeasured – not charged properties which (based on sample taken) are mostly NI Water premises as per table below.

Description	Count
Sewage Disposal Works	607
Fire Authority For N I	11
Sewage Disposal Work	2
(empty)	1
Doe (Roads)	1
Fire Authority For N I 18-22	1
Generator House	1
Stores Yard	1
Totals	**625**

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

The survey and reclassification of test meters, initially identified through the Data Integrity Project, is still going. Of the 11,500 in total, circa 1900 still need to be surveyed and 2500 require further analysis. As a general rule, unless there are details of a septic tank being associated with the property on system, test meters deemed billable for water are also deemed billable for sewerage. Those that are found to be non-domestic billable should be attributed to the non-domestic measured category and billed retrospectively to April 2007.

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

Unlike 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 2010 indicates a reduction of 613 non-domestic test meters and 561 domestic test meters during 2009/10 for sewerage services.

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 386 domestic properties classified as site meters and these will require further investigations and analysis to be completed during 2010/11 to ensure these are classified correctly.

Overall, the number of non-domestic site meters has increased by 681 during 2009/10 and circa 3120 since March 2008, driven primarily as a result of charging and data cleanse activities.

Confidence Grades
We would expect the confidence grade for this table (B3) to improve throughout the year as the benefits of the data quality programme are realised.

Table 14

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 14 NON FINANCIAL MEASURES
SEWAGE COLLECTED (TOTAL)

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**SEWAGE - VOLUMES**										
1	Volume unmeasured household sewage	Ml/d	2	233.51	C4	244.67	B3	257.99	C3	256.26	C3
2	Volume unmeasured non-household sewage	Ml/d	2	39.64	B4	20.70	B4	18.05	C3	9.19	C3
3	Volume unmeasured sewage	Ml/d	2	273.15	C4	265.37	B4	276.04	C3	265.45	C3
4	Volume measured household domestic sewage	Ml/d	2	11.45	C4	11.78	C3	0.00	A1	0.00	A1
5	Volume measured non - household domestic sewage	Ml/d	2	86.36	C3	79.17	C3	53.34	B3	43.81	B3
6	Volume trade effluent (excluding Roads Drainage)	Ml/d	2	36.49	B2	26.25	C3	18.44	C4	28.37	B2
7	Volume waste water returned	Ml/d	2	407.45	C4	382.57	C3	347.82	B4	337.63	C3
8	Volume of Roads Drainage returned	Ml/d	2							175.80	CX

Table 14 – Non Financial Measures - Sewage Collected (Total)

Line 1 – Volume unmeasured household sewage
This is calculated by assuming a 95% return to sewer of volume delivered to households factored by the percentage of the number of households billed for water against the number of households billed for sewerage services.

Sources

- AIR Table 10 Line 4 – Billed unmeasured household (Ml/d)
- AIR Table 13 Line 3 – Households billed unmeasured sewage
- AIR Table 7 Line 3 – Households billed unmeasured water

$$\text{Volume of unmeasured household sewage (Ml/d)} = \text{AIR Table 10 Line 4} \times 0.95 \times \frac{\text{AIR Table 13 Line 3}}{\text{AIR Table 7 Line 3}}$$

It is worth noting that water Billed unmeasured household volume includes the MLE adjustment, meter under registration and supply pipe leakage.

The Billed Unmeasured Household volumes have been calculated by multiplying the average PCC figure for NI Water by the unmeasured household population. The source of the PCC figure is the NI Water domestic consumption monitor. The household population figure is sourced from the Northern Ireland Statistics and Research Agency (NISRA).

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

A meter under registration factor of 7.39% has been applied to this total volume. This percentage has been provided by WRc, as a result of a project initiated by NI Water, and is specific to NI Water's domestic consumption monitor meters. In AIR09 an interim assessment of 6.52% was used.

Line 2 - Volume unmeasured non-household sewage
This is calculated by assuming a 95% return to sewer of volume delivered to non-households factored by the percentage of the number of non-households billed for water against the number of non-households billed for sewerage services.

Sources

- AIR Table 10 Line 5 – Billed unmeasured non-household (Ml/d)
- AIR Table 13 Line 6 – Non-households billed unmeasured sewage
- AIR Table 7 Line 8 – Non-households billed unmeasured water

$$\text{Volume of unmeasured Non-household sewage (Ml/d)} = \text{AIR Table 10 Line 5} \times 0.95 \times \frac{\text{AIR Table 13 Line 6}}{\text{AIR Table 7 Line 8}}$$

It is worth noting that water Billed unmeasured non-household volume includes the MLE adjustment, meter under registration and supply pipe leakage.

The reported value for Billed Unmeasured Non-Household for AIR10 is 11.38 Ml/d. The value reported in AIR09 was 20.80 Ml/d

The average non domestic unmeasured usage is based on 265m^3 per property and 30.5k properties. The 2009/10 tariff calculations assumed 20.4k non domestic unmeasured properties and that this lower number resulted in a reduction of the average consumption to 165m^3 per property. The difference in the numbers of properties (AIR compared to tariff submission, 30.5k & 20.4k respectively) is largely due to a reduction in the overall number in voids 2.5k, the inclusion in the AIR of test meters 4.3k and the averaging basis used in AIR.

Line 5 - Volume measured non-household domestic sewerage
The reported sewerage figure calculation was based on the Rapid 'effectives' report for YTD Feb 2010 and YTD March 2010. The report details every transaction for the year per bill. The sewerage customers were selected by using the criteria of any customer charges a standing charge for sewerage. The volumetric charge associated to this was totalled. This included monthly and 6 monthly customers.

Sewerage volume is a direct calculation from water volume minus a minimum of 5% non return to sewer allowance (NRTS). Some customers may apply and be granted a larger allowance. This was 15,990,817 m3 Converted to mega litres per day of 43.8 Ml/d.

Sewerage volume is lower than last year for a couple of reasons:

- The significant reduction experienced in water consumption during 2009/10, primarily as a result of the economic downturn, has shown a comparable reduction in sewerage volume.
- Several significant NRTS allowances were granted during 2009/10.

This line has been allocated a confidence grade of B3 as it has an element of manual manipulation of raw data from Rapid report to get the full year.

Line 6 - Volume trade effluent

Source of Information
The names of the traders were taken from Trade Effluent Register which is sited in Source under Resources /Databases and updated by NIW on a regular basis. Confidence grade B2.

Calculation of Flows
The actual volume of each trader was supplied by our Billing Section in Customer Service. Where annual volumes were only partially available, these were then pro–ratted up to 12 months. Where no volumes were supplied, then consented volumes, on the small number of traders were used.

Line 7 – Volume of waste water returned
This line is based on the summation of lines 3, 4, 5 and 6. The components of this calculation received confidence grades of C3, A1, B3 and C4 respectively. As C4 was the lowest confidence grade for a component, this line has been allocated a confidence grade of C4.

The Reporter's recommendation on determining the number of farmhouses with septic tanks is being addressed as part of the overall Data Quality programme.

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 m^2
- Urban footway surface area 17,022,987 m^2
- Total urban road & footway surface area 56,287,473 m^2

2. Obtained Northern Ireland average annual rainfall data from the Met Office over the last 10 years – 1.14m

3. Using the above, calculated the annual volume of rain falling on these surfaces and hence the run-off from roads & footpaths discharged to NIW sewers and storm drains.
- 56,287,473 x 1.14 = **64,167,719m^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

Table 15

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES
SEWAGE TREATMENT (NIW Only)

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**SEWAGE - LOADS**										
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	26316.0	B2			4484.0	C4	3086.5	B2
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	44575.8	C3			45024.1	C3	39716.5	C3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	516.7	C3			377.8	C3	199.4	C3
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1	1234.5	C3			473.2	C3	553.7	C3
5	Total load entering sewerage system (BOD/year)	tonnes	1	48754.3	C3			46431.4	C5	40931.0	C5
6	Equivalent population served (resident)	000	2	2226.22	C3			2088.64	C5	1837.56	C5
7	Equivalent population served (resident) (numerical consents)	000	2	2034.90	C3			2024.99	C5	1783.03	C5
B	**SEWERAGE - SERVICE FACILITIES**										
8	Number of sewage treatment works	nr	0	1097	A2			1056	A2	1,040	A2
9	Treatment capacity available (BOD5/day)	tonnes	1	132.0	D3			133.9	D3	126.3	D3
10	Number of STWs providing nutrient removal	nr	0	19	A2			22	A2	18	A1
11	Equivalent population served by STWs providing nutrient removal	000	2	1058.85	C3			1180.49	C3	1009.65	C3
12	Number of STWs providing pathogen reduction	nr	0	4	A2			2	A2	2	A1
13	Equivalent population served by STWs providing disinfection	000	2	24.56	C3			79.18	C3	31.76	C3
C	**SEWAGE - SLUDGE DISPOSAL**										
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A1			0.00	A1	0.00	A1
15	Total sewage sludge produced	ttds	1	38.0	B3			38.0	B3	30.5	B2
16	Total sewage sludge disposal	ttds	1	38.0	B3			38.0	B3	36.9	B2
17	Additional sewage sludge arising from new quality obligations since 2007	ttds	1	3.1	D3			0.0	A1	0.0	A1

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES
SEWAGE TREATMENT (PPP Only)

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**SEWAGE - LOADS**										
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1			N/C		N/C		879.3	B2
2	Total load receiving secondary treatment (BOD/year)	tonnes	1			1880.0		3331.0	A2	8105.2	B3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1			0.0		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
5	Total load entering sewerage system (BOD/year)	tonnes	1							N/A	A1
6	Equivalent population served (resident)	000	2			78.00		152.00	A2	370.10	B3
7	Equivalent population served (resident) (numerical consents)	000	2					152.00	A2	370.10	B3
B	**SEWERAGE - SERVICE FACILITIES**										
8	Number of sewage treatment works	nr	0			1		2	A1	6	A1
9	Treatment capacity available (BOD5/day)	tonnes	1			12.4		17.5	B4	30.4	B3
10	Number of STWs providing nutrient removal	nr	0			1		2	A1	3	A1
11	Equivalent population served by STWs providing nutrient removal	000	2			102.00		152.00	A2	254.67	B3
12	Number of STWs providing pathogen reduction	nr	0			0		1	A1	2	A1
13	Equivalent population served by STWs providing disinfection	000	2			0.00		68.00	A2	113.28	B3
C	**SEWAGE - SLUDGE DISPOSAL**										
14	Percentage unsatisfactory sludge disposal	%	2			0.00				0.00	A1
15	Total sewage sludge produced	ttds	1			0.8				7.4	B3
16	Total sewage sludge disposal	ttds	1			0.8				1.0	B3
17	Additional sewage sludge arising from new quality obligations since 2007	ttds	1			0.0				0.0	A1

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES
SEWAGE TREATMENT (Total)

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**SEWAGE - LOADS**										
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1			4919.9	C3	4484.0	C4	3965.8	B2
2	Total load receiving secondary treatment (BOD/year)	tonnes	1			43690.2	C3	48355.1	C3	47822.0	C3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1			482.3	C3	377.8	C3	199.4	C3
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1			444.1	C3	1136.2	C5	553.7	C3
5	Total load entering sewerage system (BOD/year)	tonnes	1			46877.0	C3	46431.4	C5	40931.1	C5
6	Equivalent population served (resident)	000	2			2120.90	C3	2240.64	C5	2207.66	C5
7	Equivalent population served (resident) (numerical consents)	000	2			2054.70	C3	2176.99	C5	2153.13	C5
B	**SEWERAGE - SERVICE FACILITIES**										
8	Number of sewage treatment works	nr	0			1058	A2	1058	A2	1046	A2
9	Treatment capacity available (BOD5/day)	tonnes	1			132.1	D3	151.4	D4	156.7	D3
10	Number of STWs providing nutrient removal	nr	0			18	A2	24	A2	21	A1
11	Equivalent population served by STWs providing nutrient removal	000	2			960.10	C3	1332.49	C3	1264.32	C3
12	Number of STWs providing pathogen reduction	nr	0			1	A2	3	A2	4	A1
13	Equivalent population served by STWs providing disinfection	000	2			28.40	C3	147.18	C3	145.04	B4
C	**SEWAGE - SLUDGE DISPOSAL**										
14	Percentage unsatisfactory sludge disposal	%	2			0.00	A1	0.00	A1	0.00	A1
15	Total sewage sludge produced	ttds	1			38.4	B2	38.0	B3	37.9	B3
16	Total sewage sludge disposal	ttds	1			38.4	B2	38.0	B3	37.9	B3
17	Additional sewage sludge arising from new quality obligations since 2007	ttds	1			1.5	B3	0.0	A1	0.0	A1

Table 15 – Non Financial Measures - Sewage Treatment

Line 1 - Trade effluent load receiving secondary treatment (BOD/year)

Calculation of BOD Loading

For traders that are sampled, we have used the actual BOD concentrations as determined by laboratory analyses.
For those traders not required to be sampled i.e. on "standard charge", standard sewage strength was calculated based on the average BOD results of monthly UWWTR samples taken at the inlet of the 10 major works. Again confidence grade B2.
Multiplying the BOD concentration by the volume and by the number of days a trader discharges results in the annual BOD loading figure for each trader.

Allocation of Trade Loads from Traders to Respective Sewage Treatment Works

The associated works for each of the traders (sampled and non-sampled) have been added to the list.

Lines 2-7 – Sewage Loads and Lines 8-13 – Sewerage –Service Facilities

NIW Only - Lines 2 - 13

It should be noted that the banding of the WWTWs is based on the latest set of Populations Equivalents i.e. PEs (minus the allowance for the tourist population) held by the Asset Performance Team. Since AIR09 PEs for 143 WWTWs have been updated.

PEs computed by others within NIW, and on behalf of others within NIW, have also been considered and adopted by the Asset Performance Team.

Trade effluent information (up to end of March 2010) 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 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.

PPP sites are reported on separately by the PPP section. There are 6 PPP WWTW where the contractors have the Water Order Consents; Kinnegar and Omega: North Down Ards, Armagh, Richhill, Ballyrickard, and Ballynacor WWTW. Ballynacor WWTW is an amalgam of three former WWTW: Ballynacor, Bullays Hill, Seagoe; the latter two having been converted by the PPP contractor into stormwater storage and transfer facilities to Ballynacor.
It has not been possible to extract sludge tanker import information, from within the organisation, to include within the PEs.

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 size.

Also due to the rural nature of Northern Ireland a large proportion of the population commute from rural to urban catchments and therefore the potential for overestimation may not be as excessive as other parts of the United Kingdom

It is hoped that a number of flow and load studies should be completed by AIR11 and this should improve confidence in the PEs for these catchments.

Lines 2 - 13 – Confidence Grades

The confidence grades of the data in lines 2 - 4 remain as C3, as although the PE confidence has been re-assessed as C5 there is greater confidence in process categories for the WWTWs, which warrants the raising of grade from C5 to C3.

The confidence grades of the data in lines 5–7 remain as stated in AIR09, 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 past year, their informed opinion was that the PEs could warrant only a C5 grading. NIW recognises the need to improve these PEs grades through targeted flow and load surveys, although the PE reviews carried out have been very comprehensive, and was in line with PE values held by others within the organisation, and the broader water industry.

The confidence grades of the data in lines 8, 9 and 11 remain as in AIR09, due to the confidence in the other information associated with the population of these lines.

The confidence grade of lines 10 and 12 should be increased from A2 in AIR09 to A1 in AIR10, as the number of works:

- providing purpose specific nutrient removal (to meet numeric consent conditions relating to limits for total phosphorus and/or total nitrogen in the discharged effluent); and
- providing purpose-specific pathogen removal (to meet consent conditions whether seasonal or all year round. STWs that provide UV irradiation and membrane filtration should be included.)

are known by NIW.

The confidence grade of the data in line 13 should be decreased from A2 in AIR09 to C3 in AIR10, as C5 is viewed as the appropriate grade for NIW's PEs. The grade for this line can thus be increase to C3 to reflect the confidence in process categories for the WWTWs.

Line 2 – Total load receiving secondary treatment

The table below shows the changes in WWTWs receiving secondary treatment since AIR09 for Line 2.

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Aghalee	2394	-7	Pe has been updated since AIR09
Aghanloo (1)	2989	17	Pe has been updated since AIR09
Annahilt (WWTW)	317	399	Pe has been updated since AIR09
Annsborough	2687	4494	Pe has been updated since AIR09
Antrim (WWTW)	1422	8595	Pe has been updated since AIR09
Armagh (WWTW)	2558	-26351	This WWTWs is now a PPP site
Artasooly	2559	-274	This WWTWs is now a pumpaway
Aughnacloy	3007	-5	Pe has been updated since AIR09
Ballybogy	1087	17	Pe has been updated since AIR09
Ballyclare	1467	5	Pe has been updated since AIR09
Ballycoshone	2689	6	This WWTWs has been upgraded for AIR10
Ballycranbeg	218	69	Pe has been updated since AIR09
Ballykelly (L/Derry)	3016	49	Pe has been updated since AIR09
Ballymagorry (WWTW)	3018	187	Pe has been updated since AIR09
Ballymena (WWTW)	1456	-5359	Pe has been updated since AIR09
Ballynacor	2395	-102837	This WWTWs is now a PPP site
Ballynahinch (Down)	311	8	Pe has been updated since AIR09
Ballyronan (WWTW)	1558	21	Pe has been updated since AIR09
Ballyvoy	1177	16	Pe has been updated since AIR09
Banbridge (WWTW)	2102	1474	Pe has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Belfast (WWTW)	345	10310	Pe has been updated since AIR09
Belleek (Fermanagh)	3024	1	Pe has been updated since AIR09
Benburb (WWTW)	2831	274	Pe has been updated since AIR09
Bullays Hill	2398	-51147	This WWTWs is now a PPP pumpaway
Bush	2833	-639	This WWTWs is now a pumpaway
Bushmills (WWTW)	1178	-151	Pe has been updated since AIR09
Carrickfergus (WWTW)	261	61	Pe has been updated since AIR09
Carrickrovaddy	2257	23	This WWTWs has been upgraded for AIR10
Castledawson	1609	-6	Pe has been updated since AIR09
Castlederg (WWTW)	3042	21	Pe has been updated since AIR09
Castlewellan (WWTW)	2694	-4624	This WWTWs is now a pumpaway
Clady (Tyrone)	4149	3	Pe has been updated since AIR09
Clough (WWTW)	296	-16	PE has been updated since AIR09
Coalisland	2828	977	Pe has been updated since AIR09
Conthem Rd	3180	29	This WWTWs is a new site for AIR10.
Cookstown (WWTW)	1582	-105	Pe has been updated since AIR09
Cranagh (WWTW)	3065	63	This WWTWs has been upgraded for AIR10
Cross Lane(2-6)	2911	-9	This WWTWs has been decommissioned for AIR10
Culmore (WWTW)	3071	-6764	Pe has been updated since AIR09
Derryhale	2570	27	Pe has been updated since AIR09
Donaghmore (WWTW)	2840	455	Pe has been updated since AIR09
Donemana	3103	16	Pe has been updated since AIR09
Donnybrewer	3080	36	Pe has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Downpatrick (WWTW)	771	1413	Pe has been updated since AIR09
Draperstown	1615	47	Pe has been updated since AIR09
Dromora (WWTW)	316	13	Pe has been updated since AIR09
Dromore (Down)	2127	237	Pe has been updated since AIR09
Drummack	3094	16	This WWTWs has been upgraded for AIR10
Drumman Hill	2575	-24	This WWTWs is now a pumpaway
Dungannon	2850	14469	Pe has been updated since AIR09
Dungiven	3101	17	Pe has been updated since AIR09
Dunmurry	346	-7778	Pe has been updated since AIR09
Dunnamore	1574	5	Pe has been updated since AIR09
Ederney (WWTW)	3106	-288	Pe has been updated since AIR09
Enniskillen	3218	-361	Pe has been updated since AIR09
Fintona (WWTW)	3112	-1	Pe has been updated since AIR09
Fivemiletown (WWTW)	3113	-159	Pe has been updated since AIR09
Galbally	2844	51	Pe has been updated since AIR09
Garvagh (WWTW)	1154	-28	Pe has been updated since AIR09
Gilford (WWTW)	2162	51	Pe has been updated since AIR09
Glassdrumman (Down)	302	-34	Pe has been updated since AIR09
Glenstall	1109	-1051	Pe has been updated since AIR09
Greenisland (WWTW)	263	-72	Pe has been updated since AIR09
Hilltown (WWTW)	2701	131	Pe has been updated since AIR09
Irvinestown	3137	-254	Pe has been updated since AIR09
Katesbridge Road(79-85)	2110	12	This WWTWs has been upgraded for AIR10
Keady (Armagh)	2553	40	Pe has been updated since AIR09
Kesh (WWTW)	3140	33	Pe has been updated since AIR09
Kilkeel (WWTW)	313	-1506	Pe has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Killinchy (WWTW)	252	301	Pe has been updated since AIR09
Killyleagh (WWTW)	273	337	Pe has been updated since AIR09
Kilmore (Down)	285	34	Pe has been updated since AIR09
Kilrea	1156	-790	Pe has been updated since AIR09
Kinawley	3149	-16	Pe has been updated since AIR09
Larne (WWTW)	2044	-343	Pe has been updated since AIR09
Limavady (WWTW)	3162	-14	Pe has been updated since AIR09
Lisbarnet (WWTW)	239	-503	This WWTWs is now a pumpaway
Lisburn (New Holland)	329	12	Pe has been updated since AIR09
Lisnagade Road(54-56)	2161	6	This WWTWs has been upgraded for AIR10
Lisnaskea (WWTW)	3171	47	Pe has been updated since AIR09
Loughdian	2146	-18	This WWTWs is now a gravity away to Poyntzpass
Loughinisland (WWTW)	298	229	This WWTWs has been upgraded for AIR10
Lower Rashee Road (15-21)	5188	12	This is a new WWTWs for AIR10
Magherafelt (WWTW)	1621	184	Pe has been updated since AIR09
Magheralin	2413	-1875	This WWTWs is now a pumpaway
Magheramason	3177	2	Pe has been updated since AIR09
Markethill	2591	26	Pe has been updated since AIR09
Martinstown	1445	33	Pe has been updated since AIR09
Mayboy	1163	34	Pe has been updated since AIR09
Moira	2429	266	Pe has been updated since AIR09
Monea (WWTW)	3186	14	Pe has been updated since AIR09
Moneymore (WWTW)	1589	4	PE has been updated since AIR09
Moneyneany (WWTW)	1631	64	Pe has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Moneyreagh (WWTW)	337	5	Pe has been updated since AIR09
Moneyslane (WWTW)	2151	-24	Pe has been updated since AIR09
Moy (WWTW)	2859	-1114	Pe has been updated since AIR09
Mullaghbane (Armagh)	2594	29	This WWTWs has been upgraded for AIR10
Mullanahoe (WWTW)	2043	-13	Pe has been updated since AIR09
Mullans (Antrim)	1118	62	Pe has been updated since AIR09
Newcastle (WWTW)	303	32	Pe has been updated since AIR09
Newry (WWTW)	2685	-6549	Pe has been updated since AIR09
Newtownards (Ballyrickard)	241	-50892	This WWTWs is now a PPP site for AIR10
Newtownbreda (WWTW)	342	682	PE has been updated since AIR09
Newtownbutler (WWTW)	3200	7	Pe has been updated since AIR09
Newtownstewart (WWTW)	3202	9	Pe has been updated since AIR09
North Coast (WWTWs)	4150	-536	Pe has been updated since AIR09
Oakland Villas	1711	18	This WWTWs has been upgraded for AIR10
Oghill (1)	3205	-54	This WWTWs is now a gravity away to Culmore
Omagh (WWTW)	3999	-1060	Pe has been updated since AIR09
Orritor (WWTW)	1591	-15	Pe has been updated since AIR09
Plumbridge (WWTW)	3210	-20	Pe has been updated since AIR09
Portaferry (2)	5200	3801	This WWTWs has been upgraded for AIR10
Poundburn	318	-401	This WWTWs is now a pumpaway
Poyntzspass (WWTW)	2156	18	Pe has been updated since AIR09
Randalstown	1425	-6666	This WWTWs is now a pumpaway
Rasharkin	1120	-229	PE has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Rathfriland (WWTW)	2713	-11	Pe has been updated since AIR09
Reaskmore Road	5286	12	This WWTWs is a new site for AIR10.
Redford	2853	-6	Pe has been updated since AIR09
Richill	2597	-3384	This WWTWs is now a PPP site
Ringneill (WWTW)	237	503	PE has been updated since AIR09
Robinsonstown	2419	-31	Pe has been updated since AIR09
Roughfort (WWTW)	1470	-15	Pe has been updated since AIR09
Saintfield (WWTW)	290	8	Pe has been updated since AIR09
Seagoe (WWTW)	2420	-15000	This WWTWs is now a PPP pumpaway
Seahill (WWTW)	774	6795	This WWTWs has been upgraded for AIR10
Springhill Road(1)	1713	14	This WWTWs has been upgraded for AIR10
Stewartstown	1599	-63	Pe has been updated since AIR09
Strabane	3223	-1824	Pe has been updated since AIR09
Strangford	226	268	Pe has been updated since AIR09
Tamnaherin	3226	-54	Pe has been updated since AIR09
Tamnamore (WWTW)	2862	23	Pe has been updated since AIR09
Tandragee	2174	488	Pe has been updated since AIR09
Tempo (WWTW)	3229	-17	Pe has been updated since AIR09
Trillick (WWTW)	3231	1	Pe has been updated since AIR09
Tullynakill Road	5280	31	This WWTWs is a new site for AIR10.
Tulnacross Road(44-46)	1820	6	This WWTWs has been upgraded for AIR10
Warrenpoint (WWTW)	2720	40	Pe has been updated since AIR09
Waterfoot Road (WWTW)	1643	63	Pe has been updated since AIR09
Whitehouse	265	312	Pe has been updated since AIR09
	Total	**-242366**	**Change in Line 2 PE since AIR09**

It should be noted that due to rounding and summation of PEs the total shown differs slightly from the difference between the AIR10 and AIR09 values for this line.

Line 3 – Total load receiving primary treatment only

The table below shows the changes in WWTWs receiving primary treatment only since AIR09 for Line 3.

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Aghanloo (2)	2989	-940	This WWTWs is now abandoned for AIR10
Ardglass (WWTW)	268	48	Pe has been updated since AIR09
Ballycoshone	2689	-6	This WWTWs has been upgraded for AIR10 and now has secondary treatment
Barnish Road(44-46)	1758	-6	This WWTWs has been decommissioned for AIR10
Carrickrovaddy	2257	-23	This WWTWs has been upgraded for AIR10 and now has secondary treatment
Cloghoge Road	2170	-27	This WWTWs is now a pumpaway for AIR10
Cranagh (WWTW)	3065	-63	This WWTWs has been upgraded for AIR10 and now has secondary treatment
Drummack	3094	-16	This WWTWs has been upgraded for AIR10 and now has secondary treatment
Katesbridge Road(79-85)	2110	-12	This WWTWs has been upgraded for AIR10 and now has secondary treatment
Lisnagade Road(54-56)	2161	-6	This WWTWs has been upgraded for AIR10 and now has secondary treatment
Loughinisland (WWTW)	298	-229	This WWTWs has been upgraded for AIR10 and now has secondary treatment
Mullaghbane (Armagh)	2594	-29	This WWTWs has been upgraded for AIR10 and now has secondary treatment
Oakland Villas	1711	-18	This WWTWs has been upgraded for AIR10 and now has secondary treatment
Seahill (WWTW)	774	-6771	This WWTWs has been upgraded for AIR10 and now has secondary treatment
Springhill Road(1)	1713	-14	This WWTWs has been upgraded for AIR10 and now has secondary treatment
Stramore	2173	-18	This WWTWs is now a gravity away for AIR10
Tulnacross Road(44-46)	1820	-6	This WWTWs has been upgraded for AIR10 and now has secondary treatment
	Total	**-8136**	**Change in Line 3 PE since AIR09**

It should be noted that due to rounding and summation of PEs the total shown differs slightly from the difference between the AIR10 and AIR09 values for this line.

Line 4 – Total load receiving preliminary treatment only
The table below shows the changes in WWTWs receiving preliminary treatment only since AIR09 for Line 4.

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Ballycastle (WWTW)	1071	3703	The Pe at this WWTWs has been updated for AIR10
Tully Road Headworks	3975	-27	The Pe at this WWTWs has been updated for AIR10
	Total	**3676**	**Change in Line 4 PE since AIR09**

It should be noted that due to rounding and summation of PEs the total shown differs slightly from the difference between the AIR10 and AIR09 values for this line.

Line 5 – Total load entering sewerage system
The table below shows the changes in WWTWs since AIR09 that affects load entering the system for Line 5.

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Aghalee	2394	-7	The Pe for this site has been updated since AIR09
Aghanloo (1)	2989	17	The Pe for this site has been updated since AIR09
Aghanloo (2)	2989	-940	This WWTWs has been decommissioned for AIR10
Annahilt (WWTW)	317	399	The Pe for this site has been updated since AIR09
Annalong (WWTW)	300	-45	The Pe for this site has been updated since AIR09
Annsborough	2687	4494	The Pe for this site has been updated since AIR09
Antrim (WWTW)	1422	8595	The Pe for this site has been updated since AIR09
Ardglass (WWTW)	268	48	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Armagh (WWTW)	2558	-26351	This WWTWs is now a PPP site for AIR10
Artasooly	2559	-274	This WWTWs has been pumpaway for AIR10
Aughnacloy	3007	-5	The Pe for this site has been updated since AIR09
Ballybogy	1087	17	The Pe for this site has been updated since AIR09
Ballycastle (WWTW)	1071	3703	The Pe for this site has been updated since AIR09
Ballyclare	1467	5	The Pe for this site has been updated since AIR09
Ballycranbeg	218	69	The Pe for this site has been updated since AIR09
Ballykelly (L/Derry)	3016	49	The Pe for this site has been updated since AIR09
Ballymagorry (WWTW)	3018	187	The Pe for this site has been updated since AIR09
Ballymartin (Retention Tank)	770	-31	The Pe for this site has been updated since AIR09
Ballymena (WWTW)	1456	-5359	The Pe for this site has been updated since AIR09
Ballynacor	2395	-102837	This WWTWs is now a PPP site for AIR10
Ballynahinch (Down)	311	8	The Pe for this site has been updated since AIR09
Ballyronan (WWTW)	1558	21	The Pe for this site has been updated since AIR09
Ballyvoy	1177	16	The Pe for this site has been updated since AIR09
Banbridge (WWTW)	2102	1474	The Pe for this site has been updated since AIR09
Barnish Road(44-46)	1758	-6	This WWTWs has been decommissioned for AIR10
Belfast (WWTW)	345	10310	The Pe for this site has been updated since AIR09
Belleek (Fermanagh)	3024	1	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Benburb (WWTW)	2831	274	The Pe for this site has been updated since AIR09
Blackrock Retention Tank (Down)	306	7	The Pe for this site has been updated since AIR09
Bullays Hill	2398	-51147	This WWTWs is now a PPP pumpaway site for AIR10
Bush	2833	-639	This WWTWs has been pumpaway for AIR10
Bushmills (WWTW)	1178	-151	The Pe for this site has been updated since AIR09
Carrickfergus (WWTW)	261	61	The Pe for this site has been updated since AIR09
Castledawson	1609	-6	The Pe for this site has been updated since AIR09
Castlederg (WWTW)	3042	21	The Pe for this site has been updated since AIR09
Castlewellan (WWTW)	2694	-4624	This WWTWs has been pumpaway for AIR10
Clady (Tyrone)	4149	3	The Pe for this site has been updated since AIR09
Cloghoge Road	2170	-27	This WWTWs has been pumpaway for AIR10
Clough (WWTW)	296	-16	The Pe for this site has been updated since AIR09
Coalisland	2828	977	The Pe for this site has been updated since AIR09
Conthem Rd	3180	29	This WWTWs is a new site for AIR10 as recently adopted by NIW
Cookstown (WWTW)	1582	-105	The Pe for this site has been updated since AIR09
Cross Lane(2-6)	2911	-9	This WWTWs has been decommissioned for AIR10
Culmore (WWTW)	3071	-6764	The Pe for this site has been updated since AIR09
Derryhale	2570	27	The Pe for this site has been updated since AIR09
Donaghmore (WWTW)	2840	455	The Pe for this site has been updated since AIR09
Donemana	3103	16	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Donnybrewer	3080	36	The Pe for this site has been updated since AIR09
Downpatrick (WWTW)	771	1413	The Pe for this site has been updated since AIR09
Draperstown	1615	47	The Pe for this site has been updated since AIR09
Dromora (WWTW)	316	13	The Pe for this site has been updated since AIR09
Dromore (Down)	2127	237	The Pe for this site has been updated since AIR09
Drumman Hill	2575	-24	This WWTWs has been pumpaway for AIR10
Dungannon	2850	14469	The Pe for this site has been updated since AIR09
Dungiven	3101	17	The Pe for this site has been updated since AIR09
Dunmore Cottages	806	-6	The Pe for this site has been updated since AIR09
Dunmurry	346	-7778	The Pe for this site has been updated since AIR09
Dunnamore	1574	5	The Pe for this site has been updated since AIR09
Ederney (WWTW)	3106	-288	The Pe for this site has been updated since AIR09
Enniskillen	3218	-361	The Pe for this site has been updated since AIR09
Fintona (WWTW)	3112	-1	The Pe for this site has been updated since AIR09
Fivemiletown (WWTW)	3113	-159	The Pe for this site has been updated since AIR09
Galbally	2844	51	The Pe for this site has been updated since AIR09
Garvagh (WWTW)	1154	-28	The Pe for this site has been updated since AIR09
Gilford (WWTW)	2162	51	The Pe for this site has been updated since AIR09
Glassdrumman (Down)	302	-34	The Pe for this site has been updated since AIR09
Glenstall	1109	-1051	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Greenisland (WWTW)	263	-72	The Pe for this site has been updated since AIR09
Hilltown (WWTW)	2701	131	The Pe for this site has been updated since AIR09
Irvinestown	3137	-254	The Pe for this site has been updated since AIR09
Keady (Armagh)	2553	40	The Pe for this site has been updated since AIR09
Kesh (WWTW)	3140	33	The Pe for this site has been updated since AIR09
Kilclief (Retention Tank)	269	-268	This WWTWs has been pumpaway for AIR10
Kilkeel (WWTW)	313	-1506	The Pe for this site has been updated since AIR09
Killinchy (WWTW)	252	301	The Pe for this site has been updated since AIR09
Killyleagh (WWTW)	273	337	The Pe for this site has been updated since AIR09
Kilmore (Down)	285	34	The Pe for this site has been updated since AIR09
Kilrea	1156	-790	The Pe for this site has been updated since AIR09
Kinawley	3149	-16	The Pe for this site has been updated since AIR09
Larne (WWTW)	2044	-343	The Pe for this site has been updated since AIR09
Limavady (WWTW)	3162	-14	The Pe for this site has been updated since AIR09
Lisbarnet (WWTW)	239	-503	This WWTWs has been pumpaway for AIR10
Lisburn (New Holland)	329	12	The Pe for this site has been updated since AIR09
Lisnaskea (WWTW)	3171	47	The Pe for this site has been updated since AIR09
Loughdian	2146	-18	This WWTWs is gravitating away for AIR10
Lower Rashee Road (15-21)	5188	12	This WWTWs is a new site for AIR10 as recently adopted by NIW
Magherafelt (WWTW)	1621	184	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Magheralin	2413	-1875	This WWTWs is now a PPP pumpaway site for AIR10
Magheramason	3177	2	The Pe for this site has been updated since AIR09
Markethill	2591	26	The Pe for this site has been updated since AIR09
Martinstown	1445	33	The Pe for this site has been updated since AIR09
Mayboy	1163	34	The Pe for this site has been updated since AIR09
Moira	2429	266	The Pe for this site has been updated since AIR09
Monea (WWTW)	3186	14	The Pe for this site has been updated since AIR09
Moneymore (WWTW)	1589	4	The Pe for this site has been updated since AIR09
Moneyneany (WWTW)	1631	64	The Pe for this site has been updated since AIR09
Moneyreagh (WWTW)	337	5	The Pe for this site has been updated since AIR09
Moneyslane (WWTW)	2151	-24	The Pe for this site has been updated since AIR09
Moy (WWTW)	2859	-1114	The Pe for this site has been updated since AIR09
Mullanahoe (WWTW)	2043	-13	The Pe for this site has been updated since AIR09
Mullans (Antrim)	1118	62	The Pe for this site has been updated since AIR09
Newcastle (WWTW)	303	32	The Pe for this site has been updated since AIR09
Newry (WWTW)	2685	-6549	The Pe for this site has been updated since AIR09
Newtownards (Ballyrickard)	241	-50892	This WWTWs is now a PPP site for AIR10
Newtownbreda (WWTW)	342	682	The Pe for this site has been updated since AIR09
Newtownbutler (WWTW)	3200	7	The Pe for this site has been updated since AIR09
Newtownstewart (WWTW)	3202	9	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
North Coast (WWTWs)	4150	-536	The Pe for this site has been updated since AIR09
Oghill (1)	3205	-54	This WWTWs is gravitating away for AIR10
Omagh (WWTW)	3999	-1060	The Pe for this site has been updated since AIR09
Orritor (WWTW)	1591	-15	The Pe for this site has been updated since AIR09
Plumbridge (WWTW)	3210	-20	The Pe for this site has been updated since AIR09
Portavogie(Retention Tank)	209	-129	The Pe for this site has been updated since AIR09
Poundburn	318	-401	This WWTWs has been pumpaway for AIR10
Poyntzspass (WWTW)	2156	18	The Pe for this site has been updated since AIR09
Randalstown	1425	-6666	This WWTWs has been pumpaway for AIR10
Rasharkin	1120	-229	The Pe for this site has been updated since AIR09
Rathfriland (WWTW)	2713	-11	The Pe for this site has been updated since AIR09
Reaskmore Road	5286	12	This WWTWs is a new site for AIR10 as recently adopted by NIW
Redford	2853	-6	The Pe for this site has been updated since AIR09
Richill	2597	-3384	This WWTWs is now a PPP site for AIR10
Ringneill (WWTW)	237	503	The Pe for this site has been updated since AIR09
Robinsonstown	2419	-31	The Pe for this site has been updated since AIR09
Roughfort (WWTW)	1470	-15	The Pe for this site has been updated since AIR09
Saintfield (WWTW)	290	8	The Pe for this site has been updated since AIR09
Seagoe (WWTW)	2420	-15000	This WWTWs is now a PPP pumpaway site for AIR10
Seahill (WWTW)	774	24	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Stewartstown	1599	-63	The Pe for this site has been updated since AIR09
Strabane	3223	-1824	The Pe for this site has been updated since AIR09
Stramore	2173	-18	This WWTWs is gravitating away for AIR10
Strangford	226	268	The Pe for this site has been updated since AIR09
Tamnaherin	3226	-54	The Pe for this site has been updated since AIR09
Tamnamore (WWTW)	2862	23	The Pe for this site has been updated since AIR09
Tandragee	2174	488	The Pe for this site has been updated since AIR09
Tempo (WWTW)	3229	-17	The Pe for this site has been updated since AIR09
Trillick (WWTW)	3231	1	The Pe for this site has been updated since AIR09
Tully Road Headworks	3975	-27	The Pe for this site has been updated since AIR09
Tullynakill Road	5280	31	This WWTWs is a new site for AIR10 as recently adopted by NIW
Warrenpoint (WWTW)	2720	40	The Pe for this site has been updated since AIR09
Waterfoot Road (WWTW)	1643	63	The Pe for this site has been updated since AIR09
Whitehead (WWTW)	452	-57	The Pe for this site has been updated since AIR09
Whitehouse	265	312	The Pe for this site has been updated since AIR09
	Total	**-251157**	**Change in Line 5 PE since AIR09**

It should be noted that due to rounding and summation of PEs the total shown differs slightly from the difference between the AIR10 and AIR09 values for this line.

Line 6 – Equivalent population served (resident)

The table below shows the changes in WWTWs since AIR09 that affects equivalent population served (resident) for Line 6

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Aghalee	2394	-7	The Pe for this site has been updated since AIR09
Aghanloo (1)	2989	17	The Pe for this site has been updated since AIR09
Aghanloo (2)	2989	-940	This WWTWs has been decommissioned for AIR10
Annahilt (WWTW)	317	399	The Pe for this site has been updated since AIR09
Annalong (WWTW)	300	-45	The Pe for this site has been updated since AIR09
Annsborough	2687	4494	The Pe for this site has been updated since AIR09
Antrim (WWTW)	1422	8595	The Pe for this site has been updated since AIR09
Ardglass (WWTW)	268	48	The Pe for this site has been updated since AIR09
Armagh (WWTW)	2558	-26332	This WWTWs is now a PPP WWTWs
Artasooly	2559	-274	This WWTWs is now a pumpaway for AIR10
Aughnacloy	3007	-5	The Pe for this site has been updated since AIR09
Ballybogy	1087	17	The Pe for this site has been updated since AIR09
Ballycastle (WWTW)	1071	3703	The Pe for this site has been updated since AIR09
Ballyclare	1467	5	The Pe for this site has been updated since AIR09
Ballycranbeg	218	69	The Pe for this site has been updated since AIR09
Ballykelly (L/Derry)	3016	49	The Pe for this site has been updated since AIR09
Ballymagorry (WWTW)	3018	187	The Pe for this site has been updated since AIR09
Ballymartin (Retention Tank)	770	-31	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Ballymena (WWTW)	1456	-5359	The Pe for this site has been updated since AIR09
Ballynacor	2395	-102815	This WWTWs is now a PPP WWTWs
Ballynahinch (Down)	311	8	The Pe for this site has been updated since AIR09
Ballyronan (WWTW)	1558	21	The Pe for this site has been updated since AIR09
Ballyvoy	1177	16	The Pe for this site has been updated since AIR09
Banbridge (WWTW)	2102	1474	The Pe for this site has been updated since AIR09
Barnish Road(44-46)	1758	-6	This WWTWs has been decommissioned for AIR10
Belfast (WWTW)	345	10310	The Pe for this site has been updated since AIR09
Belleek (Fermanagh)	3024	1	The Pe for this site has been updated since AIR09
Benburb (WWTW)	2831	274	The Pe for this site has been updated since AIR09
Blackrock Retention Tank (Down)	306	7	The Pe for this site has been updated since AIR09
Bullays Hill	2398	-51139	This WWTWs is now a PPP pumpaway WWTWs
Bush	2833	-639	This WWTWs is now a pumpaway for AIR10
Bushmills (WWTW)	1178	-151	The Pe for this site has been updated since AIR09
Carrickfergus (WWTW)	261	61	The Pe for this site has been updated since AIR09
Castledawson	1609	-6	The Pe for this site has been updated since AIR09
Castlederg (WWTW)	3042	21	The Pe for this site has been updated since AIR09
Castlewellan (WWTW)	2694	-4624	This WWTWs is now a pumpaway for AIR10
Clady (Tyrone)	4149	3	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Cloghoge Road	2170	-27	This WWTWs is now a pumpaway for AIR10
Clough (WWTW)	296	-16	The Pe for this site has been updated since AIR09
Coalisland	2828	977	The Pe for this site has been updated since AIR09
Conthem Rd	3180	29	This is a new WWTWs for AIR10 as this has been recently adopted
Cookstown (WWTW)	1582	-105	The Pe for this site has been updated since AIR09
Cross Lane(2-6)	2911	-9	This WWTWs has been decommissioned for AIR10
Culmore (WWTW)	3071	-6764	The Pe for this site has been updated since AIR09
Derryhale	2570	27	The Pe for this site has been updated since AIR09
Donaghmore (WWTW)	2840	455	The Pe for this site has been updated since AIR09
Donemana	3103	16	The Pe for this site has been updated since AIR09
Donnybrewer	3080	36	The Pe for this site has been updated since AIR09
Downpatrick (WWTW)	771	1413	The Pe for this site has been updated since AIR09
Draperstown	1615	47	The Pe for this site has been updated since AIR09
Dromora (WWTW)	316	13	The Pe for this site has been updated since AIR09
Dromore (Down)	2127	237	The Pe for this site has been updated since AIR09
Drumman Hill	2575	-24	This WWTWs is now a pumpaway for AIR10
Dungannon	2850	14469	The Pe for this site has been updated since AIR09
Dungiven	3101	17	The Pe for this site has been updated since AIR09
Dunmore Cottages	806	-6	The Pe for this site has been updated since AIR09
Dunmurry	346	-7778	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Dunnamore	1574	5	The Pe for this site has been updated since AIR09
Ederney (WWTW)	3106	-288	The Pe for this site has been updated since AIR09
Enniskillen	3218	-361	The Pe for this site has been updated since AIR09
Fintona (WWTW)	3112	-1	The Pe for this site has been updated since AIR09
Fivemiletown (WWTW)	3113	-159	The Pe for this site has been updated since AIR09
Galbally	2844	51	The Pe for this site has been updated since AIR09
Garvagh (WWTW)	1154	-28	The Pe for this site has been updated since AIR09
Gilford (WWTW)	2162	51	The Pe for this site has been updated since AIR09
Glassdrumman (Down)	302	-34	The Pe for this site has been updated since AIR09
Glenstall	1109	-1051	The Pe for this site has been updated since AIR09
Greenisland (WWTW)	263	-72	The Pe for this site has been updated since AIR09
Hilltown (WWTW)	2701	131	The Pe for this site has been updated since AIR09
Irvinestown	3137	-254	The Pe for this site has been updated since AIR09
Keady (Armagh)	2553	40	The Pe for this site has been updated since AIR09
Kesh (WWTW)	3140	33	The Pe for this site has been updated since AIR09
Kilclief (Retention Tank)	269	-268	This WWTWs is now a pumpaway for AIR10
Kilkeel (WWTW)	313	-1506	The Pe for this site has been updated since AIR09
Killinchy (WWTW)	252	301	The Pe for this site has been updated since AIR09
Killyleagh (WWTW)	273	337	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Kilmore (Down)	285	34	The Pe for this site has been updated since AIR09
Kilrea	1156	-790	The Pe for this site has been updated since AIR09
Kinawley	3149	-16	The Pe for this site has been updated since AIR09
Larne (WWTW)	2044	-343	The Pe for this site has been updated since AIR09
Limavady (WWTW)	3162	-14	The Pe for this site has been updated since AIR09
Lisbarnet (WWTW)	239	-503	This WWTWs is now a pumpaway for AIR10
Lisburn (New Holland)	329	12	The Pe for this site has been updated since AIR09
Lisnaskea (WWTW)	3171	47	The Pe for this site has been updated since AIR09
Loughdian	2146	-18	This WWTWs is now a gravity away for AIR10
Lower Rashee Road (15-21)	5188	12	This is a new WWTWs for AIR10 as this has been recently adopted
Magherafelt (WWTW)	1621	184	The Pe for this site has been updated since AIR09
Magheralin	2413	-1875	This WWTWs is now a PPP pumpaway WWTWs
Magheramason	3177	2	The Pe for this site has been updated since AIR09
Markethill	2591	26	The Pe for this site has been updated since AIR09
Martinstown	1445	33	The Pe for this site has been updated since AIR09
Mayboy	1163	34	The Pe for this site has been updated since AIR09
Moira	2429	266	The Pe for this site has been updated since AIR09
Monea (WWTW)	3186	14	The Pe for this site has been updated since AIR09
Moneymore (WWTW)	1589	4	The Pe for this site has been updated since AIR09
Moneyneany (WWTW)	1631	64	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Moneyreagh (WWTW)	337	5	The Pe for this site has been updated since AIR09
Moneyslane (WWTW)	2151	-24	The Pe for this site has been updated since AIR09
Moy (WWTW)	2859	-1114	The Pe for this site has been updated since AIR09
Mullanahoe (WWTW)	2043	-13	The Pe for this site has been updated since AIR09
Mullans (Antrim)	1118	62	The Pe for this site has been updated since AIR09
Newcastle (WWTW)	303	32	The Pe for this site has been updated since AIR09
Newry (WWTW)	2685	-6549	The Pe for this site has been updated since AIR09
Newtownards (Ballyrickard)	241	-50870	This WWTWs is now a PPP WWTWs
Newtownbreda (WWTW)	342	682	The Pe for this site has been updated since AIR09
Newtownbutler (WWTW)	3200	7	The Pe for this site has been updated since AIR09
Newtownstewart (WWTW)	3202	9	The Pe for this site has been updated since AIR09
North Coast (WWTWs)	4150	-536	The Pe for this site has been updated since AIR09
Oghill (1)	3205	-54	This WWTWs is now a gravity away for AIR10
Omagh (WWTW)	3999	-1060	The Pe for this site has been updated since AIR09
Orritor (WWTW)	1591	-15	The Pe for this site has been updated since AIR09
Plumbridge (WWTW)	3210	-20	The Pe for this site has been updated since AIR09
Portavogie(Retention Tank)	209	-129	The Pe for this site has been updated since AIR09
Poundburn	318	-401	This WWTWs is now a pumpaway for AIR10
Poyntzspass (WWTW)	2156	18	The Pe for this site has been updated since AIR09
Randalstown	1425	-6666	This WWTWs is now a pumpaway for AIR10

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Rasharkin	1120	-229	The Pe for this site has been updated since AIR09
Rathfriland (WWTW)	2713	-11	The Pe for this site has been updated since AIR09
Reaskmore Road	5286	12	This is a new WWTWs for AIR10 as this has been recently adopted
Redford	2853	-6	The Pe for this site has been updated since AIR09
Richill	2597	-3384	This WWTWs is now a PPP WWTWs
Ringneill (WWTW)	237	503	The Pe for this site has been updated since AIR09
Robinsonstown	2419	-31	The Pe for this site has been updated since AIR09
Roughfort (WWTW)	1470	-15	The Pe for this site has been updated since AIR09
Saintfield (WWTW)	290	8	The Pe for this site has been updated since AIR09
Seagoe (WWTW)	2420	-15000	This WWTWs is now a PPP pumpaway WWTWs
Seahill (WWTW)	774	24	The Pe for this site has been updated since AIR09
Stewartstown	1599	-63	The Pe for this site has been updated since AIR09
Strabane	3223	-1824	The Pe for this site has been updated since AIR09
Stramore	2173	-18	This WWTWs is now a gravity away for AIR10
Strangford	226	268	The Pe for this site has been updated since AIR09
Tamnaherin	3226	-54	The Pe for this site has been updated since AIR09
Tamnamore (WWTW)	2862	23	The Pe for this site has been updated since AIR09
Tandragee	2174	488	The Pe for this site has been updated since AIR09
Tempo (WWTW)	3229	-17	The Pe for this site has been updated since AIR09
Trillick (WWTW)	3231	1	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Tully Road Headworks	3975	-27	The Pe for this site has been updated since AIR09
Tullynakill Road	5280	31	This is a new WWTWs for AIR10 as this has been recently adopted
Warrenpoint (WWTW)	2720	40	The Pe for this site has been updated since AIR09
Waterfoot Road (WWTW)	1643	63	The Pe for this site has been updated since AIR09
Whitehead (WWTW)	452	-57	The Pe for this site has been updated since AIR09
Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Whitehouse	265	312	The Pe for this site has been updated since AIR09
	Total	**-251086**	**Change in Line 6 PE since AIR09**

It should be noted that due to rounding and summation of PEs the total shown differs slightly from the difference between the AIR10 and AIR09 values for this line.

Line 7 – Equivalent population served (resident – numerical consents)
The table below shows the changes in WWTWs since AIR09 that affects equivalent population served (resident) with numerical consents for Line 7.

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Aghalee	2394	-7	The Pe for this site has been updated since AIR09
Aghanloo (1)	2989	17	The Pe for this site has been updated since AIR09
Aghanloo (2)	2989	-940	This WWTWs is now decommissioned for AIR10
Annahilt (WWTW)	317	399	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Annsborough	2687	4494	The Pe for this site has been updated since AIR09
Antrim (WWTW)	1422	8595	The Pe for this site has been updated since AIR09
Ardglass (WWTW)	268	48	The Pe for this site has been updated since AIR09
Armagh (WWTW)	2558	-26332	This WWTWs is now a PPP site
Aughnacloy	3007	-5	The Pe for this site has been updated since AIR09
Ballybogy	1087	17	The Pe for this site has been updated since AIR09
Ballycastle (WWTW)	1071	3703	The Pe for this site has been updated since AIR09
Ballyclare	1467	5	The Pe for this site has been updated since AIR09
Ballycranbeg	218	362	This WWTWs has a numeric consent for the first time in AIR10
Ballykelly (L/Derry)	3016	49	The Pe for this site has been updated since AIR09
Ballymagorry (WWTW)	3018	187	The Pe for this site has been updated since AIR09
Ballymena (WWTW)	1456	-5359	The Pe for this site has been updated since AIR09
Ballynacor	2395	-102815	This WWTWs is now a PPP site
Ballynahinch (Down)	311	8	The Pe for this site has been updated since AIR09
Ballyronan (WWTW)	1558	21	The Pe for this site has been updated since AIR09
Ballyvoy	1177	289	This WWTWs has a numeric consent for the first time in AIR10
Banbridge (WWTW)	2102	1474	The Pe for this site has been updated since AIR09
Belfast (WWTW)	345	10310	The Pe for this site has been updated since AIR09
Belleek (Fermanagh)	3024	1	The Pe for this site has been updated since AIR09
Benburb (WWTW)	2831	274	The Pe for this site has been updated since AIR09
Bullays Hill	2398	-51139	This WWTWs is now a PPP pumpaway site

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Bush	2833	-639	This WWTWs is a pumpaway for AIR10
Bushmills (WWTW)	1178	-151	The Pe for this site has been updated since AIR09
Carrickfergus (WWTW)	261	61	The Pe for this site has been updated since AIR09
Castledawson	1609	-6	The Pe for this site has been updated since AIR09
Castlederg (WWTW)	3042	21	The Pe for this site has been updated since AIR09
Castlewellan (WWTW)	2694	-4624	This WWTWs is a pumpaway for AIR10
Clady (Tyrone)	4149	3	The Pe for this site has been updated since AIR09
Clough (WWTW)	296	-16	The Pe for this site has been updated since AIR09
Coalisland	2828	977	The Pe for this site has been updated since AIR09
Cookstown (WWTW)	1582	-105	The Pe for this site has been updated since AIR09
Culmore (WWTW)	3071	-6764	The Pe for this site has been updated since AIR09
Derryhale	2570	27	The Pe for this site has been updated since AIR09
Donaghmore (WWTW)	2840	455	The Pe for this site has been updated since AIR09
Donemana	3103	16	The Pe for this site has been updated since AIR09
Donnybrewer	3080	36	The Pe for this site has been updated since AIR09
Downpatrick (WWTW)	771	1413	The Pe for this site has been updated since AIR09
Draperstown	1615	47	The Pe for this site has been updated since AIR09
Dromora (WWTW)	316	13	The Pe for this site has been updated since AIR09
Dromore (Down)	2127	237	The Pe for this site has been updated since AIR09
Dungannon	2850	14469	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Dungiven	3101	17	The Pe for this site has been updated since AIR09
Dunmurry	346	-7778	The Pe for this site has been updated since AIR09
Dunnamore	1574	312	This WWTWs has a numeric consent for the first time in AIR10
Ederney (WWTW)	3106	-288	The Pe for this site has been updated since AIR09
Enniskillen	3218	-361	The Pe for this site has been updated since AIR09
Fintona (WWTW)	3112	-1	The Pe for this site has been updated since AIR09
Fivemiletown (WWTW)	3113	-159	The Pe for this site has been updated since AIR09
Florencecourt	3114	259	This WWTWs has a numeric consent for the first time in AIR10
Galbally	2844	383	This WWTWs has a numeric consent for the first time in AIR10
Garvagh (WWTW)	1154	-28	The Pe for this site has been updated since AIR09
Garvaghy	3116	105	This WWTWs has a numeric consent for the first time in AIR10
Gilford (WWTW)	2162	51	The Pe for this site has been updated since AIR09
Glassdrumman (Down)	302	-34	The Pe for this site has been updated since AIR09
Glenstall	1109	-1051	The Pe for this site has been updated since AIR09
Greenisland (WWTW)	263	-72	The Pe for this site has been updated since AIR09
Hilltown (WWTW)	2701	131	The Pe for this site has been updated since AIR09
Irvinestown	3137	-254	The Pe for this site has been updated since AIR09
Keady (Armagh)	2553	40	The Pe for this site has been updated since AIR09
Kesh (WWTW)	3140	33	The Pe for this site has been updated since AIR09
Kilkeel (WWTW)	313	-1506	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Killinchy (WWTW)	252	301	The Pe for this site has been updated since AIR09
Killyleagh (WWTW)	273	337	The Pe for this site has been updated since AIR09
Kilmore (Down)	285	420	This WWTWs has a numeric consent for the first time in AIR10
Kilrea	1156	-790	The Pe for this site has been updated since AIR09
Kinawley	3149	381	This WWTWs has a numeric consent for the first time in AIR10
Larne (WWTW)	2044	-343	The Pe for this site has been updated since AIR09
Limavady (WWTW)	3162	-14	The Pe for this site has been updated since AIR09
Lisbarnet (WWTW)	239	-503	This WWTWs is a pumpaway for AIR10
Lisburn (New Holland)	329	12	The Pe for this site has been updated since AIR09
Lisnaskea (WWTW)	3171	47	The Pe for this site has been updated since AIR09
Maghera (Down)	305	340	This WWTWs has a numeric consent for the first time in AIR10
Magherafelt (WWTW)	1621	184	The Pe for this site has been updated since AIR09
Magheralin	2413	-1875	This WWTWs is now a PPP pumpaway site
Magheramason	3177	2	The Pe for this site has been updated since AIR09
Markethill	2591	26	The Pe for this site has been updated since AIR09
Martinstown	1445	33	The Pe for this site has been updated since AIR09
Moira	2429	266	The Pe for this site has been updated since AIR09
Monea (WWTW)	3186	373	This WWTWs has a numeric consent for the first time in AIR10
Moneymore (WWTW)	1589	4	The Pe for this site has been updated since AIR09
Moneyneany (WWTW)	1631	329	This WWTWs has a numeric consent for the first time in AIR10

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Moneyreagh (WWTW)	337	5	The Pe for this site has been updated since AIR09
Moneyslane (WWTW)	2151	380	This WWTWs has a numeric consent for the first time in AIR10
Moy (WWTW)	2859	-1114	The Pe for this site has been updated since AIR09
Mullanahoe (WWTW)	2043	-13	The Pe for this site has been updated since AIR09
Newcastle (WWTW)	303	32	The Pe for this site has been updated since AIR09
Newry (WWTW)	2685	-6549	The Pe for this site has been updated since AIR09
Newtownards (Ballyrickard)	241	-50870	This WWTWs is now a PPP site
Newtownbreda (WWTW)	342	682	The Pe for this site has been updated since AIR09
Newtownbutler (WWTW)	3200	7	The Pe for this site has been updated since AIR09
Newtownstewart (WWTW)	3202	9	The Pe for this site has been updated since AIR09
North Coast (WWTWs)	4150	-536	The Pe for this site has been updated since AIR09
Omagh (WWTW)	3999	-1060	The Pe for this site has been updated since AIR09
Orritor (WWTW)	1591	291	This WWTWs has a numeric consent for the first time in AIR10
Plumbridge (WWTW)	3210	-20	The Pe for this site has been updated since AIR09
Portaferry (2)	5200	3793	This WWTWs has a numeric consent for the first time in AIR10
Portavogie(Retention Tank)	209	-129	The Pe for this site has been updated since AIR09
Poundburn	318	-401	This WWTWs is a pumpaway for AIR10
Poyntzspass (WWTW)	2156	18	The Pe for this site has been updated since AIR09
Randalstown	1425	-6666	This WWTWs is a pumpaway for AIR10
Rasharkin	1120	-229	The Pe for this site has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Rathfriland (WWTW)	2713	-11	The Pe for this site has been updated since AIR09
Redford	2853	278	This WWTWs has a numeric consent for the first time in AIR10
Richill	2597	-3384	This WWTWs is now a PPP site
Robinsonstown	2419	516	This WWTWs has a numeric consent for the first time in AIR10
Roughfort (WWTW)	1470	-15	The Pe for this site has been updated since AIR09
Saintfield (WWTW)	290	8	The Pe for this site has been updated since AIR09
Seagoe (WWTW)	2420	-15000	This WWTWs is now a PPP pumpaway site
Seahill (WWTW)	774	24	The Pe for this site has been updated since AIR09
Stewartstown	1599	-63	The Pe for this site has been updated since AIR09
Strabane	3223	-1824	The Pe for this site has been updated since AIR09
Strangford	226	268	The Pe for this site has been updated since AIR09
Tamnaherin	3226	311	This WWTWs has a numeric consent for the first time in AIR10
Tamnamore (WWTW)	2862	23	The Pe for this site has been updated since AIR09
Tandragee	2174	488	The Pe for this site has been updated since AIR09
Tempo (WWTW)	3229	-17	The Pe for this site has been updated since AIR09
Trillick (WWTW)	3231	1	The Pe for this site has been updated since AIR09
Warrenpoint (WWTW)	2720	40	The Pe for this site has been updated since AIR09
Whitehouse	**265**	**312**	The Pe for this site has been updated since AIR09
	Total	**-241959**	**Change in Line 7 PE since AIR09**

It should be noted that due to rounding and summation of PEs the total shown differs slightly from the difference between the AIR10 and AIR09 values for this line.

Line 8 – Number of sewage treatment works
The number of WWTWs of 1040, on this line differs from the total of 1058 as shown in Table 17c, as the former does not include the screened outfalls (5 No.) and the unscreened outfalls (13 No.), as per the definition for this line.

The table below shows the changes in numbers of WWTWs since AIR09 for Line 8

Name of Works	CAR ID	Change in Number of Sewage Treatment Works	Comments
Aghanloo (2)	2989	Reduction	This WWTWs has been decommissioned for AIR10
Armagh (WWTW)	2558	Reduction	This WWTWs is now a PPP WWTWs
Artasooly	2559	Reduction	This WWTWs is now a pumpaway for AIR10
Ballynacor	2395	Reduction	This WWTWs is now a PPP WWTWs
Barnish Road(44-46)	1758	Reduction	This WWTWs has been decommissioned for AIR10
Bullays Hill	2398	Reduction	This WWTWs is now a PPP pumpaway WWTWs
Bush	2833	Reduction	This WWTWs is now a pumpaway for AIR10
Castlewellan (WWTW)	2694	Reduction	This WWTWs is now a pumpaway for AIR10
Cloghoge Road	2170	Reduction	This WWTWs is now a pumpaway for AIR10
Conthem Rd	3180	Addition	This is a new WWTWs for AIR10 as this has been recently adopted
Cross Lane(2-6)	2911	Reduction	This WWTWs has been decommissioned for AIR10
Drumman Hill	2575	Reduction	This WWTWs is now a pumpaway for AIR10
Lisbarnet (WWTW)	239	Reduction	This WWTWs is now a pumpaway for AIR10
Loughdian	2146	Reduction	This WWTWs is now a gravity away for AIR10
Lower Rashee Road (15-21)	5188	Addition	This is a new WWTWs for AIR10 as this has been recently adopted
Magheralin	2413	Reduction	This WWTWs is now a PPP pumpaway WWTWs
Newtownards (Ballyrickard)	241	Reduction	This WWTWs is now a PPP WWTWs

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Oghill (1)	3205	Reduction	This WWTWs is now a gravity away for AIR10
Portaferry (2)	5200	Addition	This WWTWs has been upgraded during AIR10
Poundburn	318	Reduction	This WWTWs is now a pumpaway for AIR10
Randalstown	1425	Reduction	This WWTWs is now a pumpaway for AIR10
Reaskmore Road	5286	Addition	This is a new WWTWs for AIR10 as this has been recently adopted
Richill	2597	Reduction	This WWTWs is now a PPP WWTWs
Seagoe (WWTW)	2420	Reduction	This WWTWs is now a PPP pumpaway WWTWs
Stramore	2173	Reduction	This WWTWs is now a gravity away for AIR10
Tullynakill Road	5280	Addition	This is a new WWTWs for AIR10 as this has been recently adopted

Line 9 – Treatment capacity available

The table below shows the changes in Treatment Capacity Available at WWTWs since AIR09 for Line 9.

Name of Works	CAR ID	Change in Design Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Aghanloo (2)	2989	-1700	This WWTWs has been decommissioned for AIR10
Aghory	2547	-34	This site has been upgraded during AIR10
Annahilt (WWTW)	317	1464	This site has been upgraded during AIR10
Annsborough	2687	5634	This site has been upgraded during AIR10
Antrim (WWTW)	1422	45624	This site has been upgraded during AIR10
Ardground	2996	-27	This site has been upgraded during AIR10
Armagh (WWTW)	2558	-38329	This WWTWs is now a PPP WWTWs
Armagh Road(202-206)	2250	1	This site has been upgraded during AIR10
Artasooly	2559	-50	This WWTWs is now a pumpaway for AIR10
Aughnacloy	3007	215	This site has been upgraded during AIR10
Ballybogy	1087	300	This site has been upgraded during AIR10
Ballycoshone	2689	1	This site has been upgraded during AIR10
Ballynacor	2395	-72700	This WWTWs is now a PPP WWTWs
Ballyward	2120	1	This site has been upgraded during AIR10
Barnish Road(44-46)	1758	-6	This WWTWs has been decommissioned for AIR10
Benburb (WWTW)	2831	1347	This site has been upgraded during AIR10
Brockaghboy (WWTW)	1140	145	This site has been upgraded during AIR10
Bullays Hill	2398	-47625	This WWTWs is now a PPP pumpaway WWTWs

Name of Works	CAR ID	Change in Design Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Bush	2833	-398	This WWTWs is now a pumpaway for AIR10
Carrickrovaddy	2257	5	This site has been upgraded during AIR10
Castlecaulfield (WWTW)	2836	529	This site has been upgraded during AIR10
Castlewellan (WWTW)	2694	-2515	This WWTWs is now a pumpaway for AIR10
Clarehill	1039	89	This site has been upgraded during AIR10
Cloghoge Road	2170	-27	This WWTWs is now a pumpaway for AIR10
Clough (WWTW)	296	-468	This site has been upgraded during AIR10
Conthem Rd	3180	50	This is a new WWTWs for AIR10 as this has been recently adopted
Cranagh (WWTW)	3065	105	This site has been upgraded during AIR10
Cross Lane(2-6)	2911	-9	This WWTWs has been decommissioned for AIR10
Crossmaglen	2273	700	This site has been upgraded during AIR10
Dartress	1148	-16	This site has been upgraded during AIR10
Derryaghna	3073	-33	This site has been upgraded during AIR10
Diviny	2403	-20	This site has been upgraded during AIR10
Donnybrewer	3080	4918	This site has been upgraded during AIR10
Downpatrick (WWTW)	771	13990	This site has been upgraded during AIR10
Drapersfield (WWTW)	1571	220	This site has been upgraded during AIR10
Draperstown	1615	2045	This site has been upgraded during AIR10
Dromora (WWTW)	316	300	This site has been upgraded during AIR10

Name of Works	CAR ID	Change in Design Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Drummack	3094	-6	This site has been upgraded during AIR10
Drumman Hill	2575	-24	This WWTWs is now a pumpaway for AIR10
Duneany (WWTW)	1440	-14	This site has been upgraded during AIR10
Dungannon	2850	20534	This site has been upgraded during AIR10
Dunnamore	1574	260	This site has been upgraded during AIR10
Edenderry (Antrim)	343	131	This site has been upgraded during AIR10
Enniskillen	3218	6652	This site has been upgraded during AIR10
Florencecourt	3114	190	This site has been upgraded during AIR10
Gilford (WWTW)	2162	362	This site has been upgraded during AIR10
Glarryford (WWTW)	1441	-13	This site has been upgraded during AIR10
Hamiltonsbawn	2603	1396	This site has been upgraded during AIR10
Kilmood	255	129	This site has been upgraded during AIR10
Kinawley	3149	340	This site has been upgraded during AIR10
Legaghory	3157	-9	This site has been upgraded during AIR10
Lisbarnet (WWTW)	239	-460	This WWTWs is now a pumpaway for AIR10
Lisbellaw (WWTW)	3165	210	This site has been upgraded during AIR10
Lisdoart (1)	3166	133	The Design Pe for this site has been updated in AIR10
Lisdoart (2)	3167	-133	The Design Pe for this site has been updated in AIR10
Lisnagade Road(54-56)	2161	3	This site has been upgraded during AIR10

Name of Works	CAR ID	Change in Design Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Loughdian	2146	-18	This WWTWs is now a gravity away for AIR10
Loughinisland (WWTW)	298	165	This site has been upgraded during AIR10
Lower Rashee Road (15-21)	5188	12	This is a new WWTWs for AIR10 as this has been recently adopted
Maghera (Down)	305	225	This site has been upgraded during AIR10
Magheralin	2413	-1800	This WWTWs is now a PPP pumpaway WWTWs
Magheramason	3177	80	This site has been upgraded during AIR10
Maytown Road	2275	1	This site has been upgraded during AIR10
Milltown (Maghera)	1630	-3	This site has been upgraded during AIR10
Monea (WWTW)	3186	391	This site has been upgraded during AIR10
Mullaghbane (Armagh)	2594	5	This site has been upgraded during AIR10
Mullaghglass (Newry)	2280	33	This site has been upgraded during AIR10
Myroe (WWTW)	3198	106	This site has been upgraded during AIR10
Newtownards (Ballyrickard)	241	-60000	This WWTWs is now a PPP WWTWs
Oakland Villas	1711	2	This site has been upgraded during AIR10
Oghill (1)	3205	-44	This WWTWs is now a gravity away for AIR10
Pomeroy Road	2901	2	This site has been upgraded during AIR10
Portaferry (2)	5200	5287	This WWTWs has been upgraded during AIR10
Poundburn	318	-214	This WWTWs is now a pumpaway for AIR10
Randalstown	1425	-5500	This WWTWs is now a pumpaway for AIR10

Name of Works	CAR ID	Change in Design Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Rasharkin	1120	365	This site has been upgraded during AIR10
Reaskmore Road	5286	28	This is a new WWTWs for AIR10 as this has been recently adopted
Richill	2597	-3353	This WWTWs is now a PPP WWTWs
Ringneill (WWTW)	237	736	This site has been upgraded during AIR10
Rosslea (WWTW)	3213	93	This site has been upgraded during AIR10
Saintfield (WWTW)	290	637	This site has been upgraded during AIR10
Saval More Cottages	2715	-4	This site has been upgraded during AIR10
Scribbagh (WWTW)	3216	2	This site has been upgraded during AIR10
Seagoe (WWTW)	2420	-14497	This WWTWs is now a PPP pumpaway WWTWs
Seahill (WWTW)	774	7825	This site has been upgraded during AIR10
Soldierstown	2431	15	This site has been upgraded during AIR10
Springhill Road(1)	1713	4	This site has been upgraded during AIR10
St Marys Terrace	2718	4	This site has been upgraded during AIR10
Stramore	2173	-6	This WWTWs is now a gravity away for AIR10
Tullynakill Road	5280	36	This is a new WWTWs for AIR10 as this has been recently adopted
Tulnacross Road(44-46)	1820	5	This site has been upgraded during AIR10
Glenravel Road (97)	1789	-6	The site was incorrectly included in the AIR09 treatment Capacity
Gortnagola Road	2889	-6	The site was incorrectly included in the AIR09 treatment Capacity
Katesbridge Road (109-115)	2205	-18	The site was incorrectly included in the AIR09 treatment Capacity
Bay Road (163-179)	1784	-27	The site was incorrectly included in the AIR09 treatment Capacity
Lisaclare	2848	-80	The site was incorrectly included in the AIR09 treatment Capacity
	Total	**-126110**	**Change in Line 9 PE since AIR09**

Lines 10 - Number of STW's providing nutrient removal

The number of works, 18, with nutrient removal reflects those required by NIEA to have nitrogen or phosphorus removal. This is a reduction of 4 from AIR09 and details can be seen in the table below.

Name of Works	CAR ID	Change in Number of STWs providing nutrient removal	Comments
Armagh (WWTW)	2558	Reduction	This WWTws is a PPP site
Ballynacor	2395	Reduction	This WWTws is a PPP site
Bullays Hill	2398	Reduction	This WWTWs is a PPP Pumpaway site
Seagoe (WWTW)	2420	Reduction	This WWTWs is a PPP pumpaway site

Line 11 – Equivalent population served by STW's providing nutrient removal

The table below shows the changes in Equivalent Population served by STWs providing nutrient removal for Line 11.

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Carrickfergus (WWTW)	261	61	The Pe for this WWTWs has been updated since AIR09
Downpatrick (WWTW)	771	1413	The Pe for this WWTWs has been updated since AIR09
Belfast (WWTW)	345	10310	The Pe for this WWTWs has been updated since AIR09
Dunmurry	346	-7778	The Pe for this WWTWs has been updated since AIR09
Lisburn (New Holland)	329	12	The Pe for this WWTWs has been updated since AIR09
Newtownbreda (WWTW)	342	682	The Pe for this WWTWs has been updated since AIR09
Whitehouse	265	312	The Pe for this WWTWs has been updated since AIR09
Ballyclare	1467	5	The Pe for this WWTWs has been updated since AIR09
Cookstown (WWTW)	1582	-105	The Pe for this WWTWs has been updated since AIR09

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Magherafelt (WWTW)	1621	184	The Pe for this WWTWs has been updated since AIR09
Antrim (WWTW)	1422	8595	The Pe for this WWTWs has been updated since AIR09
Ballymena (WWTW)	1456	-5359	The Pe for this WWTWs has been updated since AIR09
Armagh (WWTW)	2558	-26332	This WWTws is a PPP site
Ballynacor	2395	-102815	This WWTws is a PPP site
Banbridge (WWTW)	2102	1474	The Pe for this WWTWs has been updated since AIR09
Bullays Hill	2398	-51139	This WWTWs is a PPP Pumpaway site
Dungannon	2850	14469	The Pe for this WWTWs has been updated since AIR09
Seagoe (WWTW)	2420	-15000	The Pe for this WWTWs has been updated since AIR09
Tandragee	2174	488	The Pe for this WWTWs has been updated since AIR09
Enniskillen	3218	-361	The Pe for this WWTWs has been updated since AIR09
Lisnaskea (WWTW)	3171	47	The Pe for this WWTWs has been updated since AIR09
	Total	**-170836**	**Change in Line 11 PE since AIR09**

It should be noted that due to rounding and summation of PEs the total shown differs slightly from the difference between the AIR10 and AIR09 values for this line.
Note that PEs (Resident) have been used for line 11.

Line 12 - Number of STW's providing pathogen reduction
Newtownards (Ballyrickard) WWTWs is now a PPP site and therefore no longer reported on. Portaferry is the only additional works which has been identified as requiring pathogen reduction i.e. which possess a microbiological standard from EHS i.e. 20,000fc/100ml. This gives a total of 2 WWTWs including Larne.

Lines 13 – Equivalent population served by STW's providing disinfection

The table below shows the changes in Equivalent Population served by STWs providing disinfection at WWTWs since AIR09 for Line 13.

Name of Works	CAR ID	Change in Pe from AIR09 to AIR10 (-ve indicates AIR09 figure larger)	Comments
Larne (WWTW)	2044	-343	The PE for this site has been updated since AIR09
Newtownards (Ballyrickard)	241	-50870	This WWTWs now a PPP WWTWs
Portaferry (2)	5200	3793	This WWTWs provides pathogen reduction for the first time
	Total	-47420	**Change in Line 13 PE since AIR09**

It should be noted that due to rounding and summation of PEs the total shown differs slightly from the difference between the AIR10 and AIR09 values for this line.
Note that PEs (Resident) have been used for line 13.

Sewage Treatment (PPP)

Line 1 – Total Trade Effluent Load receiving Treatment

This is the first year the Company has reported PPP related catchments and extracted them from NIW Only for the relevant sites as per Methodology.

Lines 2 – Total load receiving secondary treatment

The increase in Total Load receiving treatment reflects the phased addition of WwTW's being operated by the Omega Contractor across the reporting period. With the agreement of NIAUR, PPP reported the North Down WwTW facility and the Kinnegar Contract only in AIR09. From April 09 the Ballynacor, Ballyrickard, Armagh and Richhill data is now included,

Explanation: As detailed in the Methodology, the Omega Scheme calculates Annual BOD from an averaging calculation as BOD sampling is based on Compliance Sampling. The Kinnegar Scheme samples BOD daily and calculates Annual BOD accordingly. This Contractual Sampling is also utilised to provide evidence against Compliance Sampling requirements. There is no BOD/COD conversion rates applied for any PPP Schemes.

Sludge data input is determined as end figures to ensure that possible double counting is at least minimised.

The reported equivalent Population figures have been calculated as per NIAUR recommendations, and may fluctuate from year to year as the BOD

loading could vary; this could be due to losses from the system, such as or demographic changes or overflows etc.

Lines 3- 4 - Total load receiving primary treatment and preliminary treatment
No Change, as the PPP works all provide secondary treatment as a minimum level of Treatment.

Line 5 – Total load entering sewerage system
PPP is not able to report against this line; the Reporter noted that as the Total load entering the Network was not reported, it could cause an anomaly in regard to the totalisation of the data on the NIW group table. Consideration should be given to prevent this possible outcome. The only report that PPP could place in Table 15 Line 5 would be identical to the figure reported in Line 2; i.e. 8105.2 tonnes derived from the inputs to Line 2. This would attract a very low confidence grade as it would effectively ignore any effect of Network based loading losses. Consequently this line is not applicable.

Line 6 – Equivalent population served (resident)
The increase in the Equivalent Population Served (resident) receiving treatment reflects the addition of WwTW's being operated by the PPP Contractors across the reporting period. The change is four in number namely Ballyrickard, Armagh, Richhill and Ballynacor WwTW's.

Line 7 - **Equivalent population served (resident) (numerical consents)**
Reported as per Line 6, in that all the PPP WwTW's have numerical consents.

Line 8 – Number of sewage treatment works
Year end data is provided, the change from AIR09 data represents the additional Omega Contract WwTW's (Ballynacor, Ballyrickard, Armagh and Richhill) coming into operation across the reporting period.

Line 9 – Treatment capacity available
Year end data is provided, the change from AIR09 data represents the additional Omega Contract WwTW's (Ballynacor, Ballyrickard, Armagh and Richhill) coming into operation across the reporting period.

Line 10 – Number of sewage STW's providing nutrient removal
Year end data is provided, the change from AIR09 data represents the additional Omega Contract WwTW's (Ballynacor and Armagh) coming into operation across the reporting period.

Line 11 – Equivalent population served by STW's providing nutrient removal
North Down was erroneously reported during the 08/09 reporting period as the works is not required to provide nutrient removal; Kinnegar remains reportable in addition to the new works.

Year end data is provided, the change from AIR09 data represents the additional Omega Contract WwTW's (Ballynacor and Armagh) coming into operation across the reporting period.

Line 12 – Number of STW's providing pathogen reduction
Year end data is provided, the change from AIR09 data represents the additional Omega Contract WwTW (Ballyrickard) coming into operation across the reporting period.

Line 13 - Equivalent population served by STW's providing disinfection
Year end data is provided, the change from AIR09 data represents the additional Omega Contract WwTW (Ballyrickard) coming into operation across the reporting period.

Lines 14 – Percentage unsatisfactory sludge disposal
The data represents the Sludges disposed of by the Contractor for the duration of the reporting period. The Omega contractor only disposed of sludges from 19 February – 31 March. All were disposed of through authorised routes and the % to unauthorised routes is therefore 0.

Line 15 – Total sewage sludge produced
The data represents the amount of sewage sludge produced by the works operated by Glen Water during the reporting period. It includes the Kinnegar, North Down and Ballyrickard sludges for the whole year exported to NIW at Duncrue Street for disposal, prior to the Omega Sludge Disposal Service Commencement Date.

It also includes the Armagh, Richhill, and Ballynacor WWTW Sludges for the whole year as these were exported to NIW at its Ballynacor Sludge Facility (up to 19th February), blended with other indigenous sludges and imported sludges before being 'produced' by NIW and disposed of by NIW. After 19th February Glen Water took over the operation of the Ballynacor Sludge Facility and continued to disposed of by Glen Water.

The gross volumes per year produced by PPP contractors are;

Sites reported AIR09:

Kinnegar: 0.7 ttds to NIW incinerator at Duncrue Street
North Down Ards: 1.65 ttds to NIW Incinerator at Duncrue St

New PPP Sites AIR 10:

Ballyrickard: 1.72 ttds to NIW Incinerator at Duncrue St
Richhill: Sludges transported to NIW at Ballynacor Sludge Facility: 0.21ttds
Armagh:Sludges transported to NIW at Ballynacor Sludge Facility 0.84 ttds
Ballynacor (inc Bullays Hill & Seagoe PS): Sludges transported to NIW at Ballynacor Sludge Facility 2.23 ttds

This line does not include the volumes of sludges produced by NIW from non-PPP sites and disposed of by Glen water at Ballynacor from 19 February (0.61ttds) which is recorded in the 'NIW only' table

Line 16 – Total sewage sludge disposal
As the Omega Sludge Disposal Service did not commence until 31 March 2010 the Sludges produced by the Contractor at the following sites throughout the year were disposed of by NI Water in accordance with the Contracts; Kinnegar, North Down/Ards WwTW, Armagh WwTW, Richhill WwTW, Ballyrickard WwTW, and Ballynacor WwTW. As such they were disposed of by NI Water and are recorded in the NI Water only tables.

The exception to the above is the sludges disposed of by the Contractor at Ballynacor Sludge Facility from 19 February 2010 to 31 March 2010 under a side agreement to the Omega Contracted services.

These sludges are a combination of 1.5 months of Contractor sludges from the following PPP schemes:

Armagh: 0.100 ttds
Richhill: 0.020 ttds
Ballynacor: 0.25 ttds

and a further 0.61 exported by NIW to the Glen Water operated facility.

This is the data (0.980 ttds) reported in Column 4.

Year end data is provided, the change from AIR09 data represents the additional Omega Contract WwTW's coming into operation across the reporting period from AIR 09 which reported North Down and Kinnegar only.

Total Table

Confidence Grades for Total Table - Lines 2 - 13

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 80% 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 PPP has no contribution to the total value.
Line 6 - Maintain NIW's C5 as NIW's value contributes to 80% of total value.
Line 7 - Maintain NIW's C5 as NIW's value contributes to 80% 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.
Line 10 - Maintain AI as depicted both by NIW and PPP.
Line 11 - Maintain NIW's C3 as NIW's value contributes more greatly to the total value.
Line 12 - Maintain AI as depicted both by NIW and PPP.
Line 13 - Confidence grade B4 is proposed to allow for NIW's C3 compared to PPP's B3

Line 14 – Percentage unsatisfactory sludge

There is no record of any unsatisfactory disposal.

Line 15 – Total sewage sludge produced

This is the total sewage sludge produced for 2009/10 (tds) as recorded monthly by WW Area Sludge Officers (reconciled using the SLS) and presented in the monthly Sludge Management Report along with sewage sludge produced at PPP sites, cake to incineration and an estimated quantity of WwTW's grit & screenings removed as part of the treatment process and disposed of under Tender C018.

Line 16- Total sewage sludge disposal

As Line 15.

Line 17 – Additional sludge

There has been no significant increase in the quantity of sewage sludge produced from new quality obligations during 2009/10.

Table 16

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 16 NON FINANCIAL MEASURES
SEWERAGE SERVICE ACTIVITIES (NIW Only)

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**ASSET BALANCE AT APRIL 1**										
1	Total length of sewers	km	2	13911.23	B3	14263.62		14319.50	B3	14465.23	B3
2	Total length of "critical" sewers	km	2	1321.00	C5	2467.00		2469.01	C4	2889.10	C4
B	**CHANGES DURING REPORT YEAR**										
3	New "critical" sewers	km	2	0.00	C3	2.01	A2	13.04	D3	14.30	B2
4	"Critical" sewers - inspection by CCTV/man entry	km	2	5.58	C3	5.47	A3	31.06	C4	40.43	C4
5	"Critical" sewers - renovated	km	2	2.79	C3	1.82	A3	3.15	A3	0.81	A2
6	"Critical" sewers - replaced	km	2	0.00	C3	3.61	A3	2.813	A3	5.07	A2
7	Abandoned "critical" sewers and other changes	km	2	0.00	C3	0.00	A2	-407.05	C4	0.00	A2
8	New "non-critical" sewers	km	2	54.97	C3	41.11	A3	135.88	B3	153.48	B2
9	"Non-critical" sewers - renovated	km	2	1.54	C3	1.13	A3	0.75	A3	1.38	A2
10	"Non-critical" sewers - replaced	km	2	N/C		8.91	A3	5.42	A3	6.19	A2
11	Abandoned "non-critical" sewers and other changes	km	2	N/C		0.99	A3	410.24	A3	0.49	A2
12	Sewer collapses per 1,000km	nr	1	86.4	C4	47.3	B4	96.3	C5	68.7	C5
13	Sewer blockages per 1,000km	nr	1	1536.4	C4	1181.0	B4	1936.4	C5	1791.0	C5
C	**ASSET BALANCE AT MARCH 31**										
14	Total length of sewers	km	2	14263.62	B3	14319.50	B3	14465.23	B3	14745.61	B3
15	Total length of "critical" sewers	km	2	1355.00	C5	2469.01	C4	2889.10	C4	3653.62	C3
D	**INTERMITTENT DISCHARGES**										
16a	Number of unsatisfactory intermittent discharges excluding CSOs (EHS)	nr	0			441	C4	85	A2	192	C2
16b	Number of unsatisfactory intermittent discharges CSOs (EHS)	nr	0			408	C4	270	A2	381	C2
17a	Number of intermittent discharges excluding CSOs	nr	0			1377	B4	1391	B4	1455	B4
17b	Number of CSOs	nr	0			799	B4	814	B4	751	B4
E	**DRAINAGE AREA PLANS**										
18	Cumulative number of drainage area plans completed	nr	0			49	A1	54	A1	70	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
20	Total sewerage drainage areas	nr	0			109	A2	109	A2	269	A2
21	Cumulative % drainage area plan studies completed	%	1			45.0	A1	49.5	A1	26.0	A2
22	% population/properties covered by completed studies	%	1			43.0	A2	46.0	A2	49.6	C4
F	**OTHER SEWERAGE SERVICE ACTIVITIES**										
23	Number of intermittent discharges refurbished for maintenance	nr	0								
24	Number of sewage treatment works refurbished for maintenance	nr	0								
25	P.e. of refurbished sewage treatment works for maintenance	000	0								
26	Number of new or enhanced sewage treatment works for quality	nr	0								
27	P.e. of new or enhanced sewage treatment works for quality	000	0								
28	First time sewerage - number of schemes completed	nr	0								
29	First time sewerage schemes - properties	nr	0								
30	Number of sludge treatment works refurbished for maintenance	nr	0								
31	Number of pumping stations refurbished for maintenance	nr	0								
32	Number of sea outfalls refurbished for maintenance	nr	0								
33	Number of investigations completed related to the quality programme	nr	0								

Table 16 - Non Financial Measures - Sewerage service activities (NIW only)

General

The Reporter recommended consolidation of Table 16 methodologies to improve visibility and avoid possible conflicts, to this end the Asset Management Section (AMS) has co-ordinated the input into this table from a number of sources.

NIW has been endeavouring to ensure that GIS can provide a single source of data for lines such as 1, 2, 3, 7, 8, 11, 14 and 15 as recommended by the Reporter. Apart from lines 1 and 2 being extracted from the previous AIR 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.

Line 1 – Total length of sewers at 1 April

The value of 14465.23km has been extracted from line 14 of the AIR09 Table 16.

Line 2 – Total length of 'critical' sewers at 1 April

The value of 2889.1 km has been extracted from line 15 of the AIR09 Table 16.

Lines 3 – 11 – Changes during reporting year

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

B	CHANGES DURING REPORT YEAR					
3	New "critical" sewers	km	2		14.30	B4
8	New "non-critical" sewers	km	2		153.48	B2

The confidence grades have been reviewed by AMS, taking into consideration those proposed by both NIW sections, as follows:

The confidence grade for line 3 has been averaged to a B4, as the EP portion of the overall total for this line is 64%, and due to the range of the respective proposed grades.

The confidence grade for line 8 has been averaged to a B2, as the Operations Services' portion of the overall total for this line is 64%, and due to the range of the respective proposed grades.

Lines 5, 6, 7, 9, 10 and 11 - the confidence grades as submitted by EP have not been altered by AMS as Operations Services has stated no entry against these lines.

B	CHANGES DURING REPORT YEAR					
4	"Critical" sewers - inspection by CCTV/man entry	km	2		40.43	C4

The confidence grade for line 4 has been maintained at the Networks Sewerage proposed C4, as their portion of the overall total, (i.e. 35.65m of 40.43m), for this line is 88%.

Commentary from EP Procurement Business Unit for Lines 3 - 11

B	CHANGES DURING REPORT YEAR					
3	New "critical" sewers	km	2		9.10	A2
4	"Critical" sewers - inspection by CCTV/man entry	km	2		4.78	A2
5	"Critical" sewers - renovated	km	2		0.81	A2
6	"Critical" sewers - replaced	km	2		5.07	A2
7	Abandoned "critical" sewers and other changes	km	2		0	A2
8	New "non-critical" sewers	km	2		55.10	A2
9	"Non-critical" sewers - renovated	km	2		1.38	A2
10	"Non-critical" sewers - replaced	km	2		6.19	A2
11	Abandoned "non-critical" sewers and other changes	km	2		0.49	A2

General
NIW is targeting investment in the sewerage infrastructure to maintain and achieve stable serviceability – e.g. the Belfast Sewers Project – Sewer Rehab. The work carried out to date has been almost exclusively the repair of collapsed or partially collapsed sewers.

Critical sewers are identified using standard industry definitions – WRc Sewer Rehabilitation Manual Category 4 and 5. The Reporter recommended consistent definitions for Critical Sewers and as a result a drop down menu has been developed from the WRc Manual and has been 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. This has improved the consistency of reporting critical and non-critical sewers.

The only sewer cleaning work carried out under the Belfast Sewers Project – Sewer Rehab was what was considered necessary to allow CCTV surveys to be conducted or where a relining technique required it.

Lines 3 – 7 – 'Critical' sewers
All information is compiled from EP sewerage infrastructure monthly returns. This is an accurate measurement of the actual lengths of critical sewers laid, renovated or replaced, and abandoned, compiled from contractor's on-site records. The information is collated from each individual contract on a monthly basis and aggregated into an overall annual figure.

The overall confidence grade has been assessed as A2, to take account of inconsistent interpretation of the definition of a critical sewer and some very slight reservations as to the completeness of compliance with the reporting procedure.

Line 4 – 'Critical' sewers – inspection by CCTV/man entry
The figure for critical sewer inspection by CCTV may include surveys outside the reporting period – either sewers surveyed before 1 April 2009 but constructed in 09/10 and sewers surveyed in 09/10 but not due for construction until after 31 March 10.

Lines 8 – 11 – 'Non-critical' sewers
All information is compiled from EP sewerage infrastructure monthly returns. This is an accurate measurement of the actual lengths of non-critical sewers laid, renovated or replaced, and abandoned, compiled from contractor's on-site records. The information is collated from each individual contract on a monthly basis and aggregated into an overall annual figure.
The overall confidence grade has been assessed as A2, to take account of inconsistent interpretation of the definition of a critical sewer and some very slight reservations as to the completeness of compliance with the reporting procedure.

The totals reported for new critical, new non-critical and non-critical replaced include an amount of sewers laid during the AIR09 reporting period. Notification of these sewers was not received to enable inclusion in the AIR09 submission. They have been included in the AIR10 totals to provide a true figure for the asset balance.

Commentary from Operations Directorate for Lines 3 - 12

Line 4 – 'Critical' sewers – inspection by CCTV/man entry
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 AIR11 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

Calculation Process for Table 16 Line 4
Data gathering and calculation is as described below:

- Table 16: Line 14: Total length of sewers at 31 March 2010
- Table 16: Line 15: Total length of 'critical' sewers at 31 March 2010
- Total length of sewers inspected by CCTV.

B	CHANGES DURING REPORT YEAR					
4	"Critical" sewers - inspection by CCTV/man entry	km	2		35.65	C4

This information is gathered by Networks Sewerage Field managers using checked and paid invoices from the Sewer Maintenance Contractor and submitted through line management on an excel spreadsheet to Networks Sewerage Business Unit on a monthly basis.

The percentage length of critical sewers against the total length of sewers is calculated by using the total length of critical sewer divided by the total length of sewer (T16L15/T16L14*100) = percentage%

The total length of all sewers inspected by CCTV is then multiplied by this percentage. This figure will equal in rough terms to the length of 'Critical' sewer inspected by CCTV.

Lines 5, 6, 7, 9, 10 & 11- 'Critical' Sewers

B	CHANGES DURING REPORT YEAR				
5b	"Critical" sewers - renovated (Ops only)	km	2		n/a
6b	"Critical" sewers - replaced (Ops only)	km	2		n/a
7b	Abandoned "critical" sewers and other changes (Ops only)	km	2		n/a
9b	"Non-critical" sewers - renovated (Ops only)	km	2		n/a
10b	"Non-critical" sewers - replaced (Ops only)	km	2		n/a
11b	Abandoned "non-critical" sewers and other changes (Ops only)	km	2		n/a

Note – line numbers have been suffixed with a 'b' to indicate input from Operations Directorate

Background
Within the Operations Directorate, three functions have been identified as having the potential to be involved in one or more of the sewerage service activities covered by Lines 3b to 11b of Table 16. The three functions are Networks Sewerage, the Operations Contract Management Centre (OCMC) and Tactical Asset Management (TAM).

Each function was asked if it would have any involvement in the list of activities. As a result of this exercise, Networks Sewerage confirmed that the only activity it would have any involvement in would be Line 4b: 'Critical' sewers – inspection by CCTV/man entry (Ops) whilst TAM confirmed that the only activities it would have any involvement in would be Line 3b: New 'critical' sewers (Ops) and Line 8b: New 'non-critical' sewers (Ops). The identification of these providers of information within Ops enabled NI Water to make a more complete return on Lines 3, 4 and 8 in 2008/09.

There remain a number of activities covered by lines in Table 16 in which no function within Ops has any involvement. Operations Services has agreed to take on the role of author/reviewer/approver of these lines for AIR10.

Figures
Ops Services has input "not applicable" against lines 5b, 6b, 7b, 9b, 10b and 11b. This implies that sewerage service activities relating to renovated, replaced and abandoned critical and non-critical sewers are not applicable to Ops and reflects the responses from the three functions.

Ops Services cannot input "0" because the suggestion would be that the activities apply to Ops but no work was undertaken in 2009/10. And Ops cannot input "not counted" because the suggestion would be that work was undertaken by Ops but wasn't measured.

Lines 3 and 8 – New sewers

B	CHANGES DURING REPORT YEAR					
3	New "critical" sewers	km	2		5.198	D3
8	New "non-critical" sewers	km	2		98.376	B3

Introduction
Sewers are adopted under the provisions of Article 161 of the Water and Sewerage Services (Northern Ireland) Order 2006. The basis of this is that a developer i.e. any person constructing or proposing to construct a sewer 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 offered 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 Information Pack, 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 may require 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.

Line 12 – Sewer collapses per 1,000km
Calculation process
Data gathering and calculation is as described below:

- 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 2009

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 2010 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.

Due to the method of gathering the data on Sewer Collapses, see Line-Specific Methodology Statement, the regulatory instructions for calculating figures for Table 16 Line 12 and Table 16a Lines 1 and 2 must be reversed.

Table 16: line 12 has been calculated using the figure reported for table 16a Lines 1 and 2 and the total length of sewers figure reported for Table 16 line 14.

Line 13 – Sewer blockages per 1,000km
Calculation process
Data gathering and calculation is as described below:

- Table 16a: Line 3: Total number of sewer blockages
- Table 16: Line 14: Total length of sewers at 31 March 2009

The number of sewer blockages is divided by the total length of sewers at 31 March 2010 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.

Due to the method of gathering the data on Sewer Collapses, see Line-Specific Methodology Statement, the regulatory instructions for calculating figures for Table 16 Line 13 and Table 16a Line 3 must be reversed.

Table 16: line 13 has been calculated using the figure reported for table 16a Line 3 and the total length of sewers figure reported for Table 16 line 14.

Line 14 – Total length of sewers at 31 March
The value of 14745.61km has been extracted from NI Water digital data which is held in the Asset Mapper GIS.

There has been no change to the structure of the data reported on this year from the previous years that would directly affect the 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 AIR09 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 at 31 March
The value of 3653.62km has been extracted from NI Water digital data which is held in the Asset Mapper GIS.

There has been a substantial increase in the total critical sewer lengths this year compared to last year due to improvements in the analysis technique used to identify critical sewers. In the AIR 09 returns the critical sewer total was calculated based solely on the attributes of the sewer and did not take into account the location of the sewer in regards to structures, roads and other transport infrastructure. In line with the Reporter's recommendation a consistent definition of 'critical sewers' has been established.

A recent desktop exercise utilising geospatial technology was carried out by Atkins on behalf of NIW to assess the criticality of the NIW sewer network. This exercise assessed the sewer criticality on both their attributes and location. This has led to a higher number of sewers being identified as critical. The methodology selected for this exercise is as stated within the WRc Sewer Rehabilitation Manual 4th edition. A copy of Atkins report on the Critical Sewer assessment can be obtained on request.

In line with the Reporter's recommendation issues such as 'Sewers' with upstream depth of 2 to 3m and an unknown downstream depth are being defined as 'unknown' sewers', and those with upstream depth <2m and unknown downstream depth have been excluded. These have been addressed as a result of the revised critical sewer methodology.

In light of this the confidence grade has been upgraded from C4 to C3.

The Reporter recommended additional breakdown of sewer lengths, however due to current software and NIW business procedures, further details of the additional breakdown of sewer lengths for lines 14 and 15 cannot be provided.

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.

However the corresponding numbers of UIDs as recognised by NIEA for classification ***to date*** are:

- The number of unsatisfactory intermittent discharges excluding CSOs (EHS) - 80 UIDs;
- The number of unsatisfactory intermittent discharges CSOs (EHS) - 219 UIDs; and
- 117 of these UIDs are scheduled to be improved within the PC10 period.

Line 17a - Number of intermittent discharges excluding CSO's and Line 17 b – Number of CSO's

Table A - Depicting differences between the sewerage system overflows between AIR09 and AIR10

Intermittent Discharges	AIR09 Number	Preliminary AIR10 Number	AIC & APT Rationalisation exercise identified	AIR10 Number (after AIC & APT Rationalisation exercise)	Difference between AIR09 & AIR10 (after AIC & APT Rationalisation exercise)
Combined Storm Overflows (CSOs)	814	819	-68	**751**	-63
Sewage Pumping Stations (SPSs)	925	951	-18	**933**	8
Total Number of Intermittent Discharges	1739	1770	-86	**1684**	-55

Hence for AIR10 the total number of Sewerage System Overflows is 751 + 933 i.e. 1684

There has been a preliminary net increase of 5 No: CSOs since AIR09. This is made up of 9 No: new CSOs minus 4 No: CSOs that have been removed.

In addition there has been a preliminary net increase of 26 No: SPS since AIR09. This is made up of 29 No: new SPSs minus 3 No: SPSs that have been removed.

(For a further breakdown see Table B - Changes in Intermittent Discharges by Drainage Area below).

However the Asset Performance Team has been seeking to improve its overall confidence grading of intermittent discharge information for AIR10 and carried out an exercise to rationalise our data with the Asset Information Centre (AIC).

This resulted in 86 No: sewerage system overflows being withdrawn since AIR09 which do not fall within the industry standard for reporting purposes.

The number of withdrawn sewerage system overflows have been categorised into the following:

- 44 No: Dual Manholes;
- 10 No: Bifurcation Manholes;
- 32 No: Duplicate Assets
  (Consisting of 18 No: SPS overflows & 14 No: CSOs)

(For further details see Tables C, D & E below).

Overall this equates to a:

Net increase of 31 No: sewerage system overflows since AIR09
Plus: 1739 No: sewerage system overflows identified in AIR09
Sub Total: 1770 No: sewerage system overflows
Minus: 86 No: Overflows withdrawn after rationalisation exercise
Total: 1684 No: sewerage system overflows identified for AIR10

Further analysis of the APT and AIC rationalisation exercise of intermittent discharges, has highlighted assets requiring further investigation for AIR11, i.e.

- 7 assets have been identified by APT with more than one overflow that does not align with AIC data – Included in APT ID list
- 7 No: assets indicated as consented by APT but not by AIC – Included in APT ID list
- 16 No: assets indicated as consented by AIC that are within WWTWs boundaries and therefore not an intermittent Discharge. These have are included in APT WWTW overflow discharges – Not included in APT ID list
- 13 No: assets indicated as consented by AIC but not by APT – Not included in APT ID list
- 30 No: assets indicated as abandoned by AIC but not by APT – Included in APT ID list
- 13 No: assets indicated as demolished by AIC but not by APT – Included in APT ID list
- 7 No: assets indicated as out of service by AIC but not by APT – Included in APT ID list

In total 93 No: assets between APT and AIC do not align. There are 16 No: assets indicated as consented by AIC that are within WWTWs boundaries and therefore are not an intermittent discharge. These are incorporated in the APT WWTW overflow discharges.

Therefore, 64 No: assets, which are included within the AIR10 APT ID list, will require further investigation for AIR11, in addition to the 13 assets listed by AIC as consented, but not recorded in the APT list.

Table B - Changes in Intermittent Discharges by Drainage Area

Drainage Area	No of CSO's added since AIR09	No of CSO's removed since AIR09	No of SPS's added since AIR09	No of SPS's removed since AIR09	Comments
Clougher (200's)	1	0	0	0	Ballymagowan Rd CSO, within Clogher catchment. Details of CSO received from NIW Ops and added to the application CC 01/10/09. CAR ID: NM001104307
Edenderry (200's)	1	0	0	0	New application as catchment for WWTW's previously did not contain any CSO's or Pumping Stations. CAR ID: CO002857412
Antrim	1	0	1	0	CSO at Massereene Bridge added Randalstown SPS added (CAR ID: SP002872783)
Killyleagh	2	0	0	0	CSO's added as result of pollution incident. CAR ID: NM001319270 & NM001318865
East Belfast	1	0	0	0	Details of Cherryvalley CSO were added to the application following information received from ERS. CAR ID: NM001149599
Larne	1	0	2	0	Details of two previously uncommented assets added to the application – Drains Bay SPS and Blackarch CSO. CAR ID: CO00098466 & SP002022812 Mike Collins, EP, confirmed that as well as the CSO Blackarch also has an overflow from the SPS.i.e. Blackarch SPS CAR ID: SP002022817
Limavady	2	0	1	0	CSO at Alexander Road & CSO at Main Street added. CAR ID: CO000984143. Coolessan SPS added. CAR ID: SP002021708
Clough/Seaforde (200's)	0	0	1	0	Seaforde SPS CAR ID: WW002064063 & Pinetrees SPS (Car id SP002870070 formerly known as Seaforde SPS)
Creagh (200's)	0	0	1	0	Application updated with details of Creagh Industrial Park SPS. This SPS highlighted as unconsented by NIEA and details received from Brendan McNeil of Ops. CAR ID: SP002022909

Drainage Area	No of CSO's added since AIR09	No of CSO's removed since AIR09	No of SPS's added since AIR09	No of SPS's removed since AIR09	Comments
Florencecourt (200's)	0	0	2	0	Florencecourt Caravan Park SPS (CAR id SP002022004) & Drumlaghy SPS (CAR id SP002022000)
Park (200's)	0	0	1	0	Park PS CAR ID: SP002021898
Ringneill (200's)	0	0	1	0	Details of SPS supplied by Z Shields. Lisbarnet WWTW abandoned and converted to SPS and pumped to Ringneill. CAR ID: WW002064138
Annahilt	0	0	1	0	Details of Poundburn SPS added to application. Poundburn changed from WWTW's to SPS and pumped to Annahilt. CAR ID: SP02870006
Armagh	0	0	1	0	New SPS constructed to replace Drumman Hill WWTW's. CAR ID: SP002870019
Ballyclare	0	0	0	1	Information from NIEA the consent for Huntingdale Green SPS was removed.
Banbridge	0	0	2	0	All data pertaining to SPS supplied by O'Dwyer Ltd Consultants. SPS 15 pumps directly to SPS 16 and then on to Banbridge WWTW's. CAR ID: SP002022440 & SP002823750
Belfast	0	0	1	0	Carrington St SPS added.
Ballynacor	0	0	0	1	Details of Seagoe SPS removed from the application as this is now under the ownership of Glen Water, PPP, as off Tuesday 6th October. Therefore they now own the consent
Bullays Hill	0	0	0	1	Ann SPS removed as now part of PPP as per instruction of Zara Shields 16/11/2009 BA.
Castlederg	0	0	1	0	Environmental Regulation section highlighted the location of an unconsented SPS within Castlederg. This was Castlederg (SPS 1). CAR ID: SP002021848
Coalisland	0	0	3	0	Details of Annagher , Bush & Bracken SPS's added. CAR IDs: SP002021795, SP002856140 & SP002021796. Name of Bracken Court CSO changed to Bracken Court SPS

Drainage Area	No of CSO's added since AIR09	No of CSO's removed since AIR09	No of SPS's added since AIR09	No of SPS's removed since AIR09	Comments
Downpatrick	0	1	1	0	Cathedral View SPS added. CAR ID: SP002022502 Ardglass CSO removed from application
Dungannon	0	0	1	0	Killyman SPS added. CAR ID: WW002063477
Glenavy	0	0	1	0	Killulagh SPS added. CAR ID: SP002638807
Culmore	0	0	2	0	Pennyburn SPS added. CAR ID: SP002021944 Lettershendony (2) SPS added: CAR ID: SP002021892
Maghera (L/Derry)	0	0	1	0	Crewe Rd SPS added. CAR ID: SP002840300
Newry	0	3	0	0	CSO1a, CSO5a and CSO6a have been closed and therefore removed from the application.
North Coast	0	0	2	0	Ballycairn SPS added. CAR ID: SP002023024 Hezlett School SPS added. CAR ID: SP002022978
Omagh	0	0	1	0	Killyclogher SPS added. CAR ID: SP002021851
Tandragee	0	0	1	0	Clare SPS added. CAR ID: SP002829448
Total Number of intermittent discharges added or removed since AIR09	9	4	29	3	
Net Increase in CSO's since AIR09	5				There has been a net increase of 5 No: CSOs since AIR09. This is made up of 9 No: new CSOs minus 4 No: CSOs that have been removed.
Net increase in SPS's since AIR09			26		There has been a net increase of 26 No: SPS since AIR09. This is made up of 29 No: new SPSs minus 3 No: SPSs that have been removed.

Table C - Dual Manholes withdrawn since AIR09 due to APT & AIC Rationalisation Exercise

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 withdrawn since AIR09 due to APT & AIC Rationalisation Exercise				**44**

Table D - Bifurcation Manholes withdrawn since AIR09 due to APT & AIC Rationalisation Exercise

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 withdrawn since AIR09 due to APT & AIC Rationalisation Exercise				**10**

Table E - Duplicate Manholes withdrawn since AIR09 due to APT & AIC Rationalisation Exercise

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
Limavady	CO000984145	CSO 50	Y	1
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	
Castlewellan	CO000984454	CSO1	Y	4
Castlewellan	CO000984455	CSO2	Y	
Castlewellan	CO000984457	CSO4	Y	
Castlewellan	SP002022529	PS 01	Y	
Upper Falls Road	CO000984510	CSO 01	Y	1
Whitehouse	CO000984647	CSO 2a	Y	1
Limavady	SP002021708	SPS 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	
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 withdrawn since AIR09 due to APT & AIC Rationalisation Exercise				**32**

AIR10 Comments ref Overflows from within WWTWs

Table F - Total number of Overflows within WWTWs

	AIR09 Number	AIR 10 Number
Total number of Overflows from within WWTWs	466	522

Hence for AIR10 the total number of overflows within WWTWs is 522.

The overall number of WWTW overflows from AIR09 to AIR10 has had a net increase of 56 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 G to O below).

The increase in WWTW overflows in AIR10 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 changes in the number of overflows within WWTWs since AIR09 are as follows:

- 21 No: overflows within WWTWs withdrawn since AIR09.
  (See Table G, H, I, J & K below)
- 77 No: Additional overflows within WWTWs since AIR09.
  (See Table L, M & N below)
- A net increase of 56 overflows since AIR09.

Table G - Overflows within WWTWs withdrawn since AIR09 due to works becoming a pump away in AIR10

Name of Works	CAR ID	Status in AIR10	Withdrawn O/Fs Since AIR09
Lisbarnet (WWTW)	239	Pump away to Ringneil WWTW	-1
Poundburn	318	Pump away to Annahilt WWTW	-2
Randalstown	1425	Pump away to Antrim WWTW	-2
Artasooly	2559	Pump away to Milltown WWTW	-1
Bush	2833	Pump away to Coalisland WWTW	-1
Castlewellan (WWTW)	2694	Pump away to Annsborough WWTW	-2
Total No of overflows withdrawn since AIR09 due to the WWTWs becoming a pump away			**-9**

Table H - Overflows within WWTWs withdrawn since AIR09 due to works being upgraded

Name of Works	CAR ID	Status in AIR10	Withdrawn O/Fs Since AIR09
Downpatrick (WWTW)	771	Works Upgraded	-1
Seahill (WWTW)	774	Works Upgraded	-1
Portaferry (2)	383	Works Upgraded	-1
Total No of overflows withdrawn since AIR09 due to the works being upgraded			**-3**

Table I - Overflows within WWTWs withdrawn since AIR09 due to works becoming PPP sites

Name of Works	CAR ID	Status in AIR10	Withdrawn O/Fs Since AIR09
Newtownards (Ballyrickard)	241	PPP	-2
Armagh (WWTW)	2558	PPP	-1
Bullays Hill	2398	PPP	-1
Seagoe (WWTW)	2420	PPP	-1
Total No of Overflows withdrawn since AIR09 due to works becoming PPP sites			**-5**

Table J – Withdrawn Overflows within WWTWs due to incorrect designation in AIR09

Name of Works	CAR ID	Status in AIR10	Withdrawn O/Fs Since AIR09
Aghnagar	2830	Incorrect no of overflows designated in AIR09.	-1
Ballynure (WWTW)	1469	Incorrect no of overflows designated in AIR09.	-1
Point Road(29-33)	1813	Incorrect no of overflows designated in AIR09	-1
Newpoint Transfer SPS	2733	Incorrect no of overflows designated in AIR09	-1
Total No of Withdrawn Overflows due to incorrect designation in AIR09			**-4**

Table K – Summary of the total number of Overflows withdrawn since AIR09

Total No of overflows withdrawn since AIR09 due to the works becoming a pump away	**-9**
Total No of overflows withdrawn since AIR09 due to the works being upgraded	**-3**
Total No of Overflows withdrawn since AIR09 due to works becoming PPP sites	**-5**
Total No of Withdrawn Overflows due to incorrect designation in AIR09	**-4**
Combined Total No: of overflows within WWTWs withdrawn since AIR09	**-21**

Table L - Additional overflows within WWTWs since AIR09 due to WWTW upgrades

Name of Works	CAR ID	Status in AIR10	Overflows for AIR10 from Process Info	Additional O/Fs Since AIR09
Annahilt (WWTW)	317	Works Upgraded	F'A' Overflow FFT Overflow to Storm Tank (OF from storm tank) ERO from Outlet PS	2
Dromora (WWTW)	316	Works Upgraded	F'A' OF FFT Overflow ERO from Inlet PS	1
Edenderry (Antrim)	343	Works Upgraded	F'A' Overflow	1
Strangford	226	Works Upgraded	Works upgraded in AIR09 but APT did not receive updated info until August 09. Therefore O/Fs should be: 1 - FA O/F, 1 - FFT with Storm Retention	1
Kilmood	255	Works Upgraded	F'A' OF FFT OF with Storm	2
Maghera (Down)	305	Works Upgraded	F'A' OF FFT OF	1
Ringneill (WWTW)	237	Works Upgraded	FFT OF with Storm	1
Saintfield (WWTW)	290	Works Upgraded	F'A' OF FFT OF with Storm	1
Ballybogy	1087	Works Upgraded	F'A' OF FFT OF (To Storm Tank)	1
Brockaghboy (WWTW)	1140	Works Upgraded	F'A' OF FFT OF	2
Dartress	1148	Works Upgraded	F'A' OF FFT OF	2
Draperstown	1615	Works Upgraded	F'A' OF FFT to Storm Tank Inlet PS OF	2
Duneany (WWTW)	1440	Works Upgraded	F'A' OF FFT OF	1
Glarryford (WWTW)	1441	Works Upgraded	F'A' OF FFT OF	1
Oakland Villas	1711	Works Upgraded	F'A' OF FFT OF	2
Springhill Road(1)	1713	Works Upgraded	F'A' OF FFT OF with Storm	2
Tulnacross Road(44-46)	1820	Works Upgraded	FFT OF with Storm	1
Aghory	2547	Works Upgraded	F'A' OF FFT OF	2
Annsborough	2687	Works Upgraded	F'A' Overflow FFT Overflow to Storm Tank (OF from storm tank)	1
Ballycoshone	2689	Works Upgraded	FFT OF with Storm	1
Benburb (WWTW)	2831	Works Upgraded	F'A' Overflow FFT Overflow to Storm Tank	1

Name of Works	CAR ID	Status in AIR10	Overflows for AIR10 from Process Info	Additional O/Fs Since AIR09
Carrickrovaddy	2257	Works Upgraded	F'A' OF FFT OF	2
Castlecaulfield (WWTW)	2836	Works Upgraded	F'A' OF FFT OF	2
Crossmaglen	2273	Works Upgraded	F'A' Overflow FFT Overflow to storm	1
Diviny	2403	Works Upgraded	F'A' OF FFT OF with Storm	2
Gilford (WWTW)	2162	Works Upgraded	F'A' OF FFT OF	2
Hamiltonsbawn	2603	Works Upgraded	F'A' OF FFT OF to Storm Tank, ERO from Inlet PS to Storm Tank	3
Lower Ballinderry	2410	Works Upgraded	F'A' OF FFT OF to Storm Tank	1
Mullaghbane (Armagh)	2594	Works Upgraded	FFT OF with Storm	1
Mullaghglass (Newry)	2280	Works Upgraded	F'A' OF FFT OF	2
Pomeroy Road	2901	Works Upgraded	F'A' OF FFT Of with Storm	2
Saval More Cottages	2715	Works Upgraded	F'A' OF FFT OF with Storm	2
Lisnagade Road(54-56)	2161	Works Upgraded	FFT OF with Storm	1
Soldierstown	2431	Works Upgraded	F'A' OF FFT OF	2
Ardground	2996	Works Upgraded	F'A' OF FFT OF	2
Cranagh (WWTW)	3065	Works Upgraded	F'A' OF FFT OF (To Storm Tank)	2
Derryaghna	3073	Works Upgraded	F'A' OF FFT OF with Storm	2
Donnybrewer	3080	Works Upgraded	FFT OF (to Storm tank) Final Effluent PS ERO	1
Drummack	3094	Works Upgraded	FFT OF with Storm F'A' OF Inlet PS OF	2
Florencecourt	3114	Works Upgraded	F'A' OF FFT OF with Storm Final Effluent SPS EO	3
Kinawley	3149	Works Upgraded	F'A' OF FFT OF with Storm	1
Legaghory	3157	Works Upgraded	F'A' OF FFT OF	2
Myroe (WWTW)	3198	Works Upgraded	F'A' OF FFT OF	2
Scribbagh (WWTW)	3216	Works Upgraded	F'A' OF FFT OF	2
Total No: of additional overflows since AIR09 due to WWTWs being upgraded				**71**

Table M - Additional overflows within WWTWs due to incorrect designation in AIR09

Name of Works	CAR ID	Status in AIR10	Changes in Overflows for AIR10 from Process Info	Additional O/Fs Since AIR09
Kilkeel (WWTW)	313	Incorrect no of overflows designated in AIR09.	AIC correct regarding no of overflows, However type of O/F should be : 1 No FFT O/F to Storm Retention 1 No Additional Overflow-pumping station E/O (from final effluent PS to storm tank)	1
Whitehouse	265	Incorrect no of overflows designated in AIR09.	AIC correct regarding no of overflows, However type of O/F should be : 1 - No FA O/F 1 - FFT O/F with Storm Retention 1 -Inlet PS E/O 1 -Interstage PS O/F	1
Cloughmills (WWTW)	1096	Incorrect no of overflows designated in AIR09.	AIC correct regarding no of overflows. Therefore 1 No additional emergency O/F in AIR10	1
Derrykeighan	1101	Incorrect no of overflows designated in AIR09.	AIC correct regarding no of overflows. Therefore 1 No additional emergency O/F in AIR10	1
Acton	2111	Incorrect no of overflows designated in AIR09.	AIC correct regarding no of overflows. Therefore 1 No additional FFT O/F in AIR10	1
Attical (WWTW)	2688	Incorrect no of overflows designated in AIR09.	AIC correct regarding no of overflows. Therefore 1 No additional FFT O/F in AIR10	1
Totals No: of additional overflows within WWTWs due to incorrect designation in AIR09				**6**

For AIR10 - 4 No: Overflows have been withdrawn (see Table J) and 6 No: additional Overflows within WWTWs (see Table M above) have been included due to overflows being incorrectly being designated in AIR09.

This equates to a net increase of 2 No: overflows in AIR10 due to overflows being wrongly designated in AIR09.

Table N – Summary of additional overflows within WWTWs since AIR09

Total No: of additional overflows since AIR09 due to works being upgraded	**71**
Totals No: of additional overflows within WWTWs due to incorrect designation in AIR09	**6**
Combined Total: of Additional overflows within WWTWs since AIR09	**77**

Table O – Summary of Overflow type within WWTWs

Overflow Type	AIR09 Overflows from WWTWs	AIR09 Overflows listed for comparison purposes with AIR08	AIR10 Overflows from WWTWs	AIR10 Overflows listed for comparison purposes with AIR09	Difference between AIR09 & AIR10 (Negative figure signifies an decreased figure from 09)
Formula "A" O/Fs only	96	106	129	140	34
Formula "A" O/Fs (which also act as PS E/O)	9		10		
Formula "A" O/Fs with Storm (which also act as PS E/O)	1		1		
FFT O/Fs only	149	228	142	254	26
FFT O/Fs (which also act as PS E/O)	14		17		
FFT O/Fs with Storm Retention	54		84		
FFT O/Fs with Storm Retention (which also act as PS E/O	11		11		
3 DWF	23	23	20	20	-3
Additional Overflows-storm	10	109	7	108	-1
Additional Overflows-other structures	7		6		
Additional Overflows-pumping station E/O	92		95		
Total No of WWTWs Overflows	466	466	522	522	56

Since AIR09 the Asset Performance Team has reviewed their summary information from Water Order Consent applications to increase the confidence for the AIR10 data. This has resulted in greater confidence in the designation of overflows from AIR09.

In addition it should be noted that Atkins are carrying out a rationalisation exercise to ascertain any additional sewerage system overflows, which may exist, and for which NIW has not applied for a Water Order Consent. This work is still ongoing, and hence has not been used in any way for the AIR10 data. Hence the confidence grades have not been changed for lines 17a and 17b.

Hence the value for line 17a i.e. 'Number of intermittent discharges excluding CSOs' (i.e. number of PS overflows in Sew. System 933, and the total number of overflows within WWTWs of 522) is 1455.

Comparison between AIR09 & AIR10 - Intermittent discharges excluding CSOs
The number of intermittent discharges excluding CSOs in **AIR09 was 1391.** This is made up 466 WWTW O/Fs + 925 SPS O/Fs.

In comparison the number of intermittent discharges excluding CSOs in **AIR10 has increased by 64 No: intermittent discharges to 1455**. This is made up of 522 WWTW O/Fs + 933 SPS O/Fs.

The net increase in the number of intermittent discharges excluding CSOs is due to a net increase of 56 No: WWTW overflows and a net increase of 8 No: SPS overflows since AIR09. As previously discussed 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 751.

Comparison between AIR09 & AIR10 – CSOs in the Sewerage System
The number of CSOs in the sewerage system has had a **net decrease of 63 No: CSOs since AIR09** i.e. 814 (AIR09) – 751 (AIR10).

This net decrease previously discussed is mainly due to the APT and AIC Rationalisation exercise which identified duplicate assets, bifurcation and dual manholes which have now been removed.

Lines 18 – 22 Drainage area plans

Drainage Area Study Programme
NI Water has an ongoing 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 is 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.

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 evolving DG5 Register;
- A formal classification of UIDs by NIEA;
- The incorporation of the principles within the new Sewerage Risk Management (WRc).

Line 18 – Cumulative number of drainage area plans completed
The number of completed studies has increased from 54 to 70, principally because of the completion of 13 Scoping Studies of smaller networks in the report year.

Line 20 – Total sewerage drainage areas
Within AIR09 the 'total number of drainage areas' was restricted to the number within the DAS programme i.e. 109. The definition for the line is not clear. NIW believes that it would be misleading to include all public sewer networks, no matter how small. For AIR10, we have included all networks with population equivalent greater than 250 i.e. 269 (including the 6 PPP WWTWs networks).

Line 22 – Percentage population/properties covered by completed studies
The confidence grade is necessarily that which is attached to the input population i.e. C4.

DRAINAGE AREA STUDY PROGRAMME

STATUS AT APRIL 2010

CATEGORY A. DASs COMPLETED SINCE 2003

Initial DAS

Catchment	Domestic population*	DAP date
Magheralin	1427	July 05
Tandragee	3523	June 05
Waringstown	3015	June 05
Draperstown	1983	June 06
Maghera	3950	June 06
Moneymore	1800	June 06
Greyabbey	1148	Feb 06
Kircubbin	1056	Feb 06
Portaferry	2514	Feb 06
Ballyhalbert	602	Aug 06
Ballywalter	1675	Aug 06
Cloughey	927	Aug 06
Portavogie	2320	Aug 06
Castledawson	1244	Nov 06
Magherafelt	9817	Nov 06
Portglenone	1206	Oct 06
Castlewellan	2049	Oct 06
Dromore	6305	Nov 06
Maghaberry	1653	Nov 06

Catchment	Domestic population*	DAP date
Donaghadee	6470	March 06
Millisle	2331	March 06
Whitehead	3880	March 06
Newcastle	9050	Dec 05
Annalong	2554	June 06
Dundrum	1291	July 06
Kilkeel	6993	July 06
Downpatrick	10146	Sept 05
Ardglass	1631	Oct 06
Upper Falls	27683	April 09
Bushmills	2015	April 09
Portballintrae	1785	April 09
Ballyrickard	36814	Nov 08

Revisited DAS

Catchment	Domestic population*	DAP date
East Belfast	100,000	February 10
Greenisland	6477	April 10
Lisburn	42563	October 09
Ballymoney	5017	Oct 04
Seahill	2831	April 06
Dunmurry	31958	Nov 03
Hillsborough	2503	Aug 03
Ballyclare	12,286	July 04
Coleraine	22,730	Nov 06

Revisited DAS

Catchment	Domestic population*	DAP date
Moira	4367	April 03
Lurgan	26512	April 03
Rathfriland	2827	Nov 03
Bessbrook	3000	Feb 04
Richhill	3225	Feb 04
Limavady	14744	Sept 03
Strabane	14365	Sept 03
Londonderry	90707	Nov 06
Carrickfergus	27327	Aug 03
Randalstown	5734	Mar 08
Antrim	31983	Mar 08
Ballycastle	5493	June 05
Portadown	30,154	Nov 06
Craigavon	16,281	Nov 06
Armagh	21053	April 09
Warrenpoint	6000	April 09

CATEGORY B. CATCHMENTS SUBJECT TO COMPLETED SCOPING STUDIES

Annahilt	1183
Saintfield	3344
Crossgar	1892
Ballykelly	2196
Dungiven	3135
Eglinton	3165
Greysteel	1230
Ballygowan	2507
Killyleagh	3276
Fintona	1534
Fivemiletown	1340
Irvinestown	2219
Lisnaskea	2949

CATEGORY C: DASs CURRENTLY IN PROGRESS

Initial DAS

Coalisland	6590
Gilford	2227
Markethill	1744
Castlederg	3106
Newbuildings	4500
Newtownstewart	1866
Sion Mills	3174
Castlerock	1883

Bellaghy	940
Garvagh	1273
Kilrea	1554
Ballycarry	1025
Ballystrudder	890
Crossmaglen	1717
Dungannon	14886
Keady	3592
Glenavy	1041
Ballynahinch	5601

Revisited DAS

Whitehouse	60874
Greencastle	8500
Bangor	59813
Omagh	23093
East Belfast	100,000
Cookstown	12645
Ballymena	28367
Belfast	190000

CATEGORY D. DAS YET TO COMMENCE

Newtownbreda	24574

CATEGORY E.	DASs WHICH WERE 'IMPLEMENTED'	
	Larne	19928
	Cushendall	2298
	Glenarm	375
	Cushendun	474
	Portrush	7588
	Portstewart	9563
	Newry	24485
	Banbridge	16074
	Rostrevor	2500
	Enniskillen	16174
	Helens Bay	1410
CATEGORY F.	DASs REQUIRING REVISIT	
	Crumlin	4260
	Holywood	12000

*Residential populations, extracted from NIAMP2 (2002)

PPP Section – Intermittent Discharges
It should be noted that neither the AIR10 Table 16 nor the Chapter 16 NIAUR Guidance had made reference to the reporting of PPP intermittent discharges. To ensure comprehensive reporting, and to reflect changes in NIW's Intermittent Discharges since AIR09 (due to works transferring to PPP etc), the full list of PPP outfalls and overflows are listed below.

NDA WwTW
1. Briggs Rock new outfall to Irish Sea

NDA WwTW Treated Effluent

2. Briggs Rock old outfall (1) to Irish Sea

Briggs Rock screened settled storm discharge
Briggs Rock emergency screened settled wastewater
Briggs Rock screened storm formula A overflow

3. Briggs Rock old outfall (2) to Irish Sea

Briggs Rock screened wastewater emergency
Orlock PS screened wastewater emergency

4. Millisle outfall to Irish Sea

Millisle screened settled storm discharge
Millisle screened settled wastewater emergency

5. Donaghadee outfall to Irish Sea

Donaghadee screened settled storm discharge
Donaghadee screened settled wastewater emergency

Ballynacor WwTW
6. Lough Neagh outfall

BNC WwTW treated effluent
BNC settled storm discharge
BNC SDP treated effluent

7. Closset River

BNC settled storm discharge

Ballyrickard WwTW
8. Newton Burn (1)

BRK WwTW treated effluent

9. Newton Burn (2)

BRK WwTW settled storm discharge.

Armagh WwTW
10. Callan River

ARM WwTW final effluent
ARM settled storm discharge
ARM settled wastewater emergency

Richill WwTW
11. River Tall (1)

RHL WwTW treated effluent

12. River Tall (2)

RHL settled storm discharge

13. River Tall (3)

RHL settled wastewater emergency

Bullays Hill WwTW
14. Woodville River

BHL screened settled storm discharge
BHL settled wastewater

Seagoe WwTW
15. River Bann (1)

SEA screened settled storm discharge
SEA screened settled wastewater emergency

16. River Bann (2)

SEA screened storm discharge
SEA screened wastewater emergency.

Kinnegar WwTW
17. Belfast Lough

KIN treated effluent
KIN above 6DWF screened storm discharge
KIN screened and settled storm discharge
KIN screened and settled wastewater emergency.

Table 16a

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 16A NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (TOTAL)

	DESCRIPTION	UNITS	DP	1	
				2009-10	CG
A	**SEWERS - MAINTENANCE**				
1	Total number of rising main failures	nr	0	25	B3
2	Total number of gravity sewer collapses	nr	0	988	B3
3	Total number of sewer blockages	nr	0	26409	B3
4	Total number of equipment failures repaired	nr	0	10882	B2

Table 16a – Non Financial Measures – Sewerage Service Serviceability Indicators

Lines 1 - 3 – Number of Rising main failures, gravity sewer collapses and sewer blockages.

Calculation Process

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 AIR 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 AIR11 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

Confidence Grading

Because NIW are using data from checked and paid invoices the confidence grade for the AIR10 remains B3. NIW expect this to improve further as we move forward into AIR11 as report building continues with the single Sewer Maintenance Contractor.

Line 4: Total number of equipment failures

Reporting Restrictions

The MWM records do not incorporate instances of non-electromechanical devices such as storage tanks or hydrobrakes.

The failure of a pump, for example, on MWM will be recorded but not the outcome associated with this failure. It is therefore not possible to identify in isolation those equipment failures which resulted in "a detrimental impact on service to customers or the environment" since the vast majority of pumping stations possess an acceptable level of redundancy which mitigates the impact of failure on the customer.

These figures need not relate directly to equipment failures associated with M&E Services. In the vast majority of cases, for example, in SPS jobs the attendance is due to unblocking of pumpsets rather than pumpset failure.

There is therefore a danger that the figures are incorrectly perceived as M&E equipment failures rather than as a result of external circumstances e.g. flash-flooding leading to blockages.

The return has been allocated a confidence grading of B2. This is due to two main factors i.e.

- Data is manually filtered to remove duplicate entries associated with "two-man" jobs. Given the manual element of this exercise there is some potential for error; and
- Out of hours work may not all be captured using the current system which relies on all jobs being recorded on the MWM system. Given the company's current operating model this does not occur in all instances.

Suggested Improvements/Actions

1. NIW needs to collate separately data relating to other attendances at site to ensure that all equipment failures are recorded. Whilst it has been noted that the emphasis is clearly upon establishing those instances where a pumping station has been unable to deliver suitable forward flow there are current limitations relating to the specific design parameters for installations which prevent the correct interpretation at present. These specifically relate to information surrounding the design flows and pumping regimes at individual sites. Consequently it is recommended that detailed analysis of each pumping station is performed to enable only those instances where the design flow is not delivered to be recorded. This will involve establishment of the pumping control methodology i.e. duty/standby or duty/assist.

2. An alternative may be to utilise the telemetry data relating to high level alarms since this will indicate situations where the inlet flow has exceeded the discharge rate. However this method does not take account of excessive rainfall which has resulted in the design throughput of the station being exceeded and for which a consented emergency discharge is available.

3. NIW should alternatively develop a reporting database which requires each high level exceedance recorded via telemetry to be associated with a specific cause and incident as per the equipment failure categories identified in Chapter 16a definitions manual.

Table 16b

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 16B NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (NIW Only)

	DESCRIPTION	UNITS	DP	1 NUMBER OF STW's UNITS	1 NUMBER OF STW's DP	2 PERCENTAGE OF STWs WHERE THERE ARE NO BOD EVENTS FORECAST FOR THE CURRENT YEAR UNITS	2 DP	3 EVENT (a) Max > 2	3 EVENT (b) 95%ile > 1	4 EVENT (c) Mean > 0.5	CG
				nr	0	%	1				
A	**SEWAGE TREATMENT WORKS - BOD PERFORMANCE**										
1	Equivalent population band 3 to 6			180		93.7		88.9		89.5	A2
2	Excluded STWs	nr	0	64							
3	Total STWs	nr	0	244							

	DESCRIPTION	UNITS	DP	1 NUMBER OF STW's UNITS	1 NUMBER OF STW's DP	2 PERCENTAGE OF STWs WHERE THERE ARE NO SS EVENTS FORECAST FOR THE CURRENT YEAR UNITS	2 DP	3 EVENT (a) Max > 2	3 EVENT (b) 95%ile > 1	4 EVENT (c) Mean > 0.5	CG
				nr		%	1				
B	**SEWAGE TREATMENT WORKS - SS PERFORMANCE**										
4	Equivalent population band 3 to 6			180		95.3		91.8		93.2	A2
5	Excluded STWs	nr	0	64							
6	Total STWs	nr	0	244							

	DESCRIPTION	UNITS	DP	1 NUMBER OF STW's UNITS	1 NUMBER OF STW's DP	2 PERCENTAGE OF STWs WHERE THERE ARE NO NH3 EVENTS FORECAST FOR THE CURRENT YEAR UNITS	2 DP	3 EVENT (a) Max > 2	3 EVENT (b) 95%ile > 1	4 EVENT (c) Mean > 0.5	CG
				nr		%	1				
C	**SEWAGE TREATMENT WORKS - NH3 PERFORMANCE**										
7	Equivalent population band 3 to 6			94		92.2		86.5		93.7	A2
8	Excluded STWs	nr	0	26							
9	Total STWs	nr	0	120							

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 16B NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (PPP Only)

	DESCRIPTION	UNITS	DP	1 NUMBER OF STW's		2 PERCENTAGE OF STWs 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			4		92.9	87.8	80.7	A2
2	Excluded STWs	nr	0	2					
3	Total STWs	nr	0	6					

				NUMBER OF STW's		PERCENTAGE OF STWs 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			4		92.9	92.9	92.9	A2
5	Excluded STWs	nr	0	2					
6	Total STWs	nr	0	6					

				NUMBER OF STW's		PERCENTAGE OF STWs 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			1		71.7	71.7	100.0	A2
8	Excluded STWs	nr	0	2					
9	Total STWs	nr	0	3					

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 16B NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (Total)

	DESCRIPTION	UNITS	DP	1 NUMBER OF STW's		2 PERCENTAGE OF STWs 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			184		93.7	88.9	89.3	A2
2	Excluded STWs	nr	0	66					
3	Total STWs	nr	0	250					

	DESCRIPTION	UNITS	DP	1 NUMBER OF STW's		2 PERCENTAGE OF STWs 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			184		95.2	91.8	93.2	A2
5	Excluded STWs	nr	0	66					
6	Total STWs	nr	0	250					

	DESCRIPTION	UNITS	DP	1 NUMBER OF STW's		2 PERCENTAGE OF STWs 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			95		92.0	86.4	93.8	A2
8	Excluded STWs	nr	0	28					
9	Total STWs	nr	0	123					

Table 16b – Non Financial Measures - Sewerage Service Serviceability Indicators

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 AIR09 Northern Ireland Water (NIW) has reported on the previous 3 year results as, due to 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 3 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 both the AIR09 and AIR10 returns 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 and AIR 10. 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 2009 the Population Equivalents (PEs) used for scheduling were the PEs agreed between NI Water's Asset Management section (AMS), Environmental Regulation section and Environment and Heritage Service (EHS). These PEs were used for the scheduling of samples for 2009. In accordance with the AIR09's reporter recommendation however, the works for this submission have been assessed using the information (PEs and PE Bands) supplied by NI Water's AMS for its AIR10 return.

For the purpose of these calculations, sea outfalls have been included, although not listed in Table 15 line 8.

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 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.

Line 1, 2, 3 – BOD Performance – Equivalent Population Bands 3 – 6

For the reporting period 180 NI Water Sites were identified, 4 PPP sites were identified with 66 sites being excluded from the assessment.

2009 NIW Sites Excluded from BOD Assessment

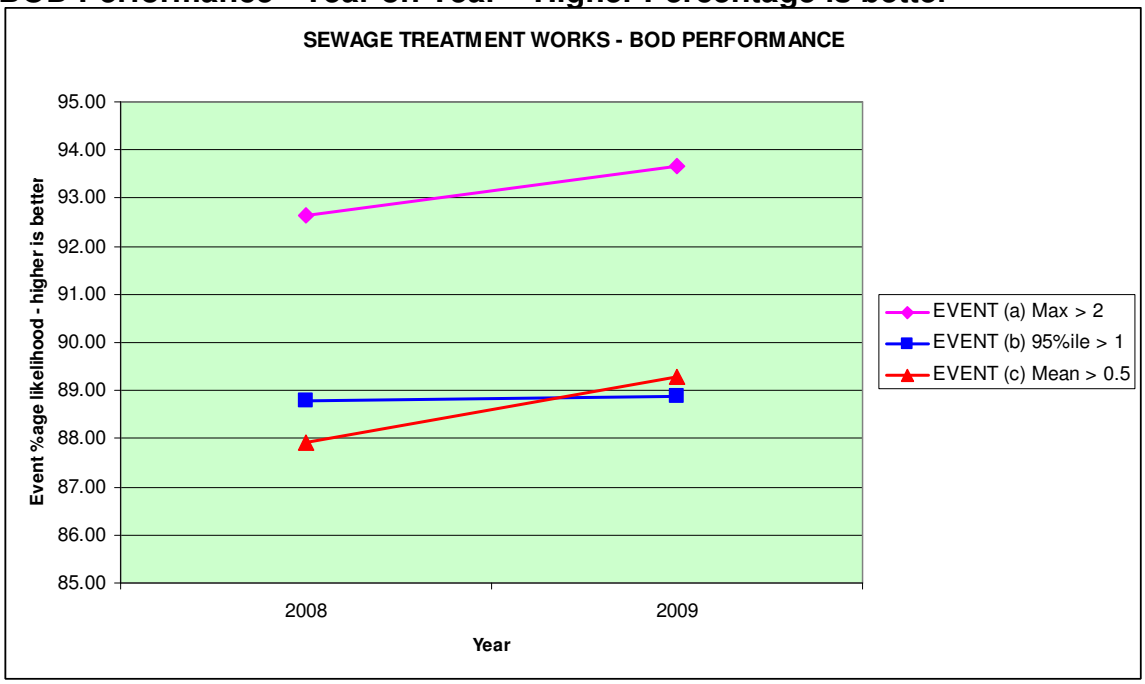
Site Code	Site Name	2009 LIMS PE	2009-10 AMS PE	PE Band	Reason for Exclusion
S13AJ	Clogh WWTW	300	370	2	Band 2
S13AU	Moorfields WWTW	300	317	2	Band 2
S13CN	Derrychrin WWTW	324	403	2	Band 2
S13DQ	Rock WWTW	137	137	1	Out of service @ 31/03/10
S13FT	Desertmartin WWTW	327	361	2	Band 2
S13GD	Knockloughrim WWTW	286	269	2	Band 2
S15AS	Randalstown WWTW	6450	#N/A	4	Out of service @ 31/03/10
S15AT	Roughfort WWTW	650	431	2	Band 2
S17BC	Liscolman WWTW	317	266	2	Band 2
S17CM	Clarehill WWTW	291	337	2	Band 2
S17ES	Mosside WWTW	450	421	2	Band 2
S23AA	Ballynacor WWTW	50000	#N/A	6	Out of service @ 31/03/10
S23AB	Bullays Hill WWTW	45000	#N/A	6	Out of service @ 31/03/10
S23AD	Seagoe WWTW	21400	#N/A	5	Out of service @ 31/03/10
S23AK	Blackskull WWTW	315	495	2	Band 2
S23AN	Derrytrasna WWTW	300	431	2	Band 2
S23AR	Maghery WWTW	265	290	2	Band 2
S23AW	Upper Ballinderry WWTW	283	308	2	Band 2
S23BK	Derrymore WWTW	250	370	2	Band 2
S25AL	Annaghmore WWTW	483	478	2	Band 2
S25AR	Bush WWTW	433	#N/A	3	Out of service @ 31/03/10
S25AY	Darkley WWTW	950	368	2	Band 2
S25CD	Brockagh Terrace (Mountjoy Dungannon)WWTW	253	452	2	Band 2
S27AG	Castlewellan WWTW	3352	#N/A	4	Out of service @ 31/03/10
S27AR	Belleeks WWTW	350	472	2	Band 2
S27AW	Cullaville WWTW	297	265	2	Band 2
S27AY	Drumintee WWTW	383	332	2	Band 2
S27BE	Kilcoo WWTW	381	498	2	Band 2
S27BL	Lurganare WWTW	300	407	2	Band 2
S35AK	Lisbarnet WWTW	469	#N/A	2	Out of service @ 31/03/10
S35AM	Loughries WWTW	245	262	2	Band 2
S35AV	Portaferry New WWTW	5287	#N/A	4	Insufficient samples
S35BC	Portavogie R/T WWTW	3333	#N/A	4	Insufficient samples
S36AG	Ardglass WWTW	3700	#N/A	4	Insufficient samples
S36AI	Annacloy WWTW	358	383	2	Band 2

Site Code	Site Name	2009 LIMS PE	2009-10 AMS PE	PE Band	Reason for Exclusion
S36BG	Glassdrumman WWTW	405	209	1	Band 1
S36BI	Maghera (Down) WWTW	110	340	2	Band 2
S37AN	Mullaghglass 1 WWTW	143	184	1	Band 1
S37AO	Drumlough WWTW	128	115	1	Band 1
S37AP	Edenderry WWTW	377	458	2	Band 2
S37AQ	Poundburn WWTW	380	#N/A	2	Out of service @ 31/03/10
S43BA	Ballymonie WWTW	479	489	2	Band 2
S43BF	Bonnaboigh WWTW	306	286	2	Band 2
S43BG	Benone WWTW	3833	205	4	Band 1
S43CB	Carrowclare WWTW	251	148	1	Band 1
S43DA	Dernaflaw WWTW	351	347	2	Band 2
S43EJ	Gortnaghey WWTW	305	370	2	Band 2
S45AE	Ardstraw WWTW	260	285	2	Band 2
S45FD	Greencastle WWTW	298	379	2	Band 2
S45FJ	Killen WWTW	292	467	2	Band 2
S45IC	Plumbridge WWTW	497	449	2	Band 2
S45IG	Seskinore WWTW	240	261	2	Band 2
S45KG	Bready WWTW	218	305	2	Band 2
S47BA	Ballycassidy WWTW	450	476	2	Band 2
S47BD	Bellanaleck WWTW	507	#N/A	3	Out of service @ 31/03/10
S47BI	Castle Archdale WWTW	888	29	3	Band 1
S47CA	Clabby WWTW	309	308	2	Band 2
S47CJ	Donagh WWTW	241	221	1	Band 1
S47FH	Lack WWTW	179	267	2	Band 2
S47GC	Lisnarrick WWTW	237	277	2	Band 2
S47HJ	Tamlaght WWTW	390	475	2	Band 2

2009 PPP Sites Excluded from BOD Assessment

Site Code	Site Name	Reason for Exclusion	2009 PE
S23BN	Ballynacor PPP WWTW	Insufficient samples	102837
S35BR	North Down/Ards PPP WWTW	Insufficient samples	50000

BOD Performance - Year on Year – Higher Percentage is better



Line B4, 5, 6 – SS Performance – Equivalent Population Bands 3 – 6

For the reporting period 180 NI Water Sites were identified, 4 PPP sites were identified with 66 sites being excluded.

2009 NIW Sites Excluded from SS Assessment

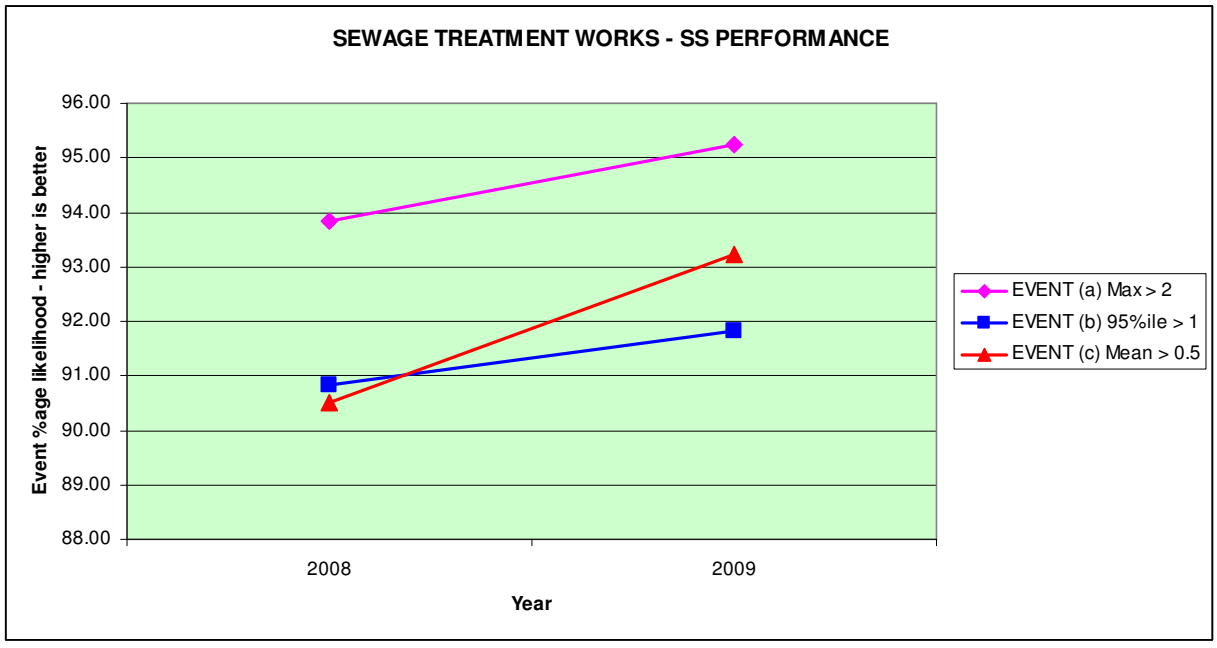
Site Code	Site Name	2009 LIMS PE	2009-10 AMS PE	PE Band	Reason for Exclusion
S13AJ	Clogh WWTW	300	370	2	Band 2
S13AU	Moorfields WWTW	300	317	2	Band 2
S13CN	Derrychrin WWTW	324	403	2	Band 2
S13DQ	Rock WWTW	137	137	1	Out of service @ 31/03/10
S13FT	Desertmartin WWTW	327	361	2	Band 2
S13GD	Knockloughrim WWTW	286	269	2	Band 2
S15AS	Randalstown WWTW	6450	#N/A	4	Out of service @ 31/03/10
S15AT	Roughfort WWTW	650	431	2	Band 2
S17BC	Liscolman WWTW	317	266	2	Band 2
S17CM	Clarehill WWTW	291	337	2	Band 2
S17ES	Mosside WWTW	450	421	2	Band 2
S23AA	Ballynacor WWTW	50000	#N/A	6	Out of service @ 31/03/10
S23AB	Bullays Hill WWTW	45000	#N/A	6	Out of service @ 31/03/10
S23AD	Seagoe WWTW	21400	#N/A	5	Out of service @ 31/03/10
S23AK	Blackskull WWTW	315	495	2	Band 2
S23AN	Derrytrasna WWTW	300	431	2	Band 2
S23AR	Maghery WWTW	265	290	2	Band 2
S23AW	Upper Ballinderry WWTW	283	308	2	Band 2
S23BK	Derrymore WWTW	250	370	2	Band 2
S25AL	Annaghmore WWTW	483	478	2	Band 2
S25AR	Bush WWTW	433	#N/A	3	Out of service @ 31/03/10
S25AY	Darkley WWTW	950	368	2	Band 2
S25CD	Brockagh Terrace (Mountjoy Dungannon)WWTW	253	452	2	Band 2
S27AG	Castlewellan WWTW	3352	#N/A	4	Out of service @ 31/03/10
S27AR	Belleeks WWTW	350	472	2	Band 2
S27AW	Cullaville WWTW	297	265	2	Band 2
S27AY	Drumintee WWTW	383	332	2	Band 2
S27BE	Kilcoo WWTW	381	498	2	Band 2
S27BL	Lurganare WWTW	300	407	2	Band 2
S35AK	Lisbarnet WWTW	469	#N/A	2	Out of service @ 31/03/10
S35AM	Loughries WWTW	245	262	2	Band 2
S35AV	Portaferry New WWTW	5287	#N/A	4	Insufficient samples
S35BC	Portavogie R/T WWTW	3333	#N/A	4	Insufficient samples
S36AG	Ardglass WWTW	3700	#N/A	4	Insufficient samples
S36AI	Annacloy WWTW	358	383	2	Band 2
S36BG	Glassdrumman WWTW	405	209	1	Band 1
S36BI	Maghera (Down) WWTW	110	340	2	Band 2
S37AN	Mullaghglass 1 WWTW	143	184	1	Band 1
S37AO	Drumlough WWTW	128	115	1	Band 1
S37AP	Edenderry WWTW	377	458	2	Band 2
S37AQ	Poundburn WWTW	380	#N/A	2	Out of service @ 31/03/10
S43BA	Ballymonie WWTW	479	489	2	Band 2

Site Code	Site Name	2009 LIMS PE	2009-10 AMS PE	PE Band	Reason for Exclusion
S43BF	Bonnaboigh WWTW	306	286	2	Band 2
S43BG	Benone WWTW	3833	205	4	Band 1
S43CB	Carrowclare WWTW	251	148	1	Band 1
S43DA	Dernaflaw WWTW	351	347	2	Band 2
S43EJ	Gortnaghey WWTW	305	370	2	Band 2
S45AE	Ardstraw WWTW	260	285	2	Band 2
S45FD	Greencastle WWTW	298	379	2	Band 2
S45FJ	Killen WWTW	292	467	2	Band 2
S45IC	Plumbridge WWTW	497	449	2	Band 2
S45IG	Seskinore WWTW	240	261	2	Band 2
S45KG	Bready WWTW	218	305	2	Band 2
S47BA	Ballycassidy WWTW	450	476	2	Band 2
S47BD	Bellanaleck WWTW	507	#N/A	3	Out of service @ 31/03/10
S47BI	Castle Archdale WWTW	888	29	3	Band 1
S47CA	Clabby WWTW	309	308	2	Band 2
S47CJ	Donagh WWTW	241	221	1	Band 1
S47FH	Lack WWTW	179	267	2	Band 2
S47GC	Lisnarrick WWTW	237	277	2	Band 2
S47HJ	Tamlaght WWTW	390	475	2	Band 2

2009 PPP Sites Excluded from SS Assessment

Site Code	Site Name	Reason for Exclusion	2009 PE
S23BN	Ballynacor PPP WWTW	Insufficient samples	102837
S35BR	North Down/Ards PPP WWTW	Insufficient samples	50000

SS Performance - Year on Year – Higher Percentage is better



Line 7, 8, 9 – Ammonia Performance – Equivalent Population Bands 3 – 6

For the reporting period 94 NI Water Sites were identified, 1 PPP sites was identified with 28 sites being excluded.

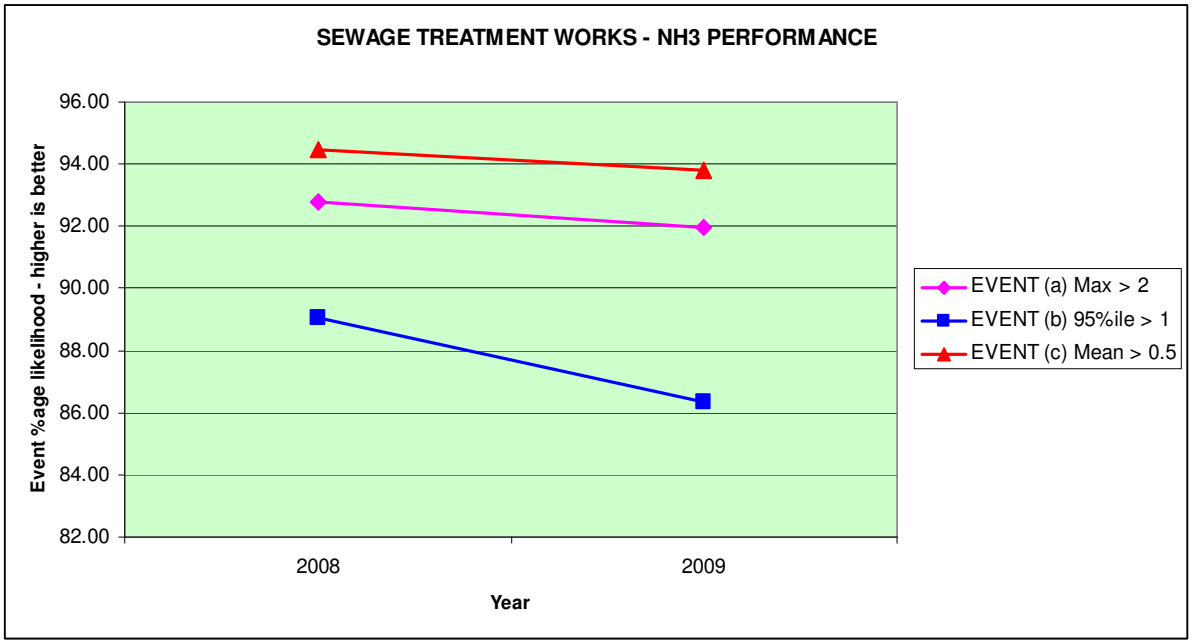
2009 NIW Sites Excluded from Ammonia Assessment

Site Code	Site Name	2009 LIMS PE	2009-10 AMS PE	PE Band	Reason for Exclusion
S13CN	Derrychrin WWTW	324	403	2	Band 2
S13DQ	Rock WWTW	137	137	1	Out of service @ 31/03/10
S15AT	Roughfort WWTW	650	431	2	Band 2
S17BC	Liscolman WWTW	317	266	2	Band 2
S17CM	Clarehill WWTW	291	337	2	Band 2
S23AA	Ballynacor WWTW	50000	#N/A	6	Out of service @ 31/03/10
S23AB	Bullays Hill WWTW	45000	#N/A	6	Out of service @ 31/03/10
S23AN	Derrytrasna WWTW	300	431	2	Band 2
S25AR	Bush WWTW	433	#N/A	3	Out of service @ 31/03/10
S25AY	Darkley WWTW	950	368	2	Band 2
S27AR	Belleeks WWTW	350	472	2	Band 2
S27AY	Drumintee WWTW	383	332	2	Band 2
S27BE	Kilcoo WWTW	381	498	2	Band 2
S27BL	Lurganare WWTW	300	407	2	Band 2
S35AK	Lisbarnet WWTW	469	#N/A	2	Out of service @ 31/03/10
S36AI	Annacloy WWTW	358	383	2	Band 2
S36BI	Maghera (Down) WWTW	110	340	2	Band 2
S37AN	Mullaghglass 1 WWTW	143	184	1	Band 1
S37AQ	Poundburn WWTW	380	#N/A	2	Out of service @ 31/03/10
S43EJ	Gortnaghey WWTW	305	370	2	Band 2
S45FD	Greencastle WWTW	298	379	2	Band 2
S45FJ	Killen WWTW	292	467	2	Band 2
S47CA	Clabby WWTW	309	308	2	Band 2
S47FH	Lack WWTW	179	267	2	Band 2
S47HJ	Tamlaght WWTW	390	475	2	Band 2

2009 PPP Sites Excluded from Ammonia Assessment

Site Code	Site Name	Reason for Exclusion	2009 PE
S23BN	Ballynacor PPP WWTW	Insufficient samples	102837
S25EB	Richill PPP WWTW	Insufficient samples	3384

NH3 Performance - Year on Year – Higher Percentage is better



2009 AMS Sites which do not exist on NIW's LIMS and not reported on

WWTWs	CAR ID	2009-10 AMS PE	PE Band
3 Sisters	S04027	18	Band 1
Abbacy Road	S03947	42	Band 1
Aghory	S02547	65	Band 1
Agivey Road(199-201)	S01755	6	Band 1
Altishane	S02993	12	Band 1
Altmore WTW (Septic Tank)	S02778	3	Band 1
Annaghmore Road(28)	S02016	18	Band 1
Annaghquinn Road(49)	S01718	6	Band 1
Anville Crescent	S02391	42	Band 1
Ardess	S02995	66	Band 1
Ardlough Road (40-42)	S04095	6	Band 1
Ardress (WWTW)	S02557	90	Band 1
Armagh Road(144-146)	S02249	6	Band 1
Armagh Road(189-193)	S02251	9	Band 1
Armagh Road(202-206)	S02250	9	Band 1
Aughanduff	S02262	12	Band 1
Aughnavallog	S02114	36	Band 1
Backlower Road(111-115)	S01791	9	Band 1
Ballee Road	S03009	15	Band 1
Ballee Road (75-83)	S04091	9	Band 1
Balleevy	S02122	12	Band 1
Ballinderry Road (45-49) Antrim	S04877	9	Band 1
Ballinlea Road(81)	S01748	9	Band 1
Ballinrees WTW(Septic Tank)	S00931	6	Band 1
Ballinteer	S01131	24	Band 1
Ballintemple WTW (Septic Tank)	S02243	3	Band 1
Ballsmill	S02258	12	Band 1
Ballyagan	S01132	24	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Ballyalton Rd (20-22)	S00849	6	Band 1
Ballyardel	S02727	12	Band 1
Ballyavelin Road (133-135)	S04123	12	Band 1
Ballybarnes Road (80-82)	S00776	3	Band 1
Ballybentragh(66-72)	S01760	6	Band 1
Ballybogie Road(7-9)	S04875	6	Band 1
Ballybrick	S02115	18	Band 1
Ballycairn (Down)	S00336	37	Band 1
Ballycleagh	S01175	6	Band 1
Ballycorr Grove	S01468	28	Band 1
Ballycoshone	S02689	6	Band 1
Ballycreelly Road (38-40)	S00333	12	Band 1
Ballycrochan Road	S00833	6	Band 1
Ballydermot Road(7-9)	S01792	6	Band 1
Ballydonaghy Cottages (1-4)	S01763	12	Band 1
Ballydrain Road (39-43)	S00238	12	Band 1
Ballyeastborough Road (15-17)	S00221	6	Band 1
Ballyfrench Road(1-3)	S00220	6	Band 1
Ballygalget Road(1)	S00840	6	Band 1
Ballygarvigan	S00228	42	Band 1
Ballygowan Road (140-142)Banbridge	S02890	6	Band 1
Ballygowan Road(102-104)	S00251	6	Band 1
Ballygowan Road(41-47)	S00243	12	Band 1
Ballygowans	S03014	12	Band 1
Ballygruby	S01557	17	Band 1
Ballyhacket	S01133	18	Band 1
Ballyheather Road (121-123)	S04112	6	Band 1
Ballyhome (WWTW)	S01134	77	Band 1
Ballyhornan Outfall	S04090	911	Band 3
Ballykeel Cottages(1-4)	S00834	13	Band 1
Ballykelly (DOWN)	S02169	21	Band 1
Ballylintagh (New)	S01135	59	Band 1
Ballylumford Cottages	S00260	61	Band 1
Ballymacallion (WWTW)	S03017	18	Band 1
Ballymacawley	S02560	22	Band 1
Ballymacnab	S02561	30	Band 1
Ballymaconaghy Road	S02690	6	Band 1
Ballymaconaghy WTW (Septic Tank)	S02369	3	Band 1
Ballymacormick	S01089	18	Band 1
Ballymaderphy	S02728	66	Band 1
Ballymaguire Road(33-35)	S02031	6	Band 1
Ballymarlagh	S01430	39	Band 1
Ballymartin (Retention Tank)	S00770	637	Band 3
Ballymiscaw road (37-41)	S00256	9	Band 1
Ballymore	S02117	15	Band 1
Ballymoyer	S02252	42	Band 1
Ballynadolly	S00327	138	Band 1
Ballynafie	S01431	70	Band 1
Ballynagalliagh (Armagh)	S02562	27	Band 1
Ballynagard (Antrim)	S01173	9	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Ballynahaye Road(3)	S04115	6	Band 1
Ballynamullan	S03011	12	Band 1
Ballynamullan Road(32-34)	S01764	6	Band 1
Ballynashee Road(71-77)	S01765	12	Band 1
Ballynease	S01604	18	Band 1
Ballynease Road(160-164)	S01793	9	Band 1
Ballyquinn (WWTW)	S03021	100	Band 1
Ballyrainey Road (65-67)	S00847	6	Band 1
Ballyrashane Road(21)	S01731	6	Band 1
Ballyrashane Road(37-39)	S01126	6	Band 1
Ballyrock	S01136	47	Band 1
Ballyroney Road (WWTW)	S02118	18	Band 1
Ballyrussell	S02691	24	Band 1
Ballysallagh WTW (Septic Tank)	S00006	3	Band 1
Ballytrim	S00276	33	Band 1
Ballyutoag	S01417	6	Band 1
Ballyvarley (WWTW)	S02119	18	Band 1
Ballyveely	S01090	6	Band 1
Ballyvelton Road(23)	S01734	15	Band 1
Ballyvelton Road(45-51)	S04037	12	Band 1
Ballyward	S02120	6	Band 1
Bankside Shinn	S02692	71	Band 1
Bar Hall	S00229	27	Band 1
Battery Road(43-45)	S01802	6	Band 1
Beagh	S01605	36	Band 1
Bearney Road(55-61)	S04143	12	Band 1
Beech Hill South	S05182	54	Band 1
Belfast Road(207-209)	S00856	6	Band 1
Belfast Road(56-58)	S04142	6	Band 1
Belleek (WTW) Septic Tank	S03494	3	Band 1
Bells Hill	S00291	17	Band 1
Bells hill(63-65)	S01795	6	Band 1
Bellshill Road(83-85)	S01794	6	Band 1
Beltrim (WWTW)	S03025	15	Band 1
Benvardin Road	S01093	6	Band 1
Blackstaff (Septic Tank)	S00219	30	Band 1
Blaney	S03028	18	Band 1
Boghill (WWTW)	S01138	12	Band 1
Boghill Road(52-54)	S01127	6	Band 1
Bohulkin	S03029	9	Band 1
Bolea (WWTW)	S03030	93	Band 1
Boleran Road (Garvagh)	S02059	12	Band 1
Bonds Glen Road (149-151)	S04105	6	Band 1
Bonds Glen Road (65-67)	S04099	6	Band 1
Bovean	S02793	30	Band 1
Boveedy	S01139	75	Band 1
Bovevagh Road (37-41)	S04121	6	Band 1
Brantry	S02832	18	Band 1
Breaside Cottages(1-6)	S02049	18	Band 1
Bregagh Road(56-58)	S01742	6	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Bregagh Road(60-62)	S01743	6	Band 1
Bregagh Road(68-70)	S01744	6	Band 1
Bresagh	S00332	30	Band 1
Brisland Road(3-5)	S04141	6	Band 1
Broagh	S01607	33	Band 1
Buckna (WWTW)	S01432	40	Band 1
Burnquarter	S01094	42	Band 1
Burren Road	S02686	12	Band 1
Caheney	S01141	12	Band 1
Capecastle	S01179	55	Band 1
Cargin Road	S01322	30	Band 1
Carmean	S01608	51	Band 1
Carmean Road(42-46)	S01796	9	Band 1
Carnalbanagh	S01459	60	Band 1
Carnalea Road	S03036	15	Band 1
Carnally	S02255	9	Band 1
Carnan	S01559	71	Band 1
Carnanbane	S03037	42	Band 1
Carnbeg	S01434	15	Band 1
Carnduff (Retention Tank)	S01180	79	Band 1
Carneyhough	S02682	6	Band 1
Carnlough Road	S01435	9	Band 1
Carnteel Road (122-124)	S04162	6	Band 1
Carran Hill (WWTW)	S02256	3	Band 1
Carricklongfield Road (21-23)	S04093	6	Band 1
Carricknaveagh (WWTW)	S00283	17	Band 1
Carrickrovaddy	S02257	23	Band 1
Carrig Place	S02254	18	Band 1
Carrigenagh (WWTW)	S00314	12	Band 1
Carrontreemall	S03040	39	Band 1
Carrowdore Road(38-40)	S00832	6	Band 1
Carrowreagh Road(68-70)	S04100	6	Band 1
Castlemellan Lower	S03043	18	Band 1
Castlemellan Upper	S03044	18	Band 1
Castlenagree	S01181	33	Band 1
Castletown (WWTW)	S03046	15	Band 1
Castlevennon	S02121	3	Band 1
Castlevennon Road(49-51)	S02113	6	Band 1
Castlewellan Road (Dromore)	S02892	6	Band 1
Castor Bay	S02380	24	Band 1
Caugh Hill (WWTW)	S03047	9	Band 1
Causeway Road(122)	S01723	6	Band 1
Causeway Road(15)	S01726	6	Band 1
Causeway Road(180)	S01730	6	Band 1
Causeway Road(30)	S01736	6	Band 1
Cavanagrow	S02565	38	Band 1
Charlestown	S02399	76	Band 1
Chatham Road	S02023	6	Band 1
Cherryvalley Road(24)	S01766	9	Band 1
Church Hill	S03050	69	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Churchfield Road	S01182	21	Band 1
Clare	S01560	47	Band 1
Clarehill Road	S02428	12	Band 1
Clattering Ford Road (12-16)	S00249	9	Band 1
Clay Lake	S02531	3	Band 1
Coagh Road(20-22)	S02033	6	Band 1
Cogry Road(25-27)	S01767	6	Band 1
Comber Road(102-106)	S00848	9	Band 1
Commons School Road(8-10)	S02897	6	Band 1
Concession Road	S02260	21	Band 1
Coneyisland (WWTW)	S00274	99	Band 1
Connaught Road(21)	S01768	15	Band 1
Coole Glebe	S01143	24	Band 1
Coolkeeran	S01098	9	Band 1
Coolnagoppoge (WWTW)	S01176	37	Band 1
Coolsythe Road(23)	S01769	6	Band 1
Coragh	S03058	18	Band 1
Corbally Road(45)	S02021	6	Band 1
Corbrackey Road	S02392	12	Band 1
Corchoney Lane (2-4)	S01563	6	Band 1
Corcreechy Road	S02696	9	Band 1
Corgary Cottages (New)	S02724	18	Band 1
Corickbeg Road(15-17)	S04136	6	Band 1
Corickmore	S03062	18	Band 1
Corkill (Fermanagh)	S03059	18	Band 1
Corkill (Tyrone)	S02032	6	Band 1
Cornakessagh	S03060	9	Band 1
Cornamuck	S03061	27	Band 1
Corrinure	S02261	6	Band 1
Corry (WWTW)	S03063	12	Band 1
Corvanaghan (WWTW)	S01565	6	Band 1
Craigaroddan Road(6-8)	S00227	6	Band 1
Craigaruskey Road (66-68)	S00254	6	Band 1
Craigavole (WWTW)	S01144	21	Band 1
Craigdarragh Road(85-87)	S00836	8	Band 1
Craigmore Road(139 - 145)	S01725	12	Band 1
Craigmore Road(18-20)	S01124	6	Band 1
Craignasasonagh	S00308	17	Band 1
Cranagh (WWTW)	S03065	63	Band 1
Crankill	S01438	9	Band 1
Creaghcor	S03066	30	Band 1
Crebarkey	S03067	24	Band 1
Creevangar	S03068	12	Band 1
Creggan Road(27)	S01770	6	Band 1
Crew Bridge	S03069	18	Band 1
Crilly	S02903	9	Band 1
Cross Lane(9-22)	S02427	24	Band 1
Crosskeys Road	S01439	9	Band 1
Crossnamoyle	S02568	18	Band 1
Culbane (WWTW)	S01145	21	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Cullion (Bready)	S03070	83	Band 1
Cullyramer	S01147	6	Band 1
Culmore Point	S03334	18	Band 1
Culnady Road(46-50)	S01798	9	Band 1
Culramoney Road(5)	S01740	6	Band 1
Curglasson	S01566	62	Band 1
Cushleake Road(37-39)	S01783	6	Band 1
Davagh Park	S02030	18	Band 1
Deerpark Road(92)	S01771	18	Band 1
Deffrick	S01184	71	Band 1
Demoan Villas	S02299	18	Band 1
Dempsey Park	S01100	69	Band 1
Derg (WTW) Septic Tank	S03499	3	Band 1
Derryaghna	S03073	18	Band 1
Derryanvil	S03911	12	Band 1
Derrygortrevy	S02837	24	Band 1
Derryhaw	S02571	10	Band 1
Derrymagowan	S02572	6	Band 1
Derrynoose	S02605	18	Band 1
Derryork Road(33-35)	S04140	6	Band 1
Diamond cottages(1)	S01772	30	Band 1
Diamond Road(73-79)	S02124	12	Band 1
Diviny	S02403	17	Band 1
Doan Place	S02839	18	Band 1
Donaghey (1)	S01568	6	Band 1
Donaghey (2)	S01569	51	Band 1
Donard View	S00280	37	Band 1
Donnelly Park	S01103	36	Band 1
Donnybrewer Road(98)	S03278	6	Band 1
Donnybrewer Road(99)	S03277	6	Band 1
Doogary	S02573	17	Band 1
Doorless	S01570	12	Band 1
Dorsy	S02267	39	Band 1
Dougan place	S02164	36	Band 1
Drapersfield (WWTW)	S01571	96	Band 1
Dree Hill	S02125	12	Band 1
Dreenan Road(38-40)	S02028	6	Band 1
Drennans Road(6)	S01773	6	Band 1
Dromara Road (Lacken)	S02126	12	Band 1
Dromore Highlands	S03085	126	Band 1
Dronehill Road	S02128	12	Band 1
Drones	S01104	48	Band 1
Drumagarner	S01149	18	Band 1
Drumagarner Road(148-150)	S02026	6	Band 1
Drumagarner Road(212-218)	S02027	12	Band 1
Drumalig Road (62-64)	S04161	6	Band 1
Drumalig Road(9-11)	S04158	6	Band 1
Drumane	S01150	18	Band 1
Drumaran Road	S02129	9	Band 1
Drumard (Antrim)	S01616	15	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Drumard (Tyrone)	S02860	12	Band 1
Drumard Primate (WWTW)	S02404	37	Band 1
Drumaroad (WTW)	S00115	3	Band 1
Drumavoley Road(39-41)	S02022	6	Band 1
Drumavoley Road(83)	S01749	6	Band 1
Drumbolg Road(98-100)	S01800	6	Band 1
Drumconvis Road(16-18)	S01801	3	Band 1
Drumcroon (WWTW)	S01151	6	Band 1
Drumenny	S03088	98	Band 1
Drumenny Road(120-128)	S02034	9	Band 1
Drumflugh Road (75-77)	S04101	6	Band 1
Drumgay (1)	S03090	11	Band 1
Drumgay (2)	S03091	39	Band 1
Drumgooland	S02131	6	Band 1
Drumgrevagh	S02697	6	Band 1
Drumhillery	S02574	75	Band 1
Drumhirk	S00246	24	Band 1
Drumilly	S02268	60	Band 1
Drumkee	S02841	17	Band 1
Drumlegagh Church Road	S03987	92	Band 1
Drumlegagh Church Road (63-65)	S04098	6	Band 1
Drumlegagh Road South	S03093	12	Band 1
Drummack	S03094	16	Band 1
Drummond	S03095	22	Band 1
Drumnacannon Road(20-22)	S01803	6	Band 1
Drumnakilly	S03096	122	Band 1
Drumnascamph	S02698	38	Band 1
Drumneechy	S03097	24	Band 1
Drumraighland	S03099	95	Band 1
Drumreagh	S01106	6	Band 1
Drumreagh Road(9-11)	S00248	6	Band 1
Drumshambo	S01572	12	Band 1
Drumsurn Road (234-238)	S04120	9	Band 1
Dunboe Road(75-77)	S01747	6	Band 1
Duncastle Road (52-60)	S04113	15	Band 1
Dundrum (Armagh)	S02576	23	Band 1
Duneany (WWTW)	S01440	72	Band 1
Dungonnell WTW (Septic Tank)	S01472	3	Band 1
Dungorbery	S01107	6	Band 1
Dunmore Cottages	S00806	51	Band 1
Dunmullan	S03102	58	Band 1
Dunnyboe Road (85-93)	S04103	12	Band 1
Dunore WTW (Septic Tank No1)	S02057	3	Band 1
Dunore WTW (Septic Tank No2)	S02057	3	Band 1
Dunore WTW (Septic Tank No3)	S02057	3	Band 1
Dunronan Road(25-27)	S01804	6	Band 1
Dunserverick (Retention Tank)	S01185	89	Band 1
Dyan	S02842	52	Band 1
Edencrannon (WWTW)	S02858	90	Band 1
Edenderry (Tyrone)	S03104	58	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Edendoit Road(107-109)	S01598	6	Band 1
Edendoit Road(22-32)	S01805	18	Band 1
Edenmore Road	S03105	12	Band 1
Edenreagh Road(39-41)	S04094	15	Band 1
Edentirooory	S02132	9	Band 1
Edergoole Road (87-89)	S04104	6	Band 1
Eglish (Armagh)	S02578	87	Band 1
Ervey Road	S03107	15	Band 1
Eskragh	S03201	33	Band 1
Fallahogy	S01617	27	Band 1
Farmacaffley	S02579	62	Band 1
Farranflugh	S01420	6	Band 1
Faughan	S03109	9	Band 1
Ferris Bay (50)	S04084	15	Band 1
Feumore (WWTW)	S02406	75	Band 1
Fincarn	S03111	85	Band 1
Fofanny WTW(Septic Tank)	S02677	3	Band 1
Foffanybane WTW (Septic Tank)	S02678	3	Band 1
Ford Road(27)	S01806	6	Band 1
Foreglen Road (51-53)	S04097	6	Band 1
Forked Bridge WTW (Septic Tank)	S00003	3	Band 1
Fourmile	S02699	18	Band 1
Gallrock	S02433	17	Band 1
Garryduff Church	S02024	9	Band 1
Garryduff Road(112- 122)	S01715	18	Band 1
Garvetagh	S03117	81	Band 1
Giants Causeway (Retention Tank)	S01186	46	Band 1
Glarryford (WTW) Septic Tank	S01210	3	Band 1
Glascar Road(28-30)	S02887	6	Band 1
Glaskerbeg Road (11)	S04088	3	Band 1
Glasmullen (WWTW)	S01187	9	Band 1
Glassdrummond	S00282	21	Band 1
Glen Cottages (1-6)	S00835	17	Band 1
Glen View (Down)	S02700	12	Band 1
Glenabbey (WWTW)	S03119	45	Band 1
Glenagoorland	S03120	18	Band 1
Glenanne	S02259	9	Band 1
Glenavy Road (Antrim)	S00324	6	Band 1
Glenbush Road(31)	S01737	6	Band 1
Glenedra Road (109-111)	S04116	6	Band 1
Glenhead Road	S02133	12	Band 1
Glenhordial WTW (Septic Tank)	S03504	3	Band 1
Glenleary Road(22)	S01733	3	Band 1
Glenmakeeran	S01188	6	Band 1
Glenshesk Road(127)	S01724	3	Band 1
Glenstaghey Road(11)	S01787	6	Band 1
Goragh Road	S02287	6	Band 1
Gorran Road(84)	S01750	6	Band 1
Gortaclady (WWTW)	S01575	17	Band 1
Gortatray	S01576	12	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Gortereghy	S01110	17	Band 1
Gortin Road(12)	S01720	6	Band 1
Gortnacross	S01577	15	Band 1
Gortnagallon Cottages(1-4)	S01777	12	Band 1
Gortnagola Road	S02889	6	Band 1
Gortnagross Road (38-40)	S04114	6	Band 1
Gortnaskea Road(45-47)	S01807	6	Band 1
Gortscreagan	S03127	82	Band 1
Gosheden (1)	S03128	30	Band 1
Gosheden (2)	S03129	67	Band 1
Gracehill Road(28)	S01735	6	Band 1
Grange Blundel	S02581	18	Band 1
Grangemore	S02580	42	Band 1
Gransha Park(25-27)	S03130	6	Band 1
Gransha Road(26-28)	S00829	3	Band 1
Greenan	S02171	12	Band 1
Greenans	S01189	9	Band 1
Greenhill (WWTW)	S01155	12	Band 1
Greenville	S03133	24	Band 1
Grove Park	S01443	27	Band 1
Grove Road(21-23)	S04873	6	Band 1
Hazelbank	S02134	24	Band 1
Hillcrest (Antrim)	S01111	24	Band 1
Hillhead Road (Down)	S02135	6	Band 1
Hillhead Road(127-131)	S01808	9	Band 1
Hillside Road(121)	S01722	6	Band 1
Hillside Road(7-9)	S04145	6	Band 1
Hilltown Road	S02702	15	Band 1
Hollybank Road(10)	S01774	6	Band 1
Hollybank Road(54)	S01775	15	Band 1
Horse Park (5-7)	S04086	6	Band 1
Hunter Bungalows	S03136	18	Band 1
Inishargy Road(10-12)	S00210	6	Band 1
Inishargy Road(2-8)	S00212	12	Band 1
Inishargy Road(36-48)	S00211	29	Band 1
Inishmagh	S02845	15	Band 1
Jacksons Crescent (1-6)	S04106	18	Band 1
Jacksons Crescent (7-8)	S04107	6	Band 1
Jacksons Crescent (9-10)	S04108	6	Band 1
Jennys Lane	S02408	17	Band 1
Jerrettspass (WWTW)	S02297	39	Band 1
Katesbridge Road(79-85)	S02110	12	Band 1
Keady (Fermanagh)	S03138	18	Band 1
Kearney(Retention Tank)	S00225	66	Band 1
Keenaghan (1)	S01578	6	Band 1
Keenaghan (2)	S01579	12	Band 1
Keenaghan (Tyrone)	S03139	18	Band 1
Kilbroney Park(1-4)	S02725	12	Band 1
Kilcarn Road(7-9)	S00250	6	Band 1
Kilclean Road (80-82)	S04102	6	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Kildress Terrace	S01580	18	Band 1
Kilgarrett	S03141	12	Band 1
Killaloo	S03142	88	Band 1
Killaughey Road(252-254)	S00837	6	Band 1
Killea WTW(Septic Tank)	S03505	3	Band 1
Killeen (Armagh)	S02294	97	Band 1
Killinchy Road(96-100)	S04146	9	Band 1
Killogue	S01112	18	Band 1
Killycurry Road(30-32)	S04138	6	Band 1
Killygore	S01444	50	Band 1
Killylane WTW(Septic Tank)	S01317	3	Band 1
Killymuck	S01583	244	Band 1
Killyneese Road(14-16)	S01809	6	Band 1
Killysavan	S02137	30	Band 1
Kilmachugh	S02583	27	Band 1
Kilmood	S00255	169	Band 1
Kilnacart	S02861	12	Band 1
Kilross	S01622	74	Band 1
Kilskeery	S03148	91	Band 1
Kiltubbrid (WWTW)	S02588	33	Band 1
Kinego Cottages	S02856	12	Band 1
Kinneyglass Road(87-89)	S01751	6	Band 1
Kinturk	S01584	18	Band 1
Knock Terrace	S02139	36	Band 1
Knockanroe	S01585	12	Band 1
Knockans (WWTW)	S01114	6	Band 1
Knockbrack	S03151	22	Band 1
Knockmoyle	S03152	95	Band 1
Knocknagore (WWTW)	S02409	15	Band 1
Knocknarea Road	S02432	15	Band 1
Knocknatavanna	S01190	22	Band 1
Knockonny	S03153	18	Band 1
Largy Cottages(1)	S01776	30	Band 1
Laurelvale Road	S02140	12	Band 1
Leeke Road	S04092	32	Band 1
Legacurry (Down)	S00321	124	Band 1
Legacurry (Tyrone)	S03156	19	Band 1
Legaghory	S03157	30	Band 1
Legatirriff	S02430	23	Band 1
Lessans	S00281	18	Band 1
Letterbin (WWTW)	S03158	60	Band 1
Letterbreen	S03160	88	Band 1
Letterkeen	S03161	12	Band 1
Limestone (1)	S03164	6	Band 1
Limestone (2)	S03163	6	Band 1
Lisbane Road(38-40)	S00839	6	Band 1
Lisbarnet Road (47-53)	S00245	12	Band 1
Liscorran Road(3-5)	S02389	6	Band 1
Lisdoart (1)	S03166	58	Band 1
Lisdoart (2)	S03167	16	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Lisdown	S02585	22	Band 1
Lislea Terrace	S01624	18	Band 1
Lismoyle	S01625	24	Band 1
Lisnadill (WWTW)	S02586	22	Band 1
Lisnagade Road(54-56)	S02161	6	Band 1
Lisnagalt	S01157	6	Band 1
Lisnagat Road(34)	S01738	6	Band 1
Lisnagat Road(64)	S01745	6	Band 1
Lisnagunogue	S01192	95	Band 1
Lisnahall	S01587	50	Band 1
Lisnakilly	S03168	33	Band 1
Lisnalea	S02274	72	Band 1
Lisnamorrow	S01810	15	Band 1
Lisnamuck (Coleraine)	S01158	24	Band 1
Lisnamuck (Magherafelt)	S01626	49	Band 1
Lisnaragh	S03169	24	Band 1
Lisnevanagh	S01421	31	Band 1
Lisnisk	S01159	15	Band 1
Lisowan	S00287	51	Band 1
Longfield (Moorside Villas)	S01627	95	Band 1
Longs Glebe	S01160	78	Band 1
Lough Bradan WTW (Septic Tank)	S03507	3	Band 1
Lough Fea (WwTW)	S04087	3	Band 1
Lough Island Reavy WTW (Septic Tank)	S02670	3	Band 1
Lough Macrory WTW (Septic Tank)	S03509	3	Band 1
Lough Road(29-31)	S04139	9	Band 1
Loughan Road (Tyrone)	S03175	27	Band 1
Lower Grange Road(20-26)	S01811	12	Band 1
Lower Rashee Road (15-21)	S05188	12	Band 1
Luney	S01628	17	Band 1
Lurgancahone Road(35-39)	S02707	9	Band 1
Lurgancahone Road(57-59)	S02708	6	Band 1
Magee Terrace	S02292	15	Band 1
Magheracoltan	S03176	21	Band 1
Magheramore Road(89)	S01753	9	Band 1
Magheramourne (WWTW)	S01464	85	Band 1
Magheraville	S02589	12	Band 1
Maghernarhar	S01193	12	Band 1
Maglion Terrace	S02147	36	Band 1
Main Road Cloughy (103-111)	S00223	15	Band 1
Managher	S01162	15	Band 1
Manor House	S02590	12	Band 1
Manse Road (Antrim)	S01710	6	Band 1
Manse Road (Down)	S02148	12	Band 1
Marlacoo Road	S02149	28	Band 1
Mayoghill (WWTW)	S01164	6	Band 1
Maytown Road	S02275	6	Band 1
McCandless Terrace	S02150	36	Band 1
McCleary	S01165	6	Band 1
McKinley Park	S02276	45	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
McNally Park(1-6)	S04124	18	Band 1
Middle Braniel Road(80-90)	S00857	18	Band 1
Milltown (Burndennet)	S03184	45	Band 1
Milltown (Maghera)	S01630	20	Band 1
Milltown(Artigarvan)	S03183	12	Band 1
Minterburn Road(115-117)	S04134	6	Band 1
Molenan	S03185	36	Band 1
Moneybrannon Road(89)	S01754	6	Band 1
Moneycanon	S03188	37	Band 1
Moneycarrie (WWTW)	S01166	15	Band 1
Moneydig	S01167	61	Band 1
Moneynick Road(118)	S01757	12	Band 1
Moneynick Road(94)	S01761	12	Band 1
Moneyreagh Road (51-55)	S00338	9	Band 1
Moneyreagh Road(139-141)	S00852	6	Band 1
Moneyscalp	S02710	21	Band 1
Monmurry	S03189	24	Band 1
Moorfield	S03190	18	Band 1
Moss Road(36-38)	S00853	3	Band 1
Moss Road(76-78)	S00244	6	Band 1
Mossvale Terrace	S02153	36	Band 1
Mount Ida	S02154	6	Band 1
Mountain View (Drumintee)	S02278	36	Band 1
Mountain View (Tullymurry)	S02712	36	Band 1
Mountcastle	S03191	12	Band 1
Movenis Road(17)	S01728	6	Band 1
Movilla Road(136-140)	S00232	9	Band 1
Moyagall Road(115-117)	S01799	6	Band 1
Moyarget Road(178)	S01729	6	Band 1
Mulderg (WWTW)	S03194	55	Band 1
Mullaghboy Road(136-138)	S01812	6	Band 1
Mullahead Road (WWTW)	S02418	9	Band 1
Mullan Road(35)	S01739	6	Band 1
Mullans (Fermanagh)	S03196	6	Band 1
Mullynaburtlan	S03197	18	Band 1
Mullyroddan	S02851	21	Band 1
Munie (WWTW)	S01466	33	Band 1
Murdocks Lane(1-6)	S00850	17	Band 1
Navery Road	S01119	12	Band 1
New Road(37-39)	S00830	6	Band 1
Newcastle Road(18-20)	S00841	6	Band 1
Newmills Road(70-72)	S01128	6	Band 1
Newry Road Rathfriland (80-83)	S02726	6	Band 1
Noones Vale	S01632	53	Band 1
Oakland Villas	S01711	18	Band 1
Oaklands (Broughshane)	S01207	3	Band 1
Old Green	S01448	17	Band 1
Old Holywood Road(190-196)	S00340	12	Band 1
Oldstone Terrace(8)	S01779	24	Band 1
Oliver Plunkett Park	S02284	84	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Oneill Terrace	S02263	33	Band 1
Orahilly Park	S02283	37	Band 1
Orritor Craigs	S01592	6	Band 1
Orritor Road(182)	S02017	12	Band 1
Owenbeg (WWTW)	S03206	30	Band 1
Parsonage Road(110-120)	S00831	18	Band 1
Pharis Road(15)	S01727	12	Band 1
Point Road(29-33)	S01813	15	Band 1
Pomeroy Road	S02901	20	Band 1
Pomeroy Road(47-49)	S01814	6	Band 1
Portadown Road (Tandragee)	S02175	12	Band 1
Portaferry Road(96-100)	S00231	9	Band 1
Priestland	S01169	85	Band 1
Priestland Road (51-53)	S04096	6	Band 1
Procklis	S01450	73	Band 1
Quarter Road	S00222	9	Band 1
Racavan	S01451	37	Band 1
Railway view(3)	S01785	6	Band 1
Rathfriland Road	S02157	12	Band 1
Rathlin (Retention Tank)	S00902	150	Band 1
Ravara Road (9-19)	S00242	18	Band 1
Rehaghy Road(64-66)	S04144	6	Band 1
Rickamore Road(36-38)	S01780	6	Band 1
Ringneill Road(1-5)	S00240	9	Band 1
Ringsend	S01170	76	Band 1
Ringsend Road	S02158	6	Band 1
Ritchies Villas	S01634	12	Band 1
Riverside(16-20)	S02029	12	Band 1
Rock Cottages	S02172	21	Band 1
Rocktown	S01635	17	Band 1
Rornashane	S01121	42	Band 1
Rosevale Road	S02176	12	Band 1
Rosscolban	S03211	3	Band 1
Rosscor	S03212	15	Band 1
Rousky	S03214	33	Band 1
Saval More Cottages	S02715	19	Band 1
Scotstown Road (7-9)	S04117	6	Band 1
Scribbagh (WWTW)	S03216	14	Band 1
Seagahan	S02530	24	Band 1
Sentry Box Road (20-22)	S02165	6	Band 1
Seven Mile Straight(177)	S01781	12	Band 1
Seven Mile Straight(78)	S02018	6	Band 1
Seven Mile Straight(82)	S02019	6	Band 1
Seven Mile Straight(86)	S02020	6	Band 1
Shaneoguestown Road(38)	S01782	6	Band 1
Sherrigrim	S01596	18	Band 1
Shinn Road	S02716	18	Band 1
Shinny Road(20-22)	S01125	6	Band 1
Shore Road (Castle View)	S01797	12	Band 1
Silent Valley (Septic Tank 1)	S00174	3	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Silent Valley (Septic Tank 2)	S00174	3	Band 1
Silent Valley (Septic Tank 3)	S00174	3	Band 1
Silent Valley (Septic Tank 4)	S00174	3	Band 1
Silent Valley (Septic Tank 5)	S00174	3	Band 1
Skernahergney	S01597	12	Band 1
Skerry View	S01452	33	Band 1
Soldierstown	S02431	32	Band 1
Springfield	S03222	83	Band 1
Springhill Road(1)	S01713	14	Band 1
Springwell Cresent(1-6)	S04135	21	Band 1
St Annes Terrace	S02722	18	Band 1
St Bridgids Villas	S02286	27	Band 1
St Johns Terrace (Kilcoo)	S02717	30	Band 1
St Marys Terrace	S02718	18	Band 1
St Patricks Villas	S02719	27	Band 1
Staffordstown Road	S01426	6	Band 1
Stangmore (WWTW)	S02854	18	Band 1
Station Road(155-157)	S00854	6	Band 1
Stradreagh (Septic Tank)	S03131	12	Band 1
Straid (Ballymena)	S01455	53	Band 1
Straid Road(111)	S01719	6	Band 1
Straid Road(12)	S01721	6	Band 1
Stranagard	S01815	6	Band 1
Tamnadeese Road(7-9)	S01816	6	Band 1
Tartaraghan	S02421	50	Band 1
Tattysallagh	S03227	84	Band 1
Teeraw	S02598	12	Band 1
The Demesne	S00289	6	Band 1
The Loup (WWTW)	S01588	239	Band 1
The Skeagh	S02163	9	Band 1
Thorney Glen	S00284	50	Band 1
Tibaran Cottages	S04127	24	Band 1
Tirquin	S03230	24	Band 1
Toberkeagh	S01195	27	Band 1
Tobermore Road(144-146)	S01817	6	Band 1
Torr Head	S01196	6	Band 1
Trench Road (66-70)	S04118	9	Band 1
Tromra	S01197	33	Band 1
Tubber Road (10-16)	S00207	12	Band 1
Tullaghmore Road(41-43)	S01818	6	Band 1
Tully (WWTW)	S03232	46	Band 1
Tully Road Headworks	S03975	2136	Band 4
Tullyard(Tyrone)	S03233	12	Band 1
Tullyelmer (WWTW)	S02599	6	Band 1
Tullygrawley	S01457	33	Band 1
Tullyhubbert Road(75-81)	S00258	12	Band 1
Tullyleek	S02855	24	Band 1
Tullymore Road (43-45)	S04119	6	Band 1
Tullyreavy	S01600	18	Band 1
Tullyroan	S02600	36	Band 1

WWTWs	CAR ID	2009-10 AMS PE	PE Band
Tullyveagh Road(2-4)	S01819	6	Band 1
Tulnacross Road(44-46)	S01820	6	Band 1
Tummery	S03234	24	Band 1
Tureagh	S01198	27	Band 1
Turraloskin	S01199	23	Band 1
Tursallagh	S03235	18	Band 1
Upper Ballygelagh Road(12-18)	S00845	12	Band 1
Upper Cranlome Road	S02893	6	Band 1
Upper Malone Road	S04026	24	Band 1
Victoria Road (277-279)	S04111	6	Band 1
Whin Road (21-23)	S04122	6	Band 1
Whitechurch Road (45-53)	S00213	15	Band 1
Whitegate Road	S02167	9	Band 1
Whitelough Road(29-31)	S04137	6	Band 1
Whitepark Road(211)	S01732	6	Band 1
Whitepark Road(56)	S01741	12	Band 1
Whitepark Road(71)	S01746	6	Band 1
Windmill Road(24-32)	S00235	15	Band 1
Windmill Road(71-73)	S04159	6	Band 1
Woaghternerry	S03239	30	Band 1
Woburn Road (63-69)	S00234	12	Band 1
Woodburn/Dorisland WTW (Septic Tank)	S00011	3	Band 1

Table 17a

NORTHERN IRELAND WATER LIMITED - ANNNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 17a SEWERAGE EXPLANATORY FACTORS
SEWERAGE SUB - AREA EXPLANATORY FACTORS (TOTAL)

	DESCRIPTION	UNITS	DP	1 AREA 1	CG	2 AREA 2	CG	3 AREA 3	CG	4 AREA 4	CG	5 AREA 5	CG	6 AREA 6	CG	7 AREA 7	CG	8 AREA 8	CG	9 Total	CG
A	**SEWERAGE SUB AREAS GENERAL**																				
	Area name:-																				
1	Annual average resident connected population	000	1																	1434.3	C4
2	Annual average non-resident population	000	1																	19.3	C3
3	Volume of sewage collected (daily average)	Ml/d	1																	337.6	B4
4	Total connected properties	nr	0																	654120	C3
5	Area of Sewerage District	km^2	0																	13520	B2
B	**SEWERAGE DATA**																				
6	Total length of sewer	km	0																	14746	B3
C	**Costs**																				
7	Sewerage: Direct Costs	£000	0																	17135	
8	Sewerage: Power Costs	£000	0																	5567	
9	Sewerage: Service Charges	£000	0																	0	
10	Sewerage: General & Support Expenditure	£000	0																	9535	
11	Sewerage: Functional Expenditure	£000	0																	26670	

Table 17a Sewerage Explanatory Factors- Sewerage Sub-Area Explanatory Factors

Line 1 - Annual average resident connected population (Total)

AIR09	Confidence Grade	AIR10	Confidence Grade
1,335.7 x 10^3 reported 1,392.8 x 10^3 recalculated	C4	1,434.3 x 10^3	C4

The guidance for Table 17a includes the following text:

"Companies must check that the following data are consistent. Companies must explain in the commentary any reasons why this data is not consistent.

- *Annual average resident connected population in table 17a (line 2, 'total' column) plus annual average non-resident population in table 17a (line 3, 'total' column) should equal the total connected population in table 13 (line 10)"*

NI Water has not calculated the Total Annual Average Resident Connected Population independently of the Total Annual Average Non-Resident Population and the Total Connected Population. Instead, the Company has used the consistency check (above) to derive the Total Annual Average Resident Connected Population.

- According to AIR10: Table 13: Line 10, the total connected population (comprising resident and non-resident population) was 1,453.610 x 10^3.

- According to AIR10: Table 17a: Line 2, the annual average non-resident population was 19.279 x 10^3.

- By calculation, the annual average resident connected population

  = 1,453.610 x 10^3 – 19.279 x 10^3 = **1,434.331 x 10^3**.

Recalculation of AIR09 Value
In AIR09, a Table 17a: Line 1 value of 1,335.7 x 10^3 was reported. This figure was based on a Table 13: Line 10 value of 1,366.33 x 10^3. The Table 13: Line 10 value was later updated and reported as 1,423.48 x 10^3, giving a recalculated Table 17a: Line 1 value of 1,392.8 x 10^3.

Significant year on year changes in reported figures including an explanation of any factors that may have influenced the figure
The AIR10 figure of 1,434.3x 10^3 is 41.5 x 10^3 higher than the AIR09 recalculated figure of 1,392.8 x 10^3. This represents an increase of 3.0% and is attributed to a decrease in annual average non-resident connected sewerage population of 11.4 x 10^3 and an increase in total connected sewerage population of 30.1 x 10^3.

Confidence Grade
There are two figures associated with the calculation of AIR10: Table 17a: Line 1: Column 9. The first figure is derived from AIR10: Table 13: Line 10 and was allocated a confidence grade of C4. The second figure is derived from AIR10: Table 17a: Line 2: Column 9 and was allocated a confidence grade of C3. Since the larger of the two figures in this calculation has been allocated a confidence grade of C4, a **C4** confidence grade will be allocated to Table 17a: Line 1: Column 9.

Implementation of Reporter's Recommendations
NI Water has adopted a consistent approach for population figures as explained in the commentary.

Line 2: Column 9: Annual average non-resident population (Total)

AIR09	Confidence Grade	AIR10	Confidence Grade
30.6×10^3	C3	19.3×10^3	C3

NI Water has included holiday and tourist population connected to the sewerage system, averaged over the year.

NI Water has not included any allowance for daily commuters or day visitors.

Statement detailing estimation method used including date of data on which estimate is made
NI Water obtained a copy of the "GB and Overseas Visitors to Northern Ireland Summary for January - August 2009" from the Research section of the NI Tourist Board website[1].

The report was based on data from NITB's Passenger Survey and Fáilte Ireland's Survey of Overseas Travellers.

- According to the publication, the number of non-resident visitor nights for Northern Ireland (Jan-Aug 09) was 4,892,000.

NI Water obtained copies of Monthly Hotel Occupancy Reports and Monthly Guesthouse and Bed and Breakfast Occupancy Reports from the Research section of the NI Tourist Board website.

- According to the occupancy reports, 1,721,400 hotel bed-spaces and 393,073 guesthouse/B&B bed-spaces were sold (Jan-Aug 09) totalling 2,114,473.

[1] www.nitb.com

- The number of bed-spaces sold from Jan-Aug 09 (2,114,473) as a percentage of the total number of bed-spaces sold in 2009 (3,041,473) was 69.52%.

- The number of non-resident visitor nights for Northern Ireland (Jan-Dec 09) was estimated as follows:

(4,892,000 / 69.52) x 100 = 7,036,824

- The annual average non-resident population was estimated as follows:

7,036,824 / 365 nights = **19,279**.

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
In previous years, this calculation was based on an estimated annual number of non-resident visitor nights for Northern Ireland, published in NI Tourist Board's "Preliminary Visitor Tourism Forecast". According to the publication, the estimate was based on January to August data from both the Northern Ireland Passenger Survey (NITB) and the Survey of Overseas Travellers (Fáilte Ireland).

This year, NI Tourist Board has published the actual number of non-resident visitor nights (Jan-Aug 09) in their "GB and Overseas Visitors to Northern Ireland Summary". The annual number was estimated by NI Water on the basis that the percentage bed-spaces sold for hotel, guesthouse and bed and breakfast establishments (Jan-Aug 09) was 69.52%.

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 2008 (11,214,000) and 2009 (7,036,824) reveals there has been a decrease in tourism. The "Northern Ireland Visitor Performance Year End Estimates 2009" states that 2009 brought one of the toughest years for tourism worldwide and despite the weakness of sterling against other currencies, visits from other Eurozone countries and North America did not increase. Overall, the business tourism sector saw significant declines, and the Visiting Friends and Relatives sector also struggled in the uncertain economic climate.

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

1. The GB and Overseas Visitors to Northern Ireland Summary provides the actual number of non-resident visitor nights for Northern Ireland but only for Jan-Aug 09. The number is based on surveys conducted by both NITB and Fáilte Ireland. An annual equivalent is only obtainable through extrapolation.

2. The Hotel and Guesthouse/B&B Occupancy Reports provide the numbers of bed-spaces sold. However, the numbers are based on the extrapolation of data for a representative sample group of establishments.

NI Water has assigned a confidence grade of **C3** to account for known deficiencies in the reliability and accuracy of the reported figure.

Line 4 – Total Connected Properties
Northern Ireland Water's (NIW) property data is provided from the RapidXtra Property Summary Report, provided by Echo and validated through the Contract Office.

The confidence grade has remained at C3 and ensures consistency with Table 13. (As per Reporters AIR09 recommendation).

We would expect this confidence grade to improve as the benefits of the data quality programme are realised.

Line 5 - Area of sewage district

Differences in data between current and previous year
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 sewer 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

Differences in data between current and previous year
There has been no change to the structure of the data reported on this year from the previous years that would directly affect the totals provided. The same queries have been used to extract the data from the Corporate Asset Register and have been checked to ensure that they are still relevant. The confidence grade of the data will remain the same as the previous year. There have been no significant improvements in data quality since the AIR09 reports. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

Lines 7-11 – Costs
The overall approach and allocation process for Table 17a has not changed since AIR08. There are still some limitations and it has not been possible to fully complete the Information Returns for 2010. Work is on going for AIR11,

through the Cost to Serve Project, on the sewerage areas the costs will be split between. The figures to population Column 9 have been taken from Table 22 (NIW only).

Line 7 – Direct Costs
It is not yet possible to split the costs into areas, however, work is on going for AIR11. 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 £13.4M, primarily as a result of the changes in methodology on allocation of general & support costs as agreed with the Utility Regulator. See Table 22 commentary for further explanation.

Line 8 – Power Costs
The figure for Power costs agrees to Table 22, Line 2 Column 1. See Table 22 commentary. Power costs have reduced by circa £0.4M from AIR09.

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 £7.6M higher than AIR09 primarily due to the change in methodology on the allocation of General & support costs in Table 22 agreed with the Utility Regulator (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 £5.8M from AIR09.

Table 17 b

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 17b SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LARGE WORKS INFORMATION DATABASE (NIW Only)

	DESCRIPTION	UNITS	DP	TOTAL	1 Belfast W10	CG	2 Ballymena W60	CG	3 Culmore W75	CG	4 Antrim W63	CG	5 Lisburn W22	CG	6 Whitehous W07	CG	7 Dunmurray W21	CG	8 North W59	CG	9 Dunganno W49	CG	10 Omagh W79	CG	11 Ballynacor W46	CG	12 Newry W31	CG	13 Bullay's Hill W47	CG	14 Carrickfergus W03	CG	15 Newtownbreda W09	CG	16 Armagh W48	CG	17 Larne W69	CG
1	Works Name				Belfast		Ballymena		Culmore		Antrim		Lisburn		Whitehouse		Dunmurry		North Coast		Dungannon		Omagh				Newry				Carrickfergus		Newtownbreda				Larne	
A	**WORKS SIZE**																																				
2	Population equivalent of total load received	000	0	1223811	365866	C5	113825	C5	131187	C5	65165	C5	63012	C5	88410	C5	45827	C5	76115	C5	61180	C5	48791	C5			63915	C5			32091	C5	40199	C5			28228	C5
B	**EFFLUENT CONSENT STANDARD**																																				
3	Suspended solids consent	mg/l	0		50	A1	25	A1	50	A1	50	A1	15	A1	50	A1	25	A1	50	A1	30	A1	50	A1			50	A1			50	A1	30	A1			50	A1
4	BOD5 consent	mg/l	0		30	A1	15	A1	30	A1	30	A1	10	A1	30	A1	10	A1	30	A1	20	A1	30	A1			30	A1			30	A1	15	A1			30	A1
5	COD consent	mg/l	0		125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1			125	A1			125	A1	125	A1			125	A1
6	Ammonia consent	mg/l	0				3	A1	10	A1	15	A1	3	A1			3	A1			5	A1	10	A1									5	A1				
7	Phosphates consent	mg/l	0				1	A1			1	A1	2	A1			2	A1			1	A1											2	A1				
C	**TREATMENT CATEGORY**																																				
8	Classification of Treatment Works				SAS		TA2		SAS		TA2		TA1		SAS		TA1		SAS		TA2		SAS				SAS				SAS		TA1				TA2	
D	**COSTS**																																				
9	Direct cost	£000	0	6960	1532		546		512		314		511		341		511		355		174		269		656		310		14		255		289		22		349	
10	Power costs	£000	0	4696	1171		399		342		183		285		225		202		229		43		144		611		258		11		184		145		2		260	
11	Service Charges	£000	0	0	0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0	
12	General and support expenditure	£000	0	2996	489		163		153		104		369		214		533		147		88		175		17		73		4		120		186		29		132	
13	Functional expenditure	£000	0	9956	2021		709		665		418		880		554		1044		502		263		444		673		384		18		375		475		51		481	
14	Estimated terminal pumping costs	£000	0	30	2		0		0		0		0		0		0		7		0		0		0		3		0		0		0		10		9	
15	Estimated sludge costs	£000	0	0	0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0	

Table 17b - Sewerage Explanatory Factors – Sewerage Treatment Works – Large Works Information Database

NI Water has a number of sites which fall into the Band 6 category and are to be reported within this submission. The sites differ from the AIR09 submission as 3 of the named sites have now been transferred to PPP concessionaire. The WWTW to be reported on for AIR10 are:

AIR10 Table 17b Band 6 Sites for Submission

LIMS Code	LIMS Name	Confirmed PE from AMS	AIR10 Band
S13BE	Tullaghgarley WWTW	113769	Band 6
S15AO	Milltown WWTW	65005	Band 6
S15BS	Larne WWTW	27967	Band 6
S17HF	North Coast (Craigtownmore) WWTW	65320	Band 6
S25AC	Moygashel WWTW	61180	Band 6
S27AC	Newry WWTW	63832	Band 6
S34AD	Newtownbreda WWTW	40109	Band 6
S34AE	Whitehouse WWTW	88373	Band 6
S34AG	Carrickfergus WWTW	32034	Band 6
S34AK	Belfast WWTW	364794	Band 6
S37AA	New Holland WWTW	63012	Band 6
S37AB	Dunmurry WWTW	45795	Band 6
S43CI	Culmore WWTW	130834	Band 6
S45IB	Omagh/Mountjoy WWTW	48765	Band 6

AIR09 Table 17b Band 6 Sites removed from Submission

LIMS Code	LIMS Name	Confirmed PE from AMS	AIR10 Band
S23AA	Ballynacor WWTW	50000	Band 6
S23AB	Bullay's Hill WWTW	51147	Band 6
S25AA	Armagh WWTW	30300	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.

As listed above Ballynacor, Bullays Hill and Armagh WWTW transferred to a PPP concessionaire in 2009, and NI Water has requested NIEA to revoke the respective consents.
The PE information and confidence grading was provided by Asset Performance Team, as part of their AIR10 return as at 31st March 2010.

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:

AIR10 Table 17b Band 5 Sites for Reference

LIMS Code	LIMS Name	Confirmed PE from AMS	AIR10 Band
S13CH	Cookstown WWTW	20659	Band 5
S13GK	Magherafelt WWTW	14630	Band 5
S15AA	Ballyclare WWTW	18708	Band 5
S17BP	Glenstall WWTW	17889	Band 5
S25AB	Coalisland WWTW	12095	Band 5
S27AA	Banbridge WWTW	23194	Band 5
S27AD	Warrenpoint WWTW	14939	Band 5
S36AA	Downpatrick Aeration WWTW	18446	Band 5
S36BB	Kilkeel WWTW	11089	Band 5
S36BO	Newcastle WWTW	12221	Band 5
S43GI	Limavady WWTW	16061	Band 5
S45JA	Strabane WWTW	20766	Band 5
S47HK	Enniskillen New WWTW	24269	Band 5

Lines 9-15 - Costs
There was a small change to the approach to populating the figures in Table 17b from AIR08 and AIR09, M & E Costs coded to Activity 510 have been removed and included as general & support as recommended by the Utility Regulator. Power costs at WWTWs have been split between sludge treatment and sewage treatment, improved coding by operational staff has resulted in a clearer split between sludge and sewage treatment and a definition and list of terminal pumping stations have been agreed and the WWTWs they feed into.

The costs are a further breakdown by location of the Band 6 expenditure detailed in Table 17f line 6 and are populated with the information available for the year ended 31st March 2010 as at 3rd June 2010. The Population Equivalent (PE) information used to complete this table was received by management accounts on 17th May 2010. The transfer of Ballyrickard WWTW's in April 2009 to PPP has reduced the number of sites included in Table 17b (NIW only). The PPP sites North Down and Kinnegar have also not been included in this table.

Line 9 – Direct Costs
Direct Costs include Power 521X, Contractors 531X, Other Contractors 532X, Materials 541X, Chemicals 548X and Direct Labour (611X and 612X-Wages overheads).

18 WWT'W's fall into Band 6 in accordance with the regulatory guidance for Table 17f and each of these have their own separate finance location – i.e. W location code.

There remains one meter at each WWTWs; so as in AIR09, the Wastewater Field managers provided a percentage estimate of power costs between sewage treatment and sludge treatment at each of the WwTWs where there are both activities. These percentages were applied to the power costs to populate Line 9. There is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTWs (W10) and the Incinerator (W01). The power team supplied an estimated 60:40 split between the Belfast WWTWs and the Incinerator which has been used to calculate the amount relating to sewage treatment at Belfast. The estimated split is the same as AIR09.

The costs have reduced from AIR09 by £4.1M partly a result of the exclusion of Ballyrickard which transferred to PPP and received service commencement in April 2009. There are also reduced costs at Armagh WWTW's as this works transferred to PPP and received service commencement in August 2009. Ballinacor and Bullays Hill WWTW's have cost less during 0910 as the WWTW's are due to transfer at the beginning of 2010/11 financial year and the sites were operated by the contractor for part of the 2009/10 year. The change in methodology on the apportionment of general & support as agreed with the Utility Regulator has had the most significant impact on the direct costs in this line.

Line 10 – Power Costs
Power costs show an increase by circa £0.4M from AIR09.

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 does not include the general & support costs for NIW PPP staff. This figure was allocated across all the WWTWs in this table based on direct labour costs (611X – Costed Wages Charge and 612X - Wages overheads). No Costs have been allocated to the PPP site North Down and Ballyrickard.

The figure has increased by £2.4M from AIR09 primarily as a result of the changes in methodology on allocation of general & support costs between sewerage, sewage treatment and sludge treatment and disposal, as agreed with the Utility Regulator. For further explanation see Table 22 commentary.

Line 13 – Functional Expenditure
This is a calculated line and is the total of Line 9 and Line 12. The total in the workings agrees to Table 22 (NIW Only) Column 2 Line 11. Costs have decreased by circa £1.7M since AIR09.

Line 14 – Terminal Pumping Costs
This information was populated in the same way as AIR09. The power costs relating to the terminal pumping station of each WWTWs has been included where possible. Not all WWTWs have terminal pumping station power costs because some are gravity fed. Three of the works (Ballymena, Newry and Omagh) include the pumping station cost in the W location code, therefore are in Line 10, and some have no direct feeds i.e. the pumping station feeds the public sewer and this feeds the WWTWs.

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. This line was incorrectly populated in AIR09 with Sludge treatment costs which are recorded under a separate activity code – 621.

Table 17c

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (NIW Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
				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	251	44	490	2	0	2	2	0	0	8	799
2	Number of STWs in size band 2	nr	0	0	15	32	4	0	7	0	1	1	0	60
3	Number of STWs in size band 3	nr	0	1	27	55	5	2	13	4	2	2	4	115
4	Number of STWs in size band 4	nr	0	2	27	11	2	2	5	2	2	2	1	56
5	Number of STWs in size band 5	nr	0	0	6	1	1	4	0	1	1	0	0	14
B	**LARGE WORKS**													
6	Number of STWs in size band 6	nr	0	0	7	0	3	4	0	0	0	0	0	14
7	Total numbers of STWs	nr	0	254	126	589	17	12	27	9	6	5	13	1058
C	**SMALL WORKS WITH AMMONIA CONSENTS**													
8	Number of small STWs with NH_3 consent (5 - 10mg/l)	nr	0	48										
9	Number of small STWs with NH_3 consent (< = 5mg/l)	nr	0	41										

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (PPP Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			
					ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	**SMALL WORKS**													
1	Number of STWs in size band 1	nr	0											0
2	Number of STWs in size band 2	nr	0											0
3	Number of STWs in size band 3	nr	0											0
4	Number of STWs in size band 4	nr	0				1							1
5	Number of STWs in size band 5	nr	0											0
B	**LARGE WORKS**													
6	Number of STWs in size band 6	nr	0		1			4						5
7	Total numbers of STWs	nr	0	0	1	0	1	4	0	0	0	0	0	6
C	**SMALL WORKS WITH AMMONIA CONSENTS**													
8	Number of small STWs with NH3 consent (5 - 10mg/l)	nr	0	0										
9	Number of small STWs with NH3 consent (< = 5mg/l)	nr	0	1										

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (Total)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			TOTAL
					ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	**SMALL WORKS**													
1	Number of STWs in size band 1	nr	0	251	44	490	2	0	2	2	0	0	8	799
2	Number of STWs in size band 2	nr	0	0	15	32	4	0	7	0	1	1	0	60
3	Number of STWs in size band 3	nr	0	1	27	55	5	2	13	4	2	2	4	115
4	Number of STWs in size band 4	nr	0	2	27	11	3	2	5	2	2	2	1	57
5	Number of STWs in size band 5	nr	0	0	6	1	1	4	0	1	1	0	0	14
B	**LARGE WORKS**													
6	Number of STWs in size band 6	nr	0	0	8	0	3	8	0	0	0	0	0	19
7	Total numbers of STWs	nr	0	254	127	589	18	16	27	9	6	5	13	1064
C	**SMALL WORKS WITH AMMONIA CONSENTS**													
8	Number of small STWs with NH3 consent (5 - 10mg/l)	nr	0	48										
9	Number of small STWs with NH3 consent (< = 5mg/l)	nr	0	42										

Table 17c - Sewerage Explanatory Factors - Sewage Treatment Works Numbers

General

The Asset Management Section (AMS) has co-ordinated information from PPP for the population of 'Table17c – PPP' table and the completion of 'Table 17c – total' table, and the associated commentary from PPP.

NIW Only

It should be noted that the banding of the WWTWs is based on the latest Populations Equivalents minus tourist PEs. Since AIR09, PEs for 143 WWTWs have been updated.

Changes regarding WWTWS from the AIR09 period are as follows:

- **a.** 12 WWTWs have been rationalised either pumped away or gravitated to larger WWTWs in last financial year.
- **b.** 3 WWTWs have been decommissioned.
- **c.** 6 WWTWs have been designated as PPP sites (with another NIW WWTWs now pumping to a PPP site).
- **d.** There are 4 new additions for sites recently adopted by NIW.

This is a net decrease of 18 WWTWs from AIR09 reporting.

We have assumed the Bands to be:

Small works

- **a.** Size band 1 <= 15kg BOD5/day (population equivalent: 0 - 250)
- **b.** Size band 2 >15 but <= 30kg BOD5/day (population equivalent: 251 - 500)
- **c.** Size band 3 >30 but <= 120kg BOD5/day (population equivalent: 501 – 2,000)
- **d.** Size band 4 >120 but <= 600kg BOD5/day (population equivalent: 2,001 –10,000)
- **e.** Size band 5 >600 but <= 1500kg BOD5/day (population equivalent: 10,001 – 25,000)

Large Works

- **i.** Size band 6 > 1500kg BOD5/day (population equivalent: > 25,000)

The total number of WWTWs in Table 17C line 7 is the total of all works in this table i.e. 1058 including the screened outfalls (5 No.) and the unscreened outfalls (13 No). It should be noted that when the Asset Information Centre was requested to query NIW's Corporate Asset Register for NIW's number of WWTWs, it revealed 1059. However CAR lists Ballyhalbert WWTWs twice as the works is on two different sites although it is one single works.

The Reporters report for AIR09 recommended that the difference in 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 AIR10 comparison between the two figures.

Total Residential Population used to Calculate Table 17C for AIR10	1205727
Total Population connected to the sewerage system based on Table 13 Line 10 for AIR10	1452886
Difference	247159

As can be seen there is a difference of 247159. However the Table 17c information does not include the residential population within PPP catchments which equates to approximately 308294. (Please note this is based on APT information updated from AIR09 and may differ from information held by the PPP section).

If this figure is added to the 17c figure then the total is 1514021 this is 61135 greater than the figure held in Table 13 Line 10, approximately 4.2% larger.

A further comparison was carried out based on PPP PEs for AIR10 and subtracting all non-residential elements held by APT. The details can be seen in the table below.

Name of Treatment Works	Equivalent Population (From PPP Section)	APT Non-Residential Pe held against PPP Catchments (Includes Non-Residential, Trade, Schools, Large water Consumers)	Residential Population (Based on PPP Equivalent Population)
North Down WWTW	72750	12905	59845
Armagh WWTW	30717	12613	18104
Richhill WWTW	2150	447	1703
Newtownards (Ballyrickard)	40533	13751	26782
Ballynacor WWTW	133866	68282	65584
Kinnegar	90,000	37635	52365
Total	370,016	145632	224384

As can be seen the residential population for the PPP sites is now 224384 if this is added to the 17c figure then the total is 1430111 this is 22775 less than the figure held in Table 13, approximately 1.57% smaller.
The Table 17c figure is based upon PEs held against the individual WWTWs catchments whereas the Table 13 figure is based on the Customer Services billing database (RAPID) which looks at Northern Ireland as a whole. To align this information would involve the analysis of all 1058 catchments in conjunction with RAPID, which is not feasible in the timeframe from AIR09 to AIR10. However based on the confidence ratings of both tables a discrepancy of either 4.2% or 1.57% (depending of which figure is used) does not seem unreasonable.

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 who populate Tables 17 a and b, hence population figures should be consistent.

The table below highlights the changes in band sizes from AIR09 to AIR10

Name of WWTWs	**Car Id**	**AIR09 Band Size**	**AIR10 Band Size**	**Comment**
Newtownards (Ballyrickard)	241	Band 6	PPP	This WWTWs is now a PPP site
Kilclief (RT)	269	Band 2	Pumpaway	This now pumps to Strangford
Lisbarnet (WWTW)	239	Band3	Pumpaway	This now pumps to Ringneil
Poundburn	318	Band2	Pumpaway	This now pumps to Annahilt
Ringneil (WWTW)	237	Band 1	Band 3	Pe increased from 170 to 673 as Lisbarnet now pumps to this WWTWs
Barnish Road (44-46)	1758	Band 1	Decommissioned	Individual septic tanks installed at the properties served by this WWTWs
Ballycastle (WWTW)	1071	Band 4	Band 5	Pe increased from 8414 to 12117 following a flow & load survey
Mullans (Antrim)	1118	Band 1	Band 2	Pe increased from 199 to 261 following an onsite house count by APT
Randalstown	1425	Band 4	Pumpaway	This now pumps to Antrim
Armagh (WWTW)	2558	Band 6	PPP	This WWTWs is now a PPP site
Artasooly	2559	Band 2	Pumpaway	This now pumps to Benburb
Ballynacor	2395	Band 6	PPP	This WWTWs is now a PPP site
Bullays Hill	2398	Band 6	PPP	This WWTWs is now a PPP site
Bush	2833	Band 3	Pumpaway	This now pumps to Coalisland
Castlewellan (WWTW)	2694	Band 4	Pumpaway	This now pumps to Annsborough
Cloghoge Road	2170	Band 1	Pumpaway	This now pumps to Tandragee
Cross Lane (2-6)	2911	Band 1	Decommissioned	Individual septic tanks installed at the properties served by this WWTWs

Name of WWTWs	Car Id		AIR09 Band Size	AIR10 Band Size	Comment
Donaghmore (WWTW)	2840	Band 3	Band 4	Pe increased from 1696 to 2151 following an increase in trade discharging in area	
Drumman Hill	2575	Band 1	Pumpaway	This now pumps to Armagh	
Loughdian	2146	Band 1	Gravity Away	This WWTWs now gravitates to Poyntzpass	
Magheralin	2413	Band 3	PPP	This WWTWs is now a pumpaway to a PPP site	
Richill	2597	Band 4	PPP	This WWTWs is now a PPP site	
Seagoe (WWTW)	2420	Band 5	PPP	This WWTWs is now a PPP site	
Stramore	2173	Band 1	Gravity Away	This WWTWs now gravitates to Gilford	
Aghanloo (2)	2989	Band 3	Decommissioned	This works served a factory which is now closed	
Oghill (1)	3205	Band 1	Gravity Away	This WWTWs now gravitates to Culmore	
Lower Rashee Road (15-21)	5188		Band 1	This was previously an unconsented WWTWs	
Conthem Rd	3180		Band 1	This site was adopted from NIHE	
Tullynakill Road	5280		Band 1	This site was adopted from a private developer	
Reaskmore Road	5286		Band 1	This site was adopted from NIHE	

The table below highlights the changes in treatment category from AIR09 to AIR10.

Name of WWTWs	Car Id	AIR09 Treatment Category	AIR10 Treatment Category	Comment
Newtownards (Ballyrickard)	241	Sec Bio	PPP	This WWTWs is now a PPP site
Downpatrick (WWTW)	771	Sec Act	Ter A1	WWTWs upgraded since AIR09
Kilclief (Retention Tank)	269	Sea Out Screen	Pump Away	This now pumps to Strangford
Lisbarnet (WWTW)	239	Sec Act	Pump Away	This now pumps to Ringneil
Loughinisland (WWTW)	298	Prim	Sec Bio	WWTWs upgraded since AIR09
Maghera (Down)	305	Sec Act	Sec Bio	WWTWs upgraded since AIR09

Name of WWTWs	Car Id	AIR09 Treatment Category	AIR10 Treatment Category	Comment
Poundburn	318	Sec Bio	Pump Away	This now pumps to Annahilt
Ringneill (WWTW)	237	Sec Act	Ter A1	WWTWs upgraded since AIR09
Saintfield (WWTW)	290	Sec Bio	Sec Act	WWTWs upgraded since AIR09
Seahill (WWTW)	774	Prim	Sec Act	WWTWs upgraded since AIR09
Barnish Road(44-46)	1758	Prim	Decommissioned	Individual septic tanks installed at the properties served by this WWTWs
Draperstown	1615	Ter A1	Sec Act	WWTWs upgraded since AIR09
Oakland Villas	1711	Prim	Sec Bio	WWTWs upgraded since AIR09
Randalstown	1425	Sec Bio	Pumpaway	This now pumps to Antrim
Springhill Road(1)	1713	Prim	Sec Bio	WWTWs upgraded since AIR09
Tulnacross Road(44-46)	1820	Prim	Sec Bio	WWTWs upgraded since AIR09
Annsborough	2687	Ter B1	Sec Act	WWTWs upgraded since AIR09
Armagh (WWTW)	2558	Ter A2	PPP	This WWTWs is now a PPP site
Artasooly	2559	Sec Bio	Pump Away	This now pumps to Benburb
Ballycoshone	2689	Prim	Sec Bio	WWTWs upgraded since AIR09
Ballynacor	2395	Ter A2	PPP	This WWTWs is now a PPP site
Bullays Hill	2398	Ter B2	PPP	This WWTWs is now a PPP site
Bush	2833	Ter B1	Pump Away	This now pumps to Coalisland
Carrickrovaddy	2257	Prim	Sec Bio	WWTWs upgraded since AIR09
Castlewellan (WWTW)	2694	Ter B1	Pump Away	This now pumps to Annsborough
Cloghoge Road	2170	Prim	Pump Away	This now pumps to Tandragee

Name of WWTWs	Car Id	AIR09 Treatment Category	AIR10 Treatment Category	Comment
Cross Lane(2-6)	2911	Prim	Decommissioned	Individual septic tanks installed at the properties served by this WWTWs
Diviny	2403	Sec Act	Sec Bio	WWTWs upgraded since AIR09
Drumman Hill	2575	Sec Bio	Pump Away	This now pumps to Armagh
Hamiltonsbawn	2603	Ter B2	Sec Act	WWTWs upgraded since AIR09
Katesbridge Road(79-85)	2110	Prim	Sec Bio	WWTWs upgraded since AIR09
Loughdian	2146	Sec Bio	Gravity Away	This WWTWs now gravitates to Poyntzpass
Lower Ballinderry	2410	Sec Bio	Ter B2	WWTWs upgraded since AIR09
Magheralin	2413	Sec Bio	PPP	This WWTWs is now a pumpaway to a PPP site
Mullaghbane (Armagh)	2594	Prim	Sec Bio	WWTWs upgraded since AIR09
Mullaghglass (Newry)	2280	Sec Act	Sec Bio	WWTWs upgraded since AIR09
Richill	2597	Ter B1	PPP	This WWTWs is now a PPP site
Seagoe (WWTW)	2420	Ter B2	PPP	This WWTWs is now a PPP site
Lisnagade Road(54-56)	2161	Prim	Sec Bio	WWTWs upgraded since AIR09
Soldierstown	2431	Sec Act	Sec Bio	WWTWs upgraded since AIR09
Stramore	2173	Prim	Gravity away	This WWTWs now gravitates to Gilford
Aghanloo (2)	2989	Prim	Abandoned	This works served a factory which is now closed
Cranagh (WWTW)	3065	Prim	Sec Bio	WWTWs upgraded since AIR09
Drummack	3094	Prim	Sec Bio	WWTWs upgraded since AIR09
Myroe (WWTW)	3198	Sec Act	Sec Bio	WWTWs upgraded since AIR09
Oghill (1)	3205	Sec Bio	Gravity Away	This WWTWs now gravitates to Culmore

Name of WWTWs	Car Id	AIR09 Treatment Category	AIR10 Treatment Category	Comment
Portaferry (2)	5200	Sea Out Screen	Sec Act	WWTWs upgraded since AIR09
Lower Rashee Road (15-21)	5188	Not listed in AIR09	Sec Bio	This was previously an unconsented WWTWs
Conthem Rd	3180	Not listed in AIR09	Sec Bio	This site was adopted from NIHE
Tullynakill Road	5280	Not listed in AIR09	Sec Bio	This site was adopted from a private developer

Difference between AIR09 and AIR10 for total in Table 17c (Column 11, row 7)

Total Number of Works for AIR09 -	**1076**
Total Number of Works for AIR 10 -	**1058**
Total Difference -	**18**

Note: PPP WWTWs are not included in this return for AIR10 (as being reported by PPP section).

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 AIR09 to present are summarised below:

Line	Number Reported AIR09	Number Reported AIR10	Difference	Comment
8	46	48	2	7 new sites- Ballycastle, Orritor, Hilltown, Dromore (Tyrone), Enniskillen, Greencastle (Tyrone), Park 5 sites removed- Annahilt, Poundburn, Aghanloo 1, Aghanloo 2, Derrylin
9	35	41	6	12 new sites- Annahilt, Ballycranbeg, Ballyvoy, Crossmaglen, Dromore (Down), Galbally, Robinsonstown, Florencecourt, Irvinestown, Kinawley, Monea, Tamnaherin 6 sites removed – Lisbarnet, Bush, Killyman, Magheralin, Belleek (Fermanagh), Greencastle (Tyrone)

Table 17c PPP
Introduction: To define the Treatment Category of the relevant Treatment Works.

General
A number of the Omega PPP Facilities were in transition from NIW Operation to PPP Service during the reporting period. For the purpose of Table 17 the reporting is based on the following principles:

Non Financial Information (NFI) Tables 17b, c & d
Irrespective of whether or not the Facility was in Service, it is treated as a PPP Facility (Scheme) for the Reporting Period over which the Concessionaire held the Water Order Consent as the operator and retained the data. Consequently, NFI is reported as 'PPP Only' and not 'NIW Only' for the following:

1. Kinnegar WWTW
2. North Down Ards WWTW
3. Richhill WWTW
4. Ballyrickard WWTW
5. Armagh WWTW
6. Ballynacor (including Bullays Hill PS and Seagoe PS) WWTW

Lines 1 - 3 – Size bands 1 to 3
Nil Return.

Line 4 - Size band 4
Column 4 refers to the Richhill WwTW which is a Secondary Activated Treatment process which has been operated by the Omega PPP Contractor during the reporting period. This is an increase on 1 from last year.

Line 6 – Size band 6
Column 2 refers to the Kinnegar WwTW as Secondary Activated Treatment processes; has been operated by the PPP Contractor (CCWL) during the reporting period. There is no increase from last year.

Column 5 refers to the Armagh, Ballyrickard, North Down and Ballynacor WwTW's which are Secondary Activated Treatment process which has been operated by the Omega PPP Contractor during the reporting period. This is an increase on 3 from last year.

Line 8 – Small STW's with ammonia consents (5-10 mg/l)
Nil return.

Line 9 - Small STW's with ammonia consents (<=5 mg/l)
Refers to Richhill WwTW which is a small works with an ammonia consent of 2mg/l 95%ile and 10mg/l UTL. This is an increase on 1 from last year.

Table 17d

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

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											
					SECONDARY		TERTIARY				SEA OUTFALLS				
				PRIMARY	ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	TOTAL	CG
A	**SMALL WORKS**														
1	Load received by STWs in size band 1	kg BOD_5/day	0	144	304	1420	6	0	16	25	0	0	67	1982	C3
2	Load received by STWs in size band 2	kg BOD_5/day	0	0	346	644	89	0	166	0	29	68	0	1342	C3
3	Load received by STWs in size band 3	kg BOD_5/day	0	36	1862	3119	314	156	744	240	276	235	244	7225	C3
4	Load received by STWs in size band 4	kg BOD_5/day	0	366	7096	2144	339	981	1162	452	370	379	272	13560	C3
5	Load received by STWs in size band 5	kg BOD_5/day	0	0	5829	726	1107	5220	0	879	841	0	0	14601	C3
B	**LARGE WORKS**														
6	Load received by STWs in size band 6	kg BOD_5/day	0	0	48383	0	8942	16104	0	0	0	0	0	73429	C3
7	Total loads rec'd (daily average all size bands)	kg BOD_5/day	0	546	63820	8052	10797	22460	2087	1595	1517	682	583	112140	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	9112											
9	Load rec'd by small STW w. NH_3 consents (< = 5mg/l)	kg BOD_5/day	0	9524											

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 17d SEWERAGE EXPLANATORY FACTORS

SEWAGE TREATMENT WORKS - LOADS (PPP Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	
				TREATMENT CATEGORY											
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			TOTAL	
					ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED		CG
A	**SMALL WORKS**														
1	Load received by STWs in size band 1	kg BOD5/day	0											0	
2	Load received by STWs in size band 2	kg BOD5/day	0											0	
3	Load received by STWs in size band 3	kg BOD5/day	0											0	
4	Load received by STWs in size band 4	kg BOD5/day	0				129							129	B3
5	Load received by STWs in size band 5	kg BOD5/day	0											0	
B	**LARGE WORKS**														
6	Load received by STWs in size band 6	kg BOD5/day	0		5405			16672						22077	B3
7	Total loads rec'd (daily average all size bands)	kg BOD5/day	0	0	5405	0	129	16672	0	0	0	0	0	22206	B3
C	**SMALL WORKS WITH AMMONIA CONSENTS**														
8	Load rec'd by small STW w. NH3 consent (5 - 10mg/l)	kg BOD5/day	0												
9	Load rec'd by small STW w. NH3 consents (< = 5mg/l)	kg BOD5/day	0	129											

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 17d SEWERAGE EXPLANATORY FACTORS

SEWAGE TREATMENT WORKS - LOADS (Total)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	
				TREATMENT CATEGORY											
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			TOTAL	
					ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED		CG
A	**SMALL WORKS**														
1	Load received by STWs in size band 1	kg BOD5/day	0	144	304	1420	6	0	16	25	0	0	67	1982	C3
2	Load received by STWs in size band 2	kg BOD5/day	0	0	346	644	89	0	166	0	29	68	0	1342	C3
3	Load received by STWs in size band 3	kg BOD5/day	0	36	1862	3119	314	156	744	240	276	235	244	7225	C3
4	Load received by STWs in size band 4	kg BOD5/day	0	366	7096	2144	468	981	1162	452	370	379	272	13689	C3
5	Load received by STWs in size band 5	kg BOD5/day	0	0	5829	726	1107	5220	0	879	841	0	0	14601	C3
B	**LARGE WORKS**														
6	Load received by STWs in size band 6	kg BOD5/day	0	0	53788	0	8942	32776	0	0	0	0	0	95506	C3
7	Total loads rec'd (daily average all size bands)	kg BOD5/day	0	546	69225	8052	10926	39132	2087	1595	1517	682	583	134346	C3
C	**SMALL WORKS WITH AMMONIA CONSENTS**														
8	Load rec'd by small STW w. NH3 consent (5 - 10mg/l)	kg BOD5/day	0	9112											
9	Load rec'd by small STW w. NH3 consents (< = 5mg/l)	kg BOD5/day	0	9653											

Table 17d - Sewage treatment works loads

General

The Asset Management Section (AMS) has co-ordinated information from PPP for the population of 'Table17c – PPP' table and the completion of 'Table 17d – total' table, and the associated commentary from PPP.

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 i.e. PEs (minus the allowance for the tourist population) held by the Asset Performance Team. Since AIR09 PEs for 143 WWTWs have been updated.

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 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.

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.

1076 WWTWs were reported on in Table 17d for AIR09. Hence there has been an overall net reduction of 18 in the number of WWTWs being reported on, which is summarised as follows:

2. 12 WWTWs (Kilclief RT, Lisbarnet, Poundburn, Randalstown, Artasooly, Bush, Castlewellan, Cloghoge Road and Drumman Hill were pumped to other works. Loughdian, Stramore and Oghill (1) (gravitated away) have been rationalised with larger WWTWs.
3. 7 WWTWs are now the responsibility of the PPP consortium, namely Newtwonards (Ballyrivckard), Armagh, Ballynacor and Richill. Bullays Hill, Seagoe WWTWs and Magheralin WWTWs have been converted to pumping stations which now pump to Ballynacor PPP WWTWs).
4. 3 WWTWs (Barnish Road (44-46), Cross Lane (2-6) & Aghanloo (2)) have been decommissioned.
5. 4 WWTWs (Lower Rashee Road (15-21), Conthem Road, Tullynakill Road & Reaskmore Road) are now included in AIR10, which have come to the attention of NIW during the past year.

We have assumed the Bands to be:

Small works

- **a.** size band 1 <= 15kg BOD5/day (population equivalent: 0 - 250)
- **b.** size band 2 >15 but <= 30kg BOD5/day (population equivalent: 251 - 500)
- **c.** size band 3 >30 but <= 120kg BOD5/day (population equivalent: 501–

2,000)

d. size band 4 >120 but <= 600kg BOD5/day (population equivalent: 2,001 –10,000)

e. size band 5 >600 but <= 1500kg BOD5/day (population equivalent: 10,001 – 25,000)

Large Works

f. size band 6 > 1500kg BOD5/day (population equivalent: > 25,000)

The total number of WWTWs in Table 17C line 7 is the total of all works in this table i.e. 1058 including the screened outfalls (5 No.) and the unscreened outfalls (13 No.).

The Reporters Report on AIR09 recommended that NIW correct possible overestimation of total WWTWs 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 size.

Also due to the rural nature of Northern Ireland a large proportion of the population commute from rural to urban catchments and therefore the potential for overestimation may not be as excessive as other parts of the United Kingdom.

It is hoped that a number of flow and load studies should be completed by AIR11 and this should improve confidence in the PEs for these catchments.

The table below highlights all the 143 WWTWs for which PEs have been updated for AIR10.

The confidence grades of the data in lines 2 - 4 remain as C3, as although the PE confidence has been re-assessed as C5 there is greater confidence in process categories for the WWTWs, which warrants the raising of grade from C5 to C3.

Name of Works	CAR ID	AIR09 Actual Pe	AIR10 Actual Pe	Difference between AIR10 & AIR09 Actual Pe (-ve indicates AIR10 Figure Smaller)	AIR09 Band Sizes	AIR10 Band Sizes	Change Band Size from AIR09
Aghalee	2394	1212	1205	-7	Band 3	Band 3	
Aghanloo (1)	2989	523	540	17	Band 3	Band 3	
Aghanloo (2)	2989	940	Abandoned	-940	Band 3		Y
Annahilt (WWTW)	317	1356	1756	399	Band 3	Band 3	
Annalong (WWTW)	300	3089	3044	-45	Band 4	Band 4	
Annsborough	2687	2383	6877	4494	Band 4	Band 4	
Antrim (WWTW)	1422	56570	65165	8595	Band 6	Band 6	
Ardglass (WWTW)	268	3366	3414	48	Band 4	Band 4	
Armagh (WWTW)	2558	26351	PPP	-26351	Band 6	PPP	Y
Artasooly	2559	274	Pumpaway	-274	Band 2		Y
Aughnacloy	3007	1906	1901	-5	Band 3	Band 3	
Ballybogy	1087	631	648	17	Band 3	Band 3	
Ballycastle (WWTW)	1071	10312	14015	3703	Band 4	Band 5	Y
Ballyclare	1467	18703	18708	5	Band 5	Band 5	
Ballycranbeg	218	293	362	69	Band 2	Band 2	
Ballykelly (L/Derry)	3016	4764	4813	49	Band 4	Band 4	
Ballymagorry (WWTW)	3018	709	896	187	Band 3	Band 3	
Ballymartin (Retention Tank)	770	668	637	-31	Band 3	Band 3	
Ballymena (WWTW)	1456	119184	113825	-5359	Band 6	Band 6	
Ballynacor	2395	102837	PPP	-102837	Band 6	PPP	Y
Ballynahinch (Down)	311	7988	7996	8	Band 4	Band 4	
Ballyronan (WWTW)	1558	968	989	21	Band 3	Band 3	
Ballyvoy	1177	273	289	16	Band 2	Band 2	
Banbridge (WWTW)	2102	21730	23204	1474	Band 5	Band 5	

Name of Works	CAR ID	AIR09 Actual Pe	AIR10 Actual Pe	Difference between AIR10 & AIR09 Actual Pe (-ve indicates AIR10 Figure Smaller)	AIR09 Band Sizes	AIR10 Band Sizes	Change Band Size from AIR09
Barnish Road (44-46)	1758	6	Decommissioned	-6	Band 1		Y
Belfast (WWTW)	345	355556	365866	10310	Band 6	Band 6	
Belleek (Fermanagh)	3024	1688	1689	1	Band 3	Band 3	
Benburb (WWTW)	2831	546	820	274	Band 3	Band 3	
Blackrock Retention Tank (Down)	306	242	249	7	Band 1	Band 1	
Brookeborough (WWTW)	3032	800	664	-136	Band 3	Band 3	
Bullays Hill	2398	51147	Pumpaway	-51147	Band 6	PPP	Y
Bush	2833	639	Pumpaway	-639	Band 3		Y
Bushmills (WWTW)	1178	2804	2653	-151	Band 4	Band 4	
Carrickfergus (WWTW)	261	32030	32091	61	Band 6	Band 6	
Castledawson	1609	1304	1298	-6	Band 3	Band 3	
Castlederg (WWTW)	3042	4852	4873	21	Band 4	Band 4	
Castlewellan (WWTW)	2694	4624	Pumpaway	-4624	Band 4		Y
Clady (Tyrone)	4149	754	757	3	Band 3	Band 3	
Cloghoge Road	2170	27	Pumpaway	-27	Band 1		Y
Clough (WWTW)	296	618	602	-16	Band 3	Band 3	
Coalisland	2828	11118	12095	977	Band 5	Band 5	
Conthem Rd	3180		29	29		Band 1	Y
Cookstown (WWTW)	1582	20822	20717	-105	Band 5	Band 5	
Cross Lane(2-6)	2911	9	Abandoned	-9	Band 1		Y
Culmore (WWTW)	3071	137951	131187	-6764	Band 6	Band 6	
Derryhale	2570	1124	1151	27	Band 3	Band 3	
Donaghmore (WWTW)	2840	1696	2151	455	Band 3	Band 4	Y

Name of Works	CAR ID	AIR09 Actual Pe	AIR10 Actual Pe	Difference between AIR10 & AIR09 Actual Pe (-ve indicates AIR10 Figure Smaller)	AIR09 Band Sizes	AIR10 Band Sizes	Change Band Size from AIR09
Donemana	3103	925	941	16	Band 3	Band 3	
Donnybrewer	3080	5139	5175	36	Band 4	Band 4	
Downpatrick (WWTW)	771	17033	18446	1413	Band 5	Band 5	
Draperstown	1615	3247	3294	47	Band 4	Band 4	
Dromora (WWTW)	316	1375	1388	13	Band 3	Band 3	
Dromore (Down)	2127	7429	7666	237	Band 4	Band 4	
Drumman Hill	2575	24	Pumpaway	-24	Band 1		Y
Dungannon	2850	46711	61180	14469	Band 6	Band 6	
Dungiven	3101	4743	4760	17	Band 4	Band 4	
Dunmore Cottages	806	57	51	-6	Band 1	Band 1	
Dunmurry	346	53605	45827	-7778	Band 6	Band 6	
Dunnamore	1574	307	312	5	Band 2	Band 2	
Ederney (WWTW)	3106	1111	823	-288	Band 3	Band 3	
Enniskillen	3218	24726	24365	-361	Band 5	Band 5	
Fintona (WWTW)	3112	1980	1978	-1	Band 3	Band 3	
Fivemiletown (WWTW)	3113	2293	2134	-159	Band 4	Band 4	
Galbally	2844	332	383	51	Band 2	Band 2	
Garvagh (WWTW)	1154	2285	2257	-28	Band 4	Band 4	
Gilford (WWTW)	2162	2429	2480	51	Band 4	Band 4	
Glassdrumman (Down)	302	243	209	-34	Band 1	Band 1	
Glenstall	1109	18945	17894	-1051	Band 5	Band 5	
Greenisland (WWTW)	263	9641	9569	-72	Band 4	Band 4	
Hilltown (WWTW)	2701	2017	2148	131	Band 4	Band 4	
Irvinestown	3137	3461	3207	-254	Band 4	Band 4	

Name of Works	CAR ID	AIR09 Actual Pe	AIR10 Actual Pe	Difference between AIR10 & AIR09 Actual Pe (-ve indicates AIR10 Figure Smaller)	AIR09 Band Sizes	AIR10 Band Sizes	Change Band Size from AIR09
Keady (Armagh)	2553	4539	4579	40	Band 4	Band 4	
Kesh (WWTW)	3140	2669	2702	33	Band 3	Band 3	
Kilclief (RT)	269	268	Pumpaway	-268	Band 2		Y
Kilkeel (WWTW)	313	12610	11104	-1506	Band 5	Band 5	
Killinchy (WWTW)	252	2810	3111	301	Band 4	Band 4	
Killyleagh (WWTW)	273	7216	7553	337	Band 4	Band 4	
Kilmore (Down)	285	386	420	34	Band 2	Band 2	
Kilrea	1156	3551	2761	-790	Band 4	Band 4	
Kinawley	3149	397	381	-16	Band 2	Band 2	
Larne (WWTW)	2044	28571	28228	-343	Band 6	Band 6	
Limavady (WWTW)	3162	16191	16177	-14	Band 5	Band 5	
Lisbarnet (WWTW)	239	503	Pumpaway	-503	Band 3		Y
Lisburn (New Holland)	329	63000	63012	12	Band 6	Band 6	
Lisnaskea (WWTW)	3171	6394	6441	47	Band 4	Band 4	
Loughdian	2146	18	Gravity away	-18	Band 1		Y
Lower Rashee Road (15-21)	5188		12	12		Band 1	Y
Magherafelt (WWTW)	1621	14460	14644	184	Band 5	Band 5	
Magheralin	2413	1875	Pumpaway	-1875	Band 3	To PPP	Y
Magheramason	3177	598	600	2	Band 3	Band 3	
Markethill	2591	2827	2853	26	Band 4	Band 4	
Martinstown	1445	578	611	33	Band 3	Band 3	
Mayboy	1163	158	192	34	Band 1	Band 1	
Moira	2429	5115	5381	266	Band 4	Band 4	
Monea (WWTW)	3186	359	373	14	Band 2	Band 2	

Name of Works	CAR ID	AIR09 Actual Pe	AIR10 Actual Pe	Difference between AIR10 & AIR09 Actual Pe (-ve indicates AIR10 Figure Smaller)	AIR09 Band Sizes	AIR10 Band Sizes	Change Band Size from AIR09
Moneymore (WWTW)	1589	2800	2804	4	Band 4	Band 4	
Moneyneany (WWTW)	1631	265	329	64	Band 2	Band 2	
Moneyreagh (WWTW)	337	2269	2274	5	Band 4	Band 4	
Moneyslane (WWTW)	2151	404	380	-24	Band 2	Band 2	
Moy (WWTW)	2859	5084	3970	-1114	Band 4	Band 4	
Mullanahoe (WWTW)	2043	1172	1159	-13	Band 3	Band 3	
Mullans (Antrim)	1118	199	261	62	Band 1	Band 2	Y
Newcastle (WWTW)	303	16229	16261	32	Band 5	Band 5	
Newry (WWTW)	2685	70464	63915	-6549	Band 6	Band 6	
Newtownards (Ballyrickard)	241	50892	PPP	-50892	Band 6	PPP	Y
Newtownbreda (WWTW)	342	39517	40199	682	Band 6	Band 6	
Newtownbutler (WWTW)	3200	1728	1735	7	Band 3	Band 3	
Newtownstewart (WWTW)	3202	2168	2177	9	Band 4	Band 4	
North Coast (WWTWs)	4150	76651	76115	-536	Band 6	Band 6	
Oghill (1)	3205	54	Gravity Away	-54	Band 1		Y
Omagh (WWTW)	3999	49851	48791	-1060	Band 6	Band 6	
Orritor (WWTW)	1591	306	291	-15	Band 2	Band 2	
Plumbridge (WWTW)	3210	469	449	-20	Band 2	Band 2	
Portavogie(Retention Tank)	209	3405	3276	-129	Band 4	Band 4	
Poundburn	318	401	Pumpaway	-401	Band 2		Y
Poyntzspass (WWTW)	2156	862	880	18	Band 3	Band 3	
Randalstown	1425	6666	Pumpaway	-6666	Band 4		Y
Rasharkin	1120	1780	1551	-229	Band 3	Band 3	
Rathfriland (WWTW)	2713	3466	3455	-11	Band 4	Band 4	

Name of Works	CAR ID	AIR09 Actual Pe	AIR10 Actual Pe	Difference between AIR10 & AIR09 Actual Pe (-ve indicates AIR10 Figure Smaller)	AIR09 Band Sizes	AIR10 Band Sizes	Change Band Size from AIR09
Reaskmore Road	5286		12	12		Band 1	Y
Redford	2853	284	278	-6	Band 2	Band 2	
Richill	2597	3384	PPP	-3384	Band 4	PPP	Y
Ringneill (WWTW)	237	170	673	503	Band 1	Band 3	Y
Robinsonstown	2419	547	516	-31	Band 3	Band 3	
Roughfort (WWTW)	1470	446	431	-15	Band 2	Band 2	
Saintfield (WWTW)	290	4425	4433	8	Band 4	Band 4	
Seagoe (WWTW)	2420	15000	Pumpaway	-15000	Band 5	PPP	Y
Seahill (WWTW)	774	6771	6795	24	Band 4	Band 4	
Stewartstown	1599	1167	1104	-63	Band 3	Band 3	
Strabane	3223	22606	20782	-1824	Band 5	Band 5	
Stramore	2173	18	Gravity away	-18	Band 1		Y
Strangford	226	968	1236	268	Band 3	Band 3	
Tamnaherin	3226	365	311	-54	Band 2	Band 2	
Tamnamore (WWTW)	2862	611	634	23	Band 3	Band 3	
Tandragee	2174	7864	8352	488	Band 4	Band 4	
Tempo (WWTW)	3229	840	823	-17	Band 3	Band 3	
Trillick (WWTW)	3231	602	603	1	Band 3	Band 3	
Tully Road Headworks	3975	2191	2164	-27	Band 4	Band 4	
Tullynakill Road	5280		31	31		Band 1	Y
Warrenpoint (WWTW)	2720	14899	14939	40	Band 5	Band 5	
Waterfoot Road (WWTW)	1643	124	187	63	Band 1	Band 1	
Whitehead (WWTW)	452	4593	4536	-57	Band 4	Band 4	
Whitehouse	265	88098	88410	312	Band 6	Band 6	
			Total	-251158			

The change in Pe equates to a difference in load of 15069.48kg/d from AIR09 to AIR10.

Difference between AIR10 and AIR09 for the total load entering WWTWs as shown in Table 17d - column 11, row 7

Total Load Received at WWTWs for AIR09 -	127209
Total Load Received at WWTWs for AIR 10 -	112140
Total Difference -	**15069**

The interpretation of the treatment categories is as below:-

AIR09 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

AIR09 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 AIR09 to AIR10.

Name of Works	CAR ID	AIR09 Actual Pe	AIR10 Actual Pe	Change in Overall Pe from 08 to 09 (-ve signifies a decrease)	Comments
Annahilt (WWTW)	317	1356	1756	-1356	This WWTWs no longer has a ammonia consent greater than 5 and equal to or less than 10
Poundburn	318	401	Pumpaway	-401	This WWTWs is now a pumpaway
Ballycastle (WWTW)	1071	10312	14015	14015	This WWTWs now has a ammonia consent greater than 5 and equal to or less than 10
Orritor (WWTW)	1591	306	291	291	This WWTWs now has a ammonia consent greater than 5 and equal to or less than 10
Hilltown (WWTW)	2701	2017	2148	2148	This WWTWs now has a ammonia consent greater than 5 and equal to or less than 10
Aghanloo (1)	2989	523	540	-523	This WWTWs no longer has a ammonia consent greater than 5 and equal to or less than 10
Aghanloo (2)	2989	940	Abandoned	-940	This WWTWs has been abandoned
Derrylin (WWTW)	3075	915	915	-915	This WWTWs no longer has a ammonia consent greater than 5 and equal to or less than 10
Dromore (Tyrone)	3083	2032	2032	2032	This WWTWs now has a ammonia consent greater than 5 and equal to or less than 10
Enniskillen	3218	24726	24365	24365	This WWTWs now has a ammonia consent greater than 5 and equal to or less than 10
Greencastle (Tyrone)	3132	379	379	379	This WWTWs now has a ammonia consent greater than 5 and equal to or less than 10
Park (WWTW)	3207	766	766	766	This WWTWs now has a ammonia consent greater than 5 and equal to or less than 10
Dromora (WWTW)	316	1375	1388	13	PE has been updated since AIR09

Name of Works	**CAR ID**	**AIR09 Actual Pe**	**AIR10 Actual Pe**	**Change in Overall Pe from 08 to 09 (-ve signifies a decrease)**	**Comments**
Ballyronan (WWTW)	1558	968	989	21	PE has been updated since AIR09
Magherafelt (WWTW)	1621	14460	14644	184	PE has been updated since AIR09
Coalisland	2828	11118	12095	977	PE has been updated since AIR09
Derryhale	2570	1124	1151	27	PE has been updated since AIR09
Donaghmore (WWTW)	2840	1696	2151	455	PE has been updated since AIR09
Markethill	2591	2827	2853	26	PE has been updated since AIR09
Ederney (WWTW)	3106	1111	823	-288	PE has been updated since AIR09
Fintona (WWTW)	3112	1980	1978	-1	PE has been updated since AIR09
Kesh (WWTW)	3140	2669	2702	33	PE has been updated since AIR09
Lisnaskea (WWTW)	3171	6394	6441	47	PE has been updated since AIR09
Newtownstewart (WWTW)	3202	2168	2177	9	PE has been updated since AIR09
Strabane	3223	22606	20782	-1824	PE has been updated since AIR09
			Total	39539	

Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR09-	**6740.1**
Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR10-	**9112.5**
Total Difference -	**2372.4**

Changes in Line 9 - Small Works with Ammonia Consent (between 5 and 10) from AIR09 to AIR10.

Name of Works	CAR ID	AIR09 Actual Pe	AIR10 Actual Pe	Change in Overall Pe from 08 to 09 (-ve signifies a decrease)	Comments
Annahilt (WWTW)	317	1356	1756	1756	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5
Ballycranbeg	218	293	362	362	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5
Lisbarnet (WWTW)	239	503	Pumpaway	-503	This WWTWs is now a pumpaway
Ballyvoy	1177	273	289	289	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5
Bush	2833	639	Pumpaway	-639	This WWTWs is now a pumpaway
Crossmaglen	2273	2908	2908	2908	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5
Dromore (Down)	2127	7429	7666	7666	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5
Galbally	2844	332	383	383	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5
Killyman	2847	948	948	-948	This WWTWs no longer has a ammonia consent greater than 0 and equal to or less than 5
Magheralin	2413	1875	Pumpaway	-1875	This WWTWs is now a pumpaway
Robinsonstown	2419	547	516	516	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5
Belleek (Fermanagh)	3024	1688	1689	-1688	This WWTWs no longer has a ammonia consent greater than 0 and equal to or less than 5
Florencecourt	3114	289	289	289	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5

Name of Works	**CAR ID**	**AIR09 Actual Pe**	**AIR10 Actual Pe**	**Change in Overall Pe from 08 to 09 (-ve signifies a decrease)**	**Comments**
Greencastle (Tyrone)	3132	379	379	-379	This WWTWs no longer has a ammonia consent greater than 0 and equal to or less than 5
Irvinestown	3137	3461	3207	3207	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5
Kinawley	3149	397	381	381	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5
Monea (WWTW)	3186	359	373	373	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5
Tamnaherin	3226	365	311	311	This WWTWs now has a ammonia consent greater than 0 and equal to or less than 5
Ballynahinch (Down)	311	7988	7996	8	PE has been updated since AIR09
Downpatrick (WWTW)	771	17033	18446	1413	PE has been updated since AIR09
Killinchy (WWTW)	252	2810	3111	301	PE has been updated since AIR09
Moneyreagh (WWTW)	337	2269	2274	5	PE has been updated since AIR09
Ballybogy	1087	631	648	17	PE has been updated since AIR09
Ballyclare	1467	18703	18708	5	PE has been updated since AIR09
Garvagh (WWTW)	1154	2285	2257	-28	PE has been updated since AIR09
Cookstown (WWTW)	1582	20822	20717	-105	PE has been updated since AIR09
Banbridge (WWTW)	2102	21730	23204	1474	PE has been updated since AIR09
Moira	2429	5115	5381	266	PE has been updated since AIR09
Poyntzspass (WWTW)	2156	862	880	18	PE has been updated since AIR09
Rathfriland (WWTW)	2713	3466	3455	-11	PE has been updated since AIR09
Tandragee	2174	7864	8352	488	PE has been updated since AIR09
Newtownbutler (WWTW)	3200	1728	1735	7	PE has been updated since AIR09
			Total	16266	

Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR09-	**8548.4**
Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR10-	**9524.4**
Total Difference -	**976**

PPP

General
A number of the Omega PPP Facilities were in transition from NIW Operation to PPP Service during the reporting period. For the purpose of Table 17 the reporting is based on the following principles:

Non Financial Information (NFI) Tables 17b, c & d
Irrespective of whether or not the Facility was in Service, it is treated as a PPP Facility (Scheme) for the Reporting Period over which the Concessionaire held the Water Order Consent as the operator and retained the data. Consequently, NFI is reported as 'PPP Only' and not 'NIW Only' for the following:

1. Kinnegar WWTW
2. North Down Ards WWTW
3. Richhill WWTW
4. Ballyrickard WWTW
5. Armagh WWTW
6. Ballynacor (including Bullays Hill PS and Seagoe PS) WWTW

Financial Information (FI) Table 17f
The Financial Information (FI) is reported on 'PPP Only' Tables as NIW Water costs (excluding payments to Concessionaires) for Facilities (Schemes) which were in service for any part of the year, being:
1. Kinnegar WWTW
2. North Down Ards WWTW
3. Richhill WWTW
4. Ballyrickard WWTW
5. Armagh WWTW

NIW Financial Data for Ballynacor WWTW (including Bullays Hill WWTW and Seagoe WWTW) is included in 'NIW Only' tables.

Lines 1 – 3 Load received by STWs in size band 1 - 3
Nil Return – No PPP operated sites in these size bands.

Line 4 – Load received by STWs in size band 4
Column 4 refers to the Richhill WwTW which is a Tertiary A1 type Secondary Activated Treatment process which has been operated by the Omega PPP Contractor during the reporting period. The data represents the load received for the full reporting period, even though formal Service Commencement was not granted until 8 April 2009, as the Contractor was operating the works for the entire period, under the Contractor's own Water Order Consent as part of the Testing & Commissioning of the Facility 129 kg BOD/day consistent with Table 43. Not reported in AIR 09 as it was not a PPP operated site.

Line 6 – Load received by STWs in size band 6
Column 5 refers to the Armagh WwTW, Ballyrickard, North Down and Ballynacor WwTW's which are Tertiary A2 type works. These are Secondary Activated Treatment processes, with nutrient removal, and in some instances disinfection;

which were operated by the Omega PPP Contractor during the reporting period. Total 16,672 kg BOD/day consistent with Table 43 but significantly higher than the AIR09 data of 4097 kg BOD/day which was only for North Down WWTW.

North Down: 4365 kg BOD/day consistent with Table 43 and comparable with the AIR 09 data of 4097 kg BOD/day (which was for May 08 – March 09 rather than a full year of PPP operation).

Armagh: The data represents the load received for the full reporting period, even though formal Service Commencement was not granted until 27 August 2009, as the Contractor was operating the works for the entire reporting period, under the Contractor's own Water Order Consent as part of the Testing & Commissioning of the Facility. 1843kg BOD/day consistent with Table 43. Not reported in AIR 09 as it was not a PPP operated site.

Ballyrickard: The data represents the load received for the full reporting period, even though formal Service Commencement was not granted until 20 April 2009, as the Contractor was operating the works for the entire reporting period, under the Contractor's own Water Order Consent as part of the Testing & Commissioning of the Facility. 2432kg BOD/day consistent with Table 43. Not reported in AIR 09 as it was not a PPP operated site.

Ballynacor: The data represents the load received for the full reporting period, even though formal Service Commencement was not granted during the entire reporting period as the Contractor was operating the works for the entire reporting period, under the Contractor's Water Order Consent as part of the Testing & Commissioning of the Facility. In addition, the data represents the load received (and reported in AIR09) for Ballynacor WWTW, Bullay's Hill WWTW and Seagoe PS, which the PPP contractor delivered as a rationalised Facility solution at Ballynacor, with the old Bullay's Hill WWTW and Seagoe WWTW operated by NI Water becoming redundant on 16 March and 10 October respectively. 8032kg BOD/day consistent with Table 43. Not reported in AIR 09 as it was not a PPP operated site.

Column 2 refers to the Kinnegar WwTW as Secondary Activated Treatment processes; which has been operated by the PPP Contractor (CCWL) during the reporting period. The data represents the load received for the full reporting period, as the Contractor was operating the works for the entire period, under his own Water Order Consent. 5405kg BOD/day consistent with Table 43. The data for AIR 09 was comparable at 5030 kg BOD/day.

Line 8 – Load received by small STW with ammonia consent (5 – 10 mg/l)
Nil return.

Line 9 - **Load received by small STW with ammonia consent (<=5 mg/l)**
Refers to Richhill WwTW which is a small works with an NH3 consent of 2mg/l 95%ile and 10mg/l UTL as evidenced by the Concessionaire's Water Order Consent. 129 kg BOD/day consistent with Table 43 and not reported in AIR 09 as it was not a PPP operated site in that period.

Table 17f

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - COSTS (NIW Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			TOTAL
					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	82.955	106.874	391.385	2.382	0.000	4.581	8.051	0.000	0.000	17.704	613.933
2	Direct costs of STWs in size band 2	£000	3	0.000	126.334	227.989	46.979	0.000	53.218	0.000	5.780	25.023	0.000	485.324
3	Direct costs of STWs in size band 3	£000	3	8.640	737.735	994.010	128.217	98.301	236.008	97.192	17.937	0.051	68.158	2386.249
4	Direct costs of STWs in size band 4	£000	3	87.315	2121.498	507.416	104.374	286.346	268.276	142.372	63.406	58.486	27.377	3666.867
5	Direct costs of STWs in size band 5	£000	3	0.000	869.456	17.225	182.279	997.071	0.000	196.318	143.904	0.000	0.000	2406.254
B	**LARGE WORKS**													
6	Direct costs of STWs in size band 6	£000	3	0.000	3573.271	0.000	1311.886	2060.745	0.000	14.038	0.000	0.000	0.000	6959.941
C	**ALL WORKS**													
7	Total direct costs of STWs - all sizes	£000	3	178.910	7535.169	2138.026	1776.117	3442.463	562.084	457.972	231.028	83.561	113.239	16518.569
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	178.910	7535.169	2138.026	1776.117	3442.463	562.084	457.972	231.028	83.561	113.239	16518.569
10	Sewage Treatment: Power costs	£000	3	103.421	4355.802	1235.913	1026.708	1989.960	324.920	264.737	133.549	48.304	65.459	9548.772
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	227.261	4080.482	2275.777	1535.823	1185.064	595.831	445.323	222.664	101.829	150.159	10820.213
13	Sewage Treatment: Functional Expenditure	£000	3	406.171	11615.651	4413.803	3311.940	4627.527	1157.915	903.295	453.692	185.390	263.398	27338.782

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - COSTS (PPP only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
				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	-	-	-	-	-	-	-	-	-	-	0.000
5	Direct costs of STWs in size band 5	£000	3	-	-	-	0.000	-	-	-	-	-	-	0.000
B	**LARGE WORKS**													
6	Direct costs of STWs in size band 6	£000	3	-	0.000	-	-	0.000	-	-	-	-	-	0.000
C	**ALL WORKS**													
7	Total direct costs of STWs - all sizes	£000	3		0.000		0.000	0.000						0.000
8	Sludge Treatment and Disposal Adjustments	£000	3		0.000		0.000	0.000						0.000
9	Sewage Treatment: Direct costs	£000	3		0.000		51.000	1058.000						1109.000
10	Sewage Treatment: Power costs	£000	3		0.000		51.000	1058.000						1109.000
11	Sewage Treatment: service charges	£000	3		1.000		0.000	0.000						1.000
12	Sewage Treatment: General and Support (NIW)	£000	3		42.000		130.000	520.000						692.000
13	Sewage Treatment: Functional Expenditure	£000	3		42.000		181.000	1578.000						1801.000

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - COSTS (Total)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			
					ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	**SMALL WORKS**													
1	Direct costs of STWs in size band 1	£000	3	82.955	106.874	391.385	2.382	0.000	4.581	8.051	0.000	0.000	17.704	613.933
2	Direct costs of STWs in size band 2	£000	3	0.000	126.334	227.989	46.979	0.000	53.218	0.000	5.780	25.023	0.000	485.324
3	Direct costs of STWs in size band 3	£000	3	8.640	737.735	994.010	128.217	98.301	236.008	97.192	17.937	0.051	68.158	2386.249
4	Direct costs of STWs in size band 4	£000	3	87.315	2121.498	507.416	104.374	286.346	268.276	142.372	63.406	58.486	27.377	3666.867
5	Direct costs of STWs in size band 5	£000	3	0.000	869.456	17.225	182.279	997.071	0.000	196.318	143.904	0.000	0.000	2406.254
B	**LARGE WORKS**													
6	Direct costs of STWs in size band 6	£000	3	0.000	3573.271	0.000	1311.886	2060.745	0.000	14.038	0.000	0.000	0.000	6959.941
C	**ALL WORKS**													
7	Total direct costs of STWs - all sizes	£000	3	178.910	7535.169	2138.026	1827.117	4500.463	562.084	457.972	231.028	83.561	113.239	17627.569
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	178.910	7535.169	2138.026	1827.117	4500.463	562.084	457.972	231.028	83.561	113.239	17627.569
10	Sewage Treatment: Power costs	£000	3	103.421	4355.802	1235.913	1077.708	3047.960	324.920	264.737	133.549	48.304	65.459	10657.772
11	Sewage Treatment: service charges	£000	3	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
12	Sewage Treatment: General and Support	£000	3	227.261	4122.482	2275.777	1665.823	1705.064	595.831	445.323	222.664	101.829	150.159	11512.213
13	Sewage Treatment: Functional Expenditure	£000	3	406.171	11657.651	4413.803	3492.940	6205.527	1157.915	903.295	453.692	185.390	263.398	29139.782

Table 17f – Sewerage Explanatory Factors - Sewage Treatment Works – Costs (NIW only)

An updated Population Equivalent (PE) database with treatment type by WWTW's was sent from Asset Management on the 17th May 2010 which was used to populate Line 1-6. Ballyrickard transferred to PPP in April 2009 and is therefore no longer included in Size Band 6 – Line 6. Ballycastle WWTW's now falls into Band 5 – Line 5. Ballycastle does not have a separate W finance location code. However, it is included in an X code and these costs have been apportioned. The Cost to Serve project will provide costs for Ballycastle in AIR11.
Table 17f has been completed based on the figures available for the year ended 31st March 2010 as at 19th May 2010, for sewage treatment – Activity 510.

A Small Works

Lines 1- 4 – Size bands 1- 4

Lines 1 - 4 were not completed across all columns in AIR09, this has improved for AIR10. Each WWTW's was assigned a finance location code, W or X. W codes are for a specific works and direct costs can be identified separately. X codes include the costs of a number of small works and these costs were apportioned across the appropriate WWTW's based on PE. There was a further apportionment across all works for the costs recorded under the M & E workshop location; this was based on direct labour.

Direct Costs include Power 521X, Contractors 531X, Other Contractors 532X, Materials 541X, Chemicals 548X and Direct Labour (611X and 612X-Wages overheads).

As with all Lines 1-10, power costs for sewage treatment are based on percentage splits provided by the wastewater field managers. There remains one meter at each WWTW; so the Wastewater Field managers provided a percentage estimate of power costs between sewage treatment and sludge treatment at each of the WwTWs where there are both activities. These percentages were applied to the total power costs at each site. There is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTWs (W10) and the Incinerator (W01). The power team supplied an estimated 60:40 split between the Belfast WWTWs and the Incinerator which has been used to calculate the amount relating to sewage treatment at Belfast. This is consistent with AIR09.

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 AIR09 by circa £4.0M due to Ballycastle now being reported under Line 5 and the change in methodology on the apportionment of general & support as agreed with the Utility Regulator (see Table 22 commentary for further explanation).

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 an additional WWTW's that is now included in this line. There is no separate W finance location

code for Ballycastle, it is included under X25 – Ballymena Area, and therefore the costs were apportioned in the same manner as Line 1-4.

The costs against this line have decreased by circa £0.2M primarily due to the change in methodology on the apportionment of general & support as agreed with the Utility Regulator. There have also been reduced costs at Seagoe WWTW's as this site is due to transfer to PPP and receive service commencement in 2011. The contractor operated Seagoe for part of the 09/10 year.

B Large Works

Line 6 – Size band 6

This line agrees with Line 9 in Table 17b. No PPP sites have been included.

The costs have reduced from AIR09 by circa £2.8M partly a result of the exclusion of Ballyrickard which transferred to PPP and received service commencement in April 2009. There are also reduced costs at Armagh WWTW's as this works transferred to PPP and received service commencement in August 2009. Ballinacor and Bullays Hill WWTW's have cost less as the WWTW's are due to transfer at the beginning of 2011 and was operated by the contractor for part of the 0910 year. The change in methodology on the apportionment of general & support as agreed with the reporter has had the most significant impact on the direct costs in this line.

Power costs at Ballymena, Omagh and Newry include the terminal pumping costs as there is one electric meter at each site.

C All Works

Line 7 – Total Direct Costs

This is a calculated line and it's the total of Line 1-6. This is an improvement since AIR09 as Line 1-4 could not be split across columns. This figure agrees with Table 22, Column 2 Line 9.

The total direct costs have reduced since AIR09 by circa £7.0M due to the exclusion of the PPP sites that have received service commencement, the reduced costs at the PPP sites that are due to receive service commencement in 2011 and the change in methodology on the apportionment of general & support as agreed with the Utility Regulator.

Line 8 – Sludge Treatment & Disposal Adjustment

These costs are not included in the total of Line 7 therefore this line is zero.

Line 9 – Direct Costs

This line is equal to Line 7 and is the total direct costs for each type of treatment. This is an improvement from AIR09 as Line 1-4 could not be split across columns. This figure agrees with Table 22, Column 2 Line 9.

Line 10 – Power Costs

Power costs relating to Sewage Treatment were apportioned across the columns based on total direct costs and is an improvement on AIR09.
In total the power figure has increased by circa £0.7M. This figure agrees with Table 22, Column 2 Line 2.

Line 12 – General & Support
The Total General & Support expenditure was taken directly from Table 22 (NIW only) Line 10 Column 2 (see Table 22 commentary) and apportioned across the locations based on direct costs. No Costs have been allocated to the PPP sites. This is and improvement from AIR09 where only Column 11 was populated.

The increase in this figure from AIR09 of circa £5.9M is primarily a result of the change in methodology on the apportionment of general & support as agreed with the Utility Regulator.

Line 13 – Functional Expenditure
This is a calculated line and is the total of Line 9 and Line 12. The total agrees to Table 22 (NIW Only) Column 2 Line 11. The total costs have reduced from AIR09 by circa £1.0M for all the reasons mentioned under the lines above. Refer to Table 22 commentary.

Table 17f – Sewerage Explanatory Factors – Costs (PPP Only)

General
A number of the Omega PPP Facilities were in transition from NIW Operation to PPP Service during the reporting period. For the purpose of Table 17f the reporting is based on the following principles:

Financial Information (FI) Table 17f:
The Financial Information (FI) is reported on 'PPP Only' Tables as NIW Water costs (excluding payments to Concessionaires) for Facilities (Schemes) which were in service for any part of the year, being:
1. Kinnegar WWTW
2. North Down Ards WWTW
3. Richhill WWTW
4. Ballyrickard WWTW
5. Armagh WWTW

NIW Financial Data for Ballynacor WWTW (including Bullays Hill WWTW and Seagoe WWTW) is included in 'NIW Only' tables other than the G&S NIW which includes the cost of contract managing Ballynacor WWTW.

Lines 1- 4 – Size bands 1- 4
There are no PPP sites sized within these categories. Therefore, this is a nil return for these size bands.

Line 5 – Size band 5
No Direct Costs associated with Richill

Line 6 – Size band 6
AIR 09 reported on Operating Contractor Costs at Kinnegar and North Down, and has no relation to the AIR10 data being for NIW Direct Costs – being zero.

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 AIR09 and AIR 10.

TA2 in AIR 09 referred to power at North Down only £622k. North Down power has increased to £795k and the line also now reports power for Armagh (£85k) and Ballyrickard (£178k)

Line 12 – General & Support
The company has altered its methodology for calculating G&S Expenditure to reflect the relevant whole cost of the Contracts Management Team and its Professional Advisors for the construction and service periods of the Wastewater PPP's, as set out in the Methodology. Only a theoretical cost was calculated for staff involvement on the Kinnegar and North Down service contracts in AIR 09. Hence the difference

from £156k total in AIR 09 to the £692k in AIR 10. The £692k reconciles for the G&S attributed to the WWTW sites as per Table 22 and Table 43.

Table 17f - Sewage Treatment Works – Total

Table 17f has been completed based on the figures available for the year ended 31st March 2010 as at 3rd June 2010.

The PPP only table was provided by PPP function and NIW only was provided by Management Accounts.

The figures in Column 11 in the NIW Total table agree with Table 22(NIW Total) Column 2.

Refer to commentary on NIW only and PPP only Individual tables for explanation of changes from AIR09.

NIW only plus PPP only equals NIW Total with the exception of Line 7, Total Direct Costs, where PPP only does not have any figures input but £1.1M is included in Table 22 PPP only. PPP only table does not have all lines completed.

Table 17 g

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 17g SEWERAGE EXPLANATORY FACTORS
SLUDGE TREATMENT AND DISPOSAL INFORMATION (NIW Only)

	DESCRIPTION	UNITS	DP	1 FARMLAND UNTREATED	CG	2 FARMLAND CONVENTIONAL	CG	3 FARMLAND ADVANCED	CG	4 INCINERATION	CG	5 TO PPP	CG	6 LANDFILL	CG	7 COMPOSTED	CG	8 LAND RECLAMATION	CG	9 OTHER	CG	10 TOTAL	CG
1	Resident population served	000	1	0.0	A1	0.0	A1	597.2	C4	637.7	C4	14.4	C4	24.1	C4	0.0	A1	99.6	C4	60.5	C4	1434.3	C4
2	Amount of sewage sludge	ttds	1	0.0	A1	0.0	A1	15.8	B2	16.9	B2	0.4	B2	0.6	B2	0.0	A1	2.6	B2	1.6	B2	37.9	B2
3	Sludge treatment: direct costs	£000	3	-		-		-		3890.617		-		-		-		-		3413.461		7304.078	
4	Sludge disposal: direct costs	£000	3	-		-		5916.317		283.408		-		3.423		-		878.399		2547.910		9629.456	
5	Sludge treatment & disposal: direct costs	£000	3	-		-		5916.317		4174.024		-		3.423		-		878.399		5961.371		16933.534	
6	Sludge treatment & disposal: power costs	£000	3	-		-		-		1518.847		-		-		-		-		1979.685		3498.532	
7	Sludge treatment & disposal: service charges	£000	3	-		-		-		-		-		-		-		-		-		-	
8	Sludge treatment & disposal: general & support exp.	£000	3	-		-		-		3454.181		-		-		-		-		2372.516		5826.697	
9	Sludge treatment & disposal: functional expenditure	£000	3	-		-		5916.317		7628.205		-		3.423		-		878.399		8333.888		22760.231	

Table 17g – Sewerage Explanatory Factors - Sludge Treatment and Disposal Information

Line 1 – Resident population served

Columns 1 - 8 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 C4 accordingly based on the C4 CG of the base population data.

Columns 9: The resident population served is that reported in T17a:L1 as required in the Utility Regulator's guidance documentation.

Line 2 – Amount of sewage sludge

Columns 1 – 8 have been based on the total sewage sludge disposal data from SLS and the WW Sludge Management monthly report; CGs vary based on accuracy of data for each disposal method.

Columns 9: This is the total sewage sludge produced for 2009/10 (tds) as recorded monthly by WW Area Sludge Officers (reconciled using the SLS) and presented in the monthly Sludge Management Report (copy attached) along with sewage sludge produced at PPP sites, cake to incineration and an estimated quantity of WwTW's grit & screenings removed as part of the treatment process and disposed of under Tender C018.

Lines 3 - 9 - Costs

The same method as AIR09 was used to populate this table in AIR10.

There has been a change the volumes of sludge transported through the various disposal routes in AIR10 and there have been changes to the Sludge transport contractor. The volumes transported through the various disposal routes have changed as a result Northern Ireland Legislation and operation of the second Incinerator by the PPP contractor. The second incinerator operated by PPP, has been running towards the later part of 09/10 and has taken test sludge over a number of months at a significantly lower price than the other disposal routes. This cost cannot be separately identified and has been included under Column 9.

The costs in Table 17g are populated with the information available for the year ended 31st March 2010 as at 3rd June 2010.

Line 3 – Sludge treatment direct costs

Expenditure has been input in Column 4 and 8.

Column 4

Sludge treatment costs for Incineration are coded using activity 636 and can be separately identified. Direct Costs include Power 521X, Contractors 531X, Other Contractors 532X, Materials 541X, Chemicals 548X and Direct Labour (611X and 612X-Wages overheads).

Power costs were treated differently as there is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTW's (W10) and the Incinerator

(W01). The usage estimated, by the power team, is a 60:40 split between Belfast and the Incinerator. This percentage was used to calculate the power costs for Sludge treatment at the Incinerator. This is consistent with AIR09.

These costs have increased from AIR09 by circa £0.2M and the main reason is the increase in power costs. During the year additional oil was used at the Incinerator due to the poor quality sludge and resource limitations.

Column 9
Sludge treatment costs for WWTW's are coded using activity 621 and can be separately identified. M & E costs coded to 621 have been removed as in AIR10 they are included under General & Support as recommended by the Utility Regulator.

Power costs are apportioned based on estimates from the field managers. 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 site. This was multiplied by the Power costs at the site to calculate the portion relating to sludge treatment. This is consistent with AIR09.

The costs of sludge treatment has increased by circa £0.7M partly a result of the change in methodology on the allocation of general & support costs (see Table 22 commentary) and also a result of improved coding by field managers using activity 621. The improved coding has increased Employment Costs and Hired and Contracted costs for Sludge Treatment.

Line 4 - Sludge disposal direct costs
Column 3, 4, 6, 8 & 9 have been populated in this line. Costs have decreased by £2.4M in total due to change in disposal routes for e.g. less sludge has been transported to Land Restoration in England compared to AIR09 (column 8). A new sludge contract was agreed for major to minor transportation in August 2009 which reduced costs in this area (Column 9). The second Incinerator operated by PPP, has been running towards the later part of 0910 and has taken test sludge over a number of months at a significantly lower price than the other disposal routes. The change in methodology on the allocation of general & support costs (see Table 22 commentary) agreed with the Utility Regulator has also had a significant impact on these costs.

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 8. Costs have decreased by circa £1.4M from AIR09.

Line 6 – Sludge treatment & disposal power costs
Power costs are associated with incineration and sludge treatment (Column 4 and 8). The power team supplied a split between the incinerator and Belfast WWTW's which was used apportion a cost to the incinerator. This is consistent with AIR09.

There is only one electric metre at each WWTW's so an estimate was received for each WWTW's from the wastewater field mangers so that a split could be calculated

at each works between sludge and sewage treatment at the sites where both activities occur. This is included under Column 8.

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. There has been a change to the methodology on the allocation of general & support costs (see Table 22 commentary) agreed with the Utility Regulator, which has been a major factor in the circa £4.7M increase from AIR09.

Line 9 – Functional expenditure
This is a calculated line and is the total of Line 5 and Line 8. Total costs have increased by circa £3.3M from AIR09. Sludge volumes in total have not changed significantly from AIR09, however, the volume reported under each of the disposal routes are different which has impacted on costs.

Table 18

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 18 REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
PROFIT AND LOSS ACCOUNT FOR YEAR ENDING 31 MARCH

	DESCRIPTION	UNITS	DP	1 2007-08	2 2008-09	3 2009-10
1	Turnover	£m	3	294.056	327.395	347.569
2	Operating costs (excluding HCD)	£m	3	-219.063	-241.458	-234.938
3	Historical cost depreciation	£m	3	-12.343	-17.767	-25.055
4	Operating income	£m	3	-0.031	0.094	0.264
5	Operating profit	£m	3	62.619	68.264	87.840
6	Other income	£m	3	0.000	0.000	0.000
7	Net interest receivable less payable	£m	3	-7.113	-20.142	-37.716
8	Profit on ordinary activities before taxation	£m	3	55.506	48.122	50.124
9	Current tax	£m	3	0.000	0.000	0.000
10	Deferred tax	£m	3	-15.562	-13.531	-14.273
11	Profit on ordinary activities after taxation	£m	3	39.944	34.591	35.851
12	Extraordinary items	£m	3	0.000	0.000	0.000
13	Profit for the year	£m	3	39.944	34.591	35.851
14	Dividends	£m	3	-33.538	0.000	-34.537
15	Retained profit for the year	£m	3	6.406	34.591	1.314

Table 18 – HC Profit and Loss account for the year ending 31 March 2010

- 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 2009/10 can be analysed as follows:

	Gross Charge	Residual interest credit	Lease repayment	Capital maintenance	CC Depreciation	Net P&L Charge
	£m	£m	£m	£m	£m	£m
Alpha	15.857	0.000	(2.906)	(0.224)	3.247	15.974
Omega	15.156	(1.932)	0.000	0.000	0.000	13.224
Kinnegar	2.249	(0.232)	0.000	0.000	0.000	2.017
Total	**33.262**	**(2.164)**	**(2.906)**	**(0.224)**	**3.247**	**31.215**

- PPP elements of line 2 'Operating Costs' are £27.968m.
  Additionally within Line 3 'HCD' there are depreciation costs for the Alpha Project of £3.247m (see Table 33).
- The current tax charge is zero and this is explained as follows:

Factors affecting the tax charge for the current period
The current tax charge for the period is lower than the standard rate of corporation tax in the UK (28%). The differences are explained below

Current tax reconciliation	**£m**
Profit on ordinary activities before tax	**51.834***
Current tax at 28%	**14.514**
Effects of:	
Expenses not deductible for tax purposes	1.292
Capital allowances for period in excess of depreciation	(34.866)
Other timing differences	(2.976)
Trade losses carried forward	22.036
Total current tax charge	0.000

* The tax computation is based on the profit for both appointed and unappointed activities.

(This reconciliation is based on Note 10 to the statutory accounts).

- The deferred tax charge of £14.273m is based on the statutory accounts charge of £14.543m less an allocation of £0.270m deferred tax to unappointed activities.

The statutory accounts deferred tax charge of £14.543m can be shown as follows:

Deferred tax

	£m
Origination/ reversal of timing differences	**13.166**
FRS 17 pension adjustments	**2.178**
Adjustment in respect of previous years	**(0.801)**
Total deferred tax charge	**14.543**
Tax charge on profit on ordinary activities	**14.543**

Table 19 shows a deferred tax liability on the balance sheet of £42.713m. This reconciles to the statutory accounts balance at 31 March 2010 of £43.408m after an allocation of £0.695m of the final balance to unappointed activities. The statutory balance of £43.408m can be summarised as follows:

	2010 £m Excluding FRS 17	**2010 £m** FRS 17	**2010 £m** **Total**
Opening liability	31.044	2.310	**33.354**
Current year deferred tax charge/ (credit) to profit and loss account	13.165	2.178	**15.343**
Prior year deferred tax charge/(credit) to P&L	(0.801)	0.000	**(0.801)**
Current year deferred year tax charge to the Statement of Total Recognised Gains and Losses	0.000	(3.600)	**(3.600)**
Closing liability	43.408	0.888	**44.296**

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:

	2010 £m
Benefit obligation at end of year	(94.115)
Fair value of plan assets at end of year	97.289
Surplus	3.174
Less deferred tax	(0.888)
Pension asset after deferred tax	**2.286**

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-10	31-Mar-09
Discount rate	5.75%	6.75%
Rate of compensation increase	4.75%	4.50%
Rate of increase in pensions in payment	3.75%	3.50%
Rate of increase in pensions in deferment	3.75%	3.50%
Inflation	3.75%	3.50%

Weighted average assumptions used to determine net pension cost for year ended:

	31-Mar-10	31- Mar-09
Discount rate	6.75%	6.00%
Expected long-term return on plan assets	6.04%	5.94%
Rate of compensation increase	3.50%	5.00%
Rate of increase in pensions in payment	3.50%	3.50%
Inflation	3.50%	3.50%

Any changes to the assumptions from 2009 to 2010 have been advised by the independent actuaries.

There is a pension asset at 31 March 2010 of £2.286m (after deferred tax) and therefore there are currently no contributions relating to funding a deficit position. Contributions to the fund in 2009/10 were 29.3% of pensionable pay from April 2009 to September 2009 and 26.9% of pensionable pay from October 2009 to March 2010. (2008/09: 29.3%).

Of significance in comparing 2009/10 and 2008/09 is the fact that a dividend of £35.006m was proposed and approved in 2009/10 and thus there is a dividend in Table 18 for the current year.

The full dividend for 2009/10 was £35.006m with £34.537m apportioned to appointed activities and £0.469m 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	**(234.938)**
Add back HC amortisation of grants and contributions	(0.590)
CC amortisation of grants and contributions	2.806
CC depreciation	(96.202)
Table 20 line 2	**(328.924)**

Cost components in Operating Costs

The following cost components of Line 2 (£234.938m) exceed £5m in 2009-10:

Wages and Salaries	42.872m
Other pension costs	10.999m
Electricity	36.254m
Rates	14.445m
Contractors	26.817m
Out sourced billing	15.976m
PPP Operating Charges –Omega	15.157m
Total	**162.520m**
	(69% of total Operating Costs)

Interest

Interest received and payable can be summarised as follows:

	£m	**£m**
Interest received		
Bank Interest	0.249	
Other finance income*	0.288	
Total Interest received		**0.537**
Interest Payable:		
On bank loans	(0.024)	
On all other loans	(26.904)	
On PPP finance lease	(11.325)	
Total Interest Payable		**(38.253)**
Net Interest		**(37.716)**

*Other finance income (£0.288m) relates to post employment costs and the finance credit calculated by the actuaries on the pension fund at year end.

Capitalisation of costs

During 2009/10 £11.895m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	**£m**
Staff Costs	9.319
Materials	0.159
Labour charge	0.076
Vehicles and plant	0.007
Overheads capitalised	2.334
Total	**11.895**

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 and are categorised in the statutory accounts as 'own work capitalised'.

Comparison to prior year and the SBP

A comparison to 2008/09 and to the SBP can be shown as follows:

	Actual	**Actual**	**SBP**
	2009 -2010	**2008 -2009**	**2009 -2010**
	£m	**£m**	**£m**
Sales	347.569	327.395	385.406
Expenditure	(259.729)	(259.131)	(291.223)
Net Operating Profit	87.840	68.264	94.183
Operating Margin	*25.3%*	*20.9%*	*24.4%*
Interest payable	(37.716)	(20.142)	(30.712)
Deferred tax	(14.273)	(13.531)	(19.041)
Profit for the year	35.851	34.591	44.430
Net Profit Margin	*10.3%*	*10.6%*	*11.5%*

Explanation of variances on sales, operating profit and interest payable are outlined in the commentary to Table 20.

Systems and controls

The company uses the Oracle financial system to produce monthly and annual accounting information. The Oracle General Ledger produces a trial balance and the detailed accounts are summarised to produce the year end statutory accounts. A series of spreadsheets are then used to analyse appointed and non appointed sales and costs to produce the financial information for the Regulatory Accounts and AIR Tables.

The company is progressing a major project to develop a costing system. In terms of regulatory reporting the main tables requiring costing information are Tables 21 and 22 and the commentaries for these tables detail how an interim costing solution is being used to populate these tables until the new costing system is in place.

This new costing solution is also intended to provide better information for the allocation of costs to non appointed activities which is currently based on a set of high level costing assumptions.

Internal Controls
The company continues to place great emphasis on internal financial controls throughout the organisation. Particular work has been ongoing on revenue assurance with a cross organisational working group engaged in workshops to ensure controls across all revenue streams are examined and plans are in place to ensure that all revenue processes are mapped. Internal audit has been involved in this project and will continue to monitor progress in this area.

Prior Year Adjustment
A prior year adjustment has been reflected in the financial statements the reasons for which are outlined in Table 19 and Table 25.

This prior year adjustment has had the following impact on the Regulatory Accounts HC Profit and Loss Account:

HC Depreciation –Appointed activities

Regulatory Accounts 2008-09	£17.767m
2008-09 comparator in 2009-10 Regulatory Accounts	£18.385m
Difference – increase in depreciation charge	£ 0.618m

This represents the element of the prior year adjustment attributable to 2008-09.

However the Table 18 comparator for 2008-09 has not been amended to reflect this.

Table 18c

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 18c REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES

	DESCRIPTION	UNITS	DP	1 2007-08	2 2008-09	3 2009-10
A	**CAPITAL EXPENDITURE CATEGORIES**					
1	Profit for the year	£m	3	39.944	34.591	35.851
2	Actuarial gains/losses on post employment plans	£m	3	14.962	1.666	-9.255
3	Other gains and losses	£m	3	0.000	0.000	0.000
4	Total recognised gains and losses for the year	£m	3	54.906	36.257	26.596

Table 18c – STRGL (HCA)

There are no other recognised gains or losses for the year.

The STRGL in the historic cost accounts includes a prior year adjustment of £6.387m which impacts on total reserves. However this is not included within recognised gains and losses for the year.

Table 18d

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 18d REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
ALLOCATION OF CAPITAL EXPENDITURE FOR TAX PURPOSES (TOTAL)

	DESCRIPTION	UNITS	DP	1 2007-08	2 2008-09	3 2009-10
A	**DIVIDEND ANALYSIS**					
1	Dividends in respect of a financial re-organisation	£m	3	0.000	0.000	0.000
2	Other ordinary dividends	£m	3	-33.538	0.000	-34.537
3	Total dividends	£m	3	-33.538	0.000	-34.537
B	**INTEREST ANALYSIS**					
4	Interest receivable/payable on intercompany balances	£m	3	0.000	0.000	0.000
5	Interest receivable/payable in respect of a financial re-organisation	£m	3	0.000	0.000	0.000
6	Indexation element of index-linked bonds	£m	3	0.000	0.000	0.000
7	Preference share dividends	£m	3	0.000	0.000	0.000
8	Other interest receivable	£m	3	2.208	1.813	0.249
9	Other interest payable	£m	3	-9.741	-17.899	-26.928
10	Other finance charges - post employment costs	£m	3	0.420	0.137	0.288
11	Other finance charges	£m	3	0.000	-4.193	-11.325
12	Total net interest	£m	3	-7.113	-20.142	-37.716

Table 18d – Analysis of dividends and interest charges

There has been no financial reorganisation during the year.

A dividend was proposed and approved in 2009/10 and this is shown on line 2. The full dividend for 2009/10 was £35.006m with £34.537m apportioned to appointed activities and £0.469m apportioned to unappointed activities (based on turnover).

Interest receivable (£0.249m) relates to monies held on deposit.

Interest payable (£26.928m) relates to the Loan Notes held with DRD and increased by £9.029m (50.4%) primarily due to the drawdown of £170m additional loan notes in 2009/10. The interest payable 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 (£0.288m) relate to post employment costs and the finance credit calculated by the actuaries on the pension fund at year end.

During 2009/10 an amount of £11.325m (2008/09: £4.193m) 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 2009/10 budget and the SBP:

	Actual	**Budget**	**SBP**
	£m	**£m**	**£m**
Net Interest payable	26.679	27.814	30.712
Loan notes	627.560	647.560	696.244

The drawdown of loans is £68.684m less than the SBP projected for 2009/10. This is primarily driven by a lower working capital requirement than was anticipated particularly for capital creditors.

Table 19

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 19 REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
BALANCE SHEET AS AT 31 MARCH (Total)

	DESCRIPTION	UNITS	DP	1 2007-08	2 2008-09	3 2009-10
A	**FIXED ASSETS**					
1	Tangible fixed assets	£m	3	1103.597	1435.239	1619.770
2	Investment - loan to group company	£m	3	0.000	0.000	0.000
3	Investment - other	£m	3	0.106	0.106	0.106
4	Total fixed assets	£m	3	1103.703	1435.345	1619.876
B	**CURRENT ASSETS**					
5	Stocks	£m	3	2.400	1.896	1.864
6	Debtors	£m	3	30.570	29.706	40.885
7	Cash	£m	3	2.843	3.554	0.349
8	Short term deposits	£m	3	54.000	19.000	10.000
9	Infrastructure renewals prepayment	£m	3	0.000	0.091	1.452
10	Total current assets	£m	3	89.813	54.247	54.550
C	**CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR**					
11	Overdrafts	£m	3	0.000	0.000	0.000
12	Infrastructure renewals accrual	£m	3	-9.695	0.000	0.000
13	Creditors	£m	3	-110.408	-131.461	-136.701
14	Borrowings	£m	3	0.000	0.000	0.000
15	Corporation tax payable	£m	3	0.000	0.000	0.000
16	Ordinary share dividends payable	£m	3	-33.538	0.000	0.000
17	Preference share dividends payable	£m	3	0.000		0.000
18	Total creditors	£m	3	-153.641	-131.461	-136.701
19	Net current assets	£m	3	-63.828	-77.214	-82.151
D	**CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR**					
20	Borrowings	£m	3	-307.560	-457.560	-627.560
21	Other creditors	£m	3	-3.422	-110.808	-106.137
22	Total creditors	£m	3	-310.982	-568.368	-733.697
E	**PROVISION FOR LIABILITIES AND CHARGES**					
23	Deferred tax provision	£m	3	-16.566	-30.653	-42.713
24	Deferred income - grants and contributions	£m	3	-9.757	-15.099	-15.730
25	Post employment asset / (liabilities)	£m	3	5.619	5.942	2.286
26	Other provisions	£m	3	-15.131	-20.638	-32.884
F	**PREFERENCE SHARE CAPITAL**					
27	Preference share capital	£m	3	0.000	0.000	0.000
28	Net assets employed	£m	3	693.058	729.315	714.987
G	**CAPITAL AND RESERVES**					
29	Called up share capital	£m	3	500.000	500.000	500.000
30	Share premium	£m	3	0.000	0.000	0.000
31	Profit and loss account	£m	3	21.368	57.625	43.297
32	Other reserves	£m	3	171.690	171.690	171.690
33	Capital and reserves	£m	3	693.058	729.315	714.987

Table 19 – HC Balance Sheet as at 31 March 2009

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 £1.314m (post dividend).

The P&L reserves in the Balance Sheet move by £14.328m and this movement can be shown as follows:

Retained profit for the year	£1.314m
Pension scheme loss net of deferred tax	(£9.255m)
Prior year adjustment *	(£6.387m)
Movement in P&L Account	**(£14.328m)**

*A prior year adjustment of £6.387m has been recognised in the current year in relation to the valuation of land and buildings. This has arisen through work undertaken as part of the Company's price control review which identified a number of sites where a decision had been taken in prior years to decommission them at a future date. As a result, adjustments were required to accelerate the depreciation on the sites, or impair the asset from the date of the decision to decommission to the decommissioning date, to reflect residual value at that date (see also commentary to Table 25).

The effect of the adjustments on the Company's regulatory HC balance sheet at 31 March 2009 was as follows:

	As previously stated £'000	Effect £'000	As restated £'000
Fixed assets	1,435,496	(6,387)	1,429,109
Opening reserves	22,051	(5,769)	16,282
Total recognised gains and losses for the year	37,189	(618)	36,571
	59,240	(6,387)	52,853

As shown the effect of the adjustment was a decrease in Profit and Loss reserves at 1 April 2008 of £5.769m and an increase in depreciation and a decrease in the reported profit for the year ended 31 March 2009 of £0.618m giving a total change in reserves in 2009-10 of £6.387m.

The Balance Sheet for the year ended 31 March 2010 within the Regulatory Accounts includes the impact of this adjustment to the 2008-09 comparator year.

However within Table 19 the comparator for 2008-09 has not been amended to reflect this.

No minority interests exist.

The elements of PPP included in the table are as follows:

Line 1 - Tangible Fixed Assets

	Alpha	**Omega**	**Kinnegar**	**Total**
	£m	£m	£m	**£m**
Gross	111.932 *	3.529	1.986	**117.447**
Acc. Deprec	(3.247)	-	-	**(3.247)**
NBV	**108.685**	**3.529**	**1.986**	**114.200**

		£m
*	Initial expenditure	111.708
	2008-09 additions to Capital Maintenance fund	0.254
	Correction of 2008-09 additions to Capital Maintenance fund	(0.254)
	Additions to Capital Maintenance fund	0.224
		111.932

(The correction of £0.254m was needed due to the figure for capital maintenance for 2008-09 being extracted in error from the Alpha financial model).

Line - 13 Creditors falling due within one year

	Alpha	**Omega**	**Kinnegar**	**Total**
	£m	£m	£m	**£m**
Lease obligation due < 1 yr	2.313	-	-	**2.313**
Accruals	3.007	3.707	1.857	**8.571**
Total	**5.320**	**3.707**	**1.857**	**10.884**

Line 21 - Other creditors falling due after more than one year

	Alpha
	£m
Lease obligation due > 1 yr	105.805

Line 26 - Other provisions

	Omega
	£m
Provisions	9.519

Significant features and movements

Fixed Assets
Increased broadly in line with additions of approximately £255m in year.

Debtors
Increased by £11.179m from £29.706m to £40.885m (37.6%). This is primarily due to:

- Measured debtors increase by £6.6m as measured sewerage customers now being billed fully for this service from 2009-2010;
- rechargeable debtors increased by £1.4m in 2009-10 driven partly by increased year end debtors from DRD and DARD;
- a debtor balance of £1m arising in connection with the PPP Alpha contract;
- Accrued income increased by £3.6m (29%) over the period; and
- A fall in VAT receivable debtors of £0.9m.

Cash and Short term deposits
Cash has decreased by £3m from £3.554m to £0.349m (90.2%) and Short term deposits have decreased by £9m from £19m to £10m (47.4%).

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	£245m
Net Interest paid	£ 38m
Dividend paid	£ 34m
PPP Lease payments	£ 3m
Total	**£320m**

Funded by:

Generated from operations	£138m
Loans	£170m
Reduction in deposit monies	£ 9m
Reduction of cash	£ 3m
Total	**£ 320m**

Deferred tax
The deferred tax balance has increased from £30.653m to £42.713m. An explanation for this has been included in the commentary to Table 18.

Borrowings > 1 year
Borrowings have increased by £170m from £457.56m to £627.56m. The additions to capital expenditure during the year were £255m. The increase in borrowings were used to partly fund these additions to capital expenditure with the balance of capital being financed through working capital.

Post employment asset/(liabilities)
Decreased from £5.942m to £2.286m (61.5%).

This can be shown as follows:

	£m
Opening balance at 1.4.09	**5.942**
Current Service Costs	(7.793)
Past Service Costs	(3.207)
Contributions	18.491
Finance Credit	0.288
Actuarial Loss (net of deferrred tax)	(9.256)
Deferred tax	(2.179)
Closing balance 31.3.10	**2.286**

Other provisions
Increased from £20.638m to £32.884m (59.3%).

This increase of 12.3m can be summarised as follows:

Decrease in Public and Employer Liability claims	(3.7m)
Decrease in Environmental liability	(1.1m)
Increase in Contractor claims	16.6m
Other	0.5m
Total	**12.3m**

PPP – Infrastructure renewals charge (IRC) and expenditure (IRE)
– Capital Maintenance

The table below summarises the IRC, IRE and capital maintenance during 2009/10 in relation to the PPP projects:

	Alpha	**Omega**	**Kinnegar**	**Total**
	£m	£m	£m	**£m**
IRE	-	-	-	**-**
IRC	-	-	-	**-**
Capital maintenance	0.224	-	-	**0.224**

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 2009-10 this is confirmed by the operator to be £224k. 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 2009-10 (2008-09: £4.924m). There has therefore been no apportionment of IRC in 2009-10 (2008-09: £3.405m).

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.

Table 19a

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

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				0.000					
"				0.000					
50				0.000					
A2	Floating rate instruments								
51				0.000					
"				0.000					
100				0.000					
A3	Index linked instruments								
101				0.000					
"				0.000					
150				0.000					
	TOTAL FOR HEDGING INSTRUMENTS		0.000						
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		17	627.560	10668.520	0.80%	5.25%	32.947	32.947	627.560
"									
350									
C2	Floating rate instruments								
351									
"									
400									
C3	Index linked instruments								
401									
"									
450									
	TOTAL FOR OTHER BORROWINGS		627.560		0.80%	5.25%	32.947	32.947	627.560
D	TOTALS		627.560	10668.520			32.947	32.947	627.560
E	RPI assumption	4.45%							

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	0%
G2	Fixed rate debt as percentage of total debt	100%
G3	Index linked debt as percentage of total debt	0%
G4	Fixed rate debt and index linked debt as percentage of total debt	100%
G5	Weighted average years to maturity	17

Table 19a - Analysis of Borrowings Due After More Than One Year

At 31 March 2010 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 notes in issue before 31 March 2010 carry a fixed rate of interest of 5.25%. Loan notes issued after this date carry fixed interest rates based on a margin of 0.85% above the reference gilt rate published by UK HM Government Debt Management Office on the date of issue of the loan note. At 31 March 2010 the gilt reference rate was 4.4103% (31 March 2009: 3.9666%) equating to an equivalent borrowing rate of 5.2603% (31 March 2009: 4.8166%).

In 2009/10 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 2010.

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.

Table 20

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

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 2007-08	2 2008-09	3 2009-10
1	Turnover	£m	3	294.056	327.395	347.569
2	Current cost operating costs (including CCD & IRC)	£m	3	-278.250	-315.427	-328.924
3	Operating income	£m	3	-0.056	-0.050	0.005
4	Working capital adjustment	£m	3	1.327	-0.292	4.313
5	Current cost operating profit	£m	3	17.077	11.626	22.963
6	Other income	£m	3	0.000	0.000	0.000
7	Net interest receivable less payable	£m	3	-7.113	-20.142	-37.716
8	Financing adjustment	£m	3	6.543	-1.044	25.217
9	Current cost profit before taxation	£m	3	16.507	-9.560	10.464
10	Current tax	£m	3	0.000	0.000	0.000
11	Deferred tax	£m	3	-15.562	-13.531	-14.273
12	Current cost profit on ordinary activities	£m	3	0.945	-23.091	-3.809
13	Extraordinary items	£m	3	0.000	0.000	0.000
14	Current cost profit attributable to shareholders	£m	3	0.945	-23.091	-3.809
15	Dividends	£m	3	-33.538	0.000	-34.537
16	Current cost profit retained	£m	3	-32.593	-23.091	-38.346

Table 20 – CC Profit and Loss account for year ending 31 March 2010

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	15.857*	0.000	(2.906)	(0.224)	3.247	15.974
Omega	15.156	(1.932)	0.000	0.000	0.000	13.224
Kinnegar	2.249	(0.232)	0.000	0.000	0.000	2.017
Total	**33.262**	**(2.164)**	**(2.906)**	**(0.224)**	**3.247**	**31.215**

* includes lease interest of £11.325m.

Line 7 Net interest receivable less payable includes £11.325m interest payable on Alpha PPP finance lease.

Comparison with prior year results

	2009-2010	2008-2009	Variance
	£m	£m	%
Turnover	347.569	327.395	6.2%
CC Operating profit	22.963	11.626	97.5%
CC (loss) / profit attributable to shareholders	(3.809)	(23.091)	83.5%
Dividends	(34.537)	-	-
CC loss retained	(38.346)	(23.091)	(66.1)%

Sales have increased in 2010 by £20.2m (6.2%) due to:

- Increase in household water and sewerage income £21.0m
- Decrease in non household sewerage income (£ 7.5m)
- Increase in Road drainage income £ 2.5m
- Increase in Measured Water income £ 4.6m
- Other (decrease) (£ 0.4m)

However operating costs have only risen by £13.5m (4.3%) over the same period and this has subsequently raised the CC operating profit margin from 3.6% to 6.6%. The overall focus on cost reduction throughout the business in 2009-10 was evidenced by lower proportionate rises in expenditure compared to the increase in turnover. Some of the main changes in operating costs in 2010 include:

- Lower tariffs for Power in 2009-10 compared to 2008-09;
- More efficient process around materials due to stores rationalisation and increased focus on materials issued;
- Rates higher in 2009-10 compared to 2008-09; and
- CCD up from £77m to £96m.

The profit attributable to shareholders has increased by approximately £19m due mostly to:

- Sales up by £20.2m with operating costs only up £13.5m;
- Working capital and Financing adjustments increase by £4.5m and £26m respectively;
- Net interest payable up by £18m; and
- Deferred tax up by £0.7m.

There was a dividend declared and approved for 2008/09 of £35.006m (accounted for in 2009-10) with £34.537m attributed to appointed activities.

Cost components in Operating Costs
The following cost components of Line 2 (£328.924m) exceed £5m in 2009-10:

Wages and Salaries	42.872m
Other pension costs	10.999m
Electricity	36.254m
Rates	14.445m
Contractors	26.817m
Out sourced billing	15.976m
PPP Operating Charges –Omega	15.157m
Current cost depreciation	96.202m
Total	**258.722m**
	(79% of total Operating Costs)

Voluntary Early Retirement and Pension
The VER schemes in 2007/08, 2008/09 and 2009/10 can be summarised as follows:

	2009-2010	**2008-2009**	**2007-2008**
Number	34*	89*	32
Non pension element	£0.409m	£0.770m	£0.600m
Pension element	£3.207m	£6.773m	£3.800m
Total	£3.616m	£7.543m	£4.400m

* including 7 ill health retirees (2008/09 14).

The above figures are for VER only and do not include the impact of the Voluntary Severance (VS) scheme in 2009/10 or 2008/09.

The future schemes are still being finalised.

The total costs, payments and accruals for VER are as follows:

	2009-2010	**2008-2009**	**2007-2008**
Total Cost	£3.616m	£7.543m	£4.400m
Payments in year	nil	£0.234m	-
Accrual at year end due to employees	£0.409m	£0.536m	£0.600m
Accrual at year end due to pension fund	£3.207m	£6.773m	£3.800m

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**
	A/C 2956	**A/C 1752**	**A/C 3119**	**A/C 5117**	**A/C 5115**	**A/C 4511**	**TOTAL**
	£m	**£m**	**£m**	**£m**	**£m**	**£m**	**£m**
Opening Surplus-pension	8.251						
Current Service Costs	(7.792)			3.814	3.978		7.792
Past Service Costs	(3.207)				3.207		3.207
Paid	18.491	(18.491)					
Net Finance income	0.288					(0.288)	(0.288)
Actuarial Loss	(12.857)		12.857				
Closing Surplus-pension	3.174						10.711

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 2009/10 are as follows:

Dr 5140 Retirement movement in provision	£0.409m
Cr 2313 Accruals	£0.409m

(Ignoring any opening accrual from 2008-09).

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 2010 and 31 March 2009 Note 25 show a full disclosure of the impact of the options exercise on the NIW pension fund. An extract of this is shown below:

Movements in fair value of plan assets

	Scheme year to 31 March 2010 £000	Estimated bulk transfer year to 31 March 2010 £000	**Total year to 31 March 2010 £000**
At the beginning of the year	23,478	44,117	**67,595**
Movement in year			
Expected return on assets	1,860	2,647	**4,507**
Contributions by plan participants	818	-	**818**
Contributions by employer	18,491	-	**18,491**
Actuarial gain/(loss)	6,042	2,742	**8,784**
Benefits paid	(2,270)	-	**(2,270)**
Settlement in relation to the Alpha bulk transfer	(57)	-	**(57)**
Settlement in relation to the admission of Northgate as a participating employer	(579)	-	**(579)**
	47,783	49,506	**97,289**

Movement in present value of defined benefit obligations

	Scheme year to 31 March 2010 £000	Estimated bulk transfer year to 31 March 2010 £000	**Total year to 31 March 2010 £000**
At the beginning of the year	23,919	35,425	**59,344**
Movement in year			
Actuarial (gains) / losses as a result of change in Bulk transfer uptake	-	-	-
Current service cost	7,773	-	**7,773**
Interest on scheme liabilities	1,844	2,375	**4,219**
Past service costs	3,207	-	**3,207**
Actuarial (gain)/loss	9,685	11,955	**21,640**
Contributions by plan participants	818	-	**818**
Benefits paid	(1,791)	(479)	**(2,270)**
Settlement in relation to the Alpha bulk transfer	(57)	-	**(57)**

Settlement in relation to the admission of Northgate as a participating employer	(208)	(351)	**(559)**
	45,190	48,925	**94,115**

Scheme assets and liabilities

	Scheme at 31 March 2010	Estimated bulk transfer at 31 March 2010	Total at 31 March 2010
	£000	£000	£000
Equities	20,900	-	20,900
Corporate bonds	9,164	-	9,164
Gilts	16,182	-	16,182
Other	1,537	-	1,537
Bulk transfer	-	49,506	49,506
Total market value of assets	47,783	49,506	97,289
Actuarial value of liabilities	(45,190)	(48,925)	(94,115)
Surplus/ (deficit) in the scheme - pension asset / (liability)	2,593	581	3,174
Related deferred tax asset / (liability)	(726)	(162)	(888)
Net pension asset / (liability)	1,867	419	2,286

The year end pension asset as shown above before deferred tax is £3.174m.

There have been no pension costs allocated to non appointed costs as the information is currently not available to separate these costs from the appointed costs.

Business Improvement costs
Business improvement costs are not analysed through the Oracle financial system but are separately identified at month end for reporting purposes only. These costs are included within line 2 – current cost operating costs and can be summarised as follows:

		£m
Salaries		1.430
Other staff costs		0.033
Hired and contracted	4.783	
Materials and equipment		0.050
Other costs of employment		0.014
Other expenses	0.096	
Total		6.406

Reprofiling of costs may occur during the year as part of the quarterly reforecasting process.

Capitalisation of costs

During 2009/10 £11.895m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	£m
Staff Costs	9.319
Materials	0.159
Labour charge	0.076
Vehicles and plant	0.007
Overheads capitalised	2.334
Total	11.895

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 and are categorised in the statutory accounts as 'own work capitalised'.

Prior Year Adjustment

A prior year adjustment has been reflected in the financial statements the reasons for which are outlined in Table 19 and Table 25.

This prior year adjustment has had the following impact on the Regulatory Accounts CC Profit and Loss Account:

CC operating costs

Regulatory Accounts 2008-09	£315.427m
2008-09 comparator in 2009-10 Regulatory Accounts	£316.045m
Difference – increase in CC depreciation charge	£ 0.618m

This represents the element of the prior year adjustment attributable to 2008-09.

The Table 20 comparator for 2008-09 has not been amended to reflect this.

AIR10 Table 21

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

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	3.234	10.480	13.714
2	Power	£m	3	5.972	4.764	10.735
3	Agencies	£m	3	0.000	0.000	0.000
4	Hired and contracted services	£m	3	1.991	5.410	7.400
5	Associated companies	£m	3	0.000	0.000	0.000
6	Materials and consumables	£m	3	3.810	1.000	4.810
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	0.444	-0.134	0.310
10	Total direct costs	£m	3	15.450	21.519	36.969
11	General and support expenditure	£m	3	7.795	11.282	19.076
12	Functional expenditure	£m	3	23.245	32.801	56.046
B	OPERATING EXPENDITURE					
13	Customer services	£m	3			8.197
14	Scientific services	£m	3			1.332
15	Other business activities	£m	3			1.233
16	Total business activities	£m	3			10.762
17	Rates	£m	3			4.102
18	Doubtful debts	£m	3			0.648
19	Exceptional items	£m	3			0.000
20	Total opex less third party services	£m	3			71.558
21	Third party services - opex	£m	3			0.204
21a	PPP Unitary Charges (Opex element)	£m	3			0.000
22	Total operating expenditure	£m	3			71.762
22a	Payment by concessionaire to operator	£m	3	0.000	0.000	0.000
C	REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)					
23	Reactive and planned maintenance infrastructure	£m	3	0.000	8.153	8.153
24	Reactive and planned maintenance non-infrastructure	£m	3	0.843	7.093	7.936
D	CAPITAL MAINTENANCE					
25	Infrastructure renewals charge (excluding third party services)	£m	3	0.000	0.000	27.171
26	Current cost depreciation (allocated)	£m	3	21.356	21.414	42.770
27	Amortisation of deferred credits	£m	3			-1.137
28	Amortisation of intangible assets	£m	3			0.000
29	Business activities current cost depreciation (non-allocated)	£m	3			0.094
30	Capital maintenance excluding third party services	£m	3			68.898
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			68.898
34	Total operating costs	£m	3			140.660

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 21 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - WATER SERVICE - (PPP Only)

	DESCRIPTION	UNITS	DP	1 WATER RESOURCES & TREATMENT	2 WATER DISTRIBUTION	3 WATER SERVICE TOTAL
	SERVICE ANALYSIS - WATER					
A	**DIRECT COSTS**					
1	Employment costs	£m	3			0.000
2	Power	£m	3	6.473	0.000	6.473
3	Agencies	£m	3			0.000
4	Hired and contracted services	£m	3			0.000
5	Associated companies	£m	3			0.000
6	Materials and consumables	£m	3			0.000
7	Service charges	£m	3			0.000
8	Bulk supply imports	£m	3			0.000
9	Other direct costs	£m	3			0.000
10	Total direct costs	£m	3	6.473	0.000	6.473
11	General and support expenditure (NIW Only)	£m	3	0.234	0.000	0.234
12	Functional expenditure	£m	3	6.707	0.000	6.707
B	**OPERATING EXPENDITURE**					
13	Customer services	£m	3			
14	Scientific services	£m	3			0.000
15	Other business activities	£m	3			
16	Total business activities	£m	3			0.000
17	Rates	£m	3			2.835
18	Doubtful debts	£m	3			
19	Exceptional items	£m	3			
20	Total opex less third party services	£m	3			9.542
21	Third party services - opex	£m	3			
21a	PPP Unitary Charges (Opex element)	£m	3			1.402
22	Total operating expenditure	£m	3			10.944
22a	Payment by concessionaire to operator	£m	3	[redacted]	[redacted]	[redacted]
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			
26	Current cost depreciation (allocated)	£m	3	3.247		3.247
27	Amortisation of deferred credits	£m	3			
28	Amortisation of intangible assets	£m	3			
29	Business activities current cost depreciation (non-allocated)	£m	3			
30	Capital maintenance excluding third party services	£m	3			
31	Third party services - current cost depreciation	£m	3			
32	Third party services - infrastructure renewals charge	£m	3			
33	Total capital maintenance	£m	3			3.247
34	Total operating costs	£m	3			14.191

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

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	3.234	10.480	13.714
2	Power	£m	3	12.445	4.764	17.208
3	Agencies	£m	3	0.000	0.000	0.000
4	Hired and contracted services	£m	3	1.991	5.410	7.400
5	Associated companies	£m	3	0.000	0.000	0.000
6	Materials and consumables	£m	3	3.810	1.000	4.810
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	0.444	-0.134	0.310
10	Total direct costs	£m	3	21.923	21.519	43.442
11	General and support expenditure	£m	3	8.029	11.282	19.310
12	Functional expenditure	£m	3	29.952	32.801	62.753
B	**OPERATING EXPENDITURE**					
13	Customer services	£m	3			8.197
14	Scientific services	£m	3			1.332
15	Other business activities	£m	3			1.233
16	Total business activities	£m	3			10.762
17	Rates	£m	3			6.937
18	Doubtful debts	£m	3			0.648
19	Exceptional items	£m	3			0.000
20	Total opex less third party services	£m	3			81.100
21	Third party services - opex	£m	3			0.204
21a	PPP Unitary Charges (Opex element)	£m	3			1.402
22	Total operating expenditure	£m	3			82.706
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	8.153	8.153
24	Reactive and planned maintenance non-infrastructure	£m	3	0.843	7.093	7.936
D	**CAPITAL MAINTENANCE**					
25	Infrastructure renewals charge (excluding third party services)	£m	3	0.000	0.000	27.171
26	Current cost depreciation (allocated)	£m	3	24.603	21.414	46.017
27	Amortisation of deferred credits	£m	3			-1.137
28	Amortisation of intangible assets	£m	3			0.000
29	Business activities current cost depreciation (non-allocated)	£m	3			0.094
30	Capital maintenance excluding third party services	£m	3			72.145
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			72.145
34	Total operating costs	£m	3			154.851

AIR10 Table 22

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (NIW Only)

	DESCRIPTION	UNITS	DP	1 SEWERAGE	2 SEWAGE TREATMENT	3 SLUDGE TREATMENT & DISPOSAL	4 SEWERAGE SERVICE TOTAL
	SERVICE ANALYSIS - SEWERAGE						
A	**DIRECT COSTS**						
1	Employment costs	£m	3	3.496	3.975	1.904	9.374
2	Power	£m	3	5.567	9.549	3.499	18.614
3	Agencies	£m	3	0.000	0.000	0.000	0.000
4	Hired and contracted services	£m	3	7.392	1.743	9.965	19.100
5	Associated companies	£m	3	0.000	0.000	0.000	0.000
6	Materials and consumables	£m	3	0.254	0.681	1.258	2.193
7	Service charges	£m	3	0.000	0.000	0.000	0.000
8	Other direct costs	£m	3	0.427	0.572	0.308	1.307
9	Total direct costs	£m	3	17.135	16.518	16.934	50.587
10	General and support expenditure	£m	3	9.535	10.820	5.827	26.182
11	Functional expenditure	£m	3	26.670	27.339	22.760	76.769
B	**OPERATING EXPENDITURE**						
12	Customer services	£m	3				10.361
13	Scientific services	£m	3				1.628
14	Other business activities	£m	3				1.558
15	Total business activities	£m	3				13.547
16	Rates	£m	3				7.020
17	Doubtful debts	£m	3				0.463
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				97.799
20	Third party services - opex	£m	3				0.008
20a	PPP Unitary Charges (Opex element)	£m	3				0.001
21	Total operating expenditure	£m	3				97.808
21a	Payment by concessionaire to operator	£m	3				
C	**REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)**						
22	Reactive and planned maintenance infrastructure	£m	3	5.528	0.000	0.000	5.528
23	Reactive and planned maintenance non-infrastructure	£m	3	11.920	3.883	0.000	15.802
D	**CAPITAL MAINTENANCE**						
24	Infrastructure renewals charge (excluding third party services)	£m	3	0.000		0.000	9.864
25	Current cost depreciation (allocated)	£m	3	1.824	45.628	2.357	49.809
26	Amortisation of deferred credits	£m	3				-1.667
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities current cost depreciation (non-allocated)	£m	3				0.282
29	Capital maintenance excluding third party services	£m	3				58.288
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				58.288
33	Total operating costs	£m	3				156.096

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (PPP Only)

	DESCRIPTION	UNITS	DP	1 SEWERAGE	2 SEWAGE TREATMENT	3 SLUDGE TREATMENT & DISPOSAL	4 SEWERAGE SERVICE TOTAL
	SERVICE ANALYSIS - SEWERAGE						
A	**DIRECT COSTS**						
1	Employment costs	£m	3				0.000
2	Power	£m	3	0.000	1.109	0.000	1.109
3	Agencies	£m	3				0.000
4	Hired and contracted services	£m	3				0.000
5	Associated companies	£m	3				0.000
6	Materials and consumables	£m	3				0.000
7	Service charges	£m	3				0.000
8	Other direct costs	£m	3	0.000	0.000	0.000	0.000
9	Total direct costs	£m	3	0.000	1.109	0.000	1.109
10	General and support expenditure (NIW Only)	£m	3	0.000	0.692	0.390	1.082
11	Functional expenditure	£m	3	0.000	1.801	0.390	2.191
B	**OPERATING EXPENDITURE**						
12	Customer services	£m	3				
13	Scientific services	£m	3				0.056
14	Other business activities	£m	3				
15	Total business activities	£m	3				0.056
16	Rates	£m	3				0.487
17	Doubtful debts	£m	3				
18	Exceptional items	£m	3				
19	Total opex less third party services	£m	3				2.734
20	Third party services - opex	£m	3				
20a	PPP Unitary Charges (Opex element)	£m	3				15.241
21	Total operating expenditure	£m	3				17.975
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				
25	Current cost depreciation (allocated)	£m	3				
26	Amortisation of deferred credits	£m	3				
27	Amortisation of intangible assets	£m	3				
28	Business activities current cost depreciation (non-allocated)	£m	3				
29	Capital maintenance excluding third party services	£m	3				
30	Third party services - current cost depreciation	£m	3				
31	Third party services - infrastructure renewals charge	£m	3				
32	Total capital maintenance	£m	3				
33	Total operating costs	£m	3				17.975

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (Total)

	DESCRIPTION	UNITS	DP	1 SEWERAGE	2 SEWAGE TREATMENT	3 SLUDGE TREATMENT & DISPOSAL	4 SEWERAGE SERVICE
	SERVICE ANALYSIS - SEWERAGE						
A	**DIRECT COSTS**						
1	Employment costs	£m	3	3.496	3.975	1.904	9.374
2	Power	£m	3	5.567	10.658	3.499	19.723
3	Agencies	£m	3	0.000	0.000	0.000	0.000
4	Hired and contracted services	£m	3	7.392	1.743	9.965	19.100
5	Associated companies	£m	3	0.000	0.000	0.000	0.000
6	Materials and consumables	£m	3	0.254	0.681	1.258	2.193
7	Service charges	£m	3	0.000	0.000	0.000	0.000
8	Other direct costs	£m	3	0.427	0.572	0.308	1.307
9	Total direct costs	£m	3	17.135	17.627	16.934	51.696
10	General and support expenditure	£m	3	9.535	11.512	6.217	27.264
11	Functional expenditure	£m	3	26.670	29.140	23.150	78.960
B	**OPERATING EXPENDITURE**						
12	Customer services	£m	3				10.361
13	Scientific services	£m	3				1.684
14	Other business activities	£m	3				1.558
15	Total business activities	£m	3				13.604
16	Rates	£m	3				7.507
17	Doubtful debts	£m	3				0.463
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				100.534
20	Third party services - opex	£m	3				0.008
20a	PPP Unitary Charges (Opex element)	£m	3				15.242
21	Total operating expenditure	£m	3				115.784
21a	Payment by concessionaire to operator	£m	3	0.000	0.000	0.000	0.000
C	**REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)**						
22	Reactive and planned maintenance infrastructure	£m	3	5.528	0.000	0.000	5.528
23	Reactive and planned maintenance non-infrastructure	£m	3	11.920	3.883	0.000	15.802
D	**CAPITAL MAINTENANCE**						
24	Infrastructure renewals charge (excluding third party services)	£m	3	0.000		0.000	9.864
25	Current cost depreciation (allocated)	£m	3	1.824	45.628	2.357	49.809
26	Amortisation of deferred credits	£m	3				-1.667
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities current cost depreciation (non-allocated)	£m	3				0.282
29	Capital maintenance excluding third party services	£m	3				58.288
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				58.288
33	Total operating costs	£m	3				174.072

Tables 21 & 22 Activity Costing Analysis – Water & Sewerage Service

After consultation with the Utility Regulator a new methodology was agreed for AIR10 and the corresponding AIR09 Tables 21 and 22 have now been restated using the same methodology. The restated AIR09 Tables form the basis of this commentary.

The costs in Tables 21 & 22 are populated with the updated information available at 3 June 2010 for the year ended 31 March 2010.

1 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 £3,000 (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; and
    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 £3,000 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.

Fixed assets comprise:

- Infrastructure assets
  Infrastructure assets comprise a network of systems consisting of mains and sewers, impounding and pumped raw water storage reservoirs, sludge pipelines and sea outfalls. The infrastructure renewals charge for infrastructure assets is included in Tables 21 and 22 and is the estimated level of annual expenditure required to maintain the operating capability of the network, which is based on the Company's Asset Management Plan.

- Other assets
  Other assets comprise a) land and non operational buildings, b) operational assets (compromising sites used for water and wastewater treatment, pumping or storage where not classified as infrastructure) and c) vehicles, mobile plant and equipment.

Allocation of costs between service areas

All costs entered to NI Waters 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 apportionment of the general Overhead Pots has reduced significantly from the restated AIR09 to AIR10. An explanation of the reduction is outlined later in the commentary. The table below shows the basis of apportionment of 'indirect' general and support expenditure between service activities.

Allocation of General and Support	Water		Sewerage			
Description	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp	Comments
BASIS - Total Direct Costs	21.2%	22.1%	19.0%	20.9%	16.7%	
G&S Overhead Pot 1	21.2%	22.1%	19.0%	20.9%	16.7%	Non ops general spend. Excludes CS, SS & Regulation
G&S Overhead Pot 2a - Water	48.9%	51.1%	0.0%	0.0%	0.0%	Water related activities only
G&S Overhead Pot 2b - Sewerage	0.0%	0.0%	33.6%	36.9%	29.5%	Sewerage activities only
G&S Overhead Pot 3	21.2%	22.1%	19.0%	20.9%	16.7%	Water and sewerage networks spend only

The percentage splits have not changed significantly from restated AIR09. No allocation within the G&S overhead pot 1, which contains the vast majority of the cost, changing by more than 2.5% The apportionment of pot 1 to Water has reduced by circa 1.5% in AIR 10 whilst Sewerage has increased by circa 1.5%.

It was agreed with the Utility Regulator that Mechanical & Electrical Maintenance (M&E) be treated as General & Support costs as opposed to being split across the other direct cost lines. M&E costs are not apportioned on the allocations set out in the table above, but rather upon the direct coding to Service Activities for the M&E function in the General Ledger. Service Activities are mapped to the NIAUR service areas in **Appendix 2**. This was consistently applied to both AIR09 restated and AIR10.

Allocation of costs to business activities and rates

All costs which relate to business activities e.g. customer services, scientific services and other, 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 has not changed since the AIR08 return. The percentage splits have not changed significantly from restated AIR09 where Water was allocated 45.7% and Sewerage 54.3%. The table below shows the basis of apportionment for AIR10.

Apportionment of business activities	Water		Sewerage		
Description	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp
BASIS - Total spend (Includes general & Support)	20.9%	23.3%	18.8%	20.6%	16.4%
Apportionment					
Water / Sewerage split	44.2%		55.8%		

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. The reminder of the rates charge is allocated to Table 22.

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 treatment since the AIR08 return.

Atypical costs and provisions:

Freeze thaw incident

During December and January 2010 the prolonged adverse weather conditions resulted in a major incident for NIW. The additional operating expenditure incurred amounted to approximately £0.5M primarily in Hired & Contracted Services.

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	£6.4M	General & support – all activities
Voluntary Early Retirement Scheme \ Voluntary Severance (VER \ VS)	£5.1M	General & support – all activities
Total	**£11.5M**	

Business Improvement Programme
The Business Improvement Programme ("BIP") is fundamental to the restructuring and modernisation of the water industry in Northern Ireland. Spanning over three years through to March 2010, the Programme is designed to improve working practices, increase efficiency and put service at the forefront of all NI Water's operations. More information on the BIP is contained within the Annual Report. The corresponding charge for AIR09 was £8.4M. Any amounts outstanding at the end of the financial year are expected to be settled within 12 months.

Voluntary Early Retirement
During 2009/10 NI Water further reduced the workforce resulting in the release of Voluntary Early Retirement (VER) and Voluntary Severance (VS) schemes. Further details on the staff reduction programme is contained within the Annual Report.

The cost of £5.1m shown above can be broken down as follows:

Pension related VER past service costs	£3.2M
Non pension lump sums	£0.4M
VS scheme payments	£1.5M
Total	**£5.1M**

Of the above costs relating to the 2009/10 scheme there were no amounts paid during 2009-2010. The entire liability was accounted for in the pension liability and accruals at year end. It is expected that these payments will be made within the next financial year. The corresponding charge for AIR09 was £11.7M.

Other Provisions
There are several other provisions relating to claims arising from contractual arrangements with suppliers.

Employment Costs
Staff costs for total NIW come to circa £54M as detailed below. These costs include the £5.1M VER\VS costs outlined above. Only circa £23M is included in Employment Costs (Line 1) in Tables 21 & 22 (AIR09 restated circa £27M). The table below provides the reconciliation between these amounts:

Description	Amount	Table 21/22 location
Industrial Wages	£21.1M	
Salaries	£26.9M	
Temporary Staff	£2.4M	
Other Costs of Employment	£1.9M	
Staff Expenses	£1.6M	
Total NIW staff costs	**£53.9M**	
Less:		
Customer Services	(£4.1M)	Customer Services
Scientific Services	(£1.6M)	Scientific Services
Third Party Opex	(£0.1M)	Third Party Opex
Regulation	(£0.4M)	Other Business Activities
Unallocated	(£24.6M)	General & Support
Total Employment Costs	**£23.1M**	**£13.7M Table 21 and £9.4M Table 22**

The unallocated amount of circa £25M is included in General & Support and has been apportioned between Table 21 and 22, across each of the columns, based on total direct costs, with the exception of M&E which is directly coded to each column using the service activity mapping. Employment costs have decreased by approximately £4M from the restated AIR09 primarily due to the reduction in staff numbers. The main expenditure in temporary support staff in the 09/10 financial year was in the Operations and Asset Management directorates (£1.0M and £0.9M respectively).

Hired & Contracted

Hired and Contracted Services of circa £26M in Table 21 and 22 are split out in the table below. The corresponding charge in the restated AIR09 was circa £24M.

	£M		
Hired & Contracted Services:	**Table 21**	**Table 22**	**TOTAL**
Operational Contractors	£6.7M	£18.4M	£25.1M
Other Contractors	£0.7M	£0.7M	£1.4M
Consultants	£0.0M	£0.0M	£0.0M
TOTAL	**£7.4M**	**£19.1M**	**£26.5M**

Within the Operational Contractors costs of £6.7M 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. In Table 22 Operational Contractors of the total of £18.4M, circa £10M is for the cost of the various Sludge Disposal Routes, circa £7M is for the maintenance of the Sewerage network and the balance relates to the costs of Sewage Treatment (includes the costs of Skip Hire etc.).

There are no Consultants Fees in Table 21 and 22 in the financial year due to the completion of the Business Improvement projects that were on-going in the previous financial year.

Hired and Contracted Services have increased by £2M from the restated AIR 09. The main area of increase is in Water Distribution where the increase is £1.6M. Approximately £0.5M of this relates to the Freeze Thaw incident and there was a further increase of approximately £0.7M on new water connections. The increase is as a result of the work activity being carried out by the contractor as opposed to the in-house workforce and the increase in the cost of carrying out a new connection due to new Street Works Licensing requirements.

General & Support Costs

General & Support costs have reduced by circa £18M from the restated AIR09 to AIR10 due to the significant reduction in VER costs, reduced pension costs, reduction in BI costs, reduction in M&E costs, other efficiencies and improved allocation of costs by the Finance Business Partners across all directorates. The principal costs in this expenditure line are:

Description	Amount	Table 21/22 location
Unallocated Employment Costs	£24.6M	Included in General & Support (Removed from Employment Costs)
Unallocated Power	£0.1M	Included in General & Support (Removed from Power Costs)
Unallocated Hired & Contracted Costs	£13.7M	Included in General & Support (Removed from Hired & Contracted)
Unallocated Materials & Consumables	£2.1M	Included in General & Support (Removed from Materials & Consumables)
Unallocated Other Direct Costs	£0.1M	Included in General & Support (Removed from Other Direct Costs)
Communication	£1.2M	General & Support
Mobile V&P Charges & Repairs	£3.0M	General & Support
Staff Training	£0.6M	General & Support
Audit & Environmental Regulatory Costs	£1.1M	General & Support
Other	£0.1M	General & Support
Total	**£46.6M**	**£19.3M Table 21 and £27.3M Table 22**

General & Support costs were apportioned across Table 21 & Table 22 based on the total direct costs allocated to each column, with the exception of M&E which follows the direct coding to Service Activities for the M&E function in the General Ledger. Service Activities are mapped to the NIAUR service areas in **Appendix 2**. This was consistently applied to both AIR09 restated and AIR10. See the **Allocation of costs between service areas** section at the start of the commentary.

Cost performance

Changes in costs

During the 2009/10 financial year Customer Field Services, which was part of Customer Services, was set-up as a new Function within the Operations Directorate. Its responsibility is meter readers and water regulations. Upon discussion with the Utility Regulator it was agreed that this should be excluded expenditure in line with the Reporting Requirements Chapter 22, B.12.

Further to discussions with the Utility Regulator it was agreed that the following costs should be classified as General and Support (G&S) expenditure:

- Chief Executive & Commercial Directorates (except for PPP staff which will be split based on the unitary charge)
- Operations Head Office
- The Finance & Regulation Directorate
- The Secretariat Directorate
- HR and The Learning and Development Centre
- The TMG function which is responsible for maintaining the fleet of vehicles
- Materials storage

- Operational and Technical support
- Mechanical and electrical maintenance (M&E)
- General and Support buildings

AIR09 Tables 21 & 22 have been restated in line with the assumptions used in AIR10 and the restated AIR09 has been used as the basis to complete this commentary.

Table 21 – NIW Total
A - Direct Costs
Total Functional Expenditure has decreased by over £10M from the restated AIR09 to AIR10. This is primarily due to the reduced general and support costs, other efficiencies and the increase in volumes of water produced by the PPP providers but is explained on a line by line basis below;

- Line 1: Employment costs have decreased in Water Resources & Treatment (WRT) by circa £0.9M and in Water Distribution (WD) by circa £1.9M. The decrease in costs is primarily due to the reduction in staff numbers.
- Line 2: Power costs include electricity costs and fuel costs for power generation. The costs have increased in AIR10 primarily due to circa 5% increase on the fixed price element of the unit price as the ESB contract moves into its 2nd annual term. The total power costs include circa £6.5M for PPP sites paid for by NIW.
- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted have increased by circa £1.7M, split £0.1M increase in WRT and £1.6M increase in WD. This is primarily due to the costs for the Freeze Thaw, an increase in the cost of road reinstatements and the cost of New Connections as detailed above.
- Line 5: Associated companies– there are no costs in this line.
- Line 6: Materials & Consumables have reduced by circa £0.9M from AIR09. WRT has reduced their costs by £0.4M while WD have decreased by £0.5M. WD has decreased due to a reduction in the use of chemicals during the year. WRT has reduced the costs of materials due to the contractor doing more of the new connections with which they provide their own materials and improved stock control has resulted in better utilisation of the stock.
- Line 7: Service Charges– there are no costs in this line.
- Line 8: Bulk Supply imports – there are no costs in this line.
- Line 9: Other Direct Costs have decreased by circa £0.5M. In WRT the main reduction was due to the rationalisation of vehicles and plant which resulted in a lesser internal charge. WD's has a significantly reduced charge in AIR10 due to an increase in the income from new connections which is offset in the P&L against overheads capitalised.
- Line 10: Total Direct Costs – this is a calculated line and is the total of Line 1-9. AIR10 direct costs are only £1M higher than the restated AIR09. This is driven by the increased power costs.
- Line 11: General & Support expenditure has reduced by over £11M from the restated AIR09. It has fallen from circa £31M to circa £19M in AIR10 due to the significant reduction in VER costs, the reduced pension costs, reduction in BI costs, reduction in M&E costs, other efficiencies and improved allocation of costs by the Finance Business Partners across all directorates. These factors reduced the General & Support expenditure which is allocated across the columns on a percentage basis of total direct costs, with the exception of M&E which follows the direct coding to Service Activities for the M&E function in the General Ledger. Service Activities are mapped to the NIAUR service areas in **Appendix 2**. This was consistently applied to both AIR09 restated and AIR10.

See the **Allocation of costs between service areas** section at the start of the commentary. The NIW Total costs include circa £0.2M for the PPP table.

- Line 12: This is the calculated total line for functional expenditure which has decreased by over £10M mainly due to the £11M reduction in general and support costs (Line 11) as described above.

B - Operating Expenditure

- Line 13: Customer services costs have increased by circa £0.4M compared to the restated AIR09. This is primarily due to changes in contractual arrangements. Customer services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR10 the percentage split was calculated at 44.2% Table 21 and 55.8% Table 22. In AIR09 the percentage split was 45.7% and 45.8% between Table 21 & 22 respectively.
- Line 14: Scientific Services costs have fallen marginally from the restated AIR09. Scientific Services costs have been split using the same percentage as Customer services as detailed above in Line 13.
- Line 15: Other Business Activities – Regulatory costs have reduced from the restated AIR09 mainly due to decreased regulator fees in the 0910 financial year. 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.
- Line 17: Local authority rates have increased slightly in AIR10 and agree with the rates bills from LPS (Land & Property Services). Rates charges increased in the year as a result of the increase in the non domestic council rates. The rates charge for water treatment can be specifically identified from the rates bill which is consistent with AIR09.
- Line 18: Doubtful debts have decreased from the restated AIR09 position of £2.1M to £0.6 in AIR10. The total Doubtful debts were split between Table 21 and 22 by a percentage split calculated by the Customer Services Finance Business Partner based on the 'measured water income' and the 'non-domestic metered sewerage' income.

  1. Customer Services have worked closely with Echo, the external billing supplier, to resolve and recover the outstanding debt issues which resulted in lower than expected bad debts in 2009/10. The bad debt charge in Customer Services in 2009/10 was £0.8M in respect of non-domestic billing;
  2. Rechargables – the bad debt charge in respect of rechargeable items in 2009/10 amounted to £0.3M.

  These costs have been split between Table 21 and 22 using the percentage split of 58.4% and 41.6% respectively.
- 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.
- Line 21: Third party services have risen marginally due to an increase in rechargeable works.
- Line 21a: Total PPP Unitary Charge has increased marginally by circa £0.1M. In AIR09 the company reported the opex element of Alpha from the dates of

Service Commencement. The costs for AIR09 therefore reflected only a part year total at £1.3M. For AIR10 the opex represents a full year total at £1.4M. This total also recognises that, unlike the Wastewater PPP's, the Alpha Concessionaire has recognised in excess of £0.7M in performance deductions in Unitary Charge invoicing and this is accounted for in the £1.4M opex charge

- 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 over £11M from the restated AIR09 mainly due to the decrease in General & Support expenditure (see Line 11). This agrees to Table 35 line 24.

C Reactive & Planned Maintenance

- Line 23: Infrastructure, this figure has reduced slightly due to significantly improved coding by the operational staff throughout the Networks Water Function.
- Line 24: Non-infrastructure, this figure hasn't changed dramatically at total level in Line 24.

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 £111 million. 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 2009/10 the net charge to the profit and loss account in respect of the service element of the Alpha unitary payments was £1.4M (2008/09 £1.3M).
- In 2009/10 the charge to the profit and loss account in respect of the finance charge element of the Alpha unitary payments was £11.3M (2008/09 £4.2M).
- In 2009/10 an amount of £2.9M (2008/09 £0.4M) 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 2009/10 an amount of £0.2M (2008/09 nil) 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 £3.3m (2008/09 £1.2M).

Leakage costs
Operating costs relating to leakage amounted to £3.8M in 2009/10 which is consistent with AIR09. Capital expenditure has increased slightly from £6.4M to £6.8M.

Table 22 – NIW Total

A - Direct Costs

Total Functional Expenditure has decreased by over £5M from restated AIR09 to AIR10. This is primarily due to the decrease in general and support expenditure and staff costs and is explained on a line by line basis below:

- Line 1: Employment costs have decreased in Sewerage (S) by circa £0.6M, Sewage Treatment (ST) by circa £1.3M and increased in Sludge Treatment and Disposal (ST&D) by circa £0.7M. The overall decrease of over £1M is primarily due to the reduction in staff numbers.
- Line 2: Power costs include electricity costs and fuel costs for power generation. The costs have increased in AIR10 primarily due to a circa 5% increase on the fixed price element of the unit price as the ESB contract moves into its 2nd annual term.

  In AIR10 the Wastewater Field managers provided a percentage estimate of power costs between sewage treatment and sludge treatment at each of the WWTWs where there are both activities. These percentages were applied to the power costs to calculate the costs for each activity. This is the same rationale as AIR09.

  There is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTWs and the Incinerator. The power team supplied an estimated 60:40 split between the Belfast WWTWs and the Incinerator which has been used to calculate the amount relating to sewage treatment at Belfast and sludge treatment at the Incinerator. This is consistent with AIR09

- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted have increased slightly by circa £0.6M, circa £0.2M in Sewerage, circa £0.5M in Sewage Treatment and reduced by circa £0.1M in Sludge treatment & disposal.
- Line 5: Associated companies– there are no costs in this line.
- Line 6: Materials & Consumables have remained virtually unchanged from the restated AIR09 to AIR10.
- Line 7: Service Charges– there are no costs in this line.
- Line 8: Other Direct Costs have decreased by circa £0.2M which is mainly in Sewerage. The main reason is due to the rationalisation of vehicles and plant which has resulted in a lesser internal charge.
- Line 9: Total Direct Costs – this is a calculated line and is the total of lines 1-8. AIR10 direct costs are is only £1M higher than the restated AIR09. This is driven by the increased power costs.
- Line 10: The General & Support expenditure has significantly reduced from the restated AIR09. It has fallen from circa £34M to circa £27M in AIR10 due to the significant reduction in VER costs, the reduced pension costs, reduction in BI costs, reduction in M&E costs, other efficiencies and improved allocation of costs by the Finance Business Partners across all directorates. These factors reduced the General & Support expenditure which is allocated across the columns on a percentage basis of total direct costs, with the exception of

M&E which follows the direct coding to Service Activities for the M&E function in the General Ledger. Service Activities are mapped to the NIAUR service areas in **Appendix 2**. This was consistently applied to both AIR09 restated and AIR10. See the **Allocation of costs between service areas** section at the start of the commentary. The NIW Total costs include circa £1.1M for the PPP table.

- Line 11: This is the calculated total line for functional expenditure which has decreased by over £5M in total and there are more accurate allocations across each of the columns. The most significant decrease is within Line 10 General & Support as already mentioned above.

B - Operating Expenditure

- Line 12: Customer services costs have increased by over £1M against the restated AIR09. This is primarily due to changes in contractual arrangements. Customer services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR10 the percentage split was calculated at 44.2% Table 21 and 55.8% Table 22. In AIR09 the percentage split was 45.7% and 54.3% between Table 21 & 22 respectively.
- Line 13: Scientific Services costs have increased marginally from the restated AIR09. Scientific Services costs have been split using the same percentage as Customer Services as detailed above in Line 12.
- Line 14: Other Business Activities – Regulatory costs have reduced from the restated AIR09 mainly due to decreased regulator fees in the 0910 financial year. These costs are apportioned on the same basis as Line 13 and Line 14.
- Line 15: Total Business Activities – this is a calculated line and is the total of Line 12, 13 and 14.
- Line 16: Local authority rates have increased by £1.7M from the restated AIR09. The following PPP sites for Omega ie Richhill, Ballyrickard and Armagh plus Kinnegar and North Down (approx £0.5M) are paid by NIW and have been removed in the NIW (only) Table 22 as they relate to the PPP site not NIW. This is consistent with AIR09. Rates have increased due to the increase in numbers of works covered by the rates bills.
- Line 17: Doubtful debts have decreased from the restated AIR09 position of circa £1.0M to circa £0.5M. The total Doubtful debts were split between Table 21 and 22 by a percentage split calculated by the Customer Services Finance Business Partner based on the 'measured water income' and the 'non-domestic metered sewerage' income.

    1. Customer Services have worked closely with Echo, the external billing supplier, to resolve and recover the outstanding debt issues which resulted in lower than expected bad debts in 2009/10. The bad debt charge in Customer Services in 2009/10 was £0.8M in respect of non-domestic billing;
    2. Rechargables – the bad debt charge in respect of rechargeable items in 2009/10 amounted to £0.3M.

These costs have been split between Table 21 and 22 using the percentage split of 58.4% and 41.6% respectively.

- 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.
- Line 20: Third party services have remained constant.
- Line 20a: Total PPP Unitary Charge has increased by circa £6M as a result of increased use of PPP sites.
- Line 21: Total operating expenditure, this is a calculated line and is the total of line 19, 20 and 20a. This line has increased by circa £2.4M from the restated AIR09. This is primarily due to the increased PPP unitary charge and power costs counteracted by the decrease in General & Support expenditure (Line 10). This agrees to Table 36 line 21.

C - Reactive & Planned Maintenance

- Line 22: Infrastructure, this figure has reduced due to significantly improved coding by the operational staff throughout the Networks Sewerage Function and the use of the Super-bundle contract.
- Line 23: Non-infrastructure, this figure has remained consistent with the restated AIR09.

PPP

Kinnegar

A contract with Coastal Clearwater Ltd was signed on 30 April 1999 for the provision of sewerage treatment which covered the upgrading of the Kinnegar Waste Treatment Works with a capital cost in the region of £11m. The contract is for 25 years with an end date of 30 April 2024.

The PFI property involved is not an asset of NIW but the assets will revert to NIW at the end of the contract. In 2009/10 the charge to the Operating Costs Statement in respect of Kinnegar was £2.0M (2008/09 £1.2M). The gross charge was £2.2M (2008/09 £1.5M) with £0.2M (2008/09 £0.2M) 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 five sites with a capital cost in the region of £122M. The contract is for 25 years with an end date of 5 March 2032.

The PFI property involved is not an asset of NIW but since the assets will revert to NIW at the end of the contract part of the unitary charge has been capitalised as a residual interest asset. In 2009/10 the charge to the Operating Costs Statement in respect of Omega was £6.9M (2008/09 £8.1M). The gross charge was £8.8M (2008/09 £9.4M) with £1.9M (2008/09 £1.3M) capitalised in relation to the residual interest asset.

An amount of £6.4M was charged to the Profit and Loss Account in 2009/10 in respect of an increased provision for claims from Glenwater giving rise to a total Profit and Loss Account charge for Omega for 2009/10 of £13.2M.

Reactive and planned maintenance
The overall approach and allocation process for Tables 21 and 22 has remained consistent with AIR09. However there still remain some limitations to the coding which means that some expenditure, for example building and ground maintenance, cannot be split separately.

Pensions
Total pension costs of £10.7M (AIR09 £17.2M) which amounts to £11.0M net of interest credit (AIR09 £17.1M) were charged to the profit and loss account. This is made up of current service costs of £7.8M (AIR09 £10.5M) and past service costs of £3.2M (AIR09 £6.7M). 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 £18.5M (AIR09 £15.2M) including £7.5M relating to payment of 2008-09 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.

From April to October 09 the actual percentage contribution level was approx. 29.3% of pensionable pay within the profit and loss account. Upon agreement between the Trustees and the company the rate was reduced to 26.9% from October 09 to the year-end.

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 2010.

Third party costs
Third party costs relate primarily to services recharged to third parties. These costs include labour, materials, vehicles and overheads to reflect a best estimate of the full

cost to the company of supplying these services. These services include unplanned work (e.g. repairs to rectify damage by third parties to company assets) and planned work (requests for the company to carry out small works). The associated income is reported in Table 23 as third party income.

Infrastructure Renewals Charge (IRC)
See Commentary for Table 33.

System Controls
Internal audit carried out a review of the AIR returns and suggested recommendations regarding sign offs, password protection of files and process notes. Where possible these recommendations have been implemented.

Table 21 – Water Service (PPP only)

Line 2 - Power Costs
AIR 09 Reported on the Alpha sites for a part year only at £2.32M from the dates of Service for each Facility (Scheme).

The increase to £6.473M reflects a full year of Service for all Facilities (Schemes)

Line 8 - Other Direct Costs:
No variation. No Costs incurred.

Line 10 - NIW only General & Support Expenditure
The NIW only General & Support Expenditure was reported in AIR09 as the portion of Commercial Contracts Management Team costs attributable to administering Facilities (Schemes) in service. This was an approximation of such NIW staff costs for its Contract Management Team staff costs for a part year of Alpha Service. (£0.074M)

For AIR10, the company has refined its methodology to G&SE Costs to include apportionment of staff costs, overheads and PPP consultancy. This gives a more accurate costing of the G&SE for water PPP's, when reflected against the current imbalance of staff and consultancy time on the construction phase of the Omega Contract. The resultant cost is considerably more accurate than AIR 09 at £0.234M.

Line 14 - Scientific Services
Whilst the company has started to bear the cost of bacteriological sampling and analysis from February 2010 following a Contract Change after the Dunore Pt Boil Notice in April 2009, this was off set by an equal reduction in the payment to the Concessionaire. The Company's accounts reflect this as a netting of the total amount payable to the Concessionaire, and the cost is therefore reflected in line 21(a), and not recorded in Line 13. Line 13 is therefore zero. (The Company will correctly allocate such amounts to Line 14 for 2010/11).

Line 16 - Rates
Rates for PPP sites were not requested in AIR 09. The rates for the relevant Facilities (Schemes) in Service are now provided. 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.

Line 21a - PPP Unitary Charges (Opex)
This line data is drawn directly with the Company's accounts. No additional reconciliation is required.

In AIR09 the Company reported the opex element of Alpha from the dates of Service Commencement. The costs for AIR 09 therefore reflected only a part year total at [redacted].

For AIR10 the opex represents a full year total at [redacted]. This total also recognises that, unlike the wastewater PPP's, the Alpha Concessionaire has recognised in excess of [redacted] in performance deductions in Unitary Charge invoicing and this in accounted for in the [redacted] opex charge.

Line 22(a) - Payments from Concessionaire to Operators

This line is equivalent to Line 10 (PPP) in AIR 09, where the data then represented the payments to the operating subcontractor for a part year as provided by the Concessionaire [redacted]

The AIR 10 data represents payments for these Facilities for a full year in accordance with the line guidance as set out in the methodology [redacted]

The operating company is entitled to receive costs in relation to the following items as agreed in the contract between the Concessionaire and Operating Company

- [redacted]
- [redacted]

The invoices presented from the operating company to the concessionaire are limited only to these categories of costs .No other information is available in relation to the payments made by Concessionaire to the Operating Company.

Also over the period from 1st April 2009 to 31st March 2010 the Concessionaire would have made payments to the Operator for the construction of the assets but these have been excluded on the basis that they do not represent routine direct costs attributable to the treatment and distribution of water and hence would not support the Primary Purpose of "Informing relative performance and efficiency assessments".

Table 22 - Sewerage Service (PPP only)

Line 2 - Power Costs
AIR 09 Reported on Omega North Down Ards WWTW only £0.622M

The increase in Omega costs reflects:
The variation in North Down Ards WWTW power costs to £0.795M
The addition of the Richhill WWTW: £0.051
The addition of Ballyrickard WWTW: £0.178
The addition of Armagh WWTW: £0.085M

Kinnegar: Power costs are not recorded as (i) they are not paid by the Company and (ii) they are part of the Unitary Charge payment to the Concessionaire and in addition cannot be determined directly as the Concessionaire is not obliged to report on AIR matters from this early PFI Contract.

Line 8 - Other Direct Costs:
In AIR 09 the Company overlooked the payment to NCC Escrow for the secure retention of the Kinnegar Project Documents. (In Omega and Alpha, these costs are borne by the Concessionaire). The value is £1k per annum, and is properly reported in AIR10

Line 10 - NIW only General & Support Expenditure
The NIW only General & Support Expenditure was reported in AIR09 as the portion of Commercial Contracts Management Team costs attributable to administering Facilities (Schemes) in service. There was an approximation of such NIW staff costs for administration of North Down and Kinnegar only. £0.074M

For AIR10, the company has refined its methodology to G&SE Costs to include apportionment of staff costs, overheads and PPP consultancy. This gives a more accurate costing of the G&SE for wastewater PPP's.

However, the revised approach spreads the expenditure across all Facilities (Schemes) whether in Service or in Construction Phases. This is more representative as a large proportion of the staff and consultancy support time has been spent on PPP Construction issues during the period.

Consequently, whilst the Ballynacor WWTW, Ballynacor Sludge Facility and Duncrue St Sludge Facilities were all in construction, (along with the Ballynacor Lagoon Remediation), and not in Service, the costs have had to be allocated to these Schemes to reconcile with the PPP Accounts Code. Thus, costs of £0.130M in Column 2 and 3 x £0.130M in Column 3 are provided for as part of the £1.081M cost of managing the wastewater PPPs.

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, and Armagh.

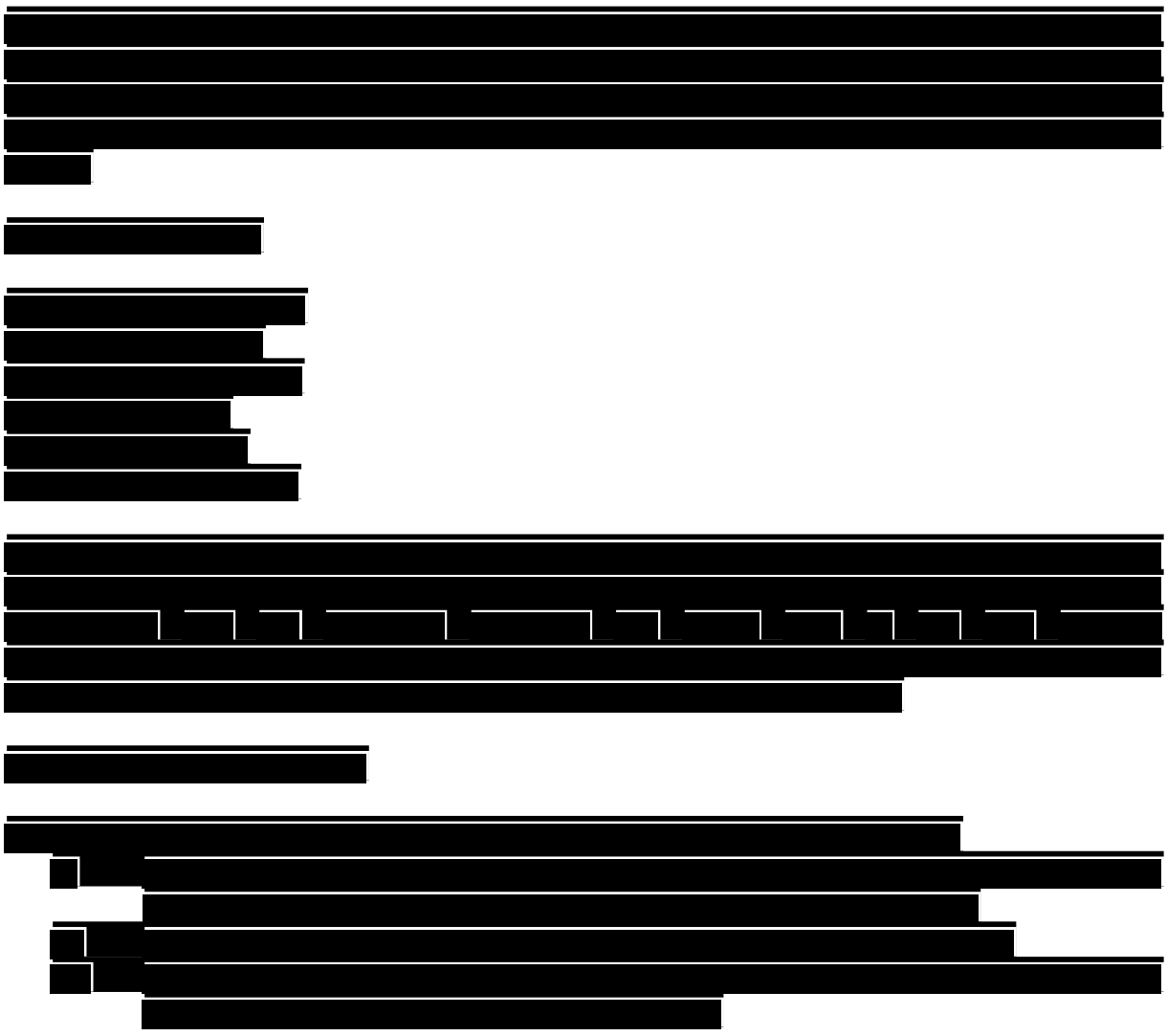
AIR 09 overstated the costs attributable to Kinnegar and North Down, as at the time the company was carrying out operational sampling for North Down in addition to the Contract sampling. The operational sampling costs were subsequently recharged to the contractor.

Line 16 - Rates

Rates for PPP sites were not requested in AIR 09. The rates for the relevant Facilities (Schemes) in Service are now provided. The rates figure for Omega sites Richhill, Ballyrickard and Armagh were taken directly from the rates bills received from LPS and apportioned for part of the year where necessary. Kinnegar was also taken directly from the Rates Bill. North Down was not included in the original 0910 rates bill however has been included in a draft additional bill from LPS which was accrued at the year end. The figure for North Down agrees to the estimate from LPS.

Line 20a - PPP Unitary Charges (Opex)

This line data is drawn directly with the Company's accounts. No additional reconciliation is required.



Line 21(a) - Payments from Concessionaire to Operators
This line is equivalent to Line 10 (PPP) in AIR 09, where the data then represented the payments to Operating Subcontractors for Kinnegar and North Down only.

The AIR 10 data represents payments for these Facilities and those of Armagh, Ballyrickard and Richhill.

The Kinnegar data has been derived from the Concessionaires Monthly Invoices to the Company where the payments to Operator are individually itemised.

The Omega data has been provided directly by the Omega Contractor, advising this is provided from the Operators accounts.

A breakdown of the payments per Facility (Scheme) is as per Table 43. The sludge figure is not Unitary Charge but the initial Milestone payments No.1 and No.2 for the Ballynacor Sludge Lagoon Remediation Work.

Appendix 1 – Expense group mapping

Expense Group	Description	Table 21 & 22 mapping
511X	Industrial Wages	1 Employment
513X	Other Wage Costs	1 Employment
514X	Other Costs of Employment	1 Employment
515X	Salaries	1 Employment
516X	Non-Industrial Expenses	1 Employment
517X	Temporary Support Staff	1 Employment
611X	Costed Wages Charge	1 Employment
612X	Wages Overheads	1 Employment
613X	Costed Wages Recovery	1 Employment
614X	Costed Wages Overhead Recovery	1 Employment
521X	Power	2 Power
531X	Operational Contractors	4 Hired and Contracted
532X	Other Contractors	4 Hired and Contracted
534X	Out sourcing	4 Hired and Contracted
538X	Consultants Fees	4 Hired and Contracted
541X	Materials and Equipment	6 Materials & consumables
544X	Non Operations Materials	6 Materials & consumables
547X	Stock Adjustments	6 Materials & consumables
548X	Chemicals	6 Materials & consumables
536X	Office and Computer Services	9 other direct costs
537X	Legal and other professional fees	9 other direct costs
551X	Accommodation	9 other direct costs
553X	Insurance - Premiums	9 other direct costs
553Y	Insurance - Claims	9 other direct costs
554X	Public Liability	9 other direct costs
555X	Employer's Liability	9 other direct costs
616X	Vehicle and Plant Charges	9 other direct costs
695X	Management Task	9 other direct costs
759X	Overheads Capitalised	9 other direct costs
518X	Staff Training & Hospitality	11 General & support
533X	V&P repairs	11 General & support
539X	Audit	11 General & support
546X	Mobile V&P Charges	11 General & support
552X	Communication	11 General & support
556X	Other Grants and Subscriptions	11 General & support
557X	Advertising and Publicity	11 General & support
641X	Intra Departmental Notionals	11 General & support
651X	Inter Departmental Notionals	11 General & support
775X	Discount Allowed	13 Customer services
556Y	Regulatory Costs	15 Other Business Activities
558X	Rates	17 Rates
772X	Bad Debts	18 Doubtful debts
534Y	PPP	20/21a 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)	
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	
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	790	
730	Water Analysis	Scientific Services
731	Sewerage General	
732	Labs Water & Sewerage General	
733	Sampling	
734	Labs Sewage Sampling	
003	Rates DRC - Water	Rates
013	Rates DRC - Sewerage	
910	Rechargeable Work	Third Party Opex
000	Default	Overhead Pot 1 - General
021	GAE	
023	Invest to Save Revenue	
810	Vehicle & Plant Maintenance	
811	Vehicle & Plant Accident Repair	
812	Garage Overheads	
813	Roads Service	
820	Telemetry	
890	TMG Function Activity	
050	Ops & Maint General (Water)	Overhead Pot 2 - Water
055	Ops & Maint General (Sewerage)	Overhead Pot 2 - Sewerage
585	Health & Safety - WW	
590	Waste Water Function Activity	
735	Trade Effluent	
821	Radio & Monitoring Wastewater	
390	Networks Function Activity	Overhead Pot 3 - Networks Water & Sewerage

Table 23

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 23 REGULATORY ACCOUNTS
ANALYSIS OF TURNOVER AND OPERATING INCOME

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	
				2007-08			2008-09			2009-10					
				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	104.560	99.245	203.805	114.083	104.945	219.028	118.127	122.227	240.354	118.127	122.227	A2
2	Unmeasured - non- household	£m	3	0.000	0.000	0.000	1.699	1.637	3.336	10.903	6.848	17.751	9.672	5.612	A2
3	Unmeasured	£m	3	104.560	99.245	203.805	115.782	106.582	222.364	129.030	129.075	258.105	127.799	127.839	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	A2
5	Measured - non- household	£m	3	40.623	37.164	77.787	39.768	36.965	76.733	34.629	22.054	56.683	0.000	0.000	A2
6	Measured	£m	3	40.623	37.164	77.787	39.768	36.965	76.733	34.629	22.054	56.683	0.000	0.000	A2
7	Trade effluent	£m	3	0.000	5.471	5.471	0.000	4.712	4.712		4.669	4.669	0.000	0.000	A2
7a	Roads Drainage Revenue	£m	3	0.000	0.000	0.000	0.000	17.150	17.15	0.000	0.000	19.670	0.000	0.000	A2
8	Large user and special agreement	£m	3	5.863	0.000	5.863	5.352	0.000	5.352	5.594	1.575	7.169	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	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	0.307	0.000	0.307	0.192	0.192	0.384	0.330	0.330	0.660	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	A2
13	Other appointed business (third party)	£m	3	0.557	0.266	0.823	0.000	0.000	0.000	0.379	0.234	0.613	0.000	0.000	A2
14	Third party services (excluding non-potable water)	£m	3	0.864	0.266	1.130	0.192	0.192	0.384	0.709	0.564	1.273	0.000	0.000	A2
15	Other sources (excluding large users, third parties and special agreements)	£m	3	0.000	0.000	0.000	0.407	0.293	0.700	0.000	0.000	0.000	0.000	0.000	A2
16	Total turnover	£m	3	151.910	142.146	294.056	161.501	165.894	327.395	169.962	177.607	347.569	0.000	0.000	A2
B	**OPERATING INCOME**														A2
17	Current cost profit or loss on sale of fixed assets	£m	3	0.021	-0.077	-0.056	-0.072	0.022	-0.050	0.120	-0.115	0.005			A2
18	Exceptional items	£m	3	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			A2
20	Total operating income	£m	3	0.021	-0.077	-0.056	-0.072	0.022	-0.050	0.120	-0.115	0.005			A2
C	**WORKING CAPITAL ADJUSTMENT**														
21	Working capital adjustment	£m	3	1.327	0.000	1.327	-0.292	0.000	-0.292	4.313	0.000	4.313			A2
D	**REVENUE CORRECTION MECHANISM**														
22	Net revenue movement out of the tariff basket	£m	3							0.000	0.000	0.000	0.000	0.000	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.

The adjustment shown in Table 23 has been entirely attributed to Water. There will be an element relating to Sewerage but the information is currently not available to calculate this split.

Monitoring Of Revenue

Measured and Unmeasured Water and Sewerage – non household

Revenue is monitored at each month end when figures are made available by Echo. Each revenue stream is compared to the budget set at the beginning of the year with PTD and YTD variances calculated and analysed. A forecasting process is also in place to take account of trends and variances that are emerging and the actual PTD and YTD are also compared to the recent forecast. The forecast process is ongoing during the year (normally quarterly) with the budget set and fixed at the start of the financial year.

The Finance and Customer Services (CS) teams meet on a monthly basis to discuss any emerging variances. This monitoring system has continued to improve during the year with the use of the Dynamic Consumption Report. This report allows underlying trends in consumption to be compared to the volumetrics underpinning the forecasted information and this can begin to provide logical explanations for under or over achievement in revenue targets. In particular key customer accounts are examined for consumption trends and economic activity as these customers can have a significant influence on results.

Comparison of 2008/09 and 2009/10

The revenue subsidy from DRD has been allocated to the classifications within Table 23 in line with the posting of these categories of subsidy in Oracle. The subsidy element is shown separately in the table below for 2009/10 and compared to the position in 2008/09.

Non- Household

	UNM W	UNM S	MW	MS
	£m	£m	£m	£m
Customer	1.231	1.236	34.629	23.629
Subsidy	-		9.672	5.612
Total 2009-10	**1.231**	**1.236**	**44.301**	**29.241**
Customer	1.699	1.638	33.016	14.217
Subsidy			6.752	22.748
Total 2008-09	**1.699**	**1.638**	**39.768**	**36.965**
Variance	(0.468)	(0.402)	4.533	(7.724)
	(27.5%)	**(24.5%)**	**11.4%**	**(20.9%)**

	TE	MW Large User	Other W	Other S
	£m	£m	£m	£m
Customer	4.669	5.594	0.709	0.564
Subsidy	-	-	-	19.670
Total 2009-10	**4.669**	**5.594**	**0.709**	**20.234**
Customer	4.712	5.352	0.599	0.460
Subsidy	-	-	-	17.175
Total 2008-09	**4.712**	**5.352**	**0.599**	**17.635**
Variance	(0.043)	0.242	0.110	2.599
	(0.9%)	**4.5%**	**18.4%**	**14.7%**

Measured Sewerage income has fallen by 20.9% partly driven by reduced sewerage charges for some high volume water customers who successfully challenged the standard % 'return to sewer' assumption underpinning their measured sewerage charges.

The income category 'Other Sewerage' has risen by approximately £2.6m (14.7%). The main income stream within this is Road drainage charges and these have risen from £17.175m in 2008-09 to £19.670m in 2009-10.

In Measured Water the subsidy is related to domestic allowance and is agreed with DRD based on customer numbers and consumption. As consumption has risen in 2009/10 this subsidy has increased.

Household

	UNM W	UNS S
	£m	£m
Customer	-	-
Subsidy	118.127	122.227
Total 2009-10	**118.127**	**122.227**
Total 2008-09	114.083	104.945
Variance	4.044 3.5%	17.282 16.5%

Variances in domestic subsidy revenue are in line with RPI and the funding agreement under SBP.

Reported Turnover and Billed Amounts
Each month Management Accounts carry out a number of adjustments to the information provided by Echo on the billed amounts. A schedule is produced that maps the Echo information to the final Oracle General Ledger balances on the five main revenue accounts in the Profit and Loss Account (see Appendix 4). The adjustments can be summarised as follows:

Account 4211 Measured Water and Account 4311 Measured Sewerage

a. Accrued Income from the Echo Accrued Income Report is added to billed amounts for the month.
b. Referred Income – this relates to bills produced by Echo and included in the billing information are not issued because they have exceeded the value range expected for the bill ('the bill ceiling) or the bill is under query (N stops) or the address is not certain. Although most of these bills will eventually be released at the month end an amount is debited from billed amounts in case the full value of the bill is not finally released.
c. Other adjustments – an issue of under-billing arose related to test meters where customers should have been billed for consumption and had not been (approximately £0.679m MW and £0.273m MS). An issue of over-billing arose related to an error in relation to legacy data whereby customers had been assigned the incorrect pipe size with a consequent overstatement of the bill issued giving approximately £885k overstatement to MW income. Manual adjustments were made for both items at year end (see billed income reconciliation).
d. [redacted] this relates to billing of £0.116m that was not included in the rapid billing run and was manually accrued.

Account 4251 Unmeasured Water and Account 4351 Unmeasured Sewerage
The billing information from Echo will show the annual bills issued to cover 12 months in advance for unmeasured customers. An adjustment is completed by NIW to spread this initial advance billing over the twelve months of the year. This is achieved by deferring the income relating to the months billed in advance by debiting

income and crediting a deferred income account on the balance sheet. At year end the amount of the deferral is zero as the billing year is in line with the financial year ended 31 March.
An adjustment was for £0.082m for non void vacant properties. This adjustment is for customers occupying properties that were not being billed - 'Void' (i.e. not billable), that were in fact revised as 'non-voids' by the metering contractor, Enterprise. At 31 March 2010 815 properties were left to bill at a revised average bill of £200, NIW provided for 50% of this on a prudent basis.

Account 4411 Trade Effluent (TE)
TE income from Echo is adjusted for the TE element of the Accrued Income Report. There is no adjustment for referred bills.

Echo Reporting Packs
The Echo billing and accrued income reports are sent to NIW at each month end on a disk. All information is in Excel spreadsheet form with twenty three separate sheets. The listing of these sheets and the reconciliations and checks completed by Echo are shown in Appendix 1. The tasks carried out by NIW Finance, NIW Customer Services and Echo are included in Appendix 2.

Reconciliations of Echo data to General Ledger (GL) Balance Sheet Accounts
A monthly exercise is carried out by Financial Accounts to ensure the following information is reconciled to the relevant GL balances on Oracle:

- Aged debtors balances provided by Echo;
- Bad Debt Provisions calculated by Customer Services;
- Accrued Income Report provided by Echo;
- Unreconciled receipts information from Echo;

At year end the position on all relevant balance sheet nominal ledger accounts was:

1210 Measured and Unmeasured Water and Sewerage Debtors	£16.544 m**
1213 Trade Effluent Debtors	£ 0.671 m
1218 Unreconciled Receipts	£(0.147)m
1220 Metered Water Bad Debt Provision	£(5.465)m
1223 Trade Effluent Bad Debt Provision	£(0.104)m
1420 Metered Water Accrued Income*	£15.392 m
1423 Trade Effluent Accrued Income	£ 0.805 m

* includes metered sewerage accrued income.

** this has been adjusted in the statutory accounts to exclude credit balances of approximately £2.237m that are then shown in creditors.

Monthly Monitoring Actual versus Budget
The monthly revenue monitoring procedures have been outlined at the start of this commentary. The year end position of income against budget can be shown as follows:

	YTD Budget (£m)	YTD Actual (£m)	Variance (£m)	Variance (%)
Measured Water / Sewerage	73.699	63.853	(9.846)	(13.4)
Unmeasured Water / Sewerage	4.441	2.467	(1.974)	(44.4)
Trade Effluent	5.200	4.669	(0.531)	(10.2)
Subsidy	277.590	277.107	(0.483)	(0.1)
Other	3.379	4.196	0.817	24.2
Total	**364.309**	**352.292**	**(12.017)**	**(3.3)**

The monthly monitoring against budget is carried out against the above lines. It should be noted subsidy is monitored at a total subsidy level and not by the income streams it is associated with. Unappointed activities are included above in both other income (vehicle maintenance, septic tank emptying etc.) and subsidy (septic tank subsidy).

Meter Reading Routestar and Rapid Xtra

In 2008-09 a module was designed by Echo to allow a reconciliation to take place between the system that collects meter readings (Routestar) to the Rapid Xtra system for bill generation. The aim was to compare the number of monthly readings being taken against the number of bills generated with an explanation of why for legitimate reasons (e.g. test meters) each reading may not give rise to a bill. This reconciliation was carried out on a monthly basis during 2009/10 and the output was examined by Customer Services, Internal Audit and External Audit. The reconciliation is now able to provide a completeness check on the numbers of readings versus the number of bills raised and it is the intention that the system should now be extended to cover consumption data read versus billed.

Measured Accrual

Accrued income is calculated by the RapidXtra system for Measured Water, Measured Sewerage and Trade Effluent income streams. The output is summarised in an Accrued Income Report and used by NIW when preparing the month end accrual.

The basis of the accrual is the same for all three income streams. At month end the number of days that has elapsed since the last bill date is multiplied by an appropriate accrual rate per day. The accrual rate is based on the historical daily consumption by the customer multiplied by the appropriate standing charge and consumption charge dependent on the customer pipe size etc. New customers without a billing history will have an industry average usage applied until a billing history has been established.

In the present economic climate historical consumption may tend to overstate future usage. This is particularly relevant for the large user accounts and an assessment is

carried out each month to determine if a manual adjustment is required to the accrued income to take account of this potential overstatement.

Reconciliation of Billed Income to P&L Account

All sources of income from Echo including MW,MS,UMW,UMS,TE.

Measured & Unmeasured Water and Sewerage	
Op. Accrued income at 1 April 2009	(£11.630m)
Cl. Accrued income at 31 March 2010	£15.924m
Movement in test meter billing	(£0.952m)
Adjustment for pipe size	£0.885m
Movement in accrual provision	£0.141m
[redacted]	£0.116m
Non void vacant properties	£0.082m
Referred Bills Movement	£0.004m
Other movement	(£0.003m)
	£4.567m
Billed Income	£61.754m
Total income in P&L	£66.321m
Accrued income at year end 25.8% of billed income in the year.	

Trade Effluent	
Op. Accrued income at 1 April 2009	(£0.964m)
Cl. Accrued income at 31 March 2010	£0.811m
Movement in Accrual Provision	(£0.006m)
	(£0.159m)
Billed Income	£4.828m
Total income in P&L	£4.669m
Accrued income at year end 16.8% of billed income in the year.	

Variances in Accrued Income during 2009/10

The accrued income balances at 31 March 2009 can be shown as follows:

	2009-10 £m	**2008-09 £m**	**Variance %**
MW and MS	15.392	11.630	32.3
TE	0.805	0.964	(16.5)
Total	**16.197**	**12.594**	**28.6**

The MW and MS customer (excluding subsidy) income has increased by 32.3 % during the year (see earlier table) and this has contributed to the significant increase in the associated accrued income at the year end. The figures above include a provision of 2% for accrued income up to 210 days and 100% for income accruing over 211 days.

Trade Effluent income has stayed fairly constant compared to last year and has decreased by 16.5%. The figures above include a provision of 2% for accrued income up to 210 days and 100% for income accruing over 211 days.

Accrued versus Billed income
This is currently not carried out although NIW are working with Echo to incorporate this as part of the monthly analysis. This will ensure variances between the accrual calculation and subsequent billing are understood and action can be agreed to enhance the accuracy of the accrued amounts.

Road Drainage Income

Liability for the costs of road drainage was transferred from sewerage service users to the Roads Service in 2008/2009 following an independent review.

NIW drew up a methodology for the calculation of the costs of road drainage which was agreed with the Regulator and accepted by the Department for Regional Development (DRD). Details of the methodology and calculation of road drainage are contained in Appendix 3.

2009/10 road drainage charges have been calculated based on the agreed projections for NIW costs of operation as set out in the NIW tariff model and as approved by DRD and NIAUR. The basis for the calculations has been examined and approved by the Regulator and accepted by DRD. A total of £19.670m was invoiced in 09/10 for road drainage.

	Combined	Storm Water	Total
Split of sewers for run off from roads and footpaths	50.35%	49.65%	100%
Total volume of Water (Cubic metres)	32,324,700	31,875,300	64,200,000
Mogden Formula element	R+V	R	
Cost of Element	0.41580	0.19543	
Cost of Run off	£13.441m	£6.229m	£19.670m

Subsidy
NI Water received £238.9m subsidy in relation to household customers and at 31 March 2010 an amount for £1.454m was outstanding from DRD. The total subsidy for household was £240.3m.

NI Water received £17.0m subsidy in relation to non-household customers and at 31 March 2010 an amount for £1.716m was due to DRD. The total subsidy for non-household was £15.3m.

At 31 March 2010 £0.262m was due to DRD from NIW, these figure were made up of £1.454m household subsidy due to NIW and £1.716m due to DRD for non-household subsidy.

Non tariff basket revenue

Water service
There is no net revenue movement out of the tariff basket for the water service.

Sewerage service
There is no net revenue movement out of the tariff basket for the sewerage service.

APPENDIX 1 - THE TESTS CARRIED OUT BY THE ECHO ACCOUNTANT AND ASSISTANT ACCOUNTANT ON THE MONTHLY REPORTING PACK SENT TO NIW

File Name	Output	Reconciliations & Checks
CA_BSD_02 MMM Financial Summary Information_v1.0.xls	Day 3 Summary of Day 5 Files	Ensure all tabs relate to files for day 5 CD
CA_BSD_MMM Bank rec_V1.0.xls	Bank Reconciliation	Ensure reconciliation to FN012 Cash, FN012 credit card, FN012 refunds and Suspense
CA_BSD_Accrualdetail31052009_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_AccrualexceptionsDC31052009_v1.0.xls	Details of meters not accrued	Ensure number of meters corresponds to Accrual Summary file
CA_BSD_AccrualsummaryDC31052009_v1.0.xls	Summary by Pipesize of accruals	Ensure that totals correspond to detailed file
CA_BSD_Aged Cash MMM 09_v1.0.XLS	Cash received aging	Reconciliation to FN012
CA_BSD_Aged Returned Payments MMM 09_v1.0.XLS	Returned Payments aging	Reconciliation to FN012
CA_BSD_FN012 Summary Split Extended MMM 09_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 09_v1.0.xls	Summary of FN012 with VAT summary	Reconciliation to FN012

File Name	Output	Reconciliations & Checks
CA_BSD_FN012 Summary Total Aged Debt Rec MMM 09_v1.0.xls	Reconciliation of 0-30 days transactions and FN012	N/a - this is a reconciliation
CA_BSD_FN012 Summary Total MMM 09_v1.0.xls	Summary by month of billing and cash received	Reconciliation to FN012
CA_BSD_FN015 Aged Debt By Industry MMM 09_v1.0.xls	Aged debt	Reconciliation to FN012 and FN016,FN017,FN018
CA_BSD_FN016 Aged Debt By Payment Plan MMM 09_v1.0.xls	Aged debt	Reconciliation to FN012 and FN015,FN017,FN018
CA_BSD_FN017 Aged Debt By Recovery Stage MMM 09_v1.0.xls	Aged debt	Reconciliation to FN012 and FN015,FN016,FN018
CA_BSD_FN018 Aged Debt By Recovery Profile MMM 09_v1.0.xls	Aged debt	Reconciliation to FN012 and FN015,FN016,FN017
CA_BSD_Manual Adjustments MMM 09_v1.0.xls	Details of manual adjustment transactions	Reconciles to FN012
CA_BSD_N-Stop Aging - MMM 09_v1.0.xls	Summary of N-Stops by age	Reconciles to GL99 - Ordinary Customers
CA_BSD_Referred Bills Summary MMM 09_v1.0.xls	N-Stops and Bill Ceilings	Reconciles to GL99 and CTLPRT04

File Name	Output	Reconciliations & Checks
CA_BSD_Summary Suspense Report 090531 incl aged_v1.0.xls	Summary of FN013 (aged)	Reconciles to FN013 / Bank Rec
CA_BSD_TE FN012 Aged Debt Rec MMM 09_v1.0.xls	Reconciliation of TE FN012 to aged debt	N/a - this is a reconciliation
CA_BSD_TE_AI_20090531_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 09_v1.0.xls	Full transactional detail of FN012 amounts	Reconciled to FN012
Vat Invoice Summary - MMM 09.xls	All VAT bill transactions for period	Reconciles to FN012 and summary split (old)

APPENDIX 2
TABLE 23

INCOME CHECKLIST

	NIW Mgt A/cs	NIW Fin A/cs	Echo	NIW CS
Email received from Echo			●	
Income summary populated			●	
Journal Template Populated			●	
Income Summary Reconciled to GL	●			
Debtors per Echo reconciled to GL		●		
Bad Debts Provision prepared and sent to Financial Accounts				●
Accrued Income provision prepared and sent to Financial Accounts				●
Bad Debts Provision reviewed		●		
Accrued Income provision reviewed & reconciled to GL		●		
DSO, Debtors days and Debt KPI prepared and sent to Financial Accounts				●
Income Summary quality checked		●		
Debtors Reconciliation quality checked	●			
Attend monthly Income meeting	●	●		●
Post Accrued Income	●			
Post Cash Received	●			
Post income and debtors	●			
Post referred bills adjustment	●			
Reconcile FN012/GL to income	●			
Post bad debt write off	●			
Disc received from Echo			●	
Review of systems adjustments to confirm these are reasonable				●
Comparison of systems adjustments to prior months				●

APPENDIX 3

METHODOLOGY AND CALCULATION OF ROAD DRAINAGE CHARGES

Calculation and Methodology

1 The calculation of Road Drainage charges was prepared on the following basis:

i The total urban road and footway surface area was obtained (Source Roads Service),

a. Urban road surface area = 39.3million m^2
b. Urban footway surface area = 17.0million m^2
c. Total Urban road & footway surface area = 56.3 million m^2

ii The average annual rainfall in Northern Ireland over the last 10 years was obtained (Source: Met Office).

Average annual rainfall = 1.14m

iii The average volume of rain and therefore the run-off from roads and footpaths discharged into NIW sewers and storm drains was calculated as follows:

56.3million m^2 x 1.14m = 64.2million m^3

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)	0.19543	Run off into Storm water sewers
V (Volumetric)	0.22037	
R+V	0.41580	Run off into Combined sewers

vi The cost determined for Road Drainage was computed as follows

	Combined	**Storm Water**	**Total**
Split of sewers for run off from roads and footpaths	50.35%	49.65%	100%
Total volume of Water (Cubic metres)	32,324,700	31,875,300	64,200,000
Mogden Formula element	R+V	R	
Cost of Element	0.41580	0.19543	
Cost of Run off	13,440,610	6,229,390	19,670,000

AIR 10 Table 23

Appendix 4

			31-Mar-10						
		YTD income 1st Apr to end of Previous Month	from Crystal Alliance	Accrued Income	Accrued Income	Referred Income	Referred Income	Deferred Income	Deferred Income
			Disc	Reverse Previous	For this month	Reverse Previous	For this month	Reverse Previous	For this month
			Dr/(Cr)	Dr/(Cr)	Dr/(Cr)	Dr/(Cr)	Dr/(Cr)		
4211	Measured Water	- 36,594,382.46	(3,369,125.42)	9,688,212.95	(9,490,802.13)	(75,242.25)	60,168.18		
4311	Measured Sewerage	- 21,802,659.89	(1,970,034.03)	6,406,646.10	(6,433,220.18)	(88,233.57)	50,632.92		
4251	Unmeasured Water	- 1,095,007.81	**40,009.47**			6,454.53	(12,502.96)	- 177,325	-
4351	Unmeasured Sewerage	- 1,049,935.09	**41,550.44**			6,454.53	(12,502.96)	- 178,527	-
4411	Trade Effluent	- 4,276,485.29	(237,785.90)	650,755.69	(810,788.38)				
		- 64,818,470.54	(5,495,385.44)	**16,745,614.74**	**- 16,734,810.70**	**- 150,566.76**	**85,795.18**	**- 355,852**	**-**

AIR 10
Table 23

Appendix 4 continued

		GENERAL LEDGER	
Monthly		**31.3.10**	
Movement	**Closing Balance**	**GL01 report**	**Diff**
- 3,186,789	- 39,781,171	- 40,223,936	- 442,765
- 2,034,209	- 23,836,869	- 23,629,278	207,591
- 143,364	- 1,238,372	- 1,231,010	7,362
- 143,025	- 1,192,960	- 1,236,461	- 43,501
- 397,819	- 4,674,304	- 4,668,587	5,717
- 5,905,205	- 70,723,676	- 70,989,272	- 265,596

NIW INCOME MANUAL ADJUSMENTS

Adj for test meter billing	Adj for Pipe Size	Accrual Provision per KPMG	Misc	Viq Square	Void Adj	TOTAL
- 678,704	- 884,630	- 186,737	- 112	- 49,990	-	**- 442,765**
273,415			2	- 65,826	-	**207,591**
		45,362			- 38,000	**7,362**
-		-			- 43,500	**- 43,501**
		5,717				**5,717**
952,119	- 884,630	- 135,658	- 110	- 115,816	- 81,500	- 265,596

Table 24

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 24 REGULATORY ACCOUNTS (CURRENT COST)
BALANCE SHEET AS AT 31 MARCH 2010 (TOTAL)

	DESCRIPTION	UNITS	DP	1 2007-08	2 2008-09	3 2009-10
A	**FIXED ASSETS**					
1	Tangible assets	£m	3	6,689.435	6,958.883	7389.297
2	Third party contributions	£m	3	-91.814	-114.399	-141.802
B	**OTHER OPERATING ASSETS AND LIABILITIES**					
3	Working capital	£m	3	-77.318	-96.960	-91.609
4	Cash	£m	3	2.844	3.554	0.349
5	Short term deposits	£m	3	54.000	19.000	10.000
6	Overdrafts	£m	3	0.000	0.000	0.000
7	Infrastructure renewals prepayment/(accrual)	£m	3	-9.695	0.091	1.452
8	Net operating assets	£m	3	-30.169	-74.315	-79.808
C	**NON-OPERATING ASSETS AND LIABILITIES**					
9	Borrowings	£m	3	0.000	0.000	0.000
10	Non-trade debtors	£m	3	1.490	1.486	1.491
11	Non-trade creditors due within one year	£m	3	-1.610	-4.385	-3.833
12	Investment - loan to group company	£m	3	0.000	0.000	0.000
13	Investment - other	£m	3	0.106	0.106	0.106
14	Corporation tax payable	£m	3	0.000	0.000	0.000
15	Ordinary share dividends payable	£m	3	-33.538	0.000	0.000
16	Preference share dividends payable	£m	3	0.000	0.000	0.000
D	**CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR**					
17	Borrowings	£m	3	-307.560	-457.560	-627.560
18	Other creditors	£m	3	-3.422	-110.808	-106.136
E	**PROVISION FOR LIABILITIES AND CHARGES**					
19	Deferred tax provision	£m	3	-16.566	-30.653	-42.713
20	Post employment asset / (liabilities)	£m	3	5.619	5.942	2.286
21	Other provisions	£m	3	-15.131	-20.638	-32.884
F	**PREFERENCE SHARE CAPITAL**					
22	Preference share capital	£m	3	0.000	0.000	0.000
23	Net assets employed	£m	3	6196.840	6153.659	6358.444
G	**CAPITAL AND RESERVES**					
24	Called up share capital	£m	3	500.000	500.000	500.000
25	Share premium	£m	3	0.000	0.000	0.000
26	Profit and loss account	£m	3	-17.632	-39.058	-93.045
27	Current cost reserve at 31 March	£m	3	5542.782	5521.027	5779.799
28	Other reserves	£m	3	171.690	171.690	171.690
29	Total capital and reserves	£m	3	6196.840	6153.659	6358.444

Table 24 – CC Balance Sheet as at 31 March 2010

The retained current cost loss for the year is £38.346m. The P&L reserves in the balance sheet decrease by £53.988m. The difference of £15.642m represents the loss on the pension fund net of deferred tax £9.255m and a prior year loss of £6.387m as shown below:

Retained profit for the year	£(38.346m)
Pension scheme loss net of deferred tax	£ (9.255m)
Prior year adjustment *	£ (6.387m)
Movement in P&L Account	**£(53.988m)**

*A prior year adjustment to profit and loss account reserves of £6.387m has been recognised in the current year in relation to the valuation of land and buildings. The corresponding entry has been a decrease in the value of Fixed Assets by £6.387m. This has arisen through work undertaken as part of the Company's price control review which identified a number of sites where a decision had been taken in prior years to decommission them at a future date. As a result, adjustments were required to accelerate the depreciation on the sites, or impair the asset from the date of the decision to decommission to the decommissioning date, to reflect residual value at that date. (see also commentary to Table 25).

(The associated indexation on these assets has produced an additional prior year adjustment of £1,129m on the current cost reserve. This is outlined in the commentary to Table 27).

The effect of the corrections on the company's CC balance sheet at 31 March 2009 was as follows:

	As previously stated £'000	Effect £'000	As restated £'000
Fixed assets	6,958,885	-7,516	6,951,369
CC P&L Reserves at 1.4.08	-17,632	-5,769	-23,401
Total recognised gains and losses for the year ended 31.3.09	-21,425	-618	-22,043
CC P&L Reserves at 31.3.09	-39,057	-6,387	-45,444
CC Reserves at 31.3.09	5,521,029	-1,129	5,519,900

The CC Balance Sheet for the year ended 31 March 2010 within the Regulatory Accounts includes the impact of this adjustment to the 2008-09 comparator year.

However within Table 24 the comparator for 2008-09 has not been amended to reflect this.

- No minority interests exist.

The elements of PPP included in the table are as follows:

Line 1: Tangible Assets

	Alpha	**Omega**	**Kinnegar**	**Total**
	£m	£m	£m	**£m**
Gross	111.932 *	3.529	1.986	**117.447**
Acc. Deprec	(3.247)	-	-	**(3.247)**
NBV	**108.685**	**3.529**	**1.986**	**114.200**

		£m
*	Initial expenditure	111.708
	Additions to Capital Maintenance fund	0.224
		111.932

Line 3: Working Capital

	Alpha	**Omega**	**Kinnegar**	**Total**
	£m	£m	£m	**£m**
Accruals	3.007	3.707	1.857	**8.571**

Line 11: Non-trade creditors due within one year

	Alpha
	£m
Lease obligation due < 1 yr	2.313

Line 18: Other Creditors

	Alpha
	£m
Lease obligation due > 1 yr	105.805

Line 21 - Other provisions

	Omega
	£m
Provisions	9.519

Significant features and movements

Line 1: Tangible assets
See commentary to Table 19.

Line 2: Third party contributions

Increased by approximately £27.4m shown as follows:

	£m
Infrastructure contributions (including £18.3m sewers adopted)	23.9
Non Infrastructure contributions	1.2
Amortisation of non- infrastructure contributions and government grants	(2.8)
Indexation	5.1
	27.4

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.

Table 25

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

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				
				INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	SUBTOTAL	INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	SUBTOTAL	TOTAL
A	**GROSS REPLACEMENT COST**											
1	Gross replacement cost at 1 April	£m	3	2648.726	794.811	23.910	3467.447	2547.006	1042.673	35.134	3624.813	7092.260
2	AMP adjustment	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	RPI adjustment	£m	3	118.885	33.324	0.948	153.157	106.660	39.569	1.233	147.462	300.619
4	Disposals	£m	3	0.000	-0.032	-0.503	-0.535	0.000	-0.291	-0.362	-0.653	-1.188
5	Additions	£m	3	41.348	29.299	3.762	74.409	64.933	97.960	2.799	165.692	240.101
6	Gross replacement cost at 31 March	£m	3	2808.959	857.402	28.117	3694.478	2718.599	1179.911	38.804	3937.314	7631.792
B	**DEPRECIATION**											
7	Depreciation at 1 April	£m	3		55.807	6.452	62.259		72.256	6.376	78.632	140.891
8	AMP adjustment	£m	3		0.000	0.000	0.000		0.000	0.000	0.000	0.000
9	AMP adjustment - gross MEA revaluation	£m	3		0.000	0.000	0.000		0.000	0.000	0.000	0.000
10	AMP adjmt - amendment to remaining useful econ. lives	£m	3		0.000	0.000	0.000		0.000	0.000	0.000	0.000
11	RPI adjustment	£m	3		2.447	0.270	2.717		3.161	0.223	3.384	6.101
12	Disposals	£m	3		0.000	-0.367	-0.367		-0.044	-0.288	-0.332	-0.699
13	Charge for year	£m	3		43.181	2.930	46.111		46.112	3.979	50.091	96.202
14	Depreciation at 31 March	£m	3		101.435	9.285	110.720		121.485	10.290	131.775	242.495
15	Net book amount at 31 March	£m	3	2808.959	755.967	18.832	3583.758	2718.599	1058.426	28.514	3805.539	7389.297
16	Net book amount at 1 April	£m	3	2648.726	739.004	17.458	3405.188	2547.006	970.417	28.758	3546.181	6951.369

Table 25 – Analysis of Fixed Assets by Asset Type (Total)

Commentary and Methodology

Methodology

The following asset categories have been analysed in the table as follows:

'Infrastructure assets' include infrastructure assets only.

'Non-specialised operational assets' include active market value land, buildings and civils.

'Specialised operational assets' include land, buildings, civils and fixed plant.

'Other tangible assets' include surplus land, buildings and civils, mobile plant and IT.

Gross Replacement Cost at 1 April and Depreciation at 1 April

The total opening balances for gross replacement cost and depreciation at 1 April 2009 have been brought forward from the total closing balances for gross replacement cost and depreciation at 31 March 2009. The analysis across asset categories is based on analysis within the fixed asset register.

Prior year adjustment

A prior year adjustment has been recognised in the current year in relation to the valuation of land and buildings. Through work undertaken as part of the Company's price control review, a number of sites were identified where a decision had been taken in prior years to decommission them at a future date. As a result, adjustments were required to accelerate the depreciation on the sites, or impair the asset from the date of the decision to decommission to the decommissioning date, to reflect residual value at that date. Consequently, the following prior year adjustment has been recognised in table 25. The effect of the adjustments was a decrease in gross replacement cost of £3.528m and an increase in accumulated depreciation of £3.988m. The effect of the corrections on the opening balances of table 25 was as follows:

	Specialised	**Non-Specialised**			
	Operational Assets	**Operational Assets**	**Infrastruc. Assets**	**Other Assets**	**Total**
	£m	**£m**	**£m**	**£m**	**£m**
Gross replacement cost					
At 1 April 2009 (as originally stated)	1,820.191	17.796	5,195.732	62.069	**7,095.788**
Prior year adjustment	(0.229)	(0.274)	0.000	(3.025)	**(3.528)**

At 1 April 2009 (as restated)	1,819.962	17.522	5,195.732	59.044	**7,092.260**
Depreciation					
At 1 April 2009 (as originally stated)	(125.584)	(0.368)	0.000	(10.951)	**(136.903)**
Prior year adjustment	(1.631)	(0.480)	0.000	(1.877)	**(3.988)**
At 1 April 2009 (as restated)	(127.215)	(0.848)	0.000	(12.828)	**(140.891)**

AMP Adjustment

There was no AMP adjustment during the year. The next AMP adjustment is planned to report in PC13.

RPI Adjustment

In April 2009, 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 2009, if there were any, as they were not indexed.

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 - £18,309,911) were decommissioned in April 2009. Decommissioned assets are assets which are no longer in use but still have a net current replacement cost (NCRC) value at the time. In order to account for this, the assets are fully depreciated in year to bring the NCRC down to nil.

Additions

Additions consisted of capital expenditure incurred during the year plus adopted sewers and sewage pumping stations and PPP assets (see below). When the assets created by the capital expenditure are commissioned they are put onto the fixed asset register and depreciation commences the following month.

In accordance with the regulatory accounting guidelines, fixed asset additions are stated gross of capital contributions but net of IRE. This gives rise to the reconciliation with the capital works programme and statutory accounts below:

	£'000
Total expenditure in capital works programme	**221,736**
Add: total ops spend	36,464
Less: capital contributions	(5,555)
Add: PPP residual interest	2,164
Add: adopted assets – infrastructure	18,340
Add: adopted assets – non-infrastructure	260
Less: adopted assets capital contributions	(18,340)
Less: de-capitalised assets	(479)
Additions per statutory accounts	**254,590**
Add: capital contributions	23,896
Less: IRE	(38,396)
Other adjustments	8
Additions per regulatory accounts	**240,098**

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 £224k, relating to the Alpha capital maintenance fund.

There is also additional residual interest for PFI Kinnegar asset and Omega asset of £2,160,000 which is included in Table 25 under specialised operational civil. The total residual interest at 31 March 2010 is £5,553,000 (31 March 2009: £3,393,000).

Depreciation Charge for Year

Current cost depreciation charge during the year was calculated based on the opening GCRC at 1 April 2009. Additions and disposals during the year were taken into account in calculating the depreciation charge.

Commentary

All assets were analysed to each of their respective asset categories and service activities to identify the water and sewerage services. The management and general service activity assets, with a GCRC of £57,290,353 (08/09: £58,028,058) as at 31 March 2010, 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.

Table 26

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 26 REGULATORY ACCOUNTS
WORKING CAPITAL

	DESCRIPTION	UNITS	DP	1 2007-08	2 2008-09	3 2009-10
1	Stocks	£m	3	2.400	1.896	1.865
2	Trade debtors - measured household	£m	3	0.000	0.000	0.000
3	Trade debtors - unmeasured household	£m	3	0.000	0.000	0.000
4	Trade debtors - measured non household	£m	3	4.459	6.991	13.587
5	Trade debtors - unmeasured non household	£m	3	0.000	0.584	0.296
6	Other trade debtors	£m	3	2.021	0.710	2.907
7	Measured income accrual	£m	3	6.674	12.594	16.197
8	Prepayments and other debtors	£m	3	15.926	7.341	6.407
9	Trade creditors	£m	3	-26.515	-18.030	-14.989
10	Deferred income - customer advance receipts	£m	3	-1.717	-1.509	-1.677
11	Short term capital creditors	£m	3	-51.952	-64.335	-72.643
12	Accruals and other creditors	£m	3	-28.614	-43.201	-43.559
13	Total working capital	£m	3	-77.318	-96.959	-91.609

Table 26 – Working Capital

Lines 2 – 6: Trade Debtors

Trade debtors are split into the five categories shown in lines 2-6 using the information from the General Ledger and the aged debtors analysis provided in the Echo pack.

The elements of PPP included in the table are as follows:

Line 12: Accruals and other creditors

Alpha	Omega	Kinnegar	Total
£m	£m	£m	**£m**
3.007	3.707	1.857	**8.571**

Significant movements from last year

Line 4: Trade debtors - measured non household

This has increased from £7.0m to £13.6m (94.3%). This is mainly due to customers for Measured Sewerage now being billed fully for this service from 2009-2010.

Line 6: Other trade debtors

This has increased from £0.7m to £2.9m (314%) primarily due an increase in rechargeable debtors of £1.4m, driven partly by increased debtors from DRD and DARD, and an increase of £1m represented by a debtor arising in connection with the PPP Alpha contract.

Line 7: Measured income accrual

This has increased by £3.6m (29%) over the period accounted for as follows:

- A number of high value accounts with meter readings outstanding in March 2010 had significant amounts accrued rather than the normal practice of issuing an estimated bill.
- The increase in measured sewerage charges directly to customers as outlined above.

Line 9: Trade creditors

Trade creditors have fallen by £3.041m (24.2%) in the period. This is related to:

- A fall of approximately 4.4% in operating expenditure from £207.6m to £198.5m.
- A rise in short-term capital creditors that are wholly comprised of capital accruals indicating less invoice value contained within Trade Creditors.

Line 11: Short term capital creditors

Additions to assets in the course of construction have fallen by approximately 9% from 2009 to 2010. Capital accruals have risen by approximately 13% and this is partly linked to a fall in invoices within year end Trade Creditors described above.

Table 27

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 27 REGULATORY ACCOUNTS
MOVEMENT ON CURRENT COST RESERVE (TOTAL)

	DESCRIPTION	UNITS	DP	1 2007-08	2 2008-09	3 2009-10
1	Current cost reserve at 1 April	£m	3	5332.978	5542.782	5519.900
2	AMP adjustment	£m	3	0.000	0.000	0.000
A	**RPI ADJUSTMENTS**					
3	Fixed assets	£m	3	220.187	-23.438	294.518
4	Working capital adjustment	£m	3	-1.327	0.292	-4.313
5	Financing adjustment	£m	3	-6.543	1.044	-25.217
6	Grants and third party contributions	£m	3	-2.513	0.347	-5.089
7	Current cost reserve at 31 March	£m	3	5542.782	5521.027	5779.799

Table 27 – Movement on current cost reserve

Line 1: Current cost reserve at 1 April
The opening current cost reserve at 1 April 2009 differs in the table from the closing balance on current cost reserve at 31 March 2009. The reason for this is outlined later in this commentary under Prior Year Adjustment.

Working capital adjustment
The working capital adjustment includes opening stock at 1st April 2009 plus all the opening short – term debtors and creditors at 1st April 2009, with the following exclusions from the calculation:

- **Stock**
  Stock relating to unappointed activities £0.005m
- **Debtors**
  EU grants receivable £1.482m
  Interest receivable £0.004m
  Debtors relating to unappointed activities £0.352m
- **Creditors**
  EU grants payable £1.482m
  Cash bond interest payable £0.015m
  Creditors relating to unappointed activities £0.276m

The following indices have been used and applied to the opening working capital balance at 1 April 2009:

RPI	2010	2009
Year end RPI	220.7	211.3
Change in 2009-10	4.44865%	

Working capital adjustment = opening working capital at 1 April 2009 x change in RPI 2009-2010
= £96,959k x 4.44865% = £4,313k

Financing adjustment

The financing adjustment can be shown as follows:

	£m
Opening net assets	6,153.662
Opening net fixed assets	6,844.486
	-690.824
Add back: working capital	96.959
Opening net finance	-593.865
Add back:	
Ordinary share dividends payable	0.000
Deferred tax provision	30.653
Less:	
Pension asset	-5.942
Add back:	
Deferred tax liability on pension asset	2.310
Revised opening net finance	-566.844
RPI	4.44865%
Financing Adjustment	**25.217**

Prior Year Adjustment

As outlined in the commentaries to Table 24 and Table 25 a prior year adjustment to profit and loss account reserves of £6.387m has been recognised in the current year in relation to the valuation of land and buildings. The corresponding entry has been a decrease in the value of CC Fixed Assets by £6.387m. The associated indexation on these assets has produced an additional prior year adjustment of £1.129m on the current cost reserve. With a further decrease in the value of CC fixed assets of £1.129m.

The effect of the corrections on the company's CC balance sheet at 31 March 2009 was as follows:

	As previously stated £'000	Effect £'000	As restated £'000
Fixed assets	6,958,885	-7,516	6,951,369
CC P&L Reserves at 1.4.08	-17,632	-5,769	-23,401
Total recognised gains and losses for the year ended 31.3.09	-21,425	-618	-22,043
CC P&L Reserves at 31.3.09	-39,057	-6,387	-45,444
CC Reserves at 31.3.09	5,521,029	-1,129	5,519,900

The Regulatory Accounts for the year ended 31 March 2010 includes the impact of this adjustment to the 2008-09 comparator year.

However within Table 27 the comparator for 2008-09 has not been amended to reflect this.

Table 28

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 28 REGULATORY ACCOUNTS
CASH FLOW STATEMENT FOR YEAR ENDING 31 MARCH (TOTAL)

	DESCRIPTION	UNITS	DP	1 2007-08	2 2008-09	3 2009-10
1	Net cashflow from operating activities	£m	3	142.202	133.052	137.968
A	**RETURN ON INVESTMENTS & SERVICING OF FINANCE**					
2	Interest received	£m	3	2.228	1.840	0.247
3	Interest paid	£m	3	-9.613	-18.012	-26.905
4	Interest in finance lease rentals	£m	3	0.000	-4.193	-11.325
5	Non-equity dividends paid	£m	3	0.000	0.000	0.000
6	Net cashflow from returns on investments & servicing of finance	£m	3	-7.385	-20.365	-37.983
B	**TAXATION**					
7	Taxation (paid)/received	£m	3	0.000	0.000	0.000
C	**CAPITAL EXPENDITURE AND FINANCIAL INVESTMENT**					
8	Gross cost of purchase of fixed assets	£m	3	-214.427	-226.011	-213.359
9	Receipts of grants and contributions	£m	3	3.703	6.270	6.514
10	Infrastructure renewals expenditure	£m	3	-24.431	-44.058	-38.396
11	Disposal of fixed assets	£m	3	0.379	0.790	0.494
12	Movements on long term loans to group companies	£m	3	0.000	0.000	0.000
13	Net cashflow from investing activities	£m	3	-234.776	-263.009	-244.747
D	**ACQUISITIONS AND DISPOSALS**					
14	Acquisitions and disposals	£m	3	0.000	0.000	0.000
E	**EQUITY DIVIDENDS**					
15	Equity dividends paid	£m	3	0.000	-33.538	-34.537
F	**MANAGEMENT OF LIQUID RESOURCES**					
16	Net cashflow from management of liquid resources	£m	3	-54.000	35.000	9.000
17	Net cashflow before financing	£m	3	-153.959	-148.860	-170.299
G	**FINANCING**					
18	Capital in finance lease rentals	£m	3	0.000	-0.430	-2.906
19	New bank loans taken out	£m	3	157.560	150.000	170.000
20	Repayment of bank loans	£m	3	0.000	0.000	0.000
21	Proceeds from share issues	£m	3	0.000	0.000	0.000
22	Net cash inflow from financing	£m	3	157.560	149.570	167.094
23	Increase/(decrease) in cash in the year	£m	3	3.601	0.710	-3.205

Table 28 – Cashflow statement

Significant movements from last period

Line 1 - Net cashflow from operating activities

This has increased by £4.916m (3.7%). 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 49% from £18.012m to £26.905m. This is consistent with an additional loan drawdown of £170m in 2009-2010. 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)

Line 4 - Interest in finance lease rentals

The Alpha project during 2009-2010 gave rise to £11.325m (2008: £4.193m) interest payable on the associated finance lease.

Line 8 - Gross cost of purchase of fixed assets

These have decreased by £12.652m (5.6%). This is consistent with capital expenditure plans for 2009-10.

Line 10 - Infrastructure Renewals Expenditure

IRE for 2009-2010 compared to 2008-2009 can be shown as follows:

IRE	2009-2010	2008-2009	Increase/(Decrease) in period	Increase/(Decrease) in period
	£m	£m	£m	%
Water	26.903	37.458	(10.555)	(28.2)
Sewerage	11.493	6.600	4.893	74.1
Total	38.396	44.058	(5.662)	(12.9)

Water IRE has decreased over the period. In 2008-09 the total included the Alpha PPP IRE of approximately £4.9m whereas in 2009-10 there is no PPP Alpha element. There is however a further reduction of £5.7m which is in line with the capital expenditure plans for 2009-10 for IRE water.

Sewerage IRE has risen by £4.9m over the period. This represents the planned increased focus on base maintenance in 2009-10 that has occurred as the high level of expenditure on sewerage enhancement (Belfast Tunnel) has concluded.

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 £9m from the end of 2008-2009 to the end of 2009-2010 with a consequent release into cashflow.

Line 18 - Capital in finance lease rentals
An amount of £2.906m was made in payment against the Alpha PPP finance lease.

Line 19 - New bank loans taken out
In 2009-2010 £170m 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	22.963
2	Working capital adjustment	£m	(4.313)
3	Movement in working capital	£m	(13.702)
4	Depreciation	£m	96.202
5	Current cost profit on sale of fixed assets	£m	(0.005)
6	Infrastructure renewals charge	£m	37.035
7	Other non-cash profit and loss items	£m	(0.213)
8	Net cash flow from operating activities	£m	137.967

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, 10 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 £0.224m 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.

Table 29

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 29 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
RECONCILIATION OF OPERATING PROFIT TO NET CASH FLOW FROM OPERATING ACTIVITIES (TOTAL)

	DESCRIPTION	UNITS	DP	1 2007-08	2 2008-09	3 2009-10
1	Current cost operating profit	£m	3	17.077	11.626	22.963
2	Working capital adjustment	£m	3	-1.327	0.292	-4.313
3	Movement in working capital	£m	3	26.554	7.258	-13.701
4	Receipts from other income	£m	3	0.000	0.000	0.000
5	Depreciation	£m	3	58.834	76.184	96.202
6	Current cost profit on sale of fixed assets	£m	3	0.056	0.050	-0.005
7	Infrastructure renewals charge	£m	3	35.668	34.272	37.035
8	Other non-cash profit and loss items	£m	3	5.340	3.370	-0.213
9	Net cash flow from operating activities	£m	3	142.202	133.052	137.968

Table 29 – Reconciliation of Operating Profit to Net Cash Flow from Operating Activities

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Table 29 commentary is not required

Table 32

ANNUAL INFORMATION RETURN - TABLE 32 FINANCIAL MEASURES
ANALYSIS OF FIXED ASSET ADDITIONS AND ASSET MAINTENANCE BY ASSET TYPE (CURRENT COST ACCOUNTING) (NIW Only)

				1	2	3	4	5	6	7
				WATER SERVICE			SEWERAGE SERVICE			
	DESCRIPTION	UNITS	DP	INFRASTRUCTURE ASSETS	0.96	SUBTOTAL	INFRASTRUCTURE ASSETS	NON-INFRASTRUCTURE ASSETS	SUBTOTAL	TOTAL
A	NIW ADDITIONS -NEW ASSETS (ENHANCEMENT)									
1	Water resource facilities	£m	3	0.094	0.219	0.313				0.313
2	Water treatment works	£m	3		8.823	8.823				8.823
3	Water distribution mains	£m	3	41.577	1.272	42.850				42.850
4	Service reservoirs and water towers	£m	3		6.506	6.506				6.506
5	Pumping stations	£m	3		1.302	1.302				1.302
6	Water management and general	£m	3	1.091	1.460	2.551				2.551
7	Sewerage	£m	3				64.684	0.973	65.657	65.657
8	Sea outfalls and headworks	£m	3				0.188	0.412	0.600	0.600
9	Sewage treatment works	£m	3					52.703	52.703	52.703
10	Sludge treatment works	£m	3					0.745	0.745	0.745
11	Sludge disposal	£m	3				0.000	0.000	0.000	0.000
12	In-line pumping stations	£m	3					6.319	6.319	6.319
13	Terminal pumping stations	£m	3					5.669	5.669	5.669
14	Sewerage management and general	£m	3				0.061	1.659	1.721	1.721
15	Total infrastructure additions (Enhancement)	£m	3	42.763		42.763	64.933		64.933	107.696
16	Total non-infrastructure additions (Enhancement)	£m	3		19.583	19.583		68.480	68.480	88.063
17	Total additions (Enhancement)	£m	3	42.763	19.583	62.346	64.933	68.480	133.413	195.759
B	NIW BASE SERVICE PROVISION									
18	Water resource facilities	£m	3	0.184	0.427	0.611				0.611
19	Water treatment works	£m	3		4.226	4.226				4.226
20	Water distribution mains	£m	3	24.237	1.247	25.483				25.483
21	Service reservoirs and water towers	£m	3		0.963	0.963				0.963
22	Pumping stations	£m	3		0.716	0.716				0.716
23	Water management and general	£m	3	2.483	4.727	7.210				7.210
24	Sewerage	£m	3				10.392	0.343	10.736	10.736
25	Sea outfalls and headworks	£m	3				0.001	0.003	0.004	0.004
26	Sewage treatment works	£m	3					16.821	16.821	16.821
27	Sludge treatment works	£m	3					0.320	0.320	0.320
28	Sludge disposal	£m	3				0.000	0.895	0.895	0.895
29	In-line pumping stations	£m	3					7.349	7.349	7.349
30	Terminal pumping stations	£m	3					0.964	0.964	0.964
31	Sewerage management and general	£m	3				1.100	3.420	4.520	4.520
32	Total infrastructure renewals (Base)	£m	3	26.904		26.904	11.494		11.494	38.397
33	Total non-infrastructure expenditure (Base)	£m	3		12.305	12.305		30.115	30.115	42.421
34	Total expenditure (Base service provision)	£m	3	26.904	12.305	39.209	11.494	30.115	41.609	80.818

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 2009/10 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 £224k.

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. A large portion of this investment as in 2008/09 is the result of a legacy of under funding in the former Water Service.

The majority of asset maintenance expenditure related to water distribution mains (Water rehabilitation projects), sewerage assets (Drainage Area Plan projects) and wastewater treatment works in order to maintain the serviceability of the asset base for customers.

The Capital Investment Driver Allocation methodology has changed significantly since the SBP. The Methodology is explained in Chapter 34 which in summary is the process adopted in 07/08 and 08/09 with some further system advancements.

The allocation methodology for Management and General expenditure is reflective of that included within the 'Strategic Business Plan' (SBP) allocation at 41%:59% (Water/Sewerage). This is only applied when projects have not already been allocated within Management and General to either Water or Sewerage within individual projects and is typical of projects within Human Resources and Finance and Regulation which are common to both Water and Sewerage. 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 09/10 reporting. Expenditure in these two areas has been separately identified within Asset Management Directorate expenditure in 09/10 and is not confused with the resultant delivery projects managed within Engineering Procurement Directorate.

Sewer adoptions paid by third parties of £18,341m are included in column 4, line 7 of Table 32 within Sewerage infrastructure enhancements. Sewerage Pumping Stations paid by third parties of £0.262m are included in Col 5, line 12 within Sewerage non infrastructure enhancements.

The calculation of gross asset valuation for adopted sewerage assets is based on the unit costs derived for the SBP which was indexed to 09/10 prices by RPI. The unit costs are applied by diameter banding and total lengths laid. The unit costs adopted in the SBP were developed from historic actual costs of projects completed by NI Water Service and reported in 06/07 prices.

Of the total capital expenditure of £276.577m (net of grants and contributions on infrastructure maintenance expenditure and inclusive of sewerage adoptions), £80.818m (29%) related to base service position. There has been gradually been an increase each year during the SBP period in the % of Base Maintenance as a % of the total Capital expenditure programme.

In all the Capex Financial tables Backlog Base as defined in the SBP has been allocated consistently as per the SBP. This amounts to £6.096m for water service and £7.912m for sewerage service and is allocated to 'Enhanced Service Levels' for financial reporting purposes.

Infrastructure Renewals expenditure has been reported net of any grants and contributions in this table. Grants and contributions (Infrastructure Charges) have been apportioned 59% IRE and 41% MNI for both Water and Sewerage for 09/10 reporting. The apportionment has been derived from the SBP predictions.

Reconciliation between Table 32, 35 and 36

Table 32 - Line 17 + Line 34 in col 7	**£276.577m**
Table 35 – line 28 col 4	£101.554m
Table 36 – line 25 col 4	£156.420m
Assets adopted at nil cost	£ 18.602m
Reconciliation total	**£276.577m**

Reporter recommendations (AIR09)

(Page 1 para 7 of Reporter's Report)
The Reporter commented that SBP apportionments were still being adopted outside the CWP and these might not always be valid. In order to reduce the reliance on SBP apportionments these have been removed from all documentation and project managers have now to access each project on its own merits. There as still a number of projects within the M & G categories, some of which commenced in earlier years, that have the default 41%/59% split with spend reported in 09/10. There is no additional data to provide a change to these allocations.

(Page 4 para 2 & 3 of Reporter's report)
The Reporter had made comment that data breakdown was not the most transparent and ideally a single system would simplify audit work.
The Model input tab on the Engineering procurement model has been updated for 09/10 reporting to improve the transparency of the data set for interrogation on any individual investment driver. In addition, NIW is developing a new reporting tool referred to as Capital Programme Monitoring and Reporting (CPMR) which will mean that all reporting will be from a single

source. The development phase is underway and it is anticipated that this will be in use in AIR11.

Table 33

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)
DEPRECIATION CHARGE BY ASSET TYPE (NIW Only)

	DESCRIPTION	UNITS	DP	1	1a	2	3	4	5	6	CG
				WATER SERVICE							
				2006-07	Per SBP 2007-08	2007-08	Per SBP 2008-09	Actual 08-09	Per SBP 2009-10	Actual 09-10	
A	**DEPRECIATION CHARGE FOR THE YEAR**										
1	CCD on enhancement assets	£m	3	N/C	9.924	9.776	12.217	11.719	12.545	16.333	C4
2	CCD on MNI assets	£m	3	N/C	19.823	19.529	19.931	19.002	21.398	26.531	C4
3	Total depreciation charge for the year	£m	3	N/C	29.747	29.305	32.148	30.721	33.943	42.864	C4
B	**INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION**										
4	Infrastructure renewals expenditure	£m	3	N/C	25.186	19.778	20.724	32.534	23.195	26.903	B2
5	Infrastructure renewals charges	£m	3	N/C	27.277	27.277	28.747	22.500	29.938	27.171	C5
6	Infrastructure renewals prepayment/ (accrual)	£m	3	N/C	-2.091	-7.499	-10.114	2.535	-16.857	2.267	C5

	DESCRIPTION	UNITS	DP	7	7a	8	9	10	11	12	CG
				SEWERAGE SERVICE							
				2006-07	Per SBP 2007-08	2007-08	Per SBP 2008-09	Actual 08-09	Per SBP 2009-10	Actual 09-10	
A	**DEPRECIATION CHARGE FOR THE YEAR**										
1	CCD on enhancement assets	£m	3	N/C	20.706	24.017	24.239	33.230	25.426	34.562	C4
2	CCD on MNI assets	£m	3	N/C	6.921	8.027	8.080	11.077	11.424	15.529	C4
3	Total depreciation charge for the year	£m	3	N/C	27.627	32.044	32.319	44.307	36.850	50.091	C4
B	**INFRASTRUCTURE RENEWALS CHARGES,**										
4	Infrastructure renewals expenditure	£m	3	N/C	12.968	6.195	12.308	6.600	9.743	11.493	B2
5	Infrastructure renewals charges	£m	3	N/C	8.391	8.391	9.275	8.367	10.869	9.864	C5
6	Infrastructure renewals prepayment/ (accrual)	£m	3	N/C	4.577	-2.196	7.610	-3.963	6.484	-2.334	C5

	DESCRIPTION	UNITS	DP	13	13a	14	15	16	17	18
				Total						
				2006-07	Per SBP 2007-08	2007-08	Per SBP 2008-09	Actual 08-09	Per SBP 2009-10	Actual 09-10
A	**DEPRECIATION CHARGE FOR THE YEAR**									
1	CCD on enhancement assets	£m	3	0.000	30.630	33.793	36.456	44.949	37.971	50.895
2	CCD on MNI assets	£m	3	0.000	26.744	27.556	28.011	30.079	32.822	42.060
3	Total depreciation charge for the year	£m	3	0.000	57.374	61.349	64.467	75.028	70.793	92.955
B	**INFRASTRUCTURE RENEWALS CHARGES,**									
4	Infrastructure renewals expenditure	£m	3	0.000	38.154	25.973	33.032	39.134	32.938	38.396
5	Infrastructure renewals charges	£m	3	0.000	35.668	35.668	38.022	30.867	40.807	37.035
6	Infrastructure renewals prepayment/ (accrual)	£m	3	0.000	2.486	-9.695	-2.504	-1.428	-10.373	-0.067

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)
DEPRECIATION CHARGE BY ASSET TYPE (PPP Only)

	DESCRIPTION	UNITS	DP	1	1a	2	3	4	5	6	
				WATER SERVICE							
				2006-07	Per SBP 2007-08	2007-08	Per SBP 2008-09	Actual 08-09	Per SBP 2009-10	Actual 09-10	CG
A	DEPRECIATION CHARGE FOR THE YEAR										
1	CCD on enhancement assets	£m	3	0.000	0.000	0.000	1.156	1.156	3.247	3.247	C4
2	CCD on MNI assets	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C4
3	Total depreciation charge for the year	£m	3	0.000	0.000	0.000	1.156	1.156	3.247	3.247	C4
B	INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION										
4	Infrastructure renewals expenditure	£m	3	0.000	0.000	0.000	0.000	4.924	0.000	0.000	B2
5	Infrastructure renewals charges	£m	3	0.000	0.000	0.000	0.000	3.405	0.000	0.000	C5
6	Infrastructure renewals prepayment/ (accrual)	£m	3	0.000	0.000	0.000	0.000	1.519	0.000	1.519	C5

	DESCRIPTION	UNITS	DP	7	7a	8	9	10	11	12	
				SEWERAGE SERVICE							
				2006-07	Per SBP 2007-08	2007-08	Per SBP 2008-09	Actual 08-09	Per SBP 2009-10	Actual 09-10	CG
A	DEPRECIATION CHARGE FOR THE YEAR										
1	CCD on enhancement assets	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C4
2	CCD on MNI assets	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C4
3	Total depreciation charge for the year	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C4
B	INFRASTRUCTURE RENEWALS CHARGES,										
4	Infrastructure renewals expenditure	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	B2
5	Infrastructure renewals charges	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C5
6	Infrastructure renewals prepayment/ (accrual)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C5

	DESCRIPTION	UNITS	DP	13	13a	14	15	16	17	18
				TOTAL						
				2006-07	Per SBP 2007-08	2007-08	Per SBP 2008-09	Actual 08-09	Per SBP 2009-10	Actual 09-10
A	DEPRECIATION CHARGE FOR THE YEAR									
1	CCD on enhancement assets	£m	3	0.000	0.000	0.000	1.156	1.156	3.247	3.247
2	CCD on MNI assets	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	Total depreciation charge for the year	£m	3	0.000	0.000	0.000	1.156	1.156	3.247	3.247
B	INFRASTRUCTURE RENEWALS CHARGES,									
4	Infrastructure renewals expenditure	£m	3	0.000	0.000	0.000	0.000	4.924	0.000	0.000
5	Infrastructure renewals charges	£m	3	0.000	0.000	0.000	0.000	3.405	0.000	0.000
6	Infrastructure renewals prepayment/ (accrual)	£m	3	0.000	0.000	0.000	0.000	1.519	0.000	1.519

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)
DEPRECIATION CHARGE BY ASSET TYPE (Total)

	DESCRIPTION	UNITS	DP	1	1a	2	3	4	5	6	
				WATER SERVICE							
				2006-07	Per SBP 2007-08	2007-08	Per SBP 2008-09	Actual 08-09	Per SBP 2009-10	Actual 09-10	CG
A	DEPRECIATION CHARGE FOR THE YEAR										
1	CCD on enhancement assets	£m	3	0.000	9.924	9.776	13.373	12.875	15.792	19.580	C4
2	CCD on MNI assets	£m	3	0.000	19.823	19.529	19.931	19.002	21.398	26.531	C4
3	Total depreciation charge for the year	£m	3	0.000	29.747	29.305	33.304	31.877	37.190	46.111	C4
B	INFRASTRUCTURE RENEWALS CHARGES,										
4	Infrastructure renewals expenditure	£m	3	0.000	25.186	19.778	20.724	37.458	23.195	26.903	B2
5	Infrastructure renewals charges	£m	3	0.000	27.277	27.277	28.747	25.905	29.938	27.171	C5
6	Infrastructure renewals prepayment/ (accrual)	£m	3	0.000	-2.091	-7.499	-10.114	4.054	-16.857	3.786	C5

	DESCRIPTION	UNITS	DP	7	7a	8	9	10	11	12	
				SEWERAGE SERVICE							
				2006-07	Per SBP 2007-08	2007-08	Per SBP 2008-09	Actual 08-09	Per SBP 2009-10	Actual 09-10	CG
A	DEPRECIATION CHARGE FOR THE YEAR										
1	CCD on enhancement assets	£m	3	0.000	20.706	24.017	24.239	33.230	25.426	34.562	C4
2	CCD on MNI assets	£m	3	0.000	6.921	8.027	8.080	11.077	11.424	15.529	C4
3	Total depreciation charge for the year	£m	3	0.000	27.627	32.044	32.319	44.307	36.850	50.091	C4
B	INFRASTRUCTURE RENEWALS										
4	Infrastructure renewals expenditure	£m	3	0.000	12.968	6.195	12.308	6.600	9.743	11.493	B2
5	Infrastructure renewals charges	£m	3	0.000	8.391	8.391	9.275	8.367	10.869	9.864	C5
6	Infrastructure renewals prepayment/ (accrual)	£m	3	0.000	4.577	-2.196	7.610	-3.963	6.484	-2.334	C5

	DESCRIPTION	UNITS	DP	13	13a	14	15	16	17	18	
				Total							
				2006-07	Per SBP 2007-08	2007-08	Per SBP 2008-09	Actual 08-09	Per SBP 2009-10	Actual 09-10	CG
A	DEPRECIATION CHARGE FOR THE YEAR										
1	CCD on enhancement assets	£m	3	0.000	30.630	33.793	37.612	46.105	41.218	54.142	C4
2	CCD on MNI assets	£m	3	0.000	26.744	27.556	28.011	30.079	32.822	42.060	C4
3	Total depreciation charge for the year	£m	3	0.000	57.374	61.349	65.623	76.184	74.040	96.202	C4
B	INFRASTRUCTURE RENEWALS										
4	Infrastructure renewals expenditure	£m	3	0.000	38.154	25.973	33.032	44.058	32.938	38.396	B2
5	Infrastructure renewals charges	£m	3	0.000	35.668	35.668	38.022	34.272	40.807	37.035	C5
6	Infrastructure renewals prepayment/ (accrual)	£m	3	0.000	2.486	-9.695	-2.504	0.091	-10.373	1.452	C5

Table 33 – Depreciation Charge by Asset Type & Infrastructure Renewals Charge

Commentary and Methodology

Methodology

Current Cost Depreciation (CCD) Charge

The depreciation charge for the year has been populated using the same methodology used to populate Table 25. Current cost depreciation was calculated using the Fixed Asset Register (Real Asset Management). The Fixed Asset Register holds two sets of books (HCA and CCA books) which calculate depreciation using different gross book value (GBV) and gross current replacement cost (GCRC) figures. The CCA books have been used for both Table 25 and Table 33

The final depreciation report from the CCA book was then analysed to each of their respective asset categories and service activities to identify the water and sewerage services. The management and general service activity could not be readily identified as water and sewerage services and have used the following percentages split as per IFM: Water 41% and Sewerage 59%.

Historical data to provide the split between Base Service Provision (BSP) and Enhancement (E) is not available for assets in existence at 01/04/07. During the SBP period all capital projects have had CIDA applied. This has however not been uploaded to the Fixed Asset Register (FAR) during the SBP period and cannot be used for the population of this table. NIW plan to update the FAR during 2010/11 to capture this split for all assets commissioned during the PC10 period. Given that the table structure does not lend itself for population, (as per the meeting between NIW and UR in March 2010), of the assets commissioned prior to 01/04/07 the Table 34 split from AIR 10 has been used as follows:

- Water, Enhancement (62%), Base Service Provision (38%)
- Sewerage, Enhancement (69%), Base Service Provision (31%)
- The exception to this is the PPP Alpha asset that is deemed to be 100% enhancement: the CCD for Alpha has been allocated to the PPP table on this basis.

With respect to Confidence Grades this is reported as DX for CCD. This is the case as no historical data is available to provide a robust analysis.

Assets to be decommissioned or written off result in accelerated depreciation in the year. Assets with a NCRC of £18,309,911 were decommissioned in April 2009 – the corresponding accelerated depreciation is included in Table 33.

There are three main PPP Projects – Alpha, Omega and Kinnegar. When these projects were established each was examined to determine whether the

risks and rewards were transferred to the provider or remained with NIW. Findings are as follows:

Alpha Project - for Alpha it was determined that the risks and rewards remained with NIW and therefore the assets were owned by the company and should be capitalised and depreciated. An associated finance lease should also be established with an initial liability equivalent to the value of the assets capitalised.

Omega and Kinnegar Projects – it was determined that in both cases the risks and rewards were transferred to the operator and thus the assets would not be capitalised and all charges would be debited to the P&L as incurred. However an element of these charges would be credited from P&L to Balance Sheet to establish a residual interest asset since ultimately the assets would come back into NIW ownership and would have a residual value at this time. These residual assets would not be depreciated during the life of the contracts.

During the year, there were on-balance sheet additions to the Alpha PPP assets. Therefore, there was an element of depreciation, £3.247m, (2009: £1.156m) in the table relating to PPP assets. This is separately identified in the second table for PPP only.

The asset lives used in calculating depreciation are consistent with those that have been used to populate Table 34. The asset lives used to calculate depreciation in the Fixed Asset Register are the same in both the HCA and CCA books.

Table 33 has also been adjusted to include only the appointed business and exclude the unappointed business relating to vehicle maintenance carried out for third parties. The depreciation charge (£118k) relating to this has been adjusted through Water Services – CCD on MNI assets. This is the only adjustment made in populating Table 33.

There were some limitations to the CCD process namely it was based on the last asset management plan (AMP) survey of existing assets as at 1 September 2001. NI Water plans to address this limitation by preparing the next AMP which is planned to report in 2013.

There were no MEA revaluations during the year and therefore no impact on CCD charge in the year.

During the year, decommissioned assets with a net current replacement cost (NCRC) of £18,309,911 were included within the current year depreciation charge.

	Water (09/10)	Sewerage (09/10)	Total (09/10)
CC Depreciation in year	£33,823,140.54	£ 44,071,083.58	£ 77,894,224.12
Accelerated Depreciation	£12,288,392.88	£6,021,518.52	£18,309,911.40
Total (2009/2010)	£ 46,111,533.42	£50,092,602.10	£ 96,204,135.52

	Water (08/09)	Sewerage (08/09)	Total (08/09)
CC Depreciation in year	£ 29,483,049.54	£ 34,462,641.41	£ 63,945,690.95
Accelerated Depreciation	£ 2,394,263.73	£ 9,844,383.26	£ 12,238,646.99
Total (2008/2009)	£ 31,877,313.27	£ 44,307,024.67	£ 76,184,337.94

The depreciation charge for 09/10 (£96,204k) is £20,019k greater than 08/09 (£76,184k). The majority of the increase is explained by the trend in recent years of higher spending on the capital programme. This resulted in the depreciation charge increasing by £14,835k from 07/08 to 08/09. The increased spending on the capital programme continued in 08/09 resulting in the higher 09/10 depreciation charge. Part of the overall increase is explained by a £6,071k increase in accelerated depreciation relating to decommissioned assets. This was the result of an extensive fixed asset register cleansing exercise carried out during the year. Also, 09/10 included a full year's depreciation (£3,247k) of the Alpha PPP asset which was £2,091k higher than the previous year.

Infrastructure Renewals Accounting

The IRC calculation for 09/10 is based on a ten year average of Infrastructure Renewals Expenditure (IRE). The ten year annual figures comprise a four year 'look back' to 04/05, the current year 2009-2010 and a 'look forward' for the five years to 13/14.

The look back relies upon data captured in 01/02 as actual expenditure. This information is captured from a 'June Return' completed by Water Service. A return was completed for 01/02 which was subject to audit but not a full reporter review. A QBEG allocation was completed for the largest projects in the capital programme which constituted 80% of the total value of the programmes. It is recognised that this approach is not as robust as would be liked, and likely to deliver a lower value of IRE as Maintenance (IRE) projects are largely completed within smaller capital projects. However, given the lack of historical information on IRE no better solution exists to provide a reasonable calculation of IRC.

The look forward to 13/14 was calculated directly from the SBP base spreadsheets. The three base spreadsheets contributing to the E & P Capital programme were examined and where base expenditure was allocated via QBEG this was defined as either IRE or MNI at a project level. The IRE, MNI figures were carried forward to a separate spreadsheet where the analysis was completed. A review was completed of Drainage Area Plans (DAPs) following the initial assessment to correct for Sewerage Pumping stations as they are designated as non infrastructure (MNI). Initially DAPs were noted as infrastructure so the correction removed anticipated costs for Sewerage Pumping stations from IRE to MNI. Separate analysis was completed of all remaining capital and is summarised as follows:

a. Wastewater Treatment – assumed as 100% MNI as these are above ground assets.
b. Water Supply – assumed as 100% MNI as these are above ground assets.
c. Networks – an analysis was completed of expenditure in the first 6 months of 06/07 and a QBEG allocation was completed on each project. The IRE output from this is 38% of networks expenditure (14% water and 24% sewerage) and 18% MNI. The balance of 44% is allocated to Capital Enhancement.
d. Leakage – assumed as 100% IRE.
e. The remaining areas of capital investment have been allocated 100% to MNI based on a split of 41% water and 59% sewerage. This split was derived from the SBP allocation within the Base Spreadsheets for the SBP. Typical examples include investment in Asset Management and Head Office areas which are clearly not infrastructure.

The final output from the above is an average over the first 5 years. This is actual predictions of investment based on historical unit costs as applied in the SBP re-costing exercise and verified by the interim reporter. NB the Base spreadsheets used for the SBP had the 06/07 programme included. Whilst not part of the final SBP the 06/07 data was used for the IRC calculation process.

The blank years between 02/03 and 06/07 were populated using extrapolation from the 01/02 analysis. The extrapolation provided for an increasing IRE in Water and a decreasing IRE in Sewerage. Since no historical data was available no alternative mechanism was available. As a consequence the IRC calculation has a degree of uncertainty attached to it but by completing comparisons with England and Wales IRE programmes it was deemed to be reasonable. Table 1 below shows the summary output as agreed with the interim reporter. This demonstrates that the IRE figure for NIW is at the higher end of the England and Wales numbers when compared on a like for like basis. It should be noted that Backlog Base was not included in the NIW determination of IRC. In summary the IRC was last calculated as part of the SBP process in 2007.

Table 1: Comparison with E&W IRE figures.

Service Area	England & Wales Benchmarks AMP4 (Post-efficiency) (£m)			Base Expenditure	NIW (Post-efficiency) (£m)			
	Min	Ave	Max		3yr Ave	5yr Ave	9yr Ave	
Water IRE	8.8	14	17.6	Water IRE	25.0	22.6	26.3	adjusted to post-efficiency figures from above data
				Backlog Base	4.0	5.9	6.7	adjusted to post-efficiency figures from above data
				Water IRE + BB	29.0	28.5	33.0	adjusted to post-efficiency figures from above data
Wastewater IRE	4.8	6.7	10.7	Wastewater IRE	9.2	9.1	10.8	adjusted to post-efficiency figures from above data
				Backlog Base	4.8	6.6	5.3	adjusted to post-efficiency figures from above data
				Wastewater IRE + BB	14.0	15.7	16.1	adjusted to post-efficiency figures from above data

The difference between the IRE and IRC is treated as an accrual or prepayment.

Based on the information available management has not finalised its view of IRC due to the uncertainty around the base data, to ensure it reflects the medium to long term view of the maintenance needs of its infrastructure assets. IRC is towards the maximum when compared to England & Wales but this is necessary to counteract the historical under investment.

2009-2010 IRC

The IRC for 2009-10 based on the above methodology and incorporated in the final Strategic Business Plan can be summarised as follows:

Water - £29.930m
Sewerage - £10.855m
Total - £40.785m

This would have been the figure used in the 2009-2010 financial statements but a reduction of approximately 9.2% (£3.75m) to the total IRC figure for 2009-2010 was agreed with the Regulator. This reduction was pro-rated against the original SBP charge to give the following water and sewerage IRC:

Water - £27.171m
Sewerage - £ 9.864m
Total - £37.035m

The Interim Reporter (Halcrow) had previously provided NIW with a statement that the projected levels of IRE underpinning the SBP would be sufficient to ensure that there is a low risk of a decline in the aggregate serviceability of infrastructure assets. In light of the reduction in IRC of 9.2% Halcrow were requested to review this opinion. Although the original IRE figures were not amended to achieve a calculated IRC at the lower agreed level Halcrow took account of the reduction and issued a second statement reiterating their original view.

The PC10 submission was not used to inform the IRC for this year (2009-10). This is because it is the last year of a distinct business plan period and, therefore, it was considered appropriate to use the IRC contained in the SBP for 2009-10. If the PC10 figures for IRE were used for the calculation of IRC in 2009-10 it would have led to an increase in IRC of approximately £210k.

The IRE for 2009-2010 can be shown as follows:

Water - £26.903m
Sewerage - £11.493m
Total - £38.396m

The prepayment /accrual at 31 March 2010 can be shown as follows:

	W TOTAL £m	**S TOTAL £m**	**Total TOTAL £m**
IRE	26.903	11.493	38.396
IRC	27.171	9.864	37.035
In year prepayment / (accrual)	-0.268	1.629	1.361
c/f prepayment / (accrual)	4.054	-3.963	0.091
Cumulative prepayment / (accrual)	3.786	-2.334	1.452

At the end of the year to 31 March 2009 an overall small prepayment of £0.091m was evident with IRE and IRC in total virtually matching for the first two years of the SBP period. This year Water IRE has been below the IRC charge giving a small accrual of £0.268m. Sewerage has shown IRE larger than IRC by £1.629m and this has produced an overall prepayment of £1.452m for the year.

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 columns could not be populated for PPP elements as the Financial Model supporting the SBP did not allocate IRE and IRC separately to the Alpha Project.

There is no difference between the IRC in the Statutory accounts and the IRC in the regulatory accounts.

Table 34

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

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		5	6	7	8	
				WATER SERVICE					SEWERAGE SERVICE				
				2006-07	2007-08	2008-09	Report Year 2009-10	CG	2006-07	2007-08	2008-09	Report Year 2009-10	CG
A	**ACCOUNTING FIXED ASSET ADDITIONS**												
	NON-INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE												
1	Very Short	£m	3	N/C	0.000	0.000	0.043	B3	N/C	0.000	0.000	0.033	B3
2	Short	£m	3	N/C	4.797	1.634	2.464	B2	N/C	6.206	7.319	5.465	B2
3	Medium	£m	3	N/C	2.146	4.310	7.203	B2	N/C	27.800	32.232	27.181	B2
4	Medium long	£m	3	N/C	0.000	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
5	Long	£m	3	N/C	2.210	6.229	9.831	B2	N/C	32.290	41.759	35.558	B2
6	Land	£m	3	N/C	0.678	0.025	0.053	B3	N/C	3.406	0.495	0.244	B3
7	Land Disposals	£m	3	N/C	-0.199	-0.531	-0.061	B2	N/C	-0.003	-0.001	-0.014	B2
8	Total	£m	3	N/C	9.632	11.668	19.534	B2	N/C	69.700	81.804	68.467	B2
B	**NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE**												
9	Very Short	£m	3	N/C	0.000	0.000	0.809	B3	N/C	0.000	0.000	0.000	n/a
10	Short	£m	3	N/C	11.578	5.291	3.568	B2	N/C	5.859	5.117	5.603	B2
11	Medium	£m	3	N/C	1.851	6.404	5.465	B2	N/C	6.460	12.370	13.966	B2
12	Medium long	£m	3	N/C	0.000	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
13	Long	£m	3	N/C	5.928	7.728	2.451	B2	N/C	10.978	10.351	10.546	B2
14	Total	£m	3	N/C	19.356	19.423	12.293	B2	N/C	23.297	27.838	30.114	B2
C	**NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)**												
15	Very Short	years	0	N/C	0	0	4	B3	N/C	0	0	4	B3
16	Short	years	0	N/C	10	10	10	B2	N/C	10	10	10	B2
17	Medium	years	0	N/C	20	20	20	B2	N/C	20	20	20	B2
18	Medium long	years	0	N/C	0	0	0	n/a	N/C	0	0	0	n/a
19	Long	years	0	N/C	60	60	60	B2	N/C	60	60	60	B2

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 34 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)
ANALYSIS OF NON-INFRASTRUCTURE FIXED ASSET ADDITIONS BY LIFE CATEGORIES - PPP

	DESCRIPTION	UNITS	DP	1	2	3	4		5	6	7	8	
				WATER SERVICE					SEWERAGE SERVICE				
				2006-07	2007-08	2008-09	Report Year 2009-10	CG	2006-07	2007-08	2008-09	Report Year 2009-10	CG
A	ACCOUNTING FIXED ASSET ADDITIONS NON-INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE												
1	Very Short	£m	3	N/C	N/C	0.000	0.000	n/a	N/C	N/C	0.000	0.000	n/a
2	Short	£m	3	N/C	N/C	0.000	0.000	n/a	N/C	N/C	0.000	0.000	n/a
3	Medium	£m	3	N/C	N/C	48.389	0.000	n/a	N/C	N/C	0.000	0.000	n/a
4	Medium long	£m	3	N/C	N/C	0.000	0.000	n/a	N/C	N/C	0.000	0.000	n/a
5	Long	£m	3	N/C	N/C	41.361	0.000	n/a	N/C	N/C	0.000	0.000	n/a
6	Land	£m	3	N/C	N/C	0.000	0.000	n/a	N/C	N/C	0.000	0.000	n/a
7	Land Disposals	£m	3	N/C	N/C	0.000	0.000	n/a	N/C	N/C	0.000	0.000	n/a
8	Total	£m	3	N/C	N/C	89.750	0.000	n/a			0.000	0.000	n/a
B	NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE												
9	Very Short	£m	3	N/C	N/C	0.000	0.000	n/a	N/C	N/C	0.000	0.000	n/a
10	Short	£m	3	N/C	N/C	0.000	0.000	n/a	N/C	N/C	0.000	0.000	n/a
11	Medium	£m	3	N/C	N/C	0.137	0.099	B3	N/C	N/C	0.000	0.000	n/a
12	Medium long	£m	3	N/C	N/C	0.000	0.000	n/a	N/C	N/C	0.000	0.000	n/a
13	Long	£m	3	N/C	N/C	0.117	0.125	B3	N/C	N/C	0.000	0.000	n/a
14	Total	£m	3	N/C	N/C	0.254	0.224	B3			0.000	0.000	n/a
C	NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)												
15	Very Short	years	0	N/C	0	0	0	n/a	N/C	0	0	n/a	n/a
16	Short	years	0	N/C	10	10	10	n/a	N/C	10	10	n/a	n/a
17	Medium	years	0	N/C	20	20	20	B3	N/C	20	20	n/a	n/a
18	Medium long	years	0	N/C	0	0	0	n/a	N/C	0	0	n/a	n/a
19	Long	years	0	N/C	60	60	60	B3	N/C	60	60	n/a	n/a

Table 34 – Financial Measures (Current Cost Accounting) - Analysis of Non-Infrastructure Fixed Asset Additions by Life Categories

Commentary and methodology

All the capital expenditure tables have been populated using project data extracted from the company's core project control system (CAPTRAX), as well as ORACLE (Financial management system).

Internal training and mentoring has been ongoing with key staff mainly with Engineering Procurement, Operations, Asset Management, PPP and Finance and Regulation directorates. A specific Master Class was developed and presented to Engineering Procurement, Operations and Asset Management staff in December 2009 and January 2010 to help staff understanding of CIDA definitions and allocations as well as awareness of the use of CIDA data for various business and regulatory needs including common framework and benchmarking. Feedback from these sessions has been very positive.

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 been further developed from 2008/09 to reflect weaknesses identified during AIR09 audit and internal experience gained in our second year as NI Water. As noted in AIR09 the CIDA methodology is significantly different from the Capital Proportional allocation (QBEG) process adopted in the Strategic Business Plan (SBP).

During 2009/10 the CIDA data capture and analysis process has developed significantly and this is explained as follows:

a) CIDA calculator spreadsheet – This spreadsheet was developed in 2007/08 to capture engineering data from the complex projects where proportional allocation is required and convert this to CIDA outputs for Regulatory reporting in accordance with the processes as outlined in the CIDA Manual, dated June 2007(updated Nov 09) and the Regulatory Accounting Guideline 2.03. Calculations to complete the analysis are built within the spreadsheet and an output in CAPTRAX format is provided. During the 2009/10 year the following has been completed
    - The CIDA calculator is no longer viewed as a tool to be adopted on its own for apportionment of complex projects. By spending quality time with project managers and demonstrating worked examples at the master class it is now deemed more practical that project managers break each project into defined elements

and apply CIDA to this element. The CIDA calculator has performed a basis to ensure consistency for the first 2 years of NIW but it is accepted that a spreadsheet cannot be built that will define every individual project scenario that is possible within a water and sewerage company.

- CIDA Q apportionment against all WWTW projects was reviewed, and corrected as necessary, to ensure that the Q allocation was against the correct drivers. This followed some discrepancies that were identified during Reporter's audit in AIR09. This only affects the output on Table 38.
- CIDA allocation on all Water Rehabilitation projects has been reviewed during 09/10 to further improve the allocation following the weakness identified by the Reporter in AIR09 in that DG2 was not generally demonstrated in the allocations. In other words the Enhanced Service Level (ESL) allocation on Watermain Rehab projects was generally missing. This was due to the methodology adopted previously in that each scheme within the project had a primary driver applied but these primary drivers had not included ESL. This has been updated to allow secondary drivers to be used in some schemes to ensure ESL is captured. (Note: No ESL allocation was completed on Watermain rehab projects in the SBP).

  In addition we have taken the opportunity to improve our allocation by ensuring Meters and PRV's are allocated as non-infra. This was not the case in previous years.
- The CIDA master classes were used as a platform to introduce clarity around the definition for Sewerage and the split between infra (to include Civils and all long life assets) and non-infra (to include all short life assets, e.g. screens) as this is unique and not similar to the other allocations.
- The CIDA manual has had an update in November 2009 to reflect the above matters and other minor adjustments to ensure better understanding within the business.

b) An additional level of approval is now required on all EP projects. All approvals now must go via Asset Management Strategic Investment team and within this team the CIDA allocation is checked. The Senior Regulatory Analyst who has been mentoring all Staff on CIDA matters has spent considerable time during 09/10 helping the 'Strategic Investment team' gain a good understanding of principles to be applied. Proof of this progress was demonstrated at the CIDA master classes when a set of complex CIDA examples were demonstrated by this team.

c) CAPTRAX – CAPTRAX is reconciled on a monthly basis with ORACLE so the final reports can be run directly from CAPTRAX. Three CIDA reports are generated from CAPTRAX as follows:
   - CIDA non lands. – This reports the accrual in 2009/10 against each project, excluding land acquisition, with a full CIDA output.

- CIDA lands – this reports the accrual in 2009/10 against land acquisition and the associated CIDA output.
- Projects with no CIDA – In 2007/08 555 projects had no CIDA applied. The expenditures on these projects were very small, and on projects largely completed as part of the former company Water Service. Typical projects contributing to this were watermain projects completed in 05/06 and 06/07 and indeed in earlier years, where wayleave compensation had only been agreed in 07/08. In 2008/09 the number of projects with no CIDA had been reduced to 149 with a related expenditure of £278k. This related to 0.1% of the CWP in 2008/09.

  For 2009/10 this file is no longer required as all Capital projects now have CIDA applied. In addition we can report that the projects that did not have CIDA applied in 2007/08 and 2008/09 now have had these completed during the reporting year to assist the company in our Capital Allowances claim for tax purposes.

d) CWP AIR reporting Model – The model developed in Excel for AIR09 reporting has been adopted for AIR 10 reporting. The model takes the outputs from the above reports from CAPTRAX and completes the tables 32, 34, 35, 36, 37 and 38 with the CWP element of Capital expenditure. Some refinement has been completed within the model to improve the transparency of the project drivers.

Operating Capital and M & G

This area captures all Capital expenditure which is not managed via the CWP. For all Capital projects not on the CWP (herein referred to Operating Capital expenditure) the CIDA information has been captured on the Project Setup form at Project approval and recorded on a Database (AICC) in Finance and Regulation Directorate. A single merged output from ORACLE and the AICC Database is input into a similar model as described above that is used to analyse the output for population of the AIR tables. All expenditure in this category had a full CIDA allocation in 09/10.

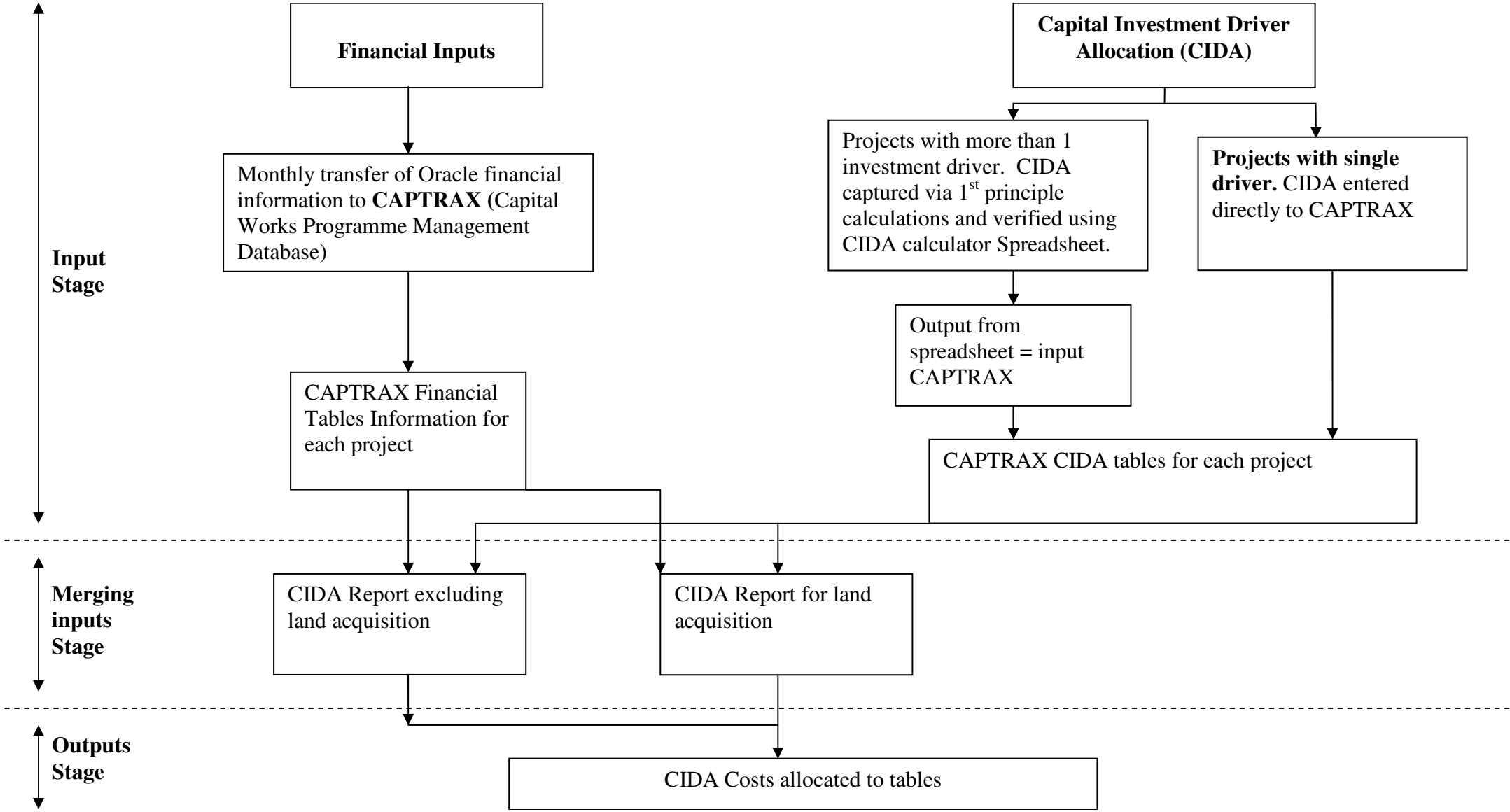
This information has been analysed separately from the CWP and merged on the final output tables.

Table population

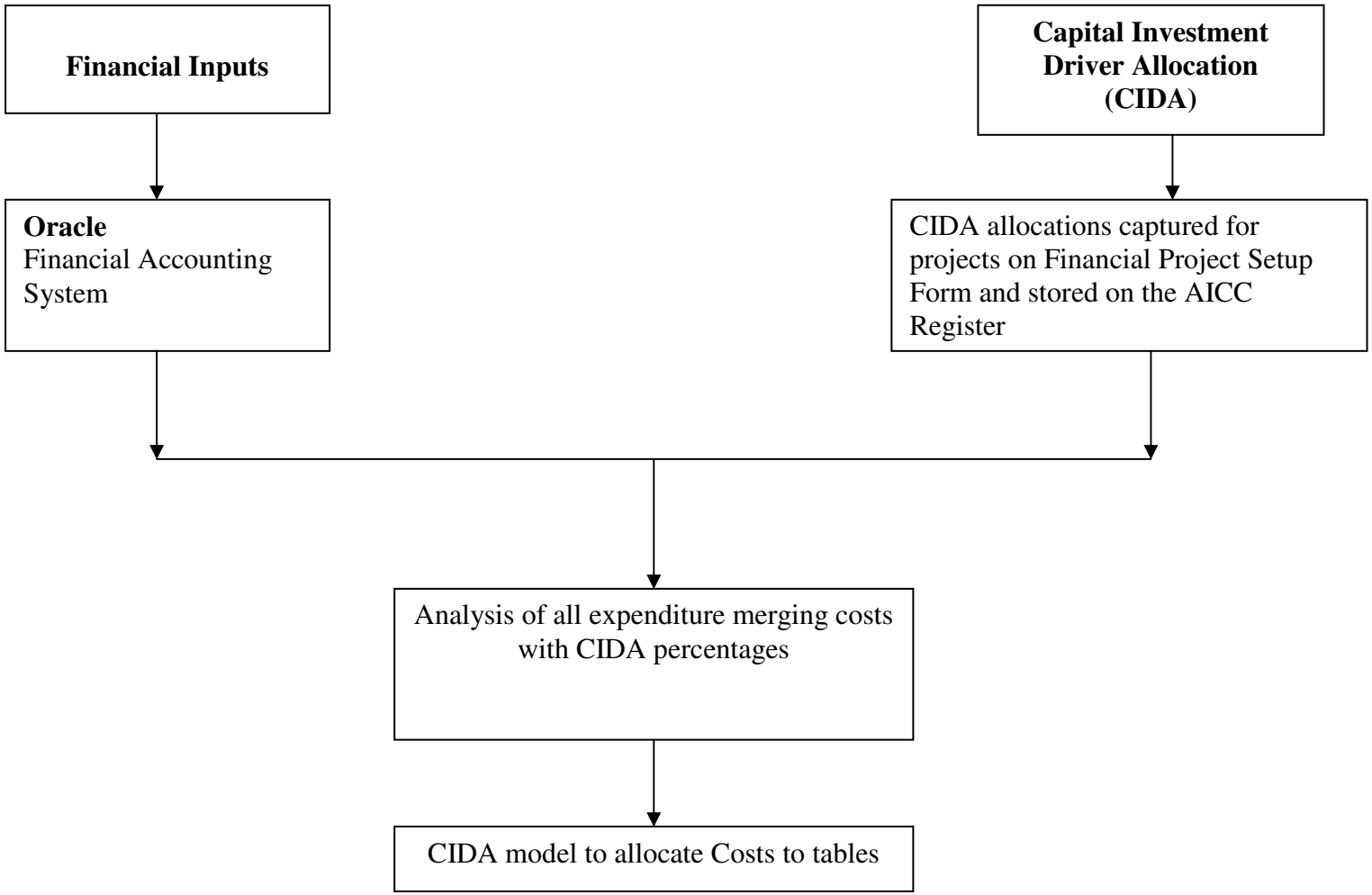
Data used in the population of the table is based on data extracted from the company's core systems and no assumptions are made in the allocation of project expenditure to the lines in the tables for all the expenditure with CIDA directly attributed. For the small rounding figure of £43k of CWP expenditure (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
During 09/10 financial year the life designated for Digitisation has been changed from short to medium to align with the NIW financial categories. Additional categories of spend have been captured in 09/10 and are reported as follows:

a) Vans – reported as very short
b) Computers
c) Land Management. This relates to catchments area management of land Reservoir sites and has been reported as Medium life.

The above paragraph completes the reporter recommendation from AIR09 to include commentary on Asset life allocations as referenced on Page 2 par 6 of the reporters report on AIR09.

The last comprehensive review of asset lives was completed as part of NIAMP2 in 2001. NIW are currently developing systems that a full review of asset lives can be completed in the future.

Methodology PPP table
Figures for PPP Alpha Capital maintenance have been taken directly from Table 42 and apportioned between Fixed Plant and Civils as per the PPP Contractors Financial model. This is the same process as adopted in AIR09.

PPP - Omega
No PPP OMEGA capital has been reported in the AIR10 financial tables for the following reasons:

- The Capital Cost split between Civils and M & E has been extracted from the Contractors Financial Model. This does not define 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 allocation methodology for Management and General expenditure is reflective of that included within the 'Strategic Business Plan' (SBP) allocation at 41%:59% (Water/Sewerage). This is only applied when projects have not already been allocated within Management and General to either Water or Sewerage within individual projects. This was adopted by project mangers when completing the CIDA data and no assumptions were required during the

analysis.

The asset lives adopted for Regulatory reporting are consistent with those in the Fixed Asset Register (FAR). The links for reporting purposes is outlined in the Capital investment Driver allocation manual.

The last comprehensive review of asset lives was completed as part of NAIMP2 in 2001. NIW are currently developing systems so that a review of asset lives can be completed in the future, which is anticipated to take place for PC13.

Expenditure is charged to individual projects and these are assigned individual asset lives for regulatory reporting.

This table is consistent with the analysis in Table 32. All expenditure reported in Table 34 is in outturn prices, gross of grants and contributions.

PPP Table
The expenditure of £0.224m on this table relates to the Capital Maintenance element of PPP Alpha expenditure for 09/10. The £0.224m is reported in Section B of the table and is split using the Asset lives split assumed in the contractors financial model. There is no PPP Capital on Sewerage.

Table 35

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 35 FINANCIAL MEASURES
WATER SERVICE - EXPENDITURE BY PURPOSE (NIW ONLY)

	DESCRIPTION	UNITS	DP	1 SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**BASE SERVICE PROVISION**										
1	Base operating expenditure	£m	3	N/C		95.308	B4	98.446		71.455	B4
2	Infrastructure renewals expenditure (net)	£m	3	N/C		19.778	B3	32.534	B3	26.904	B3
3	MNI (gross of grants and contributions)	£m	3	15.030		19.356	B3	19.423	B3	12.305	B3
4	MNI - grants and contributions	£m	3	N/C		0.000		0.000		0.000	n/a
5	MNI - net of grants and contributions	£m	3	15.030		19.356	B3	19.423	B3	12.305	B3
6	Infrastructure renewals expenditure (gross)	£m	3	35.730		19.778		32.534	B3	26.896	B3
B	**QUALITY ENHANCEMENTS**										
7	Capex: Total quality enhancement programme	£m	3	23.790		15.714	B3	19.076	B3	19.704	B3
8	Opex: Total quality enhancement programme	£m	3	N/C		0.050	B4	0.053	B4	0.307	B4
C	**ENHANCED SERVICE LEVELS**										
9	Capital expenditure - customer service	£m	3	4.370		5.930	B3	2.949	B3	13.452	B3
10	Additional operating expenditure - customer service	£m	3	N/C		0.000	B4	0.000	B4	0.000	B4
D	**MAINTAINING AND IMPROVING SUPPLY/DEMAND BALANCE**										
11	Capital expenditure supply/demand balance	£m	3	16.530		18.069	B3	10.963	B3	12.194	B3
12	Capex - new development	£m	3	N/C		17.758	B3	4.824	B3	11.485	B3
13	Capex - growth	£m	3	N/C		0.311	B3	6.139	B3	0.709	B3
14	Capex - free meter "selective and optants"	£m	3	N/C		0.000	B3	0.000	B3	0.000	B3
15	Additional operating expenditure supply/demand balance	£m	3	N/C		0.000	B4	0.000	B4	0.000	B4
16	Capital expenditure - security of supply	£m	3	N/C		1.541	B3	24.095	B3	16.996	B3
17	Additional operating expenditure - security of supply	£m	3	N/C		0.000	B4	0.000	B4	0.000	B4
E	**NEW OUTPUTS/OBLIGATIONS SINCE THE SBP**										
18	New outputs/obligations - capex	£m	3	N/C		0.000	B3	0.000	B3	0.000	B3
19	New outputs/obligations - opex	£m	3	N/C		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	N/C		1.486		1.584		1.230	A2
21	Enhancement requisitions, grants and contributions	£m	3	N/C		2.504		2.763		2.995	A2
G	**ADOPTED ASSETS, NILL COST ASSETS**										
22	Assets adopted or acquired at nil cost	£m	3	N/C		0.000		0.000	n/a	0.000	n/a
23	Adopted assets in return for a payment	£m	3	N/C		0.000		0.000	n/a	0.000	n/a
H	**EXPENDITURE TOTALS**										
24	Total operating expenditure (total)	£m	3	N/C		95.358		98.499		71.762	n/a
25	Infrastructure renewals expenditure (net) (NIW only)	£m	3	N/C		19.778	B3	32.534	B3	26.904	B3
26	Total asset additions (NIW only)	£m	3	N/C		60.611	B3	76.506	B3	74.651	B3
27	Total enhancement capital contributions (NIW only)	£m	3	N/C		3.990	B3	4.347	B3	4.225	B3
28	Total capital expenditure (excl. adopted and nil cost assets) (NIW only)	£m	3	N/C		80.389	B3	109.040	B3	101.554	B3
I	**Capital element of PPP unitary charge payment**										
29	Base maintenance (infrastructure and non-infrastructure)	£m	3							0.224	n/a
30	Quality enhancement expenditure	£m	3							0.000	n/a
31	Enhanced service level expenditure	£m	3							0.000	n/a
32	Supply demand balance expenditure	£m	3							0.000	n/a
33	New outputs/obligations since the SBP	£m	3							0.000	n/a
34	Total capital element of PPP unitary charge payment	£m	3							0.224	n/a

Table 35 - Water service – Expenditure by purpose

Capital expenditure (Capex)
In 2009/10 NIW invested £101.554m, 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 2009/10 NIW invested £26.904m (net) in water service infrastructure renewals. This is an increase on the 07/08 figure of £19.778m which we noted as being understated in AIR08 and a reduction on the 08/09 figure of £32.534m. By delivering this investment the company has:

- Renewed 172km of mains (including mains renewed for ENHANCEMENT)

- Replaced 6418 communication pipes (not including lead replacement).

In 2009/10 there is a difference in the IRE (net) and IRE (gross) of £0.008m which relates to income received for watermain diversions.

Capex: base service provision-maintenance non-infrastructure (NIW)
In 2009/10 NIW invested £12.3m (gross) in the maintenance of water non-infrastructure assets. In doing so the company has:

- Invested at many sites/assets under our refurbishment programme. The Service reservoir rehab programme is the main highlight in this area for 09/10. Twenty reservoirs and water towers have been refurbished in 09/10. Much of this spend has been allocated to Backlog Base and so is not shown in Section B of the Table.

- Invested in Management and General activities (water), to maintain non-operational assets including improvements to IT systems. In line with the SBP costs have been allocated in the proportions 41% water: 59% sewerage where not directly allocated to either Water or Sewerage by the Project Managers within CIDA.

- Invested £4.2m in Water Treatment works upgrades. The main sites included in this investment are Lough Bradan WTW, Carnmoney WTW and Killyhelvin WTW.

Serviceability
In 2009, water quality compliance of drinking water leaving our Water Treatment Works out turned at 99.92%, against the target of 99.90%. Following the introduction of PPP Alpha upgraded works along with asset improvements in 2009, we reduced the number of Trihalomethane regulatory exceedances, at the customer tap, from 141 in 2008 to 30 in 2009. This is a direct result of improved treatment at our treatment works. This figure will be

further improved in 2010, following the commissioning of Seagahan Water Treatment Works in late 2009.

Expenditure to reduce leakage
Operational expenditure in the Leakage function in 2009/10 was £3.81m

The following table shows the breakdown of expenditure in the Leakage function in 2009/10.

Table 1 – Leakage expenditure

Expenditure category (£m outturn prices)	2009/10 £m
Total Capex	6.79
Total Opex	3.81
Total Expenditure	**10.6**

This expenditure includes £0.02m Business Improvement Operating expenditure and £0.18m Business Improvement Capital expenditure.

Capex within the Leakage function includes the following 3 contracts: Leakage Detection Contract, Leakage Repair Contract and Leakage Management Services Contract and capitalised salaries for internal staff associated with leakage infrastructure improvements. Other capex is in relation to meters, PRVs etc as well as leakage infrastructure work associated with pressure management, DMA optimisation, and meter replacement/installation

Opex expenditure is mainly contributed to from staff costs and Roads Service fees for Road opening permits (moleseye).

Capex: quality enhancements (NIW)
In 2009/10 NIW invested £19.7m in water service quality programmes. In doing so the company has:

- Renewed mains as part of the water rehabilitation programme. The quality programme is a significant element of the Rehab programme.
- Upsized mains as part of the water rehabilitation programme. Some of this work is also driven by the quality programme.
- Completed work at the following WTW sites as part of the quality improvement programme agreed with DWI as part of the SBP
  1. Seagahan WTW

- A more detailed review of the quality programme accompanies Table 37.

Capex: new obligations
NIW have not completed any new obligations that were not listed in the SBP CWP in 2009/10.

Capex: supply-demand balance (NIW)
In 2009/10 NIW invested £16.996m providing security of supply projects and £0.7m on growth projects as part of the supply-demand balance. This expenditure results partially from proportional expenditure to this service area from delivery of the Quality enhancement programme as well as security of supply projects resulting from the Water Resource Strategy.

In 2009/10 NIW also invested £11.485m in water services supply/demand programme relating to new development (provision on new supplies/connections). In doing so it has:

- Connected 4819 new properties; (4457, household and 272 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 minus the Opex from Capex calculated for Enhancements.

Lines 2 – 6 - Base Service Provision: IRE and MNI

IRE
In 09/10 £7k 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 2009/10.

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 2007/08, 2008/09 and 2009/10. 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 ENHANCEMMENT. 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.

Lines 20 – 21 - Grants, capital contributions and infrastructure charge receipts for new connections

Line 20 - **Infrastructure charge receipts – new connections** of £1.230m in Line 20 represents the total gross receipts for 2009-2010 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 (2009-2010 (42.46%) and this element is not treated as a capital contribution toward infrastructure but is credited in the balance sheet to a deferred income account and is amortised over the average useful life of non-infrastructure assets (30 years).

Line 21 - Enhancement requisitions, grants and contributions comprise:

2009-2010	**£m**
Water connections	2.306
Requisitions	0.689
Total line 21	**2.995**

- Total asset additions – Check to Table 25 line 5 col 4. For AIR 10 the reported numbers in these two tables are as follows:
  Table 25 – £74.409m
  Table 35 - £74.651m

The difference in the above 2 figures is explained as follows:

a) PPP Alpha capital maintenance of £224k is not included in Table 35
b) £-479k included in Table 25 relates to Decapitalised projects in 09/10 and the reversal of £250k of PPP Alpha Capital maintenance from 08/09. The balance is a small rounding error.

Confidence Grades –CIDA allocation has made further progress in 09/10 and whilst it is accepted there may minor shortcomings these are very 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.

Backlog Base
Backlog Base expenditure of £6.096m in Water Service is included in line 9 of the table.

Reporter Recommendations (AIR 09)

The reporter identified that few Zonal Study projects had a DG2 allocation in AIR09 with a result that the ESL allocation was understated. NIW have reviewed all Zonal Studies /Rehabilitation projects CIDA allocations in 09/10 including those projects delivered in 07/08 and 08/09.

Table 35a

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 35A FINANCIAL MEASURES
WATER SERVICE - EXPENDITURE BY PURPOSE

RPI Inflator (Operating Expenditure) base year to report year prices	
COPI Inflator (Capital Expenditure) base year to report year prices	0.96

	DESCRIPTION	UNITS	DP	1 SBP PROJECTIONS FOR 2009/10	2 SBP PROJECTIONS UPLIFTED FOR RPI AND COPI	3 ACTUAL 2009/10 OUTTURN	4 DIFFERENCE FROM REVISED SBP FIGURES	5 % DIFFERENCE FROM REVISED SBP FIGURES DP	5 % DIFFERENCE FROM REVISED SBP FIGURES 2
A	**BASE SERVICE PROVISION**								
1	Base operating expenditure	£m	3						
2	Infrastructure renewals expenditure (net)	£m	3	23.633	22.579	26.904	4.324		19.15
3	MNI (gross of grants and contributions)	£m	3	20.479	19.566	12.305	-7.261		-37.11
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	20.479	19.566	12.305	-7.261		-37.11
B	**QUALITY ENHANCEMENTS**								
6	Capex - total quality enhancement programme	£m	3	17.092	16.330	19.704	3.374		20.66
7	Opex - total quality enhancement programme	£m	3						
C	**ENHANCED SERVICE LEVELS**								
8	Capital expenditure - customer service	£m	3	2.445	2.336	13.452	11.116		475.92
9	Additional operating expenditure - customer service	£m	3						
D	**MAINTAINING AND IMPROVING SUPPLY/DEMAND BALANCE**								
10	Capital expenditure supply/demand balance	£m	3	16.955	16.199	12.194	-4.005		-24.72
11	Total enhancement capital contributions	£m	3	5.524	5.278	4.225	-1.053		-19.95
12	Capex net of enhancement capital contributions	£m	3	11.431	10.921	7.969	-2.952		-27.03
13	Additional operating expenditure supply/demand balance	£m	3						
14	Capital expenditure - security of supply	£m	3	0.000	0.000	16.996	16.996		
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	80.604	77.010	101.554	24.545		31.87
17	Total opex excluding new outputs	£m	3						
18	Total gross capex - gross of grants (ire net) and including new outputs	£m	3	80.604	77.010	101.554	-77.010		-100.00
19	Total opex including new outputs	£m	3						

Table 35a – Water Service – Expenditure comparisons by purpose

The Strategic Business Plan was not structured using the PR process and as a result the data used and the systems adopted for the SBP analysis are not easily utilised to populate this table accurately. Tables 35a and 36a SBP totals have been reconciled to £252,738m shown on page 17 of the full SBP document by excluding Capital Contributions and PPP Alpha Capital maintenance.

It is difficult to report on the variations as noted on this table as the reporting methodology of the QBEG in the SBP and the CIDA allocation in 09/10 reporting year are derived differently. The variations are best examined on a project by project basis using the CIM template. However, the following commentary will give an explanation of some of the main differences.

Comparison issues

1) The only central source of SBP (col 1) data is the Financial Model used in the SBP. The Model only works with Enhancement and Base Service Provision. It does not distinguish between Quality Enhancement, Enhanced Service Level and Supply demand balance. Some assumptions have had to be adopted to develop this granularity for the population of the tables.
2) Backlog Base has been reported as ESL in this table as is the case for all the CAPITAL tables as this was adopted for the SBP period. Whilst this in itself should not present a comparison issue in the table care need to be adopted when comparing with other companies.
3) Capitalised Salaries were applied to the SBP as per the CWP split. However, for Enhancement salaries these were only applied to infrastructure projects within the SBP. This is a weakness in the SBP as Enhancement Salaries apply to both Infra and non-infra projects. For consistency the information has been maintained as per the SBP assumption in this table.
4) Within the M & G (using the SBP definition and not OFWAT definition) predicted spend was allocated to Base Service Provision and Enhancement. The portion of Enhancement was split between Water infra, Water non-infra, Sewerage infra and Sewerage non-infra. In reality, the spend relates to Watermains in new developments and should have been entirely allocated to Water infra. This was a SBP financial error.
5) Within the SBP a combination of RPI and COPI was adopted to Capital Elements. By using actual COPI on this table we do not have a true comparison.
6) £202k SBP amount of PPP Alpha Capital Maintenance has been removed from col 1.
7) When QBEG was applied to the SBP this was completed at sub programme level. Within these sub programmes the QBEG allocation could be challenged as it does not now reflect our understanding as has been refined during the 3 years of the SBP. One example of this is Zonal Studies/watermain rehab programme where in the SBP there was no allocation for ESL (DG2). In col 3 this now includes for DG2 allocation against ESL.

8) A number of post SBP determination financial adjustments took place at the request of DRD. These mainly moved finance from Infrastructure to non Infrastructure. There was no Engineering and Regulatory reasoning behind these changes but fully financially motivated. These adjustments have not been reflected in Col 1.

General Matters
The COPI factor of 0.96 has been derived by estimating no increase in the COPI index in the last Quarter of 09/10 and is the factor from the base year of 06/07 to 09/10. This figure is less than 1 due to deflation in the COPI index in the last 2 years. This alone has the effect of reducing the SBP capital from that assumed in 'Water Service' SBP submission of £12.2m in 09/10.

Figures reported in Columns 1 and 2 of this table are post efficiency.

PPP
No PPP is included in this table.

Line 6 - Capex - Total Quality Enhancement Programme
The quality enhancement (Q) programme spent more than the SBP projection in 09/10. This can partly be attributed to the increase in Water Distribution rehab. programme being larger.

Line 16 - Total Gross Capex - Gross of Grants (IRE Net) and Excluding New Outputs
The total SBP Water predicted expenditure as per the table is £77m in 09/10 prices. The actual expenditure was £101.5m.

Reporter Recommendations from AIR09
a) Actual COPI has been adopted in this table rather than assumed SBP COPI.
b) Reconciliation issues from the SBP col have been presented to NIAUR on the 28/04/10.
c) Line 17 and 19 is not populated in AIR 10 as per the guidance.

Table 36

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 36 FINANCIAL MEASURES
SEWERAGE SERVICE - EXPENDITURE BY PURPOSE

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**BASE SERVICE PROVISION**										
1	Base operating expenditure	£m	3	N/C		87.703	B4	107.531	B4	95.090	B4
2	Infrastructure renewals expenditure (net)	£m	3	N/C		6.195	B3	6.600	B2	11.494	B3
3	MNI (gross of grants and contributions)	£m	3	25.980		23.297	B3	27.838	B2	30.102	B3
4	MNI - grants and contributions	£m	3	N/C		0.000		0.000	B2	0.000	n/a
5	MNI - net of grants and contributions	£m	3	25.980		23.297	B3	27.838	B2	30.102	B3
6	Infrastructure renewals expenditure (gross)	£m	3	9.640		6.195	B3	6.600	B2	11.494	B3
B	**QUALITY ENHANCEMENTS**										
7	Capex - total quality enhancement programme	£m	3	43.930		49.426	B3	79.419	B2	62.880	B3
8	Opex - total quality enhancement programme	£m	3	N/C		0.096	B4	1.028	B4	1.413	B4
C	**ENHANCED SERVICE LEVELS**										
9	Capital expenditure - customer service	£m	3	17.210		49.691	B3	28.209	B2	20.002	B3
10	Additional operating expenditure - customer service	£m	3	N/C		0.000	B4	0.044	B4	0.338	B4
D	**IMPROVING SUPPLY/DEMAND BALANCE**										
11	Capital expenditure supply/demand balance	£m	3	50.470		45.287	B3	44.230	B2	31.723	B3
12	Capex - new development	£m	3	N/C		19.875	B3	38.339	B3	28.642	B3
13	Capex - growth - sewage	£m	3					5.834	B3	2.777	B3
14	Capex - growth - sewage treatment	£m	3					0.057	B3	0.304	B3
15	Additional operating expenditure supply/demand balance	£m	3	N/C		0.596	B4	0.489	B4	0.968	B4
E	**NEW OUTPUTS/OBLIGATIONS SINCE THE SBP**										
16	New outputs/obligations - capex	£m	3	N/C		0.000	B3	0.000	B3	0.220	B3
17	New outputs/obligations - opex	£m	3	N/C		0.000	B4	0.000	B2	0.000	B4
F	**GRANTS, CAPITAL CONTRIBUTIONS AND INFRASTRUCTURE CHARGES RECEIPTS FOR NEW CONNECTIONS**										
18	Infrastructure charge receipts - new connections	£m	3	N/C		1.132		1.164	A2	1.029	A2
19	Enhancement requisitions, grants and contributions	£m	3	N/C		0.124		0.759	A2	1.253	A2
G	**ADOPTED ASSETS, NIL COST ASSETS**										
20	Assets adopted or acquired at nil cost	£m	3	N/C		19.859	B3	19.284	B3	18.602	B3
H	**EXPENDITURE TOTALS**										
21	Total operating expenditure	£m	3	N/C		88.395		109.092	B2	97.808	n/a
22	Infrastructure renewals expenditure (net)	£m	3	N/C		6.195	B3	6.600	B2	11.494	B3
23	Total asset additions	£m	3	N/C		187.560	B3	198.980	B2	163.529	B3
24	Total enhancement capital contributions	£m	3	N/C		1.256	B3	1.923	B2	2.282	B3
25	Total capital expenditure (excluding adopted and nil cost assets)	£m	3	N/C		173.896	B3	186.296	B2	156.420	B3
I	**Capital element of PPP unitary charge payment**										
26	Base maintenance (infrastructure and non-infrastructure)	£m	3							0.000	n/a
27	Quality enhancement expenditure	£m	3							0.000	n/a
28	Enhanced service level expenditure	£m	3							0.000	n/a
29	Supply demand balance expenditure	£m	3							0.000	n/a
30	New outputs/obligations since the SBP	£m	3							0.000	n/a
31	Total capital element of PPP unitary charge payment	£m	3							0.000	n/a

Table 36 - Sewerage Service – Expenditure by purpose

Capital expenditure (Capex)
In 2009/10 NIW invested £156.4m (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 2009/10 NIW invested 11.49m (net) in sewerage service infrastructure renewals. With the large Belfast Sewer project now nearing completion the balance of expenditure on Sewerage is increasing within Base Maintenance. This reflects the longer term company view as expenditure on sewerage infra base maintenance has been low in 07/08 and 08/09. In spending the 09/10 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 2009/10 on both Critical and non-critical sewers in line with findings from the Drainage Area Studies.

Capex: base service provision – maintenance non- infrastructure
In 2009/10 NIW invested £30.102 million (net) in the maintenance of non-infrastructure assets. This is an increase on the 08/09 figure of £27m.

In doing so the company has:

- Completed projects at wastewater treatment works. Refer to commentary in Chapter 38. These are quality driven projects but some contain a Base Service Provision apportionment within CIDA.
- Invested approximately £3.4 million in Management and General Activities to maintain non-operational assets.

Capex: quality enhancements
In 2009/10 NIW invested £63.0 million in sewerage service quality programmes. In doing so the company has:

- Completed 19 of wastewater treatment works as agreed in the SBP targets for 09/10 financial year, 5 wastewater treatment works that had 08/09 SBP completion dates and 1 with an 07/08 completion date.

Line 16 - Capex: New Obligations
Derrytrasna WWTW was not included within the SBP project listing. On 30/03/07 March 2007 a new Water Order Consent (WOC) was issued for this works, which the works was unable to meet. In response to a statement under caution (SUC) dated 7/04/09 NIW responded by completing some short term measures and accelerating a Capital project. NIW has advanced this project

without any additional funding. £220k is reported in 09/10 against this project. The £220k is added to this line and removed from lines 3, 7 & 12 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 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 2009/10.

IRE related contributions would be those contributions from third parties towards work carried out on base sewerage projects. This is shown as zero for 2009/10 as this income is currently not shown in the accounts as a capital contribution.

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 2009/10.

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 2007/08, 2008/09 and 2009/10. 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. Benchmarking against similar existing sites identified power costs as the main expenditure at each of these sites. It was possible to get the power costs for these sites. Pumping Stations cannot be identified individually in the General Ledger and where possible the same methodology as the small WWTW's has been used. However there remain some pumping stations for which it has not been possible to separately identify power costs.

It should be noted that in some cases the entire OPEX is treated as OPEX from CAPEX as the assets are entirely new. Examples include assets adopted and WWTW's where no form of treatment was provided before. As the OPEX has been taken straight from the general ledger these costs will only relate to the portion of the year that the site is operational and therefore no apportionment is required.

Apportionment within the Table has been completed in accordance with CIDA apportionments to ENHANCEMENT. A separate database has been

developed to analyse these smaller number of projects using the CIDA ENHANCEMENT outputs (rebalanced to 100%) from the original Capital project to apportion the OPEX from CAPEX.

Grants, capital contributions and infrastructure charge receipts for new connections (lines

Line 18 - Infrastructure charge receipts – new connections of £1.029m in Line 18 represents the total gross receipts for 2009-2010 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 (2009-2010 42.46%) 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:

2009-2010	**£m**
Sewers for adoption – inspection fees	0.519
Requisitions	0.226
Sewerage connections	0.507
Total line 21	**1.253**

Confidence Grades – CIDA allocation has made further progress in 09/10 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:

c) Total opex as this is extracted from T21 where no confidence grades are applied.
d) Block I as this information is extracted from T42 where no confidence grades are applied.

Total asset additions – Check to Table 25 line 5 col 8. For AIR 10 the reported numbers in these two tables are as follows:
Table 25 – £165.692m
Table 36 - £163.529m

The difference of £2.164m relates to the Residual interest on Kinnegar PPP project which is not included on Table 36.

Health and Safety
Health and Safety Expenditure has been allocated to Base Service Provision.

Backlog Base
Backlog Base expenditure of £7.912m is included in line 9 of this table.

Reporter's Recommendations
(Page 7 para 8). In line with the Reporter's recommendation it was agreed at the NIW/NIEA Regulation Sub-Group meeting that NIEA would produce Project Sign Off Procedures and Proformas.

Table 36a

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 36A FINANCIAL MEASURES
SEWERAGE SERVICE - EXPENDITURE BY PURPOSE

RPI Inflator (Operating Expenditure) base year to report year prices	
COPI Inflator (Capital Expenditure) base year to report year prices	0.96

	DESCRIPTION	UNITS	DP	1 SBP PROJECTIONS FOR 2009-10	2 SBP PROJECTIONS UNPLIFTED FOR COPI AND RPI FOR 2009-10	3 ACTUAL 2009-10 OUTTURN	4 DIFFERENCE FROM REVISED SBP FIGURES DP	5 % DIFFERENCE FROM REVISED SBP FIGURES 2
A	**BASE SERVICE PROVISION**							
1	Base operating expenditure	£m	3					
2	Infrastructure renewals expenditure (net)	£m	3	12.622	12.117	11.494	-0.623	-5.14
3	MNI (gross of grants and contributions)	£m	3	29.253	28.083	30.115	2.032	7.24
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	29.253	28.083	30.102	2.019	7.19
B	**QUALITY ENHANCEMENTS**							
6	Capex: Total quality enhancement programme	£m	3	53.769	51.618	63.032	11.414	22.11
7	Opex: Total quality enhancement programme	£m	3					
C	**ENHANCED SERVICE LEVELS**							
8	Capital expenditure	£m	3	14.763	14.173	20.002	5.829	41.13
9	Additional operating expenditure - customer service	£m	3					
D	**MAINTAINING SUPPLY/DEMAND BALANCE**							
10	Capital expenditure supply/demand balance	£m	3	47.043	45.161	31.778	-13.383	-29.63
11	Total enhancement capital contributions	£m	3	4.207	4.039	2.282	-1.757	-43.50
12	Capex net of enhancement capital contributions	£m	3	42.835	41.122	29.496	-11.626	-28.27
13	Additional operating expenditure supply/demand balance	£m	3					
E	**EXPENDITURE TOTALS**							
14	Total gross capex - gross of grants (ire net) and excluding new outputs	£m	3	157.450	151.152	156.420	5.268	3.49
15	Total opex (excluding new outputs)	£m	3					
16	Total gross capex - gross of grants (ire net) and including new outputs	£m	3	157.450	151.152	156.420	5.268	3.49
17	Total opex including new outputs	£m	3					

Table 36a – Financial Measures - Sewerage Service – Expenditure by Purpose

The Strategic Business Plan was not structured using the PR process and as a result the data used and the systems adopted for the SBP analysis are not easily utilised to populate this table accurately. Tables 35a and 36a SBP totals have been reconciled to £252,738m shown on page 17 of the full SBP document by excluding Capital Contributions and PPP Alpha Capital maintenance.

It is difficult to report on the variations as noted on this table as the reporting methodology of the QBEG in the SBP and the CIDA allocation in 09/10 reporting year are derived differently. The variations are best examined on a project by project basis using the CIM template. However, the following commentary will give an explanation of some of the main differences.

Comparison issues

9) The only central source of SBP (col 1) data is the Financial Model used in the SBP. The Model only works with Enhancement and Base Service Provision. It does not distinguish between Quality Enhancement, Enhanced Service Level and Supply demand balance. Some assumptions have had to be adopted to develop this granularity for the population of the tables.
10) Backlog Base has been reported as ESL in this table as is the case for all the CAPITAL tables as this was adopted for the SBP period. Whilst this in itself should not present a comparison issue in the table care need to be adopted when comparing with other companies.
11) Capitalised Salaries were applied to the SBP as per the CWP split. However, for Enhancement salaries these were only applied to infrastructure projects within the SBP. This is a weakness in the SBP as Enhancement Salaries apply to both Infra and non infra projects. For consistency the information has been maintained as per the SBP assumption in this table.
12) Within the M & G (using the SBP definition and not OFWAT definition as this applies to spend in Operations directorate as well as M & G) predicted spend was allocated to Base Service Provision and Enhancement. The portion of Enhancement spend was split between Water infra, Water non infra, Sewerage infra and Sewerage non infra. In reality the spend relates to Watermains in new developments and should have been entirely allocated to Water infra. This was a SBP financial error.
13) Within the SBP a combination of RPI and COPI was adopted to Capital Elements. By using actual COPI on this table we do not have a true comparison.
14) When QBEG was applied to the SBP this was completed at sub programme level. Within these sub programmes the QBEG allocation could be challenged as it does not now reflect our understanding as has been refined during the 3 years of the SBP. One example of this is DAP Studies/Sewer rehab programme where in the SBP there was no allocation for ESL (DG5). In col 3 this now includes for DG5 allocation against ESL.

15) A number of post SBP determination financial adjustments took place at the request of DRD. These mainly moved finance from Infrastructure to non Infrastructure. There was no Engineering and Regulatory reasoning behind these changes but fully financially motivated. These adjustments have not been reflected in Col 1.

General Matters

The COPI factor of 0.96 has been derived by estimating no increase in the COPI index in the last Quarter of 09/10 and is the factor from the base year of 06/07 to 09/10. This figure is less than 1 due to deflation in the COPI index in the last 2 years. This alone has the effect of reducing the SBP capital from that assumed in 'Sewerage Service' SBP submission of £22.9m in 09/10.

Figures reported in Columns 1 and 2 of this table are post efficiency.

In respect of OPEX only total opex has been populated.

PPP

No PPP is included in this table.

Line 14 - Total Gross Capex - Gross of Grants (IRE Net) and Excluding New Outputs

The total SBP Water predicted expenditure as per the table is £151.15m in 09/10 prices. The actual expenditure was £156.42m.

Reporter Recommendations from AIR09

d) Actual COPI has been adopted in this table rather than assumed SBP COPI.
e) Reconciliation issues from the SBP col have been presented to NIAUR on the 28/04/10.
f) Line 17 is not populated in AIR 10 as per the guidance.

Table 37

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 37 FINANCIAL MEASURES
WATER COMPLIANCE - EXPENDITURE REPORT (NIW only)

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**OBLIGATIONS PRIOR TO THE SBP**										
1	Capex: Completion of programme of work funded prior to the SBP	£m	3	N/C		0.000		0.000	B4		n/a
2	Opex: Completion of programme of work funded prior to the SBP	£m	3	N/C		0.050	B4	0.053	B4	0.034	B4
B	**WATER TREATMENT**										
3	Capex: Nitrates	£m	3	N/C		0.000	B3	0.000	B2	0.001	B3
4	Capex: Pesticides	£m	3	N/C		0.000	B3	0.004	B2	0.121	B3
5	Capex: Cryptosporidium	£m	3	N/C		0.686	B3	0.084	B2	0.589	B3
6	Capex: Lead - water conditioning	£m	3	N/C		0.000	B3	0.000	B2	0.001	B3
7	Capex : Other parameters	£m	3	N/C		2.886	B3	4.273	B2	7.217	B3
8	Opex: Water treatment	£m	3	N/C		0.000	B4	0.000	B4	0.272	B4
C	**WATER DISTRIBUTION**										
9	Capex: Total Article 31 distribution expenditure	£m	3	N/C		0.000	B3	0.004	B3	0.000	B3
10	Capex: Distribution expenditure allocated to quality	£m	3	N/C		11.675	B3	10.525	B3	10.588	B3
11	Capex: Lead communication pipes	£m	3	N/C		0.168	B3	0.131	B3	0.393	B3
12	Opex: Quality distribution	£m	3	N/C		0.000	B4	0.000	B4	0.000	B4
D	**SECURITY RELATED MEASURES**										
13	Capex: Security-related	£m	3	N/C		0.208	B3	3.973	B2	0.645	B3
14	Opex: Security-related	£m	3	N/C		0.000	B4	0.000	B4	0.000	B4
E	**ENVIRONMENTAL PROGRAMME**										
15	Capex: Investigations	£m	3	N/C		0.000	B3	0.000	B3	0.149	B3
16	Capex: Options appraisals/implementations	£m	3	N/C		0.090	B3	0.086	B3	0.000	B3
17	Opex: Environmental obligations	£m	3	N/C		0.000	B4	0.000	B3	0.000	B4
F	**CAPEX & OPEX TOTALS**										
18	Capex: Total quality enhancement programme (water)	£m	3	N/C		15.714	B3	19.076	B2	19.704	B3
19	Opex: Total quality enhancement programme (water)	£m	3	N/C		0.050	B4	0.053	B4	0.307	B4

Table 37 – Financial Measures - Water Compliance – Expenditure Report

PPP
No PPP information is reported in this table in accordance with the guidance.

NIW Capex
The reporting of expenditure in Table 37 is consistent with the methodology outlined in Chapter 34. In summary proportional allocation is completed at project level and not at programme level as per the SBP.

The table below shows progress that NIW is making to deliver the DWI requirements as outlined in the SBP.

Table 2

Planned Project completions (Agreed with DWI or SBP)

	DWI ref no			2009/10
Seaghan WTW	W2514			Nov 09

Programme Delivery Schedule Actual/latest best estimate

	DWI ref no			2009/10
Seaghan WTW	W2514			Dec 09

Seaghan WTW was completed in Dec 09 which is within one month of the SBP planned completion date.

Lines 1 & 2 - Obligations Prior to the SBP
No pre SBP obligations are reported in 09/10 in line 1. The amount of £34k reported in line 2 relates to Carron Hill WTW which was commissioned in 07/08.

Water Compliance

Lines 3 – 7 - Water Treatment
The water compliance programme allowed in the SBP price limits addresses the need to improve the water quality supplied from Seaghan WTW, which was supported by DWI. For the works completed the total design flow is 13.6Ml/d. The main drivers for this project were as follows:91% quality Enhancement, 9% Base Service Provision(allocated to Backlog Base).

Lines 9 – 11 - Water Distribution

Lines 9 – 10 - Mains Rehabilitation
In the twelve months to the 31st March 2010 NIW has rehabilitated a large length of ferrous mains as part of the Quality programme.

In 2009/10 NIW has laid a total of 379km of mains (new and replacement) as part of the mains rehab programme. A large of portion of this is attributable to Quality Enhancement. The portion attributed to quality varies with each project as recorded within the Capital Investment Driver allocations.

Quality expenditure on water main rehabilitation is proportionally allocated on a project basis.

Line 10 – Capex: Distribution Expenditure Allocated to Quality
Large Diameter Trunk Mains
Castor Bay to Dungannon Strategic Trunk Main main contract commenced on site during 09/10 and £9.3m was accrued against this project. This project does not have a quality allocation.

Line 11 - Capex: Lead communication pipes
The £0.393million reported on this line related to lead communication pipe replacement. NIW does not have any obligation within the SBP from DWI to replace specific lead communication pipes. The finance reported here is a result of lead communication pipes replaced in conjunction with the watermain rehabilitation programme and individual homes replacing individual service pipe where NIW have replaced the company owned communication pipe at this connection.

Line 13 - Capex: Security-related
£0.645million was spent in 2009/10 to deliver work related to the Security and Emergency Measures. This expenditure was mainly delivered via the following 2 projects

1) Service Reservoir Enhanced Security.
2) Security improvements at Keypoint installations

Line 15 - Capex: Investigations
The majority of the £0.149m reported on this line was spent in 2009/010 for the Strule intake for Derg WTW.

Reporter recommendations (AIR09)
The reporter requested that NIW improve the transparency of the CIDA spreadsheet for E & P expenditure so that individual drivers can be filtered with the project ID still showing. This has been implemented for AIR10.

Table 38

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN - TABLE 38 FINANCIAL MEASURES
SEWERAGE COMPLIANCE - EXPENDITURE REPORT (NIW only)

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**OBLIGATIONS PRIOR TO THE SBP**										
1	Capex: Completion of programme of work funded prior to the SBP - continuous discharge	£m	3	N/C		0.000		0.000	B3	0.000	n/a
2	Capex: Completion of programme of work funded prior to the SBP - intermittent discharge	£m	3	N/C		0.000		0.000	B3	0.000	n/a
3	Capex: Completion of programme of work funded prior to the SBP – sewage sludge management	£m	3	N/C		0.000		0.000	B3	0.000	n/a
4	Opex: Completion of programme of work funded prior to the SBP	£m	3	N/C		0.000		0.000	B4	0.000	n/a
B	**INTERMITTENT DISCHARGES**										
5	Capex: Unsatisfactory intermittent discharges	£m	3	N/C		40.614	B3	40.378	B2	23.205	B3
6	Opex: Unsatisfactory intermittent discharges	£m	3	N/C		0.000	B4	0.081	B4	0.027	B4
C	**EU DIRECTIVES**										
7	Capex: Continuous discharges - UWWTD	£m	3	N/C		0.515	B3	5.626	B2	7.994	B3
8	Opex: Continuous discharges - UWWTD	£m	3	N/C		0.000	B4	0.115	B4	0.469	B4
9	Capex: Continuous and intermittent discharges – Bathing Waters Directive	£m	3	N/C		0.087	B3	1.781	B2	1.677	B3
10	Opex: Continuous and intermittent discharges – Bathing Waters Directive	£m	3	N/C		0.000	B4	0.067	B4	0.061	B4
11	Capex: Continuous and intermittent discharges – Freshwater Fish Directive	£m	3	N/C		1.865	B3	6.852	B2	5.999	B3
12	Opex: Continuous and intermittent discharges – Freshwater Fish Directive	£m	3	N/C		0.000	B4	0.030	B4	0.109	B4
13	Capex: Continuous and intermittent discharges – Habitats Directive	£m	3	N/C		0.005	B3	0.025	B2	0.055	B3
14	Opex: Continuous and intermittent discharges – Habitats/ Directive	£m	3	N/C		0.000	B4	0.000	B4	0.000	B4
15	Capex: Continuous and intermittent discharges – Other EU Directives	£m	3	N/C		5.480	B3	23.365	B2	23.528	B3
16	Opex: Continuous and intermittent discharges – Other EU Directives	£m	3	N/C		0.095	B4	0.735	B4	0.747	B4
D	**OTHER ENVIRONMENTAL PROGRAMMES**										
17	Capex: First Time Sewerage	£m	3	N/C		0.860	B3	1.392	B2	0.574	B3
18	Opex: First Time Sewerage	£m	3	N/C		0.000	B4	0.000	B4	0.000	B4
19	~~Capex: CRoW Act~~	£m	3								
20	~~Opex: CRoW Act~~	£m	3								
21	Capex: Chemicals – endocrine disruptor schemes	£m	3	N/C		0.000	B3	0.000	B2	0.000	B3
22	Opex: Chemicals – endocrine disruptor schemes	£m	3	N/C		0.000	B3	0.000	B4	0.000	B3
23	Capex: Other cost drivers	£m	3	N/C		0.000	B3	0.000	B2	0.000	B3
24	Opex: Other cost drivers	£m	3	N/C		0.000	B3	0.000	B4	0.000	B3
E	**INVESTIGATIONS**										
25	Capex: Investigations	£m	3	N/C		0.000	B3	0.000	B2	0.000	B3
26	Opex: Investigations	£m	3	N/C		0.000	B3	0.000	B4	0.000	B3
F	**SEWAGE SLUDGE MANAGEMENT**										
27	Capex: Enhanced sewage sludge management	£m	3	N/C		0.000	B3	0.000	B2	0.000	B3
28	Opex: Enhanced sewage sludge management	£m	3	N/C		0.000	B3	0.000	B4	0.000	B3
G	**CAPEX & OPEX TOTALS**										
29	Capex: Total quality enhancement programme – sewerage service	£m	3	N/C		49.426	B3	79.419	B2	63.032	B3
30	Opex: Total quality enhancement programme – sewerage service	£m	3	N/C		0.096	B4	1.028	B4	1.413	B4

Table 38 – Financial Measures - Sewerage Compliance – Expenditure Report

PPP Capex

No PPP Capex information is reported in this table in accordance with the guidance issued in March 2010.

NI Capex

The allocation of expenditure in Table 38 is based upon the same methodology adopted for the other CAPEX tables. The detail for quality enhancement apportionment is as follows. NB. In NIW most Wastewater Treatment projects have multiple drivers with many projects having five or more environmental drivers. The Reporter's report from AIR09 stated that a number of QBEG discrepancies were found in the allocation of Quality drivers on WWTW projects. CIDA quality allocations on WWTW projects have been reviewed during the reporting year to align with the EHS (NIEA) Quality drivers listing (ref Table 1).

Table 1: SBP Quality Drivers

Title	Completion Date	Year to be Delivered	Quality Enhancement Driver															
			UWWTD Failures for BOD/COD 1998/2000 (U1)	UWWTD Failures for BOD/COD 2005 (U2)	Nutrient removal in existing sensitive areas (U3)	Nutrient removal in new sensitive areas (U4)	Appropriate treatment at WWTW with p.e. 250 - 2,000 inInd and - 10,000 c	Appropriate treatment for works < 250 p.e. category 1(U6)	Appropriate treatment for WWTWs < 250 p.e. category 2a (U7)	Hotspot failing UWWTD(HS1)	Hotspot failing RDS or public complaints (HS2)	Causing failure to comply with BWD mandatory standards(BWD)	Falure to meet Shellfish water requirements (SF)	Failure to meet Freshwater Fish Directive requirements (FF1)	Predicted failure to meet Freshwater Fish Directive requirements(FF2)	Failure to meet GQA or WFD standards (WOO/WFD)	Expenditure required to remove dangerous substances (DS)	Responsible for breach of the habitats Directive (HD)
AUGHER WWTW	Aug-07																	
BALLINAMALLARD WWTW	May-07																	
BELCOO WWTW	Apr-07																	
BELFAST LOUGH NORTH SHORE - **WHITEHOUSE**	Nov-07									X								
BELLAGHY WWTW	Sep-07																	
BERAGH & SIXMILECROSS WWTWS	Apr-07																	
CABRAGH WWTW	Oct-07						X								X	X		
CLADY WWTW	Jun-07																	
CLAUDY WWTW	Nov-07																	
CLOUGH WWTW	Jul-07						X								X	X		
COOKSTOWN WWTW	Nov-07		X							X					X	X		
DERRYHALE WWTW	Jun-07	2007/08													X	X		
IRVINESTOWN WWTW	Mar-08			X							X				X	X		
KILLYLEA/CALEDON WWTW	Jun-07						X								X	X		
KILLYMAN WWTW	Jan-08														X	X		
LARNE WWTW	Aug-07		X									X	X					
LENADERG/SEAPATRICK WWTWS	Jun-07						X								X	X		
LOUGHGUILE WWTW (INC CORKEY)	Sep-07																	
MAGHERA WWTW	Jun-07			X											X	X		
NORTH COAST WWTW	Mar-08		X							X		X						
POMEROY WWTW	Sep-07																	
RASHARKIN WWTW	Jul-07														X	X		
RATHFRILAND WWTW	Apr-07																	
ROUGHFORT WWTW	Mar-08														X	X		
SION MILLS WWTW	Jan-08		EHS drivers not issued. Appropriate drivers include U2, HS2, and FF1															
TANDRAGEE IMPS (INC SCARVA, AUGLISH & LAURALVALE)	Nov-07		EHS drivers not issued. Appropriate drivers include U1, U2, U3, HS1, HS2, and FF1															
BALLYNADOLLEY WwTW	Jun-07		These are Waste water Treatement Works with under 250 population equivelant (pe) for which EHS have only issued descriptive standards. Following planned inspections in 2008 EHS will decide upon a prioity list for these works. The primary driver for these projects may not currently be Quality Enhancement.															
BALLYNAGROSS WWTW	May-07																	
DRUMNAKILLY WWTW	Feb-08																	
LETTERBREEN SEWERAGE SCHEME (WwTW)	Feb-08																	
MORROWS CROSS PUMP AWAY	Jun-07																	
TAMNAMORE/MULNAKILL & CLONTYCLAY RBCs	Dec-07																	
ANNAHILT WWTW (including Poundburn PA)	Mar-09														X	X		
BALLYBRAKES/GLENSTALL WWTWs	May-08		X			X				X					X	X		
BELEEK WWTW, NEWRY.	Jul-08						X								X	X		
BELLANALECK WWTW	Sep-08																	
BUSH WWTW	Feb-09						X								X	X		
DERRYLIN WWTW	Nov-08	2008/09					X								X	X		
DROMORE WWTW	Oct-08			X											X	X		
GILFORD WWTW	Mar-09			X											X	X		
HILLTOWN WWTW	Dec-08														X	X		
KILLEN WWTW	Aug-08						X								X	X		
MAGHERALIN WWTW	Sep-08														X	X		
MULLAGHBOY WWTW	May-08						X								X	X		
NEWTOWNBREDA, DUNMURRY & NEW HOLLAND WWTWS NUTRIEI	Mar-09		X		X													
PARK WWTW	Feb-09						X								X	X		
STRANGFORD WWTW (INC KILCLIEF RT)	Aug-08									X						X		
CARROWCLARE WWTW	Apr-08		These are Waste water Treatement Works with under 250 population equivelant (pe) for which EHS have only issued descriptive standards. Following planned inspections in 2008 EHS will decide upon a prioity list for these works. The primary driver for these projects may not currently be Quality Enhancement.															
CRANAGH WWTW	Dec-08																	
BALLYBOGEY WWTW	Aug-09														X	X		
BALLYHALBERT WWTW	Jun-09						X			X		X				X		
BALLYHASKIN WWTW	May-09						X					X				X		
BALLYWALTER WWTW	Aug-09						X			X		X				X		
BENBURB WWTW	Apr-09																	
BENONE WWTW AND BENONE AREA SEWERAGE	Mar-10			X														X
CASTLEWELLAN/ANNSBOROUGH WWTW	Apr-09			X							X				X	X		
CLOUGHY WWTW	May-09						X				X	X				X		
DARRAGH CROSS WwTW (in parallel with Saintfield)	Mar-10						X								X	X		
DONNYBREWER WWTW	Sep-09																	
DRAPERSTOWN WWTW	Feb-10			X											X	X		
DROMARA WWTW	Jul-09						X								X	X		
EDENDERRY WWTW	Oct-09						X								X	X		
ENNISKILLEN WWTW	Mar-10	2009/10	X		X													
HAMILTONSBAWN WWTW	Apr-09						X								X	X		
LIMAVADY WWTW	May-09		X			X									X	X		
LISBARNET WWTW	Sep-09						X				X				X	X		
LOWER BALLINDERRY WWTW	Sep-09														X	X		
LURGANARE WWTW	Feb-10															X		
PORTAFERRY WWTW	Feb-10						X			X			X			X		
PORTAVOGIE WWTW	Aug-09						X			X						X		
RAHOLP WWTW	Jun-09						X			X					X	X		
SAINTFIELD WWTW	Mar-10			X											X	X		
SEAHILL WwTW	Feb-10						X						X			X		
WARRENPOINT WWTW	Aug-09											X				X		
KILLEA WWTW	Sep-09		These are Waste water Treatement Works with under 250 population equivelant (pe) for which EHS have only issued descriptive standards. Following planned inspections in 2008 EHS will decide upon a prioity list for these works. The primary driver for these projects may not currently be Quality Enhancement.															

Table 2 SBP compared with 09/10 delivery

Project Title	SBP Completion Date	Current Completion Date
Ballybogey WWTW	Aug-09	Nov-09
Ballyhalbert WWTW	Jun-09	May-09
Ballyhaskin WWTW (Ballywhiskin WWTW))	May-09	Feb-09
Ballywalter WWTW	Aug-09	Apr-09
Benburb WWTW	Apr-09	Dec-09
Benone WWTW and Benone Area Sewerage	Mar-10	Oct-12
Castlewellan/Annsborough WWTW	Apr-09	Nov-09
Cloughy WWTW	May-09	May-09
Darragh Cross WWTW (in parallel with Saintfield)	Mar-10	Jul-10
Donnybrewer WWTW	Sept-09	Mar-10
Draperstown WWTW	Feb-10	Feb-10
Dromara WWTW	Jul-09	Feb-10
Edenderry WWTW	Oct-09	Feb-10
Enniskillen WWTW	Mar-10	Jun-09
Hamiltonsbawn WWTW	Apr-09	Sep-09
Limavady WWTW	May-09	Jun-09
Lisbarnet WWTW	Sept-09	Feb-10
Lower Ballinderry WWTW	Sept-09	Aug-09
Lurganare WWTW	Feb-10	May-10
Portaferry WWTW	Feb-10	Apr-09
Portavogie WWTW	Aug-09	Jul-11
Raholp WWTW	Jun-09	08/09 year completion
Saintfield WWTW	Mar-10	Feb-10
Seahill WWTW	Feb-10	Sep-09
Warrenpoint WWTW	Aug-09	08/09 year completion
Killea WWTW	Sept-09	Project not required

NIW completed 5 of the wastewater treatment works as agreed in the SBP targets for 08/09, 1 from 07/08, and 19 Wastewater treatment works as agreed in the SBP targets for 2009/10. Details of these are explained below.

First Time Sewerage – The SBP had no First Time Sewerage projects listed as being required by EHS to be delivered to meet the quality programme outputs. NIW has invested capex in 09/10 on projects which are in accordance with the RAG2.03 definition of first time sewerage. This expenditure has been reported on line 17 of the Table.

SBP projects planned for 07/08

The WWTW at Clough was due for completion as per SBP targets in 07/08. We can report that this project was completed in 09/10.

SBP projects planned for 08/09
In AIR09 we reported 6 works which were being delivered later than planned in the SBP. We can report that Annahilt WWTW(including Poundburn PA), Gilford WWTW, Park WWTW, Cranagh WWTW and Magheralin WWTW are now completed and Mullaghboy will be completed in 11/12.

Additional SBP outputs
NIW also report the following additional outputs as completed in 2009/10 as were not recorded as targets in the SBP.

a) Castlecaulfield – This WWTW was carried forward from before the SBP and completed in 2009/10.
b) Crossmaglen, Milltown (Antrim), Moygashel(Dungannon) and Ravarnet all had SBP funding but no SBP completion target defined. These are all reported as completed in 2009/10.

Methodology
The general methodology for apportionment of these costs is outlined in Chapter 34. Where the scheme (or components of the scheme) have multiple Quality drivers, the costs have been split and assigned to the appropriate drivers.

The Quality portion of each scheme (or component) can be split across a maximum of 6 drivers from the following list:

- Unsatisfactory Intermittent Discharge;
- U1 - UWWTD Failures for BOD/COD 1998/2000;
- U2 - UWWTD Failures for BOD/COD 2005;
- U3 - Nutrient removal in existing sensitive areas;
- U4 - Nutrient removal in new sensitive areas;
- U5 - Appropriate treatment of WwTW with PE 250 - 2,000 inland and 10,000 coastal;
- U6 - Appropriate treatment at WwTW <250 PE Category 1;
- U7 - Appropriate treatment at WwTW <250 PE Category 2a;
- HS1 - Hotspot failing UWWTD;
- HS2 - Hotspot failing RDS or public complaints;
- BWD - Causing failure to comply with BWD mandatory standards;
- SF - Failure to meet Shellfish Water Directive requirements;
- FF1 - Failure to meet Freshwater Fish Directive requirements;
- FF2 - Predicted failure to meet Freshwater Fish Directive requirements;
- WQO / WFD - Failure to meet GQA or WFD standards;
- DS - Expenditure required to remove dangerous substances;
- HD - Responsible for breach of the Habitats Directive;
- FTS - First Time Sewerage.

The proportion assigned to each contributing driver is derived from the WwTW scores provided by EHS (now NIEA). Where the WwTW does not appear on the list, or where no scores are provided, the supervising Engineer responsible for the scheme has applied his/her engineering judgement and

project knowledge to identify the relevant driver(s) and to assign appropriate score(s). For example, if WwTW "A" has been assigned scores of 3 for FF2 and 2 for U6, then 60% (i.e. 3/5) of its Quality cost has been allocated to the FF2 driver and 40% (i.e. 2/5) has been assigned to the U6 driver."

Pre SBP obligations

- NIW have not reported any pre SBP obligations in this table for 09/10. Note: There are a number of projects that commenced pre SBP with spend in 09/10 but these had also funding designated and outputs associated in the SBP period. For this reason they have not been defined as per SBP obligations.

Reporter recommendations (AIR09)

The Reporter's requested that NIW improve the transparency of the CIDA spreadsheet for E & P expenditure so that individual drivers can be filtered with the project ID still showing. This has been implemented for AIR10.

A number of CIDA discrepancies were found in AIR between the Quality allocations provided by NIEA at the outset of the SBP and those being applied by NIW staff in the CIDA allocation. All Quality CIDA allocations on WWTW projects have been reviewed during 2009/10.

CAPITAL INVESTMENT MONITORING TABLE CIM

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
												Current Capital Investment Driver Allocation (%)														Actual Project Outputs					
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	Current/Actual Project Expenditure [06/07£k] 2008	2009	2010	Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d] Taking into account Authorised Departures	Not taking into account Authorised Departures	WwTW (>250pe) compliance with Water Order Consents [no. of works]	[population equivalent]	WwTW passing UWWTD numeric consents [no. of works]	[population equivalent]	Internal sewer flooding (DG5) caused by overload [properties removed from register]	[m sewer replaced/ refurbished]	Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Water Distribution Network Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Sewerage Network Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
JA210			water	Water Infrastructure	Water Distribution Mains	Tardree Zone WM Imps	7399.82	6002.56	0.00	0.00	3043.71	42	15	14	29		0	0	0	0	0	0		0	0	27412	0	14713	0	0	0
JA211			water	Water Infrastructure	Water Distribution Mains	Killylane Zone WM Imps	9459.85	4091.32	0.00	0.00	0.00	31	38	0	31		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JA238			water	Water Infrastructure	Water Distribution Mains	Antrim Ring Main Relocation	205.11	298.75	33.21	0.00	265.53	0	100	0	0		0	0	0	0	0	0		0	0	0	0	986	0	0	0
JA238	JA234		water	Water Infrastructure	Water Distribution Mains	Stiles Way / Millhouse Village, Antrim - Watermain Diversion	0.00	-1.81	0.00	0.00	-1.81	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB443			water	Water Infrastructure	Water Distribution Mains	Moyola to Mullaghboy SR Transfer Main	1485.74	902.68	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB458			water	Water Infrastructure	Water Distribution Mains	Dunore West Zone Watermain Improvements	8664.57	2796.59	72.12	0.00	0.00	6	72	4	18		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB459			water	Water Infrastructure	Water Distribution Mains	Dunore East Zone Watermain Improvements	5348.20	2863.92	0.00	0.00	0.00	39	49	0	12		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB460			water	Water Infrastructure	Water Distribution Mains	Moyola Zone Watermain Improvements	14212.54	4084.66	42.70	0.00	5.42	20	15	40	25		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB461			water	Water Infrastructure	Water Distribution Mains	Lough Fea Zone WM Improvements	7722.18	4310.11	4225.66	18.52	65.93	47	29	24	0		0	0	0	0	0	0		0	0	0	0	24246	0	0	0
JB463			water	Water Infrastructure	Water Distribution Mains	Dungonnell Zone Watermain Improvements	2311.05	1681.23	3.80	0.00	0.00	12	5	83	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB488			water	Water Infrastructure	Water Distribution Mains	Buckna - Glarryford Replacement	2309.27	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB488	JR416	JR416	water	Water Infrastructure	Water Distribution Mains	CTM Extension - Barnetts Park to Purdysburn	0.00	2789.51	0.00	63.88	1094.65	25	36	0	39		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB500			water	Water Infrastructure	Water Distribution Mains	The Glens Zone Watermain Improvements	826.32	859.70	0.00	0.00	0.00	0	91	0	9		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB501			water	Water Infrastructure	Water Distribution Mains	Casheltown Zone Watermain Improvements	2460.52	2930.69	228.70	1513.61	-9.03	0	12	88	0		0	0	0	0	0	0		0	0	202	0	14713.4	0	0	0
JB502			water	Water Infrastructure	Water Distribution Mains	Tully Zone Watermain Improvements	2598.71	2579.09	0.00	0.00	0.00	31	38	0	31		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB506			water	Water Infrastructure	Water Distribution Mains	Dungonnell/Tully Service Reservoir Zone Watermain Improvements	3620.94	0.00	0.00	0.00	0.00	12	5	0	83		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB508			water	Water Infrastructure	Water Distribution Mains	Cargan Zone Watermain Improvementss	3547.65	2203.05	2133.23	122.20	-52.38	51	0	47	2		0	0	0	0	0	0		0	0	170	0	18230	0	0	0
JB517			water	Water Infrastructure	Water Distribution Mains	Cookstown Zone WM Improvements	3399.17	4265.56	505.79	1058.14	13.55	1	70	21	8		0	0	0	0	0	0		2	0	5765	0	14537.7	0	0	0
JB547			water	Water Non Infrastructure	Service Reservoirs and Water Towers	Reservoir Rehabilitation Northern Area Phase 1	6897.43	1644.46	1223.19	423.07	-1.81	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB547	JB647		water	Water Non Infrastructure	Service Reservoirs and Water Towers	Reservoir Rehabilitation Northern Area - Phase 2	0.00	1697.23	8.54	1656.17	32.51	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB547	JR402		water	Water Non Infrastructure	Service Reservoirs and Water Towers	Hydepark Service Reservoir Integrity	0.00	2179.91	785.73	1394.19	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB547	JR414		water	Water Non Infrastructure	Service Reservoirs and Water Towers	Reservoir Rehabilitation South East Area Phase 2	0.00	1485.84	0.00	1485.84	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JB565			water	Waste Water Non Infrastructure	Sewage Treatment Works	PEIT 2006 Northern	34.98	29.42	29.42	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JC247			water	Water Non Infrastructure	Service Reservoirs and Water Towers	Forrest Service Reservoir	2804.07	2800.92	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JC292			water	Water Infrastructure	Water Distribution Mains	Ballinrees East Zone Watermain Improvements	3253.49	0.00	0.00	0.00	0.00	39	49	0	12		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JC293			water	Water Infrastructure	Water Distribution Mains	Ballinrees Central Zone Watermain Improvements	1474.47	1674.49	0.00	0.00	1674.49	8	17	1	74		0	0	0	0	0	0		0	0	4438	0	12028	0	0	0
JC294			water	Water Infrastructure	Water Distribution Mains	Ballinrees West Zone Watermain Improvements	2616.90	164.54	141.39	23.14	0.00	28	30	41	1		0	0	0	0	0	0		83	0	1193	0	3973	0	0	0
JC295			water	Water Infrastructure	Water Distribution Mains	Altnahinch Zone Watermain Improvements	3414.34	2152.91	2149.36	34.25	-30.71	22	0	78	0		0	0	0	0	0	0		0	0	0	0	17832	0	0	0
JC296			water	Water Infrastructure	Water Distribution Mains	Drumabest Zone WM Imps	2446.72	2863.92	0.00	0.00	0.00	39	49	0	12		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JC336			water	Water Non Infrastructure	Water Treatment Works	Altnahinch and Seagahan WTW's Residual Sludge Disposal	1924.95	3405.56	16.13	993.33	2394.33	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JC349			water	Water Infrastructure	Water Distribution Mains	Portballintrae Zone Wm Improvements	2225.80	4090.94	700.32	2632.85	757.77	67	27	6	0		0	0	0	0	0	0		0	0	10196	0	37909	0	0	0
JC350			water	Water Infrastructure	Water Distribution Mains	Ballycastle Zone Wm Improvements	4339.71	6003.99	0.00	4.63	2947.98	30	30	32	8		0	0	0	0	0	0		0	0	3064	0	22987	0	0	0
JC351			water	Water Infrastructure	Water Distribution Mains	Ballynahone Zone Wm Improvements	1352.48	4236.68	1708.10	2468.06	60.51	17	6	77	0		0	0	0	0	0	0		0	0	20981	0	21200	0	0	0
JC352			water	Water Infrastructure	Water Distribution Mains	Loughguile Zone Wm Improvements	1575.69	3659.20	1198.52	1475.65	146.32	69	10	21	0		0	0	0	0	0	0		0	0	7073	0	19641	0	0	0
JC353			water	Water Infrastructure	Water Distribution Mains	Rasharkin Zone Wm Improvements	2249.92	2664.88	627.25	750.79	-2.71	34	61	4	1		0	0	0	0	0	0		0	0	10109	0	5736.9	0	0	0
JF005			water	Water Infrastructure	Water Distribution Mains	Clay Lake Zone Watermain Improvements	1650.13	2029.65	2087.68	-83.32	25.29	23	74	0	3		0	0	0	0	0	0		9	0	30428	0	6347	0	0	0
JF006			water	Water Infrastructure	Water Distribution Mains	Altmore/Gortlenaghan Zone Watermain Improvements	4475.84	4031.45	381.48	1124.79	9.03	0	99	1	0		0	0	0	0	0	0		0	0	16801	0	8100	0	0	0
JF007			water	Water Infrastructure	Water Distribution Mains	Seagahan Zone Watermain Improvements	1067.09	3175.08	657.62	2679.13	-161.67	11	89	0	0		0	0	0	0	0	0		0	0	40121	0	4639.3	0	0	0
JF017			water	Water Infrastructure	Water Distribution Mains	Glencuil to Cabragh Strategic Link Watermain	2084.41	6941.30	13.29	2.78	-2.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JF019			water	Water Non Infrastructure	Water Treatment Works	Clay Lake WTW	1201.10	872.30	643.39	238.84	-9.93	94	6	0	0		5	0	0	0	0	0		0	0	0	0	0	0	0	0
JF047			water	Water Non Infrastructure	Water Treatment Works	Seagahan WTW Residual Sludge Disposal	1924.95	12.96	0.00	12.96	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JF563			water	Water Non Infrastructure	Water Treatment Works	Seagahan WTW	5110.93	6505.92	511.48	2790.22	3193.64	91	9	0	0		13.6	0	0	0	0	0		0	0	0	0	0	0	0	0
JG018			water	Water Infrastructure	Water Distribution Mains	Castor Bay/Banbridge Zone Watermain Improvements	3574.42	1707.51	235.34	1518.24	-46.06	0	99	1	0		0	0	0	0	0	0		0	0	18741	0	3808.2	0	0	0
JG019			water	Water Infrastructure	Water Distribution Mains	Castor Bay/Craigavon North Watermain Rehabilitation	1824.34	2824.86	522.87	2361.60	-59.61	5	67	11	17		0	0	0	0	0	0		0	0	28633	0	7959	0	0	0
JG021			water	Water Infrastructure	Water Distribution Mains	Castor Bay/Craigavon South Zone Watermain Rehabilitation	3367.97	1224.69	215.41	1128.49	-119.22	14	53	19	14		0	0	0	0	0	0		0	0	15186	0	3404	0	0	0
JG022			water	Water Infrastructure	Water Distribution Mains	Castor Bay/ Shanmoy Zone	2318.41	1878.86	0.00	1232.18	646.68	13	59	28	0		0	0	0	0	0	0		0	0	18798	0	3884	0	0	0
JG023			water	Water Infrastructure	Water Distribution Mains	Castor Bay,Armagh Zone Watermain Improvements	2963.03	2802.68	2617.19	199.04	-13.55	7	43	22	28		0	0	0	0	0	0		25	0	41408	0	2252	0	0	0
JG035			water	Water Infrastructure	Water Distribution Mains	Ballydougan to Newry Main Link Reinforcement	4065.85	22313.27	101.54	57.40	1120.85	0	1	0	99		0	0	0	0	0	0		0	0	333	0	6952	0	0	0
JG036			water	Water Infrastructure	Water Distribution Mains	Castor Bay to Dungannon Strategic Trunk Mains	1993.66	16057.35	90.15	1722.83	8120.48	0	31	2	67		0	0	0	0	0	0		0	0	0	0	13752	0	0	0
JG036	JF569		water	Water Infrastructure	Water Distribution Mains	Ballygawley/CabraghSR Link Main	0.00	129.57	111.98	17.59	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	1000	0	0	0
JG037			water	Water Non Infrastructure	Service Reservoirs and Water Towers	Ballydougan Service Reservoir Extension	3901.87	3708.48	15.18	11.11	0.00	0	69	0	31		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JG037	JB648	JB648	water	Water Non Infrastructure	Service Reservoirs and Water Towers	Dungonnell Command Service Reservoir	0.00	1016.49	0.00	38.88	667.45	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JG037	JB665	JB665	water	Water Non Infrastructure	Service Reservoirs and Water Towers	Tullaghans SR, Dunloy, New Reservoir	0.00	734.69	0.00	21.29	494.04	0	15	0	85		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JG038			water	Management and General	Water Management and General	Portadown to Moy Pumping Station	909.61	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JG059			water	Water Infrastructure	Water Distribution Mains	Castor Bay/Moira Zone WM Imps	3014.44	3236.66	2889.54	345.31	1.81	0	12	84	4		0	0	0	0	0	0		0	0	7032	0	14157	0	0	0
JL693			water	Water Infrastructure	Water Distribution Mains	Cityside Zone Watermain Improvements	892.52	3392.58	332.13	988.71	142.70	0	100	0	0		0	0	0	0	0	0		0	0	1680	0	2055	0	0	0
JL697			water	Water Infrastructure	Water Distribution Mains	Waterside Zone Watermain Improvements	4573.62	1147.07	18.03	2.78	1126.26	35	64	0	1		0	0	0	0	0	0		0	0	0	0	5580	0	0	0
JL698			water	Water Infrastructure	Water Distribution Mains	Carmoney East Zone Watermain Improvements	7073.28	2089.17	0.00	4.63	2084.54	0	51	22	27		0	0	0	0	0	0		0	0	1451	0	14921	0	0	0
JL699			water	Water Infrastructure	Water Distribution Mains	Limavady Zone Watermain Improvements	13842.59	1790.14	104.38	869.28	816.47	75	25	0	0		0	0	0	0	0	0		0	0	3044	0	18301.1	0	0	0
JL700			water	Water Infrastructure	Water Distribution Mains	North East Zone Watermain Improvements	2512.63	0.00	0.00	0.00	0.00	31	38	0	31		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JL704			sewerage	Waste Water Infrastructure	Sewerage	Skeoge Development Watermains and Sewers	1163.72	463.46	451.70	2.78	7.23	0	5	0	95		0	0	0	0	0	0		0	0	0	0	0	0	0	3151
JL713			water	Water Infrastructure	Water Distribution Mains	Killyhevlin to Lough Bradan Link Watermain	2145.98	7758.76	4.74	3.70	-3.61	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JL715			water	Water Infrastructure	Water Distribution Mains	Carmoney to Strabane Strategic Link Watermain	5640.59	7347.43	7.59	2.78	-2.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JL723			water	Water Non Infrastructure	Water Treatment Works	Carmoney Water Treatment Works Upgrade	4171.40	3301.04	0.00	41.66	1302.38	32	68	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JL736			water	Water Non Infrastructure	Service Reservoirs and Water Towers	Reservoir Rehabilitation Western Area Phase1	6897.43	2191.59	1977.60	219.40	-5.42	9	91	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JL736	JL752		water	Water Non Infrastructure	Service Reservoirs and Water Towers	Reservoir Rehabilitation Western Area Phase 2	0.00	1804.19	37.96	1502.50	263.73	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JL736	JL758		water	Water Non Infrastructure	Service Reservoirs and Water Towers	Reservoir Rehabilitation Programme Phase 3	00/01/1900	2581.29	0.00	0.00	2581.29	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JN226			water	Water Non Infrastructure	Water Resource Facilities	Strule Intake For Derg WTW	1584.58	4669.82	51.24	77.76	139.99	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JN355			water	Water Infrastructure	Water Distribution Mains	North Tyrone Zone Watermain Improvements	3349.53	2990.70	18.03	2382.89	589.78	1	99	0	0		0	0	0	0	0	0		0	0	30854	0	14195.8	0	0	0
JN356			water	Water Infrastructure	Water Distribution Mains	Omagh Zone Watermain Improvements	16083.03	9821.02	0.00	0.00	0.00	39	49	0	12		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JN357			water	Water Infrastructure	Water Distribution Mains	South West Zone Watermain Improvements	15759.35	2454.79	0.00	0.00	0.00	31	38	0	31		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JN367			water	Water Non Infrastructure	Water Resource Facilities	Glendergan Impoundment	7675.71	6631.30	26.57	70.36	-11.74	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JN368			water	Water Non Infrastructure	Facilities Pumping Stations	Derg - Omagh Area Transfer Pumps	215.90	565.23	65.48	493.43	6.32	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JN390			water	Water Non Infrastructure	Water Treatment Works	Lough Bradan WTWs Upgrade	4397.34	3902.88	0.00	50.92	2295.88	51	49	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JN410			water	Water Non Infrastructure	Water Treatment Works	Lough Macrory WTW Clear Water Tank	1506.98	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JN428			water	Water Infrastructure	Water Distribution Mains	Derg West Zone Wm Improvements	3153.05	3415.47	449.80	2910.57	55.09	0	85	5	10		0	0	0	0	0	0		0	0	19087	0	26640.1	0	0	0
JN429			water	Water Infrastructure	Water Distribution Mains	Derg South Zone Wm Improvements	2971.20	3019.37	0.00	0.00	0.00	31	38	0	31		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JN430			water	Water Infrastructure	Water Distribution Mains	Alleyhill Zone Wm Improvements	2823.37	2688.56	0.00	0.00	0.00	27	60	5	8		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JN431			water	Water Infrastructure	Water Distribution Mains	Bradan Zone Wm Improvements	2714.45	2591.63	0.00	0.00	0.00	31	38	0	31		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JP607			water	Water Infrastructure	Water Distribution Mains	South Zone Watermain Improvements	19762.62	11191.66	55.04	0.00	0.00	31	38	0	31		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JP609			water	Water Infrastructure	Water Distribution Mains	South East Zone Watermain Improvements	15227.30	8855.76	0.00	0.00	0.00	31	38	0	31		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JP610			water	Water Non Infrastructure	Service Reservoirs and Water Towers	Meenacloyabane Service Reservoir	434.75	457.12	181.25	275.87	0.00	0	21	0	79		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JP618			water	Water Non Infrastructure	Water Treatment Works	Killyhevlin WTW Improvements to Caustic Plant	144.92	295.28	229.65	62.03	3.61	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JP633			water	Water Non Infrastructure	Water Treatment Works	Killyhevlin WTW Residual Sludge Disposal	1924.95	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR096			water	Water Infrastructure	Water Distribution Mains	Aquarius	5186.61	146.14	146.14	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR111			water	Water Non Infrastructure	Service Reservoirs and Water Towers	Knocknagoney SR	1945.14	2023.82	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR151			water	Water Non Infrastructure	Service Reservoirs and Water Towers	West Belfast/ North Lisburn	7911.55	2857.39	29.42	72.21	286.31	0	34	0	66		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR295			water	Water Infrastructure	Water Distribution Mains	Lough Mourne Zone Watermain Improvements	1457.66	1258.07	0.00	0.00	0.00	24	65	0	11		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR296			water	Water Infrastructure	Water Distribution Mains	Carrickfergus Zone Watermain Improvements	1734.52	2111.86	0.00	0.00	434.43	24	65	0	11		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR297			water	Water Infrastructure	Water Distribution Mains	Newtownabbey Zone Watermain Improvements	2767.86	1677.43	0.00	0.00	0.00	24	65	0	11		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR298			water	Water Infrastructure	Water Distribution Mains	Ballywonard/Dunanney Zone Watermain Improvements	2745.59	1341.94	0.00	0.00	0.00	24	65	0	11		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR299			water	Water Infrastructure	Water Distribution Mains	Ballysillan/Ballyaghagan Zone Watermain Improvements	2774.78	1258.07	0.00	0.00	0.00	24	65	0	11		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR300			water	Water Infrastructure	Water Distribution Mains	West Belfast Rural Zone Watermain Improvements	1153.44	859.70	0.00	0.00	0.00	14	63	0	23		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR301			water	Water Infrastructure	Water Distribution Mains	Whiterock Zone Watermain Improvements	2447.81	1289.55	0.00	0.00	0.00	24	65	0	11		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR302			water	Water Infrastructure	Water Distribution Mains	Purdysburn East Zone Watermain Improvements	2077.00	1469.57	1312.39	186.08	-28.90	5	87	4	4		0	0	0	0	0	0		28	0	9275	0	3191	0	0	0
JR303			water	Water Infrastructure	Water Distribution Mains	Ballygomartin/Purdysburn West Zone Watermain Improvements	1823.20	1677.43	0.00	0.00	0.00	24	65	0	11		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR304			water	Water Infrastructure	Water Distribution Mains	Castlereagh Zone Watermain Improvements	3899.76	2298.28	1245.97	1115.53	-63.22	36	47	11	6		0	0	0	0	0	0		71	0	22079	0	5642.5	0	0	0
JR319			water	Water Non Infrastructure	Water Treatment Works	Dorisland WTW - Water Works Sludge Disposal	557.14	168.91	168.91	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR321			water	Water Infrastructure	Water Distribution Mains	Breda North Zone Watermain Improvements	607.33	3344.16	7.59	0.00	0.00	25	63	8	4		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR322			water	Water Infrastructure	Water Distribution Mains	Belfast East Zone Watermain Improvements	3058.58	0.00	0.00	0.00	0.00	28	71	0	1		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR323			water	Water Infrastructure	Water Distribution Mains	Oldpark Zone Watermain Improvements	4435.41	2374.14	0.00	0.00	224.89	24	65	0	11		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR324			water	Water Infrastructure	Water Distribution Mains	Ballygomartin Zone Watermain Improvements	1885.77	1258.07	0.00	0.00	0.00	24	65	0	11		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR325			water	Water Infrastructure	Water Distribution Mains	Holywood Zone WM Imps	294.77	7.59	7.59	0.00	0.00	24	65	0	11		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR329			water	Management and General	Water Management and General	Woodburn Conduit	2989.68	1696.16	55.04	5.55	9.03	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR341			water	Water Infrastructure	Water Distribution Mains	Castor Bay to Lisburn Trunk Main	1586.20	0.00	0.00	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR342			water	Water Infrastructure	Water Distribution Mains	Strategic Link - Castor Bay to Belfast	5069.38	10728.52	125.26	105.54	66.84	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR348			water	Water Infrastructure	Water Distribution Mains	Dunore to Hydepark Pumping Main Replacement	1830.05	4959.12	3332.70	-8.33	1634.75	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR349			water	Water Non Infrastructure	Water Treatment Works	Installation of DCVs at Vulnerable Sites Accross NI	989.80	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
									Current/Actual Project Expenditure [06/07£k]			Current Capital Investment Driver Allocation (%)				Actual Project Outputs															
																Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d]		WwTW (>250pe) compliance with Water Order Consents		WwTW passing UWWTD numeric consents		Internal sewer flooding (DG5) caused by overload				Water Distribution Network			Sewerage Network		
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	2008	2009	2010	Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]	Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
JR349	JN488	JN488	water	Water Non Infrastructure	Facilities Pumping Stations	Aghyaran Road Booster Station	0.00	28.90	0.00	0.00	28.90	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR367			water	Water Non Infrastructure	Service Reservoirs and Water Towers	Service Reservoir Enhanced Security	3106.09	2230.10	185.99	1971.86	72.25	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR369			sewerage	Waste Water Infrastructure	Sewerage	Belfast City Centre Public Realm Strategy	2979.20	215.80	122.41	88.87	4.52	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR369	JR401	JR401	water	Water Infrastructure	Water Distribution Mains	Lower Chichester Street, Belfast Watermains Replacement, Belfast Public R	0.00	86.79	66.43	20.37	0.00	0	91	0	9		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR369	JR408	JR408	water	Water Infrastructure	Water Distribution Mains	Belfast City Centre public Realm Phase 1, Area 3	0.00	470.28	0.00	470.28	0.00	0	100	0	0		0	0	0	0	0	0		0	0	316	0	196	0	0	0
JR369	JR427		water	Water Infrastructure	Water Distribution Mains	Mains replacement ,Belfast Public Realm Phase 1 Area 2	0.00	112.81	0.00	0.00	73.16	40	0	0	60		0	0	0	0	0	0		0	0	120	0	54	0	0	0
JR369	JR428		water	Water Infrastructure	Water Distribution Mains	Belfast City Centre Zone WM Improvements	0.00	3460.37	0.00	12.03	3448.34	18	70	0	12		0	0	0	0	0	0		0	0	5393	0	2079	0	0	0
JR371			water	Water Non Infrastructure	Water Resource Facilities	Impounding Reservoir Health and Safety Inspections	5065.84	22.77	22.77	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR372			water	Water Infrastructure	Water Distribution Mains	M1/Westlink Wm & Sewers Diversions	521.90	543.52	468.78	138.86	-64.13	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR375			water	Water Infrastructure	Water Distribution Mains	A55 Knock Road Belfast Widening	444.77	1.02	3.80	-2.78	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JR376			sewerage	Waste Water Infrastructure	Sewerage	Anderstown Rd / Shaws Rd Junction	6.11	5.73	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JS112			water	Water Infrastructure	Water Distribution Mains	North Down Strategic Trunk Watermains	4123.23	4307.32	3933.38	334.20	39.74	100	0	0	0		0	0	0	0	0	0		0	0	0	0	23500	0	0	0
JS179			water	Water Non Infrastructure	Service Reservoirs and Water Towers	Ballykine Gravity Distribution	2537.41	1062.69	30.37	38.88	91.22	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JS219			water	Water Infrastructure	Water Distribution Mains	North Down,Bangor Zone Watermain Improvements	651.83	2440.17	155.63	1355.30	69.54	37	59	0	4		0	0	0	0	0	0		0	0	9467	0	1262.7	0	0	0
JS220			water	Water Infrastructure	Water Distribution Mains	Bangor Outer Zone Watermain Improvements	1763.76	2610.66	507.69	2126.46	-23.48	37	21	36	6		0	0	0	0	0	0		0	0	11555	0	3026	0	0	0
JS221			water	Water Infrastructure	Water Distribution Mains	Ards North Zone Watermain Improvements	1607.06	2476.44	2278.42	194.41	3.61	24	65	0	11		0	0	0	0	0	0		0	0	4315	0	25030	0	0	0
JS222			water	Water Infrastructure	Water Distribution Mains	Newtownards Town Zone Watermain Improvements	1549.34	2172.30	75.92	1893.17	203.22	26	53	15	6		0	0	0	0	0	0		0	0	6318	0	5722.5	0	0	0
JS223			water	Water Infrastructure	Water Distribution Mains	Ballygowan Zone Watermain Improvements	2133.82	3924.43	0.00	6.48	3916.18	4	41	42	13		0	0	0	0	0	0		0	0	21231	0	19739	0	0	0
JS223	JS278		water	Water Infrastructure	Water Distribution Mains	Saintfield Road, Ballygowan, Replacement Watermain	0.00	147.22	0.00	148.12	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	2279	0	0	0
JS223	JS279		water	Water Infrastructure	Water Distribution Mains	Ballygowan Road, Ballygowan, Watermain Replacement	0.00	210.19	0.00	100.91	109.28	0	100	0	0		0	0	0	0	0	0		0	0	0	0	1750	0	0	0
JS223	JS280		water	Water Infrastructure	Water Distribution Mains	Ballycreelly Road, Ballygowan, Wmain Rep	0.00	137.03	0.00	137.94	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	2032	0	87.3	0	0	0
JS223	JS281		water	Water Infrastructure	Water Distribution Mains	Fields at Ballycreelly Road, Ballygowan, Wmain Rep	0.00	50.35	0.00	64.80	-14.45	0	100	0	0		0	0	0	0	0	0		0	0	644	0	202.9	0	0	0
JS225			water	Water Infrastructure	Water Distribution Mains	Mid Down Zone WM Imps	5309.93	3889.37	151.83	7.41	3730.13	13	66	11	10		0	0	0	0	0	0		0	0	52948	0	11236	0	0	0
JS226			water	Water Infrastructure	Water Distribution Mains	Downpatrick Zone WM Imps	1543.22	1372.81	0.00	0.00	0.00	27	50	1	22		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JS227			water	Water Infrastructure	Water Distribution Mains	South Down Zone WM Imps	5285.05	3311.99	243.88	0.00	0.00	31	55	5	9		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JS228			water	Water Infrastructure	Water Distribution Mains	Newcastle Zone WM Imps	852.90	0.00	0.00	0.00	0.00	9	84	0	7		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JS229			water	Water Infrastructure	Water Distribution Mains	Mourne Coast Zone Watermain Improvements	2550.76	1879.46	0.00	0.00	0.00	49	30	16	5		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JS237			water	Water Infrastructure	Water Distribution Mains	Comber Zone Watermain Improvements	1773.99	0.00	0.00	0.00	0.00	24	65	0	11		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JS250			water	Water Non Infrastructure	Water Treatment Works	THM Reduction	19.58	194.99	206.87	68.51	-80.38	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JS253			sewerage	Waste Water Infrastructure	Sewerage	Shore Road, Millisle Sewer & Watermain Replacement	172.97	214.30	207.82	6.48	0.00	50	50	0	0		0	0	0	0	0	0		0	0	0	0	423	342	0	0
JS254			sewerage	Waste Water Infrastructure	Sewerage	Moss Road, Millisle Sewer & Watermain Replacement	311.83	263.30	204.97	58.32	0.00	43	30	23	4		0	0	0	0	0	0		0	1	0	0	0	0	0	0
JS268			water	Water Infrastructure	Water Distribution Mains	Newtownards Southern Relief Road	935.59	948.64	30.37	713.76	184.25	0	77	0	23		0	0	0	0	0	0		0	0	0	0	3011	0	0	0
JS271			water	Water Infrastructure	Water Distribution Mains	Ardglass Environmental Improvements	542.99	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JS274			water	Water Non Infrastructure	Water Treatment Works	Drumaroad WTW Clear Water Tank	7561.95	7880.63	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JT097			water	Water Non Infrastructure	Service Reservoirs and Water Towers	Danescroft SR Demolition	181.73	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JT126			water	Water Infrastructure	Water Distribution Mains	Lisburn North Rural Zone Watermain Improvements	1376.64	839.12	215.41	436.03	-57.80	0	85	3	12		0	0	0	0	0	0		0	0	9147	0	341	0	0	0
JT127			water	Water Infrastructure	Water Distribution Mains	Dunmurry Zone Watermain Improvements	1245.75	1258.07	0.00	0.00	0.00	28	71	0	1		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JT128			water	Water Infrastructure	Water Distribution Mains	Lisburn Town Zone Watermain Improvements	1785.18	1413.48	0.00	0.00	1413.48	36	48	13	3		0	0	0	0	0	0		0	0	3872	0	2952	0	0	0
JT129			water	Water Infrastructure	Water Distribution Mains	Lisburn Rural Zone Watermain Improvements	5043.29	4298.49	0.00	0.00	0.00	0	41	59	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JT149			water	Water Infrastructure	Water Distribution Mains	Lisburn to R.O.I. Border Trunk Road Improvements	514.95	1143.75	76.86	655.43	323.34	0	66	0	34		0	0	0	0	0	0		0	0	1480	0	12198	2899	0	0
JV023			water	Water Infrastructure	Water Distribution Mains	Fofanny/Banbridge Zone Watermain Improvements	5181.16	3893.75	587.40	1036.85	-19.87	0	74	20	6		0	0	0	0	0	0		0	0	26007	0	2416	0	0	0
JV024			water	Water Infrastructure	Water Distribution Mains	Ballintemple Zone Watermain Improvements	1363.96	5408.02	0.00	0.00	0.00	34	44	4	18		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JV025			water	Water Infrastructure	Water Distribution Mains	Lough Ross Zone Watermain Improvements	3769.58	5497.84	65.48	0.00	0.00	43	49	2	6		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JV055			water	Water Non Infrastructure	Water Resource Facilities	Essential Health and Safety Improvements at Spelga Dam	176.05	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JV067			water	Water Infrastructure	Water Distribution Mains	Jerrettspass Chlorination	227.16	42.97	29.42	0.00	13.55	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JV531			water	Water Infrastructure	Water Distribution Mains	Alt Dist Cont No.1 - Pipelines	848.01	931.26	0.00	0.93	-9.03	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JW512			water	Water Non Infrastructure	Service Reservoirs and Water Towers	Edenaveys Service Reservoir	4256.39	2812.99	5.69	0.00	-1.81	0	45	0	55		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JW512	JC378	JC378	water	Water Non Infrastructure	Service Reservoirs and Water Towers	Glenlough SR, Ballymoney, New SR	0.00	1234.76	0.00	49.99	851.70	0	15	0	85		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JW512	JC381	JC381	water	Water Non Infrastructure	Service Reservoirs and Water Towers	Altnahinch WTP, Ballymoney, New CWB.	0.00	707.95	0.00	31.48	459.72	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JW512	JC383		water	Water Infrastructure	Water Distribution Mains	Drumcroon Road, Coleraine, Replacement Watermain	0.00	32.51	0.00	0.00	32.51	50	50	0	0		0	0	0	0	0	0		0	0	0	0	600	0	0	0
JW512	JF583	JF583	water	Water Non Infrastructure	Service Reservoirs and Water Towers	Carland Service Reservoir	0.00	2134.45	0.00	72.21	521.13	0	41	0	59		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY			water	Water Non Infrastructure	Water Treatment Works	Water Non Infra Capital Maintenance	19626.95	0.00	0.00	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JA251		water	Water Non Infrastructure	Facilities Pumping Stations	Crosshill Service Reservoir Water Booster Station, Larne	0.00	107.71	10.44	99.98	-2.71	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JA264		water	Water Non Infrastructure	Facilities Pumping Stations	Crosskennan SR, Antrim, Water Pumping Station.	0.00	753.01	0.00	13.89	65.93	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JA271		water	Management and General	Water Management and General	Killylane WTW	0.00	124.66	0.00	0.00	89.41	0	100	0	0											0	0	0	0	0	0
JYYY	JB482		water	Water Non Infrastructure	Water Treatment Works	Turbidity Meters - Northern Division	0.00	-4.74	-4.74	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JB493		water	Management and General	Water Management and General	Oaklands Rationalisation	0.00	0.88	-1.90	2.78	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JB649		water	Water Non Infrastructure	Service Reservoirs and Water Towers	Tully Service Reservoir	0.00	2242.14	0.00	18.52	0.00	0	5	0	95		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JB657		water	Water Non Infrastructure	Facilities Pumping Stations	Garstings Hill SR, Ballymena, Water Pumping station.	0.00	483.40	0.00	0.00	382.95	0	0	56	44		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JB662		water	Water Non Infrastructure	Water Resource Facilities	Panel Engineer Recommendations - North Phase 1	0.00	1022.12	0.00	0.00	67.74	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JC084		water	Water Non Infrastructure	Water Resource Facilities	River Bann Pumping Station	0.00	142.34	142.34	0.00	0.00	0	52	26	22		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JC304		water	Water Non Infrastructure	Water Treatment Works	Altnahinch WTW Supernatent Main	0.00	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JC319		water	Water Non Infrastructure	Facilities Pumping Stations	Beechfield Drive, Coleraine Water Pumping Station	0.00	34.16	34.16	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JD239		water	Waste Water Infrastructure	Sewerage	Corkey Road, Cloughmills Sewer, Pumping Main and Watermain Replaceme	0.00	1.99	3.80	0.00	-1.81	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JF565		water	Water Non Infrastructure	Water Treatment Works	Fofanny WTW EC Compliance	0.00	670.32	601.63	1.85	66.84	95	3	0	2		42	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JF567		water	Water Non Infrastructure	Water Treatment Works	Lough Ross /Carran Hill WTW	0.00	974.06	953.69	20.37	0.00	95	1	0	4		6.8	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JF584		water	Water Non Infrastructure	Water Resource Facilities	Panel Engineer Recommendations - South Phase 1	0.00	70.95	0.00	0.00	2.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JG057		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	PEIT 2006 Southern	0.00	6.64	6.64	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JL737		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	PEIT 2006 Western	0.00	18.03	18.03	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JL747		water	Water Non Infrastructure	Water Treatment Works	Repair of GAC Filters at Carmoney WTW	0.00	967.45	228.70	738.75	0.00	0	100	0	0		45	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JL750		water	Water Infrastructure	Water Distribution Mains	Ballinrees to Limavady/Londonderry Supply Augmentation	0.00	944.96	0.00	0.00	557.26	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JL756		water	Water Non Infrastructure	Water Treatment Works	Metering and Treatment of WTW effluents	0.00	10.84	0.00	0.00	10.84	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JN472		water	Water Non Infrastructure	Facilities Pumping Stations	Backglen Road, Omagh Booster Station	0.00	30.37	30.37	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JN483		water	Management and General	Water Management and General	Glenhordial WTW expansion of existing sludge plant	0.00	2.85	2.85	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JN484		water	Water Non Infrastructure	Water Resource Facilities	Glenhordial WTW replacement of Camowen pumping main	0.00	354.93	0.00	295.32	59.61	0	80	0	20		0	0	0	0	0	0		0	0	2395	0	1370	0	0	0
JYYY	JN498		water	Water Non Infrastructure	Water Resource Facilities	Panel Engineer Recommendations - West Phase 1	0.00	194.99	0.00	0.00	16.26	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JP650		water	Management and General	Water Management and General	Killyhevlin WTW Improvements to sludge settlement system	0.00	3.80	3.80	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JP651		water	Water Non Infrastructure	Water Treatment Works	Killyhevlin WTW replacement acid spillage tank	0.00	176.17	0.00	1.85	174.31	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JR211		water	Water Infrastructure	Water Distribution Mains	Woodburn	0.00	30.71	0.00	0.00	30.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JR314		sewerage	Management and General	Water Management and General	Antrim Training Centre	0.00	9.49	9.49	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JR326		water	Water Non Infrastructure	Service Reservoirs and Water Towers	CL2 Equip Upgrading Eastern Division	0.00	7.31	-3.80	11.11	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JR333		water	Water Non Infrastructure	Service Reservoirs and Water Towers	SR Integrity	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JR346		water	Water Non Infrastructure	Water Treatment Works	Dorisland Powder Activated Carbon Plant	0.00	12.36	13.29	-0.93	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JR354		water	Waste Water Non Infrastructure	Sewage Treatment Works	PEIT 04/05 Eastern Area	0.00	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JR373		sewerage	Water Non Infrastructure	Water Treatment Works	PEIT 2006 Eastern	0.00	4.74	4.74	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JR405		water	Management and General	Water Management and General	NIW Contaminated Land Remedial Project	0.00	1.85	0.00	1.85	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JR407		water	Water Non Infrastructure	Water Treatment Works	Security improvements at Keypoint Installations	0.00	649.93	0.00	0.00	491.33	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JR420		water	Water Non Infrastructure	Water Resource Facilities	Panel Engineer Recommendations - East Phase 1	0.00	2154.64	0.00	0.00	73.16	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JS111		water	Water Non Infrastructure	Water Treatment Works	Silent Valley WTW	0.00	281.84	281.84	0.00	0.00	92	0	0	8		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JS209		water	Water Infrastructure	Water Distribution Mains	Valley	0.00	35.11	35.11	0.00	0.00	30	30	20	20		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JS210		water	Water Non Infrastructure	Service Reservoirs and Water Towers	Newcastle Service Res	0.00	6.06	11.39	3.70	-9.03	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JT095		water	Water Non Infrastructure	Facilities Pumping Stations	Mullaghdrin Pumping Station	0.00	21.29	0.00	21.29	0.00	0	34	66	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JV708		water	Water Non Infrastructure	Service Reservoirs and Water Towers	Ballykeel Service Reservoir	0.00	0.95	0.95	0.00	0.00	0	9	0	91		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JV827		water	Water Non Infrastructure	Service Reservoirs and Water Towers	Tullyhappy Service Reservoir	0.00	642.41	0.00	18.52	90.32	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	JV830		water	Water Non Infrastructure	Water Treatment Works	Crieve Service Reservoir	0.00	2755.66	0.00	4.63	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
JYYY	KI462		water	Waste Water Non Infrastructure	Sewage Treatment Works	PLC Robustness Project	0.00	443.53	0.00	0.00	337.79	0	100	0	0											0	0	0	0	0	0
KA148			sewerage	Waste Water Infrastructure	Sewerage	Crumlin Drainage Area Plan	2.31	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA151			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Roughfort WwTW	181.77	208.34	0.00	136.09	72.25	100	0	0	0		0	1	545	0	0	0		0	0	0	0	0	0	0	0
KA154			sewerage	Waste Water Infrastructure	Sewerage	Sevenmile Straight/Clady Rd Sewerage Scheme	389.15	969.58	0.00	6.48	0.90	0	30	50	20		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA158			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Milltown, Antrim WwTW	18798.74	22801.11	7819.32	8712.28	4957.55	42	34	0	24		0	0	0	1	87149	0		0	0	0	0	0	0	0	6456
KA162			sewerage	Management and General	Sewerage Management and General	Mounthill and Glenoe WwTW	472.18	551.51	0.95	-0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA164			sewerage	Waste Water Infrastructure	Sewerage	Parkgate WwTW Rationalization	1528.89	769.22	-0.95	0.00	331.47	0	19	0	81		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA169			sewerage	Waste Water Infrastructure	Sewerage	Dunadry Road Antrim	25.95	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA170			sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Coastguard Road Larne	288.66	258.49	244.83	4.63	9.03	0	75	0	25		0	0	0	0	0	0		0	0	0	0	0	0	0	1070
KA172			sewerage	Waste Water Infrastructure	Sewerage	Ballynure Road Ballyclare	62.37	72.34	0.95	0.00	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA173			sewerage	Waste Water Infrastructure	Sewerage	Roguery Road Toomebridge, Sewerage Scheme	1100.10	405.32	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA173	KR378	KR378	sewerage	Waste Water Infrastructure	Sewerage	Carryduff Trunk Sewer Upgrade	0.00	1315.18	23.72	34.25	29.80	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA175			sewerage	Waste Water Non Infrastructure	Sludge Treatment Works	Northern Area Sludge Dewatering	1511.54	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA181			sewerage	Waste Water Infrastructure	Sewerage	Dublin Road, Antrim	11.52	-0.93	0.00	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA184			sewerage	Waste Water Infrastructure	Sewerage	Ballyeaston Road Ballyclare Storm Sewer	118.30	95.78	94.89	-0.93	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	370
KA185			sewerage	Waste Water Infrastructure	Sewerage	Main Bentra Road, Ballycarry Storm Sewer Extension	37.69	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA187			sewerage	Waste Water Infrastructure	Sewerage	Shore Road Toomebridge Foul Sewerage Scheme	517.77	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA188			sewerage	Waste Water Infrastructure	Sewerage	Steeple Road Antrim - Replacement Sewer	19.83	36.04	35.11	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	102
KA190			sewerage	Waste Water Infrastructure	Sewerage	Newlodge Road Antrim - Foul Sewer Extension	23.94	21.83	21.83	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	210
KA191			sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Black Cave & Upper Roddens Sewage Imps, Larne	26.19	449.30	98.69	44.44	306.18	72	15	0	13		0	0	0	0	0	0		0	1	0	0	0	0	0	0
KA192			sewerage	Management and General	Sewerage Management and General	Coast Road Larne	97.82	227.88	11.39	-7.41	3.61	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA193			sewerage	Waste Water Infrastructure	Sewerage	Coast Road Ballygally SS	112.40	232.54	1.90	0.00	0.00	40	31	0	29		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA194			sewerage	Waste Water Infrastructure	Sea outfalls and headworks	Deerpark Antrim Storm Sewer Outfall	17.02	15.86	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA195			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Mullaghboy WWTW	2801.09	1108.24	5.69	37.03	442.56	73	24	0	3		0	1	488	0	0	0		0	0	0	0	0	0	0	0
KA195	KN586	KN586	sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Killen WWTW	0.00	1248.75	867.34	381.41	0.00	26	23	0	51		0	1	55	0	0	0		0	0	0	0	0	0	0	0

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	Current/Actual Project Expenditure [06/07£k] 2008	2009	2010	Current Capital Investment Driver Allocation (%) Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Actual Project Outputs: Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d] Taking into account Authorised Departures	Not taking into account Authorised Departures	WwTW (>250pe) compliance with Water Order Consents [no. of works]	[population equivalent]	WwTW passing UWWTD numeric consents [no. of works]	[population equivalent]	Internal sewer flooding (DG5) caused by overload [properties removed from register]	[m sewer replaced/ refurbished]	Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Water Distribution Network Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Sewerage Network Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
KA206			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Small WwTWs Priority Upgrades	10005.49	5046.05	18.98	4999.07	28.00	10	40	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KA206	KG035		sewerage	Waste Water Infrastructure	Sewerage	Cross Lane Sewerage Scheme	372.08	2.85	2.85	0.00	0.00	72	21	0	7		0	0	0	1	45000	0		0	0	0	0	0	0	0	0
KB229			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Bellaghy WwTW	19.58	190.64	114.82	72.21	3.61	48	39	0	13		0	1	2000	0	0	0		0	0	0	0	0	0	0	0
KB269			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Toome (Creagh) Sewerage Scheme	8792.17	5615.26	182.20	214.78	2243.50	18	0	2	80		0	0	0	1	8037	0		0	0	0	0	0	0	0	0
KB278			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Moneymore STW Imps	3776.02	1252.33	87.30	108.31	731.58	48	19	0	33		0	1	1265	0	0	0		0	0	0	0	0	0	0	0
KB279			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Stewartstown WwTW Improvements	924.33	1103.61	82.56	70.36	792.09	27	30	0	43		0	1	1000	0	0	0		0	0	0	0	0	0	0	7361
KB280			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Draperstown WwTW	3035.53	3206.28	961.28	1987.59	257.41	60	15	0	25		0	0	0	1	4900	0		0	0	0	0	0	0	0	0
KB281			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Maghera WwTW	3550.32	1961.34	21.83	161.08	770.41	66	13	0	21		0	0	0	1	7169	0		0	0	0	0	0	0	0	0
KB282			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Magherafelt WwTW	8085.86	6701.77	132.85	98.13	1745.85	55	20	0	25		0	0	0	1	18000	0		0	0	0	0	0	0	0	0
KB284			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Coagh WwTW Improvements	2861.07	1129.52	24.67	85.17	658.42	32	9	0	59		0	1	1787	0	0	0		0	0	0	0	0	0	0	0
KB287			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Swatragh Wastewater Treatment Works	1528.23	1712.89	0.00	-3.70	5.42	78	18	0	4		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB303			sewerage	Waste Water Infrastructure	Sewerage	Moneymore Drainage Area Plan	303.71	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB304			sewerage	Waste Water Infrastructure	Sewerage	Bellaghy Drainage Area Plan	125.67	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB305			sewerage	Waste Water Infrastructure	Sewerage	Castledawson Drainage Area Plan	602.04	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB306			sewerage	Waste Water Infrastructure	Sewerage	Magherafelt Drainage Area Plan	2640.08	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB307			sewerage	Waste Water Infrastructure	Sewerage	Portglenone Drainage Area Plan	750.22	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB307	KB434		sewerage	Waste Water Infrastructure	Sewerage	Portglenone DAP Phase 1	0.00	613.65	4.74	56.47	359.47	0	6	85	9		0	0	0	0	0	0		0	0	0	0	0	390	0	0
KB308			sewerage	Waste Water Infrastructure	Sewerage	Ballymena Drainage Area Plan	10598.76	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB309			sewerage	Waste Water Infrastructure	Sewerage	Cookstown Drainage Area Plan	6270.20	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB313			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Moorfields WwTW	472.65	22.25	0.00	4.63	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB314			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Gulladuff WwTW	785.22	861.70	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB316			sewerage	Waste Water Non Infrastructure	Sludge Treatment Works	Desertmartin WwTW	1396.08	1377.01	0.00	-0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB322			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Martinstown WwTW	1021.38	564.16	0.00	45.36	280.89	84	10	0	6		0	1	321	0	0	0		0	0	0	0	0	0	0	0
KB328			sewerage	Waste Water Infrastructure	Sewerage	Draperstown Drainage Area Plan	654.47	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB328	KB428		sewerage	Waste Water Infrastructure	Sewerage	Draperstown DAP	0.00	903.67	5.69	68.51	590.68	25	17	50	8		0	0	0	0	0	0		0	0	0	0	0	867.5	0	0
KB328	KB442		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Tobermore SPS Replacement	0.00	300.63	0.00	13.89	195.99	64	18	9	9		0	0	0	0	0	0		0	0	0	0	0	797	0	0
KB329			sewerage	Waste Water Infrastructure	Sewerage	Maghera Drainage Area Plan	886.74	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB333			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Cargan WwTW	1262.55	621.26	0.00	48.14	340.50	74	22	0	4		0	1	570	0	0	0		0	0	0	0	0	0	0	0
KB352			sewerage	Waste Water Infrastructure	Sewerage	Ballymena Area Sewers	62.86	5.58	1.90	2.78	0.90	0	73	0	27		0	0	0	0	0	0		0	1	0	0	0	0	0	0
KB353			sewerage	Waste Water Infrastructure	Sewerage	Maghera Area Sewers	348.49	580.18	63.58	452.69	55.09	0	10	0	90		0	0	0	0	0	0		0	0	0	0	0	0	0	580
KB354			sewerage	Waste Water Infrastructure	Sewerage	Orritor Road, Cookstown - Sewer Rep.Phase 2	60.50	63.76	34.16	28.70	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	400
KB359			sewerage	Waste Water Infrastructure	Sewerage	Railway View/Woodtown Road, Ballymena Sewerage Scheme	326.06	304.06	0.95	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB365			sewerage	Waste Water Infrastructure	Sewerage	Magheralane Road Randalstown	701.09	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB368			sewerage	Waste Water Infrastructure	Sewerage	Drumenny Coagh Sewerage Scheme	1717.80	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB372			sewerage	Waste Water Infrastructure	Sewerage	Orritor Road, Orritor - Storm Sewer Ext.	172.52	64.28	0.00	-0.93	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB376			sewerage	Waste Water Infrastructure	Sewerage	Straw Village Sewer Upgrades	417.21	103.41	64.53	38.88	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	272
KB377			sewerage	Waste Water Infrastructure	Sewerage	Stewartstown Drainage Area Plan	128.42	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB378			sewerage	Waste Water Infrastructure	Sewerage	Tobermore Drainage Area Plan	164.93	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB380			sewerage	Waste Water Infrastructure	Sewerage	Pomerory Drainage Area Plan	139.61	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB381			sewerage	Waste Water Infrastructure	Sewerage	Rasharkin Drainage Area Plan	187.46	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB382			sewerage	Waste Water Infrastructure	Sewerage	Cloughmills Drainage Area Plan	228.24	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB383			sewerage	Waste Water Infrastructure	Sewerage	Clough Drainage Area Plan	142.86	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB384			sewerage	Waste Water Infrastructure	Sewerage	Dunloy Drainage Area Plan	327.50	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB386			sewerage	Waste Water Infrastructure	Sewerage	Creagh Hill Sewerage Scheme	93.61	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB388			sewerage	Waste Water Infrastructure	Sewerage	Gortgole Road Portglenone Storm Sewer Outfall	94.68	96.79	96.79	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	189	0	0
KB395			sewerage	Waste Water Infrastructure	Sewerage	Rocktown Road Bellaghy	20.53	-0.93	0.00	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB397			sewerage	Waste Water Infrastructure	Sewerage	Old Portglenone Road Ahoghill, Foul Sewer Extension	7.51	9.26	0.00	9.26	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	160
KB398			sewerage	Waste Water Infrastructure	Sewerage	Main Street Tobermore Foul & Storm Sewer	43.08	28.64	2.85	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB400			sewerage	Waste Water Infrastructure	Sewerage	Mullanahoe Road Ardboe Foul Sewer	58.23	104.01	6.64	66.65	30.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	382
KB401			sewerage	Waste Water Infrastructure	Sewerage	Craigs Road Rasharkin Foul Sewer Extension	85.47	4.65	1.90	1.85	0.90	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KB404			sewerage	Waste Water Infrastructure	Sewerage	Larne Road Link Ballymena Storm Sewer Extension	49.29	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC218			sewerage	Waste Water Infrastructure	Sewerage	Portrush Sewer Improvements Stage 4	252.20	1102.47	121.47	969.26	11.74	60	7	14	19		0	0	0	0	0	0		0	0	0	0	0	0	0	960
KC231			sewerage	Waste Water Infrastructure	Sewerage	Ballycastle Sewerage Scheme	612.23	1085.19	68.32	550.82	466.04	0	22	78	0		0	0	0	0	0	0		0	0	0	0	0	938	0	1687
KC232			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	North Coast WwTW EC Compliance	11714.05	11394.91	11895.05	-472.13	-28.00	11	50	0	39		0	0	0	1	106000	0		0	15	0	0	0	0	0	0
KC252			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballybrakes & Glenstall WwTW	1865.30	2571.22	1801.10	395.30	374.82	78	12	0	10		0	0	0	2	40532	0		0	0	0	0	0	0	0	0
KC264			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Kilrea WwTW Improvements	2381.61	2491.71	0.00	-0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC265			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Dervock WwTW	1419.45	1491.49	0.00	0.00	5.42	75	0	14	11		0	1	918	0	0	0		0	0	0	0	0	0	0	0
KC267			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Stranocum WwTW	1079.87	1156.37	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC273			sewerage	Waste Water Infrastructure	Sewerage	Garvagh Drainage Area Plan	409.48	0.00	0.00	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC274			sewerage	Waste Water Infrastructure	Sewerage	Kilrea Drainage Area Plan	291.83	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC278			sewerage	Waste Water Infrastructure	Sewerage	Coleraine Drainage Area Plan	1655.79	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC278	KC404		sewerage	Waste Water Infrastructure	Sewerage	Coleraine DAP Phase 1	0.00	699.32	4.74	74.06	37.93	59	21	0	20		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC283			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Moss-side WwTW	1057.71	1142.37	0.00	0.00	0.00	0	0	0	100		0	1	639	0	0	0		0	0	0	0	0	0	0	0
KC284			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Cloughmills WwTW	2971.53	874.26	1.90	56.47	359.47	61	14	0	25		0	0	0	1	2108	0		0	0	0	0	0	0	0	0
KC285			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Macosquin WwTW	1909.65	1938.47	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC288			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballybogey WWTW	542.31	653.34	69.27	-12.03	596.10	58	24	0	18		0	1	760	0	0	0		0	1	0	0	0	0	0	0
KC292			sewerage	Management and General	Sewerage Management and General	Bushmills Drainage Area Plan	386.56	14.23	14.23	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC293			sewerage	Management and General	Sewerage Management and General	CASTLEROCK DRAINAGE AREA PLAN	328.57	14.23	14.23	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC294			sewerage	Waste Water Infrastructure	Sewerage	Ballymoney Sewerage Improvements	44.74	153.41	82.56	16.66	54.19	0	33	43	24		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC296			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballycastle WwTW	8392.82	6461.56	218.26	45.36	48.77	0	28	0	72		0	0	0	1	11088	0		0	0	0	0	0	0	0	0
KC299			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Bushmills + Portballintrae WwTW	5293.47	7245.52	83.51	1210.89	5195.99	32	27	0	41		0	0	0	1	8862	0		0	0	0	0	0	0	0	0
KC302			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballintoy WwTW	733.21	1238.25	0.00	9.26	40.64	34	22	0	44		0	1	565	0	0	0		0	0	0	0	0	0	0	0
KC314			sewerage	Waste Water Infrastructure	Sewerage	Taughey Road, Balnamore Sewerage Scheme	391.71	0.09	3.80	-3.70	0.00	0	82	0	18		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC318			sewerage	Waste Water Infrastructure	Sewerage	Portstewart Area Sewers	47.31	39.07	45.55	-6.48	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC322			sewerage	Management and General	Sewerage Management and General	Donnelly Park WwTW	879.61	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC323			sewerage	Waste Water Infrastructure	Sewerage	Finvoy Road Ballymoney Sewerage Scheme	383.70	181.32	184.10	-2.78	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	345
KC325			sewerage	Waste Water Infrastructure	Sewerage	Shanlongford Ringsend Sewerage Scheme	700.36	748.75	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC328			sewerage	Waste Water Infrastructure	Sewerage	Castlecatt Road, Dervock	91.50	84.45	7.59	77.76	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC330			sewerage	Waste Water Infrastructure	Sewerage	Ballylagan Road, Islandmore	18.11	12.38	13.29	0.00	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	73	0	0
KC331			sewerage	Waste Water Infrastructure	Sewerage	Atlantic Road, Portrush	104.32	1.00	2.85	-1.85	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC336			sewerage	Waste Water Infrastructure	Sewerage	Glen Road, Garvagh Foul Sewer	35.17	39.97	42.70	-0.93	-1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	178
KC337			sewerage	Waste Water Infrastructure	Sewerage	Moneygran Road Kilrea Foul and Storm Sewers	69.59	109.40	0.00	4.63	104.77	0	45	45	10		0	0	0	0	0	1		0	0	0	0	0	0	0	294
KC338			sewerage	Waste Water Infrastructure	Sewerage	Causway/Aid	1109.30	648.12	7.59	8.33	53.29	20	15	0	65		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC339			sewerage	Management and General	Sewerage Management and General	Tonduff/Dunseverick/Lisnagunogue SS	917.67	6.50	0.00	7.41	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC342			sewerage	Waste Water Infrastructure	Sea outfalls and headworks	Ballycastle	508.78	2190.81	34.16	7.41	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC345			sewerage	Waste Water Infrastructure	Sewerage	Railway terrace, Armoy, Storm Sewer & Watermain	41.14	45.12	1.90	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC346			sewerage	Waste Water Infrastructure	Sewerage	Drumagarner Rload Kilrea	442.96	95.16	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KC347			sewerage	Waste Water Infrastructure	Sewerage	Frocess Road Ballymoney Foul Sewer	125.38	85.96	31.32	55.55	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	1220
KD999			sewerage	Waste Water Infrastructure	Sewerage	Sewer Maintenance	57536.31	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KB320		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Grange WwTW	0.00	55.95	0.00	-1.85	57.80	0	40	0	60		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KB334		sewerage	Waste Water Infrastructure	Sewerage	Tobermore WwTW Outfall	0.00	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KB342		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Magherafelt WwTW Interium Improvements	0.00	25.29	0.00	0.00	25.29	100	0	0	0											0	0	0	0	0	0
KD999	KB429		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Tamneylennan - Stewartstown SPS Upgrade	0.00	74.96	0.00	0.00	74.96	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KB431		sewerage	Waste Water Non Infrastructure	In-line pumping stations	The Brambles, Magherafelt - SPS Replacement	0.00	141.17	7.59	70.36	63.22	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KD021		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Knocktarna Manor, Coleraine Repl SPS	0.00	5.42	0.00	0.00	5.42	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KF319		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Annaghmore WwTWs	0.00	1722.87	41.75	-0.93	1406.25	39	11	0	50		0	1	234	0	0	0		0	0	0	0	0	0	0	1400
KD999	KF329		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Ardress WWPS Proposed Replacement.	0.00	676.91	0.00	0.00	5.42	0	85	15	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KG090		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	IWWF Quick Wins 2005	0.00	4.52	0.00	0.00	4.52	0	100	0	0											0	0	0	0	0	0
KD999	KG144		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Lawrencetown WwTW Upgrade	0.00	17.03	15.18	1.85	0.00	0	28	0	72		0	1	814	0	0	0		0	0	0	0	0	0	0	0
KD999	KG159		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Waringstown WWTW Storm Tanks	0.00	410.36	389.07	21.29	0.00	0	0	0	100		0	0	0	1	8233	0		0	0	0	0	0	0	0	0
KD999	KG172		sewerage	Waste Water Infrastructure	Sewerage	Wastewater treatment-Provision of maintenance related work at various loca	0.00	2030.53	0.00	89.80	1896.68	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KG178		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Annaghanoon Rd , Warringstown WWPS, Upgrade	0.00	56.57	0.00	0.00	7.23	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KG180		sewerage	Waste Water Infrastructure	Sewerage	Knockshane WWPS, Lurgan Upgrade.	0.00	81.11	0.00	0.00	1.81	0	90	0	10											0	0	0	0	0	0
KD999	KL424		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Magheramason WwTWs	0.00	651.03	0.00	0.00	5.42	40	0	0	60											0	0	0	0	0	0
KD999	KL429		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Assessment of Flow Monitoring in WWTWs (UWWTD)	0.00	320.78	56.94	263.84	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KL458		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Donemana WwTWs	0.00	773.60	0.00	0.00	5.42	40	0	0	60											0	0	0	0	0	0
KD999	KL469		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Maydown WWPS Replacement.	0.00	213.89	0.00	0.00	8.13	0	32	0	68		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KN174		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Carrickmore WwTW	0.00	-3.70	0.00	-3.70	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KN214		sewerage	Waste Water Infrastructure	Sewerage	Ardstraw	0.00	4.52	0.00	0.00	4.52	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KN577		sewerage	Management and General	Sewerage Management and General	SPAMOUNT	0.00	1555.18	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KN587		sewerage	Management and General	Sewerage Management and General	Moy WWTW	0.00	1892.44	8.54	3.70	-1.81	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KP585	KP585	sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Garrison WwTWs	0.00	1118.56	1.90	0.00	0.00	0	0	0	100		0	1	550	0	0	0		0	0	0	0	0	0	0	0
KD999	KR327		sewerage	Management and General	Sewerage Management and General	WwTWs Works Ops Manuals - Mull + Doh	0.00	4.70	2.85	1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KR382		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Salinity Removal from Sewerage System discharging to new North Down W	0.00	36.06	36.06	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KR393		sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Re-direction of Effluents from Belfast Sludge Incinerator within Belfast WWT	0.00	342.71	204.97	129.61	8.13	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KR438		sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Glenmachan Street WWPS refurbishment	0.00	4458.10	0.00	10.18	17.16	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KR442		sewerage	Management and General	Sewerage Management and General	Glenmachan Street WWPS Strategic Investigations	0.00	28.00	0.00	0.00	28.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KR443		sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Sydenham WWPS Remedial Works	0.00	46.77	0.00	0.00	2.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KS385		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Annacloy WwTW Upgrade	0.00	664.71	0.95	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KS815		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Waste Water Pumping Stations Screens Removal and Pumps Replacement	0.00	406.46	153.73	252.73	0.00	0	34	66	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
												Current Capital Investment Driver Allocation (%)				Actual Project Outputs															
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	Current/Actual Project Expenditure [06/07£k]			Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d]		WwTW (>250pe) compliance with Water Order Consents		WwTW passing UWWTD numeric consents		Internal sewer flooding (DG5) caused by overload		Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Water Distribution Network			Sewerage Network		
									2008	2009	2010					Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]			Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
KD999	KS823		sewerage	Management and General	Sewerage Management and General	Newcastle WWTW Revision of Outfall Modelling	0.00	276.70	0.00	14.81	46.97	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KS832		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Gransha Road, Bangor WWPS Refurbishment	0.00	498.05	0.00	3.70	289.92	22	78	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	140
KD999	KS835		sewerage	Waste Water Non Infrastructure	In-line pumping stations	South Street, Newtownards WWPS Refurbishment	0.00	2690.82	0.00	0.00	45.16	70	30	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KT377		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	New Holland WwTW	0.00	5655.02	0.00	0.00	450.69	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KV011		sewerage	Waste Water Infrastructure	Sewerage	Whitecross WwTW	0.00	-1.85	0.00	-1.85	0.00	40	20	0	40		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KV146		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Dunaval SPS Storm Tanks	0.00	81.17	0.00	69.43	11.74	100	0	0	0		0	0	0	0	0	0		0	1	0	0	0	0	0	0
KD999	KV157		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Rathfriland WWTW Inlet Screens and CSOS	0.00	498.20	0.00	0.00	484.10	0	60	0	40		0	0	0	1	5586	0		0	0	0	0	0	0	0	0
KD999	KV165		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Loughbrickland WWPS Septicity Dosing	0.00	30.91	0.00	0.00	2.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KD999	KX220		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Small WWTWs Priority Upgrades	0.00	4996.39	0.00	0.00	4996.39	90	0	0	10		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KE363			sewerage	Waste Water Infrastructure	Sewerage	Morrows Cross Sewerage Scheme	70.18	90.98	86.35	4.63	0.00	50	11	0	39		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF005			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Coalisland WwTW	6627.06	7121.76	13.29	593.41	4944.00	62	38	0	0		0	0	0	1	17574	0		0	0	0	0	0	0	0	0
KF009			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Caledon/Killylea/Tynan - RBC Installations West & South	665.67	81.87	167.96	-86.10	0.00	32	13	0	55		0	0	0	1	2050	0		0	0	0	0	0	0	0	0
KF012			sewerage	Waste Water Infrastructure	Sewerage	Moygashel WwTW	3338.02	3325.51	17.08	1274.76	1769.33	98	0	0	2		0	0	0	0	0	0		0	0	0	0	0	0	0	11535
KF014			sewerage	Waste Water Infrastructure	Sewerage	Clare Village Sewerage Scheme	149.23	1346.03	1091.29	224.03	30.71	0	26	0	74		0	0	0	0	0	0		0	0	0	0	0	0	0	5560
KF016			sewerage	Waste Water Infrastructure	Sewerage	Coalisland Drainage Area Plan	794.33	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF017			sewerage	Waste Water Infrastructure	Sewerage	Markethill Drainage Area Plan	718.21	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF018			sewerage	Waste Water Infrastructure	Sewerage	Dungannon Drainage Area Plan	7738.53	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF019			sewerage	Waste Water Infrastructure	Sewerage	Keady Drainage Area Plan	1045.59	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF020			sewerage	Waste Water Infrastructure	Sewerage	Armagh Drainage Area Plan	34.90	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF021			sewerage	Waste Water Infrastructure	Sewerage	Richhill Drainage Area Plan	1515.92	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF026			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Hamiltonsbawn WwTW	3440.30	4113.56	616.82	2520.83	959.18	55	18	0	27		0	1	1750	0	0	0		0	0	0	0	0	0	0	0
KF027			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Benburb/Milltown - RBC Installations West & South	2616.90	3518.25	312.20	1463.62	1605.85	60	12	0	28		0	0	0	1	2889	0		0	0	0	0	0	0	0	4480
KF028			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Keady WwTW	3185.00	4647.58	-2.85	0.00	25.29	20	46	0	34		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF029			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Bush WwTW	787.24	277.65	261.91	15.74	0.00	58	0	0	42		0	1	800	0	0	0		0	0	0	0	0	0	0	0
KF030			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Killyman WwTW	1647.30	376.29	259.06	103.68	13.55	70	30	0	0		0	1	1442	0	0	0		0	0	0	0	0	0	0	0
KF031			sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Cabragh WwTW	431.49	185.62	170.81	14.81	0.00	42	58	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF033			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Castlecaulfield WwTW	1592.69	3068.11	40.80	1573.78	1321.35	37	27	0	36		0	1	1729	0	0	0		0	0	0	0	0	0	0	0
KF035			sewerage	Waste Water Infrastructure	Sewerage	Carland/ Tullydraw Sewerage Scheme	1356.41	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF037			sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Annagher Sewage Pumping Station and Rising Main	433.55	859.70	0.00	0.00	0.00	23	23	0	54		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF038			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Darkley WwTW	909.84	1098.35	-1.90	0.00	0.00	93	0	0	7		0	1	510	0	0	0		0	0	0	0	0	0	0	0
KF039			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Blackwatertown WwTW	469.24	445.88	0.00	0.00	0.00	89	0	0	11		0	1	354	0	0	0		0	0	0	0	0	0	0	0
KF048			sewerage	Waste Water Infrastructure	Sewerage	Moor Gardens Sewer Upgrades	571.93	585.52	437.46	145.34	2.71	0	55	0	45		0	0	0	0	0	7		0	0	0	0	0	1684	0	619
KF049			sewerage	Waste Water Infrastructure	Sewerage	Cathedral Rd, Armagh Flood Alleviation Scheme Phase 2	225.10	7.79	0.00	0.00	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF060			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Brockagh Terrace/Mountjoy WwTW	1258.20	1399.10	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF062			sewerage	Waste Water Infrastructure	Sewerage	Cavanacaw Road, Storm Sewer	354.00	434.69	438.41	-4.63	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	1310	0	0
KF065			sewerage	Waste Water Infrastructure	Sewerage	Trotters Walk to Madden Road, Tandragee Sewer Upgrade	164.25	298.15	298.92	5.55	-6.32	0	50	8	42		0	0	0	0	0	0		0	0	0	0	0	586	0	0
KF066			sewerage	Waste Water Infrastructure	Sewerage	Rear of 25 Main Street, Storm Sewer Extension	9.40	31.32	31.32	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	640
KF068			sewerage	Waste Water Infrastructure	Sewerage	Drummanmore Road, Armagh Storm Sewer	38.35	70.18	68.32	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	187
KF069			sewerage	Waste Water Infrastructure	Sewerage	Coash Road, Dungannon Storm Sewer Extension	13.93	14.33	18.98	-5.55	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	75
KF070			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Eglish WwTW	1598.05	1732.49	0.00	-0.93	0.00	45	0	0	55		0	1	1300	0	0	0		0	0	0	0	0	0	0	0
KF073			sewerage	Waste Water Infrastructure	Sewerage	Armagh Road to Tandragee WwTW Sewer Upgrade	687.11	916.59	911.94	5.55	-0.90	4	56	0	40		0	0	0	0	0	1		0	2	0	0	0	1839	0	0
KF074			sewerage	Waste Water Infrastructure	Sewerage	Killyharry Road Castlecaufield Storm Replacement	36.87	43.83	1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF075			sewerage	Waste Water Infrastructure	Sewerage	Dyan Road Caledon, Storm Sewer Extension	36.53	-0.93	0.00	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KF077			sewerage	Waste Water Infrastructure	Sewerage	Poyntzpass WwTW Inlet Sewer Replacement	84.45	61.17	42.70	16.66	1.81	0	9	0	91		0	1	730	0	0	0		0	0	0	0	0	322	0	0
KF078			sewerage	Waste Water Infrastructure	Sewerage	Dungormley	18.77	41.75	41.75	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	183
KF081			sewerage	Waste Water Infrastructure	Sewerage	Killyman Foul Sewer Extension	10.51	11.29	7.59	3.70	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	77
KG003			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Magheralin Sewerage Scheme	976.84	938.52	811.35	69.43	55.09	0	44	0	56		0	0	0	0	0	0		0	0	0	0	0	0	0	4110
KG018			sewerage	Waste Water Infrastructure	Sewerage	Magheralin Drainage Area Plan	135.81	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG019			sewerage	Waste Water Infrastructure	Sewerage	Tandragee Drainage Area Plan	915.23	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG020			sewerage	Waste Water Infrastructure	Sewerage	Waringstown Drainage Area Plan	334.42	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG021			sewerage	Waste Water Infrastructure	Sewerage	Maghaberry Drainage Area Plan	254.04	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG021	KG157		sewerage	Waste Water Infrastructure	Sewerage	Maghaberry Flood Alleviation Projects	0.00	715.42	0.95	22.22	383.85	65	28	0	7		0	0	0	0	0	0		0	0	0	0	0	0	0	1775
KG022			sewerage	Waste Water Infrastructure	Sewerage	Portadown Drainage Area Plan	2510.86	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG022	KG153		sewerage	Waste Water Infrastructure	Sewerage	Gilford Road Portadown Sewerage Upgrades	0.00	2653.67	151.83	1071.10	1326.77	69	13	18	0		0	0	0	0	0	0		0	1	0	0	0	720	0	2305
KG023			sewerage	Waste Water Infrastructure	Sewerage	Lurgan Drainage Area Plan	3150.00	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG024			sewerage	Waste Water Infrastructure	Sewerage	Craigavon Drainage Area Plan	14604.66	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG025			sewerage	Waste Water Infrastructure	Sewerage	Moira Drainage Area Plan	1164.86	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG025	KG140		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Waringfield SPS Upgrade	0.00	23.60	2.85	7.41	5.42	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG031			sewerage	Waste Water Infrastructure	Sewerage	Orchard Drive, Portadown Sewerage Scheme	725.91	2.85	2.85	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG039			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballyroney WwTW	608.59	611.90	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG041			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Maghaberry WwTW	3567.13	2816.80	2.85	0.00	0.00	15	28	0	57		0	0	0	1	5000	0		0	0	0	0	0	0	0	0
KG046			sewerage	Waste Water Infrastructure	Sewerage	Tullygoonigan Sewerage Scheme	458.92	2.82	1.90	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG051			sewerage	Waste Water Infrastructure	Sewerage	Sewage PS Upgrades networks Area A	54.34	310.80	6.64	15.74	192.38	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG057			sewerage	Waste Water Infrastructure	Sewerage	Kiln Road, Lurgan Foul Sewer Extension	21.74	93.30	1.90	81.47	9.93	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	220
KG062			sewerage	Management and General	Sewerage Management and General	Oak Grange Waringstown Flood Alleviation Scheme	110.86	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG063			sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Heron Wood and & Jubilee Heights, Dromore SPSs	472.14	285.57	10.44	171.26	103.87	0	86	0	14		0	0	0	0	0	0		0	0	0	0	0	0	0	259
KG065			sewerage	Waste Water Infrastructure	Sewerage	The Diamond, Moy, Foul and Storm Sewer Extension	19.86	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG066			sewerage	Waste Water Infrastructure	Sewerage	Main Street Donaghcloney, Foul Sewer Extension	49.72	16.02	13.29	0.93	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG068			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Kiln Road SPS Upgrade [Lurgan]	16.30	60.69	1.90	3.70	55.09	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG069			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Stranmore Road Gilford Sewerage Scheme	87.86	267.75	2.85	233.29	31.61	84	16	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	535
KG070			sewerage	Waste Water Infrastructure	Sewerage	Ballymacredan	42.32	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG071			sewerage	Waste Water Infrastructure	Sewerage	Crumlin Road, Glenavy Storm Sewer Ext	50.29	2.57	-8.54	11.11	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG074			sewerage	Waste Water Infrastructure	Sewerage	Belfast Road, Magheralin Storm and Foul Sewer Ext	41.66	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG075			sewerage	Waste Water Infrastructure	Sewerage	Kernan Hill, Portadown Storm and Foul Sewer Ext	74.80	1.90	1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG078			sewerage	Waste Water Infrastructure	Sewerage	Dromore Rd, Lurgan, Sewer Extension	21.14	29.42	-0.95	23.14	7.23	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	98
KG082			sewerage	Waste Water Infrastructure	Sewerage	Foxgrove/Roughal Lane SPS Upgrade	65.95	98.79	5.69	2.78	90.32	0	100	0	0		0	0	0	0	0	0		0	2	0	0	0	0	0	1365
KG083			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Churchill Park SPS upgrade	31.52	239.83	1.90	31.48	191.47	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG084			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Regency Manor Sewage Pumping Station	34.78	171.88	4.74	1.85	165.28	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	6.7
KG085			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Clonmakate SPS Replacement	94.56	92.71	103.44	4.63	-15.35	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG086			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Moyallen SPS Upgrade	212.13	68.03	0.00	2.78	1.81	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG087			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Kensington Park SPS	252.15	8.31	1.90	3.70	2.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG091			sewerage	Waste Water Infrastructure	Sewerage	Island	136.95	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG101			sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Martins Yard and Gilford Mill SPS Rationalisation	382.58	405.85	7.59	257.36	140.90	66	34	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG102			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Castle Meadow, Gilford SPS Upgrade	252.15	32.74	0.00	2.78	0.00	0	95	0	5		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG103			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Tullylish SPS Upgrade	221.83	17.23	0.00	2.78	14.45	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG104			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Halls Mill, Laurencetown SPS Upgrade	243.57	70.34	0.00	3.70	58.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG112			sewerage	Waste Water Infrastructure	Sewerage	Dunkirk Road to Main Street Waringstown SS	230.23	211.76	12.34	140.71	58.71	0	7	0	93		0	1	1009	0	0	0		0	0	0	0	0	0	0	98
KG113			sewerage	Waste Water Infrastructure	Sewerage	Aghalee Road, Ballinderry Storm Sewer Extension	21.36	125.86	111.98	13.89	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	90
KG115			sewerage	Waste Water Infrastructure	Sewerage	Rose gardens Laurelvale Proposed Foul Sewer	20.90	39.93	42.70	-2.78	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	220
KG116			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Aghalee/Aghagllon Screens	15.76	524.26	502.94	22.22	-0.90	0	100	0	0		0	1	2000	0	0	0		0	0	0	0	0	0	0	0
KG117			sewerage	Waste Water Infrastructure	Sewerage	Lurgan Road Magheralin Sewer Replacement	118.96	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG118			sewerage	Waste Water Infrastructure	Sewerage	Crumlin Road Storm Sewer Extension	55.39	99.28	3.80	100.91	-5.42	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	555
KG119			sewerage	Waste Water Infrastructure	Sewerage	Drumlough Road Rathfriland Storm Sewer Extension	78.50	37.98	38.91	-0.93	0.00	0	0	100	0		0	0	0	0	0	7		0	0	0	0	0	0	97	132
KG120			sewerage	Waste Water Infrastructure	Sewerage	Foul Sewer Extension, Garveys Road, Dorsey	11.26	24.65	23.72	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG121			sewerage	Waste Water Infrastructure	Sewerage	Upper Edward Street Newry	44.63	104.86	0.00	3.70	101.16	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	137	0	31
KG122			sewerage	Waste Water Infrastructure	Sewerage	Main Avenue Derrybeg Storm Sewer Upgrade	43.55	53.86	0.95	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG123			sewerage	Waste Water Infrastructure	Sewerage	Brownlow	10.61	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG125			sewerage	Waste Water Infrastructure	Sewerage	Barley Lane Newry Storm and Foul Sewer Extensions	63.88	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG126			sewerage	Waste Water Infrastructure	Sewerage	Gobrana Road Glenavy Storm Sewer Extension	39.09	58.72	55.99	0.93	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	200
KG127			sewerage	Waste Water Infrastructure	Sewerage	Madden Road Tandragee Storm and Foul Sewer Extensions	273.40	182.70	148.98	49.06	-15.35	0	0	0	100		0	0	0	0	0	2		0	0	0	0	0	90	0	426
KG129			sewerage	Waste Water Infrastructure	Sewerage	Loughgall Road Portadown Storm and Foul Sewer Extensions	80.85	63.51	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG130			sewerage	Waste Water Infrastructure	Sewerage	Glen Road, Drumantine Foul Sewer Extension	27.03	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG131			sewerage	Waste Water Infrastructure	Sewerage	Lurgan Road, Aghalee Storm Sewer Ext	28.48	31.13	21.83	11.11	-1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	106
KG132			sewerage	Waste Water Infrastructure	Sewerage	Bleary Road, Bleary Storm and Foul Sewer Ext	36.49	36.02	0.00	-0.93	33.42	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	41
KG133			sewerage	Waste Water Infrastructure	Sewerage	Madden Road Tandragee Strom Sewer Extension	11.75	0.02	0.95	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KG134			sewerage	Waste Water Infrastructure	Sewerage	Carrick Drive, Banbridge Road Lurgan Storm Sewer Ext	69.26	39.23	13.29	26.85	-0.90	0	0	100	0		0	0	0	0	0	12		0	0	0	0	0	0	0	77
KG136			sewerage	Waste Water Infrastructure	Sewerage	Southern Div. DAS Stage 4A	81.40	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL300			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Dungiven WwTW	5233.09	2511.17	117.67	111.09	1635.66	0	69	0	31		0	0	0	1	6249	0		0	0	0	0	0	0	0	0
KL314			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Limavady WwTW	6314.90	5605.71	2295.50	3187.37	122.83	50	34	0	16		0	0	0	1	16000	0		0	1	0	0	0	0	0	0
KL314	KL402		sewerage	Waste Water Non Infrastructure	Sludge Treatment Works	Limavady Area Sludge Reception Centre	2997.47	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL325			sewerage	Waste Water Infrastructure	Sewerage	Drumahoe Sewerage Scheme PM & Gravity Sewers	11.52	312.49	164.17	119.42	28.90	0	20	0	80		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL342			sewerage	Waste Water Infrastructure	Sewerage	Derry City Sewerage Network Improvements	4399.63	154.60	54.09	19.44	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL342	JL754		water	Water Infrastructure	Water Distribution Mains	Derry City Centre Public Realm Replacement Watermains	0.00	581.49	0.00	67.58	513.91	0	100	0	0		0	0	0	0	0	0		0	0	468	0	1174	0	0	0
KL342	KL428		sewerage	Waste Water Infrastructure	Sewerage	Londonderry Sewer Imps Stage 2 - Duke St PS Group Schemes	0.00	982.96	2.85	143.49	125.54	53	5	37	5		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL342	KL443		sewerage	Waste Water Infrastructure	Sewerage	Londonderry DAP: Duke Street Work package	0.00	3995.48	0.00	60.17	702.67	19	36	30	15		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL342	KL445		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Londonderry DAP: Victoria road Work Package	0.00	577.41	0.00	36.10	120.12	45	5	40	10		0	0	0	0	0	0		0	0	0	0	0	220	0	0
KL342	KL446		sewerage	Waste Water Infrastructure	Sewerage	Londonderry DAP: Duke Street Work package: Flood Alleviation	0.00	742.35	0.00	22.22	104.77	15	15	68	2		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL342	KL447		sewerage	Waste Water Infrastructure	Sewerage	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	0.00	2975.98	0.00	9.26	70.45	61	15	24	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL342	KL448		sewerage	Waste Water Infrastructure	Sewerage	Londonderry DAP: Victoria road Work Package:CSO Rationalisation	0.00	1036.55	0.00	5.55	183.35	49	5	41	5		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL342	KL449		sewerage	Waste Water Infrastructure	Sewerage	Londonderry DAP: Strathfoyle & Drumahoe Work package: Drumahoe Old P	0.00	1343.73	0.00	46.29	991.69	12	43	20	25		0	0	0	0	0	0		0	0	0	0	0	420	0	440

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
									Current/Actual Project Expenditure [06/07£k]			Current Capital Investment Driver Allocation (%)				Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d]		WwTW (>250pe) compliance with Water Order Consents		WwTW passing UWWTD numeric consents		Internal sewer flooding (DG5) caused by overload				Actual Project Outputs: Water Distribution Network			Sewerage Network		
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	2008	2009	2010	Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]	Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
KL342	KL450		sewerage	Waste Water Infrastructure	Sewerage	Londonderry DAP: Strathfoyle & Drumahoe Work package: Caw PS	0.00	1085.51	0.00	7.41	849.89	21	10	59	10		0	0	0	0	0	0		0	0	0	0	0	0	0	1430
KL342	KL451		sewerage	Waste Water Infrastructure	Sewerage	Londonderry DAP: Strathfoyle & Drumahoe Work package: CSO Abandonm	0.00	1117.29	0.00	2.78	74.06	70	0	30	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL342	KL452		sewerage	Waste Water Infrastructure	Sewerage	Campsie SPS Emergency O/F Redirection.	0.00	14.83	0.00	15.74	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	63
KL342	KL455		sewerage	Waste Water Infrastructure	Sewerage	Londonderry DAP: Sewers Rehab Phase1	0.00	2450.37	0.00	22.22	171.60	5	57	33	5		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL342	KL456		sewerage	Waste Water Infrastructure	Sewerage	Londonderry DAP: Sewers Rehab Phase2	0.00	1038.65	0.00	14.81	142.70	5	68	22	5		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL342	KL457		sewerage	Waste Water Infrastructure	Sewerage	Londonderry DAP: Storm Screening	0.00	540.89	0.00	106.46	434.43	100	0	0	0		0	0	0	0	0	0		0	7	0	0	0	0	0	0
KL342	KL468		sewerage	Waste Water Infrastructure	Sewerage	Strathfoyle, Londonderry Siphon Inlet Screen	0.00	276.20	0.00	0.00	23.48	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL345			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Donnybrewer WwTW	6607.10	1432.68	22.77	38.88	1371.03	67	20	0	13		0	0	0	1	5500	0		0	0	0	0	0	0	0	0
KL350			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Benone Area Sewerage	6180.49	6052.80	18.03	69.43	6.32	63	0	0	37		0	0	0	1	8375	0		0	0	0	0	0	0	0	0
KL362			sewerage	Waste Water Infrastructure	Sewerage	Straidarran	475.61	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL363			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Feeny WwTW	1424.46	708.34	0.00	79.61	560.87	0	67	0	33		0	1	586	0	0	0		0	0	0	0	0	0	0	2620
KL365			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Claudy WwTW	1348.89	828.34	824.63	3.70	0.00	43	25	0	32		0	0	0	1	2817	0		0	0	0	0	0	0	0	0
KL370			sewerage	Waste Water Infrastructure	Sewerage	New Buildings Drainage Area Plan	13362.23	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL371			sewerage	Waste Water Infrastructure	Sewerage	Ballykelly Drainage Area Plan	1348.92	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL372			sewerage	Waste Water Infrastructure	Sewerage	Dungiven Drainage Area Plan	579.45	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL373			sewerage	Waste Water Infrastructure	Sewerage	Eglinton DAP	1231.30	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL375			sewerage	Waste Water Infrastructure	Sewerage	Limavady Drainage Area Plan	1157.02	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL375	KL431		sewerage	Waste Water Infrastructure	Sewerage	Limavady DAP stage 1	0.00	828.54	3.80	45.36	776.73	32	22	23	23		0	0	0	0	0	0		0	0	0	0	0	655	0	0
KL375	KL459		sewerage	Waste Water Infrastructure	Sewerage	Limavady DAP: Stage 2, Roe Mill Road Sewer Upgrades	0.00	757.48	0.00	29.62	723.45	50	8	21	21		0	0	0	0	0	0		0	1	165	0	0	367	0	203
KL376			sewerage	Waste Water Infrastructure	Sewerage	Glengalliagh Pumping Station and Pumping Main	54.34	3967.12	3.80	71.28	39.74	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL380			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Killea WwTW	537.45	0.95	0.95	0.00	0.00	0	73	0	27		0	1	3	0	0	0		0	0	0	0	0	0	0	0
KL380	KG145		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Derrytrasna WwTW Upgrade	0.00	465.57	0.00	0.93	192.38	69	6	0	25		0	1	300	0	0	0		0	0	0	0	0	0	0	0
KL381			sewerage	Waste Water Infrastructure	Sewerage	Greysteel Drainage Area Plan	483.23	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL384			sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Pennyburn Pumping Station	1663.75	2673.72	2249.00	416.59	8.13	35	18	0	47		0	0	0	0	0	0		0	1	0	0	0	0	0	0
KL386			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Gortnahey WwTW	2105.94	2246.31	6.64	3.70	1.81	65	0	0	35		0	1	280	0	0	0		0	0	0	0	0	0	0	0
KL393			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballymonie WwTW	1836.76	829.88	0.00	39.81	384.75	61	0	0	39		0	1	830	0	0	0		0	0	0	0	0	0	0	0
KL394			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Drumsurn WwTW	1771.93	1936.54	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL403			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Aghnaloo WwTW	2923.02	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL404			sewerage	Waste Water Infrastructure	Sewerage	Ardan Road Culmore Foul and Storm Sewer Extension	109.61	58.71	0.00	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL407			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	BALLYKELLY WwTW	5251.25	2302.99	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KL410			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Ballycoleman, Strabane Flood Alleviation Scheme	1516.32	1647.50	56.94	1335.86	254.70	0	19	57	24		0	0	0	0	0	24		0	0	0	0	0	0	0	338.5
KL414			sewerage	Waste Water Infrastructure	Sewerage	Drumahoe Sewerage Scheme SPS	2065.04	1653.73	514.33	1094.24	45.16	0	30	0	70		0	0	0	1	8000	0		0	0	0	0	0	0	0	900
KL416			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Park WWTW	1009.41	2015.17	490.61	1407.15	117.41	33	16	0	51		0	1	766	0	0	0		0	0	0	0	0	0	0	0
KL417			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Londonderry Sewer Imps Stage 1 - Victoria Market Pumping Station and Fah	3653.31	4083.50	1356.04	2475.47	251.99	27	0	39	34		0	0	0	0	0	37		0	0	0	0	0	0	0	0
KL418			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Londonderry Sewer Imps Stage 1 - Gransha Pumping Station	1503.01	1406.99	107.23	1299.76	0.00	0	29	11	60		0	0	0	0	0	0		0	0	0	0	0	0	0	432
KL419			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Londonderry Sewer Imps Stage 1 - Strathfoyle Siphon Storage Tank L'Derry	763.74	1013.71	568.42	445.29	0.00	26	15	0	59		0	0	0	0	0	0		0	1	0	0	0	0	0	24
KN142			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Strabane Back Drainage	1413.75	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN143			sewerage	Waste Water Infrastructure	Sewerage	Castlederg	508.78	514.65	0.00	0.00	27.10	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN157			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Cranagh WwTW	783.20	383.46	12.34	49.99	269.15	66	0	0	34		0	1	45	0	0	0		0	0	0	0	0	0	0	788
KN179			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballymagory WwTW	473.82	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN533			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Rousky Sewerage Scheme	468.80	289.79	3.80	28.70	144.51	48	5	0	47		0	1	37	0	0	0		0	0	0	0	0	0	0	0
KN534			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Tattyreagh WwTW	475.61	1.85	0.00	1.85	0.00	30	0	0	70		0	1	470	0	0	0		0	0	0	0	0	0	0	0
KN537			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Clanabogan RBC Installations West & South	2231.57	1878.14	3.80	-10.18	4.52	10	40	0	50		0	1	250	0	0	0		0	0	0	0	0	0	0	0
KN540			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Roscavey WwTW	462.05	462.32	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN543			sewerage	Waste Water Infrastructure	Sewerage	Milltown/Burndennett	416.44	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN544			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Cullion WwTW	1321.38	1295.88	46.50	-0.93	0.00	0	80	0	20		0	1	87	0	0	0		0	0	0	0	0	0	0	0
KN548			sewerage	Waste Water Infrastructure	Sewerage	Castlederg Drainage Area Plan	703.13	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN549			sewerage	Waste Water Infrastructure	Sewerage	Newtownstewart Drainage Area Plan	374.95	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN550			sewerage	Waste Water Infrastructure	Sewerage	Sion Mills Drainage Area Plan	500.91	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN551			sewerage	Waste Water Infrastructure	Sewerage	Fintona Drainage Area Plan	519.92	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN552			sewerage	Waste Water Infrastructure	Sewerage	Omagh Drainage Area Plan	2172.13	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN553			sewerage	Waste Water Infrastructure	Sewerage	Strabane Drainage Area Plan	5928.19	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN556			sewerage	Waste Water Infrastructure	Sewerage	Mountfield WwTW	1544.92	306.47	5.69	223.11	77.67	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	490	1878
KN557			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Eskragh/Newtownsaville WwTW	868.87	469.68	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN558			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Sion Mills WwTW	890.92	1087.40	1083.70	3.70	0.00	45	32	0	23		0	0	0	1	3350	0		0	0	0	0	0	0	0	0
KN559			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Plumbridge	835.28	607.76	0.00	5.55	33.42	0	100	0	0		0	1	500	0	0	0		0	0	0	0	0	0	0	0
KN568			sewerage	Waste Water Infrastructure	Sewerage	Donagheday Rd, Strabane	55.10	76.84	75.92	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN570			sewerage	Waste Water Infrastructure	Sewerage	Castlefin Road, Castlederg, Storm Sewer Extension	40.41	35.23	0.00	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN571			sewerage	Waste Water Infrastructure	Sewerage	Derry Road Storm Sewer	45.70	47.38	43.65	4.63	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	263
KN572			sewerage	Waste Water Infrastructure	Sewerage	Erganagh Road, Castlederg Storm Sewer	94.56	-2.85	-2.85	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN574			sewerage	Waste Water Infrastructure	Sewerage	Ballybrack Road Foul Sewer Extension	19.65	89.41	0.00	0.00	89.41	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	449
KN576			sewerage	Management and General	Sewerage Management and General	Victoria Bridge Rationalisation	1837.54	1750.40	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN580			sewerage	Waste Water Infrastructure	Sewerage	Orchard Road, Strabane	12.57	0.00	0.00	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN582			sewerage	Waste Water Infrastructure	Sewerage	Dublin Road, Newtownstewart Storm Sewer	45.79	18.22	0.00	6.48	11.74	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KN583			sewerage	Waste Water Infrastructure	Sewerage	Beragh Foul & Storm Sewer	77.81	80.66	42.70	37.96	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	615
KO038			sewerage	Waste Water Infrastructure	Sewerage	Bowens	34.75	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KO105			sewerage	Waste Water Infrastructure	Sewerage	Sleepy Valley Richill	28.23	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KO172			sewerage	Waste Water Infrastructure	Sewerage	Hill St / William St/ Anne St Milford	300.59	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KO172	KC397		sewerage	Waste Water Infrastructure	Sewerage	Castlerock Road Coleraine - Storm Sewer	0.00	558.10	12.34	10.18	535.59	94	6	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	984
KO205			sewerage	Waste Water Infrastructure	Sewerage	Dungannon Road, Moy, Storm Sewer Extension	19.14	16.88	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KP298			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Irvinestown WwTW	1216.19	736.33	613.97	17.59	104.77	41	26	0	33		0	0	0	1	3549	0		0	0	0	0	0	0	0	0
KP299			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Enniskillen WwTW	12428.03	13261.80	4682.10	7346.79	1199.42	38	24	0	38		0	0	0	1	35830	0		0	0	0	0	0	0	0	0
KP339			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Lisnarick/Castlearchdale WwTW	1965.59	2554.64	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KP343			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Letterbreen WwTW RBC Installations Additional	720.94	597.66	571.27	8.33	18.06	37	8	0	55		0	1	513	0	0	0		0	0	0	0	0	0	0	422
KP346			sewerage	Waste Water Infrastructure	Sewerage	Fivemiletown Drainage Area Plan	497.73	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KP347			sewerage	Waste Water Infrastructure	Sewerage	Irvinestown Drainage Area Plan	695.45	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KP348			sewerage	Waste Water Infrastructure	Sewerage	Lisnaskea Drainage Area Plan	1128.81	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KP350			sewerage	Waste Water Infrastructure	Sewerage	Ballinaleck - RBC Installations West & South	1208.52	1374.99	1258.30	118.50	-1.81	0	4	0	96		0	0	0	0	0	0		0	0	0	0	0	0	0	5500
KP351			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Derrylin WwTW	5683.98	3238.37	1485.10	1563.60	189.67	13	12	0	75		0	0	0	1	1969	0		0	0	0	0	0	0	0	0
KP363			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Donagh WWTWs	472.18	471.31	0.00	4.63	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KP366			sewerage	Waste Water Infrastructure	Sewerage	Kinoughtra, Teemore Storm Sewer Extension	44.79	33.26	35.11	-1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	182
KP368			sewerage	Waste Water Infrastructure	Sewerage	Killynure, Tempo Road, Enniskillen SPS Overflow Pipe	7.82	-1.87	-0.95	-0.93	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KP370			sewerage	Management and General	Sewerage Management and General	Tamlaght WWTW	1247.80	1318.19	7.59	0.93	13.55	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KP372			sewerage	Waste Water Infrastructure	Sewerage	Factory Road Enniskillen Storm Sewer Ext	31.34	42.93	1.90	0.00	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KP373			sewerage	Waste Water Infrastructure	Sewerage	Galliagh Park Enniskillen Replacement Sewers□□	20.57	394.81	126.21	274.02	-5.42	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	28	0	97
KP374			sewerage	Waste Water Infrastructure	Sewerage	Teemore SPS pumps and pumping main replacement	240.47	47.45	47.45	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	465	0	0
KR203			sewerage	Waste Water Infrastructure	Sewerage	Kensington Gardens Flood Relief	430.83	589.03	0.00	43.51	545.52	0	0	100	0		0	1	1600	0	0	0		0	0	0	0	0	1290	0	184
KR255			sewerage	Waste Water Infrastructure	Sewerage	Belfast Sewers Project	123147.50	120438.11	53511.10	45772.08	20026.19	64	10	15	11		0	0	0	0	0	0		0	0	0	0	0	4937	4297	9257
KR274			sewerage	Management and General	Sewerage Management and General	East Belfast Drainage Area Plan	6576.37	37.96	37.96	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR274	KR401		sewerage	Waste Water Infrastructure	Sewerage	East Belfast Phase 1	0.00	662.64	0.00	173.12	489.52	0	90	10	0		0	0	0	0	0	0		0	0	0	0	0	132	514	241
KR286			sewerage	Management and General	Sewerage Management and General	Drainage Area Studies	134.29	49.58	58.83	-9.26	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR289			sewerage	Waste Water Infrastructure	Sewerage	East Carryduff Trunk sewer	391.76	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR296			sewerage	Waste Water Infrastructure	Sewerage	Whitehead Drainage Area Plan	1925.10	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR297			sewerage	Waste Water Infrastructure	Sewerage	Newtownbreda Drainage Area Plan	1312.42	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR298			sewerage	Waste Water Infrastructure	Sewerage	Upper Falls DAP	8364.07	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR299			sewerage	Waste Water Infrastructure	Sewerage	Whitehouse Drainage Area Plan	9884.88	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR299	KN595	KN595	sewerage	Waste Water Infrastructure	Sewerage	Brookmount Road - Hunters Cresent Sewer Replacement	0.00	1370.28	112.92	24.07	6.32	15	9	68	8		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR299	KR385	KR385	sewerage	Waste Water Infrastructure	Sewerage	Ormeau Road Storm Separation	0.00	1001.88	16.13	497.13	488.62	100	0	0	0		0	0	0	0	0	0		0	1	0	0	0	844	0	425
KR299	KR403		sewerage	Waste Water Infrastructure	Sewerage	Whitehouse DAP Phase 1	0.00	1189.52	0.00	436.03	365.79	70	5	20	5		0	0	0	0	0	0		0	0	0	0	0	0	50	140
KR299	KR408	KR408	sewerage	Waste Water Infrastructure	Sewerage	Malone Road, Stranmillis Road, Cranmore Park Hydraulic Upgrades	0.00	34.66	0.00	13.89	20.77	11	0	89	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR300			sewerage	Waste Water Infrastructure	Sewerage	Carrickfergus Drainage Area Plan	11935.74	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR300	KR402		sewerage	Waste Water Infrastructure	Sewerage	Joymount Carrick DAP Phase 1	0.00	1267.28	17.08	149.97	961.89	0	35	52	13		0	0	0	0	0	0		0	0	0	0	0	81	280	223
KR301			sewerage	Waste Water Infrastructure	Sewerage	Greencastle Drainage Area Plan	82.26	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR302			sewerage	Waste Water Infrastructure	Sewerage	Dunmurry Drainage Area Plan	3602.59	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR302	KR404		sewerage	Waste Water Infrastructure	Sewerage	Dunmurray DAP Phase 1	0.00	791.74	18.03	690.61	83.09	6	31	57	6		0	0	0	0	0	0		0	1	0	0	0	280	454	450
KR303			sewerage	Waste Water Infrastructure	Sewerage	Greenisland Drainage Area Plan	704.15	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR309			sewerage	Waste Water Infrastructure	Sewerage	Belvoir Park Trunk Sewer	2541.40	1626.70	14.23	160.16	1416.18	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	506	0	0
KR310			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Newtownbreda WwTW	5216.97	4966.36	13.29	116.65	528.36	73	12	0	15		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR313			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Lisbarnet WwTW	2427.49	3853.90	853.10	815.59	2165.82	32	15	0	53		0	1	1100	0	0	0		0	0	0	0	0	0	0	1355
KR319			sewerage	Waste Water Infrastructure	Sewerage	Flood R M Ph 2	281.29	17.81	33.21	-1.85	-13.55	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	215
KR323			sewerage	Waste Water Infrastructure	Sewerage	Ligoniel Sewerage Scheme	485.62	1039.87	970.77	55.55	13.55	0	56	0	44		0	0	0	0	0	0		0	0	0	0	0	0	0	205
KR328			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Belfast WWTW's Screenings Strainer Wash	685.58	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR333			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Newtownbreda, Dunmurry, New Holland WWTWs - Nutrient Removal	5276.81	681.87	299.87	368.45	13.55	100	0	0	0		0	0	0	3	170000	0		0	0	0	0	0	0	0	0
KR341			sewerage	Waste Water Infrastructure	Sewerage	Demesne Road Holywood Foul & Storm Sewer	60.61	51.08	44.60	6.48	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	128
KR342			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Belfast Lough North Shore WwTW	10414.41	2088.66	1956.73	113.87	18.06	54	38	0	8		0	0	0	2	7750	0		0	0	0	0	0	0	0	0
KR342	KB436		sewerage	Waste Water Infrastructure	Sea outfalls and headworks	Whitehead, Ballystruder & Ballycarry Rationalisation	0.00	7427.69	92.05	162.01	662.93	78	10	0	12		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR357			sewerage	Waste Water Infrastructure	Sewerage	Loughview Terrace Greenisland Storm Sewer	63.04	34.21	36.06	-1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	160
KR368			sewerage	Waste Water Non Infrastructure	Sludge Treatment Works	Belfast WWTW Sludge Tanks Refurbishment	293.10	3.80	3.80	0.00	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR370			sewerage	Waste Water Non Infrastructure	In-line pumping stations	River Terrace Storm Water Pumping Station Review	508.78	-9.44	-7.59	-1.85	0.00	0	20	60	20		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KR375			sewerage	Waste Water Infrastructure	Sewerage	216-228 Belmont Road, Belfast Sewer Rehabilitation	508.78	32.36	0.00	30.55	1.81	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	108	0	54

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
												Current Capital Investment Driver Allocation (%)														Actual Project Outputs					
									Current/Actual Project Expenditure [06/07£k]							Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d]		WwTW (>250pe) compliance with Water Order Consents		WwTW passing UWWTD numeric consents		Internal sewer flooding (DG5) caused by overload				Water Distribution Network			Sewerage Network		
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	2008	2009	2010	Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]	Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
KS111			sewerage	Waste Water Infrastructure	Sewerage	Ards South, Portavogie, Ballyhalbert, Cloughey,Kirkistown	10630.49	6442.41	-10.44	49.06	261.02	80	20	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS111	KR389		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballyhalbert WwTW Interim Solution	0.00	4468.63	87.30	375.86	1556.18	66	17	0	17		0	0	0	1	2971	0		0	0	0	0	0	0	0	0
KS111	KR390		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Cloughy WwTW Interim Solution	0.00	1426.61	594.99	894.28	-96.64	42	1	0	57		0	1	1451	0	0	0		0	0	0	0	0	0	0	0
KS111	KR391		sewerage	Waste Water Infrastructure	Sewerage	Portavogie WwTW Interim Solution	0.00	2254.80	49.35	37.96	569.00	72	9	0	19		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS113			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ards North, Carrowdore, Ballywalter, Ballyhaskin	11615.41	10001.41	97.74	25.00	62.32	82	9	0	9		0	0	0	3	5507	0		0	0	0	0	0	0	0	0
KS113	KR387		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballywhiskin WwTW Interim Solution	0.00	113.30	59.78	46.29	7.23	91	0	0	9		0	1	1257	0	0	0		0	0	0	0	0	0	0	0
KS113	KR388		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballywalter WwTW Interim Solution	0.00	1992.56	591.19	1321.05	31.61	43	40	0	17		0	1	2403	0	0	0		0	0	0	0	0	0	0	1440
KS113	KR406		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Carrowdore WwTW I	0.00	31.27	29.42	1.85	0.00	100	0	0	0		0	1	1500	0	0	0		0	0	0	0	0	0	0	0
KS206			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Seahill WwTW	6833.17	4484.53	1169.10	2623.59	691.84	32	64	0	4		0	0	0	1	7825	0		0	0	0	0	0	0	0	0
KS211			sewerage	Management and General	Sewerage Management and General	Kearney WwTW	528.40	0.00	0.00	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS212			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Portaferry WwTW	5828.38	5841.47	1104.57	4163.12	259.21	21	2	0	77		0	0	0	1	4100	0		0	0	0	0	0	0	0	2655
KS215			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Annalong WwTW	3326.89	6364.28	327.39	10.18	0.90	41	59	0	0		0	0	0	1	3142	0		0	0	0	0	0	0	0	0
KS216			sewerage	Waste Water Infrastructure	Sewerage	Dunmore Sewerage - EC Compliance	152.24	205.77	0.95	1.85	121.03	0	9	0	91		0	0	0	0	0	0		0	0	0	0	0	0	0	457
KS224			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Downpatrick WwTW	9890.90	9959.54	264.76	5698.02	3932.44	23	25	0	52		0	0	0	1	31861	0		0	0	0	0	0	0	0	0
KS225			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ardglass WwTW	5684.53	3057.12	4.74	64.80	117.41	41	15	0	44		0	0	0	1	6018	0		0	0	0	0	0	0	0	0
KS235			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballygowan WwTW	2648.83	3916.03	25.62	19.44	6.32	72	28	0	0		0	0	0	1	3024	0		0	0	0	0	0	0	0	0
KS261			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballykinler WwTW	2637.88	1313.37	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS263			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Saintfield WwTW	3990.66	4784.06	260.96	2624.51	1686.24	53	33	0	14		0	0	0	1	4170	0		0	0	0	0	0	0	0	0
KS272			sewerage	Waste Water Infrastructure	Sewerage	Russell Pk sew pumping main	1060.26	1151.10	17.08	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS273			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Comber Rd/Portaferry Rd Newtownards SPS	1047.06	2022.04	0.00	473.99	1548.05	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS275			sewerage	Waste Water Infrastructure	Sewerage	Bangor DAP	3793.94	146.14	146.14	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS275	KR399		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Ballyholme (Bangor) DAP Phase 1	0.00	2583.25	53.14	1004.44	1461.34	56	35	9	0		0	0	0	0	0	0		0	3	0	0	0	1320	0	140
KS275	KR400		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Lukes Point (Bangor) DAP Phase 1	0.00	1643.47	9.49	165.71	914.92	54	46	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS278			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Strangford WwTW	1903.50	2196.91	1691.97	46.29	43.35	28	23	0	49		0	0	0	1	1216	0		0	0	0	0	0	0	0	3000
KS279			sewerage	Waste Water Infrastructure	Sewerage	Greyabbey DAP	249.79	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS279	KS812		sewerage	Waste Water Infrastructure	Sewerage	Greyabbey DAP Phase 1	0.00	419.87	0.00	15.74	0.00	76	20	4	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS280			sewerage	Waste Water Infrastructure	Sewerage	Kircubbin DAP	203.30	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS281			sewerage	Waste Water Infrastructure	Sewerage	Portaferry DAP	622.04	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS281	KS811		sewerage	Waste Water Infrastructure	Sewerage	Portaferry DAP Phase 1	0.00	609.98	0.00	606.37	3.61	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	560	0	1122
KS282			sewerage	Waste Water Infrastructure	Sewerage	Ballyhalbert DAP	213.13	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS283			sewerage	Waste Water Infrastructure	Sewerage	Ballywalter DAP	273.91	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS283	KR440		sewerage	Waste Water Infrastructure	Sewerage	Ballywalter DAP Stage 1	0.00	297.96	0.00	0.00	41.55	80	20	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS284			sewerage	Waste Water Infrastructure	Sewerage	Portavogie DAP	678.21	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS285			sewerage	Waste Water Infrastructure	Sewerage	Donaghadee DAP	2867.46	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS286			sewerage	Waste Water Infrastructure	Sewerage	Millisle DAP	2523.68	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS286	KR439		sewerage	Waste Water Infrastructure	Sewerage	Millisle DAP Stage 2	0.00	1211.65	0.00	0.93	8.13	80	0	20	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS286	KS804		sewerage	Waste Water Infrastructure	Sewerage	Millisle DAP - Phase 1	0.00	230.71	18.98	200.89	10.84	25	50	25	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS287			sewerage	Management and General	Sewerage Management and General	Newtownards/Comber DAP	5041.72	28.47	28.47	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	1	0	0	0	0	0	0
KS288			sewerage	Waste Water Infrastructure	Sewerage	Ardglass DAP	802.58	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS289			sewerage	Waste Water Infrastructure	Sewerage	Ballygowan DAP	189.80	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS290			sewerage	Waste Water Infrastructure	Sewerage	Downpatrick Sewer Network Imps	6561.02	569.00	205.92	222.18	140.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	60	800	0
KS290	KS372		sewerage	Waste Water Infrastructure	Sewerage	Market Street SPS Upgrade, Downpatrick	0.00	3154.83	6.64	18.52	217.67	84	7	9	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS290	KS373		sewerage	Waste Water Infrastructure	Sewerage	Church Street SPS Upgrade, Downpatrick	0.00	945.94	5.69	21.29	-0.90	66	27	7	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS291			sewerage	Waste Water Infrastructure	Sewerage	Saintfield DAP	828.26	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS292			sewerage	Waste Water Infrastructure	Sewerage	Ballynahinch DAP	962.93	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS293			sewerage	Waste Water Infrastructure	Sewerage	Crossgar DAP	684.86	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS294			sewerage	Waste Water Infrastructure	Sewerage	Killyleagh DAP	772.57	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS295			sewerage	Waste Water Infrastructure	Sewerage	ANNALONG DAP	746.05	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS296			sewerage	Waste Water Infrastructure	Sewerage	Dundrum DAP Civil Works	381.23	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS297			sewerage	Waste Water Infrastructure	Sewerage	Kilkeel Drainage Area Plan	2566.06	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS297	KV135		sewerage	Waste Water Infrastructure	Sewerage	Bartley Park Kilkeel Sewer Replacements And Watermain Extension	0.00	281.05	7.59	3.70	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS298			sewerage	Waste Water Infrastructure	Sewerage	South Promenade Sewer repl	3739.33	-8.54	-8.54	0.00	0.00	40	30	20	10		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS298	KS376		sewerage	Waste Water Infrastructure	Sewerage	Newcastle Sewer Networks Improvements	0.00	223.92	139.50	91.65	-7.23	0	100	0	0		0	0	0	0	0	0		0	3	0	0	0	140	830	0
KS298	KS377		sewerage	Waste Water Infrastructure	Sewerage	Downs Road/Castle Park Sewer Upgrade/ Attenuation	0.00	2677.11	184.10	64.80	71.35	70	24	0	6		0	0	0	0	0	0		0	0	0	0	0	0	0	30
KS298	KS378		sewerage	Waste Water Infrastructure	Sewerage	Burren River SPS Upgrades & Networks Improvements	0.00	779.63	17.08	529.53	233.02	37	7	56	0		0	0	0	0	0	0		0	2	0	0	0	0	0	310
KS302			sewerage	Waste Water Infrastructure	Sewerage	Seahill Sewer Network Improvements	3504.89	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS304			sewerage	Waste Water Infrastructure	Sewerage	Ballystrudder Sewerage Scheme	293.50	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS307			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Lougheries WwTW	473.82	341.58	0.00	5.55	12.64	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS309			sewerage	Waste Water Infrastructure	Sewerage	Raholp WwTW	1576.04	911.58	642.44	222.18	46.97	48	52	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS310			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Clough WwTW	2500.40	3174.92	19.93	432.33	2705.92	20	30	0	50		0	2	994	0	0	0		0	0	0	0	0	0	0	2320
KS326			sewerage	Waste Water Infrastructure	Sewerage	Commons Road, Ballykinlar Storm Sewer	70.65	191.01	9.49	-0.93	182.44	0	9	0	91		0	0	0	0	0	0		0	0	0	0	0	254	0	20
KS328			sewerage	Waste Water Infrastructure	Sewerage	Delinvilla Lane Dundrum Storm Sewer	184.70	200.80	4.74	2.78	193.28	0	26	0	74		0	0	0	0	0	0		0	0	0	0	0	215	0	88
KS329			sewerage	Waste Water Infrastructure	Sewerage	Newcastle & Council Roads, Kilkeel Storm Sewer Upgrade	189.27	5.42	0.00	0.00	5.42	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS330			sewerage	Waste Water Infrastructure	Sewerage	Manse Road, Kilkeel Storm Sewer Upgrade	127.09	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS342			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Ballyloughlin Rd, Maghera SPS Rationalisation	102.21	133.12	0.95	2.78	30.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS343			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Castlewellan Rd, Clough SPS Upgrade	34.78	3.70	0.00	3.70	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS344			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Oaklands, Darragh Cross SPS Upgrade	33.69	28.00	-0.95	1.85	27.10	0	100	0	0		0	0	0	0	0	0		0	1	0	0	0	0	0	0
KS345			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Maymore, Killyleagh SPS Upgrade	108.69	12.78	2.85	2.78	4.52	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS347			sewerage	Waste Water Infrastructure	Sewerage	Crossgar Road, Ballynahinch Storm Sewer	11.32	157.34	4.74	1.85	2.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS351			sewerage	Waste Water Infrastructure	Sewerage	Abbey Park, Kilkeel Storm Sewer Extension	33.97	0.90	-0.95	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS355			sewerage	Management and General	Sewerage Management and General	Ballynahinch WwTW	4344.57	1936.33	4.74	5.55	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS356			sewerage	Management and General	Sewerage Management and General	Killyleagh WwTW	5925.95	2189.20	0.95	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS357			sewerage	Waste Water Infrastructure	Sewerage	Sketrick Island, Whiterock Sewerage Facilities	151.29	55.99	55.99	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	730
KS359			sewerage	Waste Water Infrastructure	Sea outfalls and headworks	Briggs Rock Outfalls	537.47	45.17	-88.25	-10.18	143.61	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS362			sewerage	Waste Water Infrastructure	Sewerage	Station Road, Crossgar Replacement Sewer	46.72	82.90	44.60	14.81	23.48	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	81	64	26
KS363			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Kilmore WwTW	472.18	489.96	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS367			sewerage	Waste Water Infrastructure	Sewerage	Middle Tollymore Road, Newcastle Sewer Replacement	13.19	-1.92	-2.85	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS370			sewerage	Waste Water Infrastructure	Sewerage	Drumaness Drainage Area Study	368.83	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS371			sewerage	Waste Water Infrastructure	Sewerage	Killinchy Street Comber Storm Sewer	96.72	69.73	3.80	0.00	65.93	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	180
KS381			sewerage	Waste Water Infrastructure	Sewerage	North Road, Newtownards Storm	118.08	200.01	7.59	1.85	190.57	0	57	0	43		0	0	0	0	0	0		0	0	0	0	0	0	0	684
KS382			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Crossgar Sewage Pumping Station Improvements	94.56	98.05	0.00	0.00	9.93	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KS384			sewerage	Waste Water Infrastructure	Sewerage	Darragh Cross WwTw	712.54	819.77	28.47	653.58	119.22	71	9	0	20		0	0	0	0	0	0		0	0	0	0	0	0	0	2050
KT098			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Annahilt WwTW	5108.86	4271.80	630.10	2710.61	927.57	37	39	0	24		0	1	1885	0	0	0		0	0	0	0	0	0	0	0
KT098	KT143		sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Poundburn WWTW	0.00	718.04	93.00	224.03	401.01	53	38	0	9		0	0	0	0	0	0		0	1	0	0	0	0	0	0
KT102			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Dunmurry WwTW Modifications	8486.48	4706.34	19.93	28.70	180.64	76	17	0	7		0	0	0	1	50000	0		0	0	0	0	0	0	0	0
KT112			sewerage	Management and General	Sewerage Management and General	Mullaghglass WwTW	555.42	589.47	7.59	-1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT113			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ravarnet WwTW	349.37	582.84	9.49	14.81	537.39	58	42	0	0		0	1	635	0	0	0		0	0	0	0	0	0	0	0
KT114			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Hillsborough WwTW	2905.98	1592.95	0.00	11.11	44.26	86	14	0	0		0	0	0	1	4046	0		0	0	0	0	0	0	0	0
KT118			sewerage	Waste Water Infrastructure	Sewerage	Lisburn Drainage Area Plan	17622.31	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT119			sewerage	Waste Water Infrastructure	Sewerage	Hillsborough	3489.59	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT120			sewerage	Management and General	Sewerage Management and General	Drumlough WwTW	445.12	13.22	10.44	2.78	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT122			sewerage	Management and General	Sewerage Management and General	Drumbeg WwTW	1104.27	1124.45	5.69	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT123			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Edenderry WwTW	382.12	323.31	18.98	40.73	258.31	100	0	0	0		0	1	350	0	0	0		0	0	0	0	0	0	0	0
KT124			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Dromara WwTW	2139.29	2812.64	780.98	910.02	1117.23	52	41	0	7		0	1	1800	0	0	0		0	0	0	0	0	0	0	0
KT125			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Hook's Corner WwTW	1062.79	1329.27	0.00	6.48	405.53	85	15	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT126			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Stoneyford WwTW	1044.59	1124.27	0.00	5.55	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT128			sewerage	Waste Water Infrastructure	Sewerage	Thornleigh Park, Lisburn Foul & Storm Sewer Upgrade	103.25	112.33	92.05	18.52	0.00	0	100	0	0		0	0	0	0	0	2		0	0	0	0	0	425	0	0
KT129			sewerage	Waste Water Infrastructure	Sewerage	Lisburn Road, Hillsborough, Tank Sewer	76.63	0.05	0.00	1.85	-1.81	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT130			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Mill Turn Dromore SPS Upgrade	168.94	22.73	20.88	1.85	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT131			sewerage	Waste Water Infrastructure	Sewerage	South Lisburn Maze Area Infrastructure Appraisal	32489.60	17273.17	272.35	120.35	56.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT133			sewerage	Waste Water Infrastructure	Sewerage	North Lisburn Development Sewerage Facilities	472.14	9.40	5.69	3.70	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT134			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Lower Ballinderry WWTW	303.61	1256.99	21.83	872.99	362.17	54	19	0	27		0	1	800	0	0	0		0	0	0	0	0	0	0	0
KT138			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Beechlawn SPS Hillsborough Upgrade	88.04	527.58	0.00	8.33	6.32	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT139			sewerage	Waste Water Non Infrastructure	In-line pumping stations	River Road SPS Upgrade	90.21	388.12	0.00	2.78	11.74	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT140			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Hugenot drive Lisburn SPS Upgrade	153.25	2170.81	143.29	1587.67	439.85	100	0	0	0		0	0	0	1	36000	0		0	1	0	0	0	19	0	183
KT144			sewerage	Waste Water Infrastructure	Sewerage	The Square, Hillsborough Storm Sewer Ext.	31.99	31.66	8.54	22.22	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KT177			sewerage	Waste Water Infrastructure	Sewerage	Annahilt Drainage Area Plan	516.44	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV008			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Dromore WwTW	3164.70	4448.22	3871.70	530.46	46.06	18	20	0	62		0	0	0	1	8685	0		0	0	0	0	0	0	0	0
KV009			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Gilford WwTW	1352.85	1838.55	280.89	1394.19	163.48	37	26	0	37		0	0	0	1	3262	0		0	0	0	0	0	0	0	0
KV012			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Crossmaglen WwTW	1707.43	1860.35	40.80	693.39	1121.75	27	35	0	38		0	0	0	1	3804	0		0	1	0	0	0	0	0	0
KV013			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Rostrevor Sewerage Scheme	499.96	927.91	743.03	174.04	10.84	62	35	0	3		0	0	0	0	0	0		0	2	0	0	0	0	0	158
KV014			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Castlewellan WwTW	3460.45	4690.99	1727.08	2512.50	444.36	63	10	0	27		0	0	0	2	6334	0		0	1	0	0	0	95	0	1205
KV021			sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Lenaderg + Seapatrick SPSs	183.14	196.46	197.38	-0.93	0.00	61	24	0	15		0	0	0	0	0	0		0	0	0	0	0	0	0	80
KV022			sewerage	Waste Water Infrastructure	Sewerage	Gilford Drainage Area Plan	1251.80	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV023			sewerage	Waste Water Infrastructure	Sewerage	Castlewellan DAP	433.90	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV024			sewerage	Waste Water Infrastructure	Sewerage	Dromore Drainage Area Plan	1472.26	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV024	KV148		sewerage	Waste Water Infrastructure	Sewerage	Dromore (Co Down) DAP Phase 1	0.00	34.32	0.00	37.03	-2.71	68	30	2	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV025			sewerage	Waste Water Infrastructure	Sewerage	Crossmaglen Drainage Area Plan	461.14	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV026			sewerage	Waste Water Infrastructure	Sewerage	Warrenpoint Drainage Area Plan	5549.18	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV026	KV145		sewerage	Waste Water Infrastructure	Sewerage	Charlotte Street/Newry Road Warrenpoint Proposed Sewer Improvements	0.00	624.17	1.90	261.99	356.76	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	623

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
												Current Capital Investment Driver Allocation (%)														Actual Project Outputs					
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	Current/Actual Project Expenditure [06/07£k]			Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d]		WwTW (>250pe) compliance with Water Order Consents		WwTW passing UWWTD numeric consents		Internal sewer flooding (DG5) caused by overload		Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Water Distribution Network			Sewerage Network		
									2008	2009	2010					Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]			Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
KV027			sewerage	Waste Water Infrastructure	Sewerage	Bessbrook Drainage Area Plan	317.69	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV028			sewerage	Waste Water Infrastructure	Sewerage	Rathfriland Drainage Area Plan	118.65	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV031			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Hilltown WwTW	1277.79	1362.57	1146.33	200.89	15.35	45	19	0	36		0	0	0	1	24000	0		0	0	0	0	0	0	0	0
KV032			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Meigh WwTW	1403.90	1875.96	3.80	-1.85	0.00	0	0	0	100		0	1	1000	0	0	0		0	0	0	0	0	0	0	0
KV033			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Warrenpoint WwTW	5422.92	2848.24	883.47	1760.79	198.70	43	35	0	22		0	0	0	1	10500	0		0	0	0	0	0	0	0	0
KV041			sewerage	Management and General	Sewerage Management and General	Drumintee WwTW	433.34	0.93	0.00	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV042			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Cullaville WwTW	472.83	958.57	706.02	208.29	44.26	63	24	0	13		0	0	0	1	343	0		0	0	0	0	0	0	0	0
KV043			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Poyntzpass WwTW	1373.53	6.55	2.85	3.70	0.00	0	0	0	100		0	1	730	0	0	0		0	0	0	0	0	0	0	0
KV044			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Cullyhanna WwTW	1462.53	675.49	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV045			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Mullaghbane WwTW	875.15	883.59	0.00	-0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV048			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Sugar Island & Island Bank Catchment Sewerage Scheme	257.73	617.46	642.44	-24.07	-0.90	25	0	26	49		0	0	0	0	0	0		0	3	0	0	0	0	0	0
KV058			sewerage	Waste Water Infrastructure	Sewerage	Castlewellan Forest Park SPS	175.61	238.75	167.01	52.77	18.97	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	1328
KV061			sewerage	Waste Water Infrastructure	Sewerage	Newry Road, Camlough Foul Sewer Extension	80.44	0.93	-0.95	2.78	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV063			sewerage	Waste Water Infrastructure	Sewerage	Newry Sewerage Networks Improvements	1097.79	1431.95	507.69	248.10	269.15	21	64	0	15		0	0	0	0	0	0		0	2	0	0	0	209	0	1329
KV063	KV143		sewerage	Waste Water Infrastructure	Sewerage	Monaghan Street Sewerage System Investigation	0.00	203.00	15.18	2.78	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV067			sewerage	Waste Water Infrastructure	Sewerage	Harmony Heights, Newry Foul Sewer Extension	80.44	158.26	5.69	34.25	118.32	0	100	0	0		0	0	0	0	0	0		0	1	0	0	0	0	0	468
KV068			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Toll House Park SPS Replacement	210.59	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV069			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Carrickmacstay SPS Upgrade/Replacement	113.03	135.70	105.33	23.14	7.23	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV070			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Springfield Road Warrenpoint SPS Replacement	89.12	92.40	2.85	42.58	46.97	0	100	0	0		0	0	0	0	0	0		0	1	0	0	0	0	0	0
KV071			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Drumsesk Road & Pinewood SPS Upgrade	32.61	4.90	7.59	0.93	-3.61	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV072			sewerage	Waste Water Infrastructure	Sewerage	Rooneys Meadow Foul Sewer to Replace SPS	80.99	88.50	91.10	4.63	-7.23	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	505
KV073			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Windmill Road SPS Replacement Sewer	65.21	43.47	1.90	0.93	40.64	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV074			sewerage	Waste Water Infrastructure	Sewerage	Cambrook SPS to Green Road	92.35	305.05	7.59	49.99	247.47	0	100	0	0		0	0	0	0	0	0		0	2	0	0	253	0	0	726
KV077			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Newtownhamilton WWTW	1882.78	2221.74	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV079			sewerage	Waste Water Infrastructure	Sewerage	McShanes Road, Bessbrook Foul Sewer Extension	125.26	354.95	10.44	275.87	68.64	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	2096
KV086			sewerage	Waste Water Infrastructure	Sewerage	Banbridge By-Pass Foul Sewer Extension	239.47	-5.00	-15.18	10.18	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV089			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Dunbar Road Banbridge SPS Upgrade	185.61	91.79	0.00	2.78	0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV090			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Ballygowan Road, Banbridge SPS Proposed Upgrade	40.15	51.35	0.00	3.70	2.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV091			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Kiln Lane, Banbridge SPS Upgrade	189.27	35.31	0.00	3.70	31.61	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV092			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Bannview Heights, Banbridge SPS Upgrade	189.27	25.68	7.59	0.93	17.16	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV093			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Millstone Close, Moneyslane SPS Upgrade	194.75	160.38	0.00	133.31	26.19	0	100	0	0		0	1	537	0	0	0		0	0	0	0	0	0	0	26
KV094			sewerage	Waste Water Non Infrastructure	In-line pumping stations	Whyte Acres, Banbridge SPS Upgrade	183.78	52.52	0.95	4.63	46.06	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV095			sewerage	Waste Water Infrastructure	Sewerage	Upper Dromore Rd, Warrenpoint, Storm Sewer Extension	23.96	127.85	117.67	10.18	0.00	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	160
KV097			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Belleeks WwTW	1147.75	635.48	455.49	166.64	5.42	79	15	0	6		0	1	605	0	0	0		0	0	0	0	0	0	0	0
KV101			sewerage	Waste Water Infrastructure	Sewerage	Kilboroney Park WWTW Gravity Sewer Alternative	180.18	2.75	0.00	1.85	0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV104			sewerage	Waste Water Infrastructure	Sewerage	Loughbrickland WWTW Inlet Sewer Replacement	138.28	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV105			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Newry WwTW Extension	6110.00	9510.08	2.85	16.66	620.48	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV105	KV149		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Newry WWTW Aeration upgrade	0.00	404.28	0.00	430.48	-26.19	0	100	0	0		0	0	0	1	63200	0		0	0	0	0	0	0	0	0
KV107			sewerage	Waste Water Infrastructure	Sewerage	Banbridge Road Dromore Storm Sewer Extension	8.10	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV108			sewerage	Waste Water Infrastructure	Sewerage	School Road, Newtownhamilton Storm Sewer Wxtension	98.15	47.89	37.96	0.93	8.13	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	157
KV113			sewerage	Waste Water Infrastructure	Sewerage	Skerriff Road Cullyhanna Foul Sewer Extension	4.94	25.06	1.90	24.07	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	87
KV114			sewerage	Waste Water Infrastructure	Sewerage	Edenderry	29.95	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV115			sewerage	Waste Water Infrastructure	Sewerage	The Meadows Newry Trunk Relief Sewer	165.71	152.02	161.32	-11.11	1.81	0	0	0	100		0	0	0	0	0	4		0	0	0	0	0	0	0	710
KV117			sewerage	Waste Water Infrastructure	Sewerage	Spring Meadows/Riverfields Warrenpoint Foul Sewer Extension	3.99	39.47	30.37	2.78	6.32	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	56
KV118			sewerage	Waste Water Infrastructure	Sewerage	Hilltown Drainage Area Study	334.33	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV119			sewerage	Waste Water Infrastructure	Sewerage	Quarter Road Camlough Storm and Foul Sewer Extensions	309.31	31.29	30.37	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	112
KV120			sewerage	Waste Water Infrastructure	Sewerage	Osbourne Promenade Warrenpoint Foul Sewer Upgrade	18.28	19.47	0.00	1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV121			sewerage	Waste Water Infrastructure	Sewerage	Camlough Road Newry Storm and Foul Sewer	37.43	89.08	0.00	0.00	3.61	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV122			sewerage	Waste Water Infrastructure	Sewerage	High Street, Gilford Sewer Replacement	50.30	124.26	5.69	121.27	-2.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	128
KV124			sewerage	Waste Water Infrastructure	Sewerage	Chapeltown,Ardglass	315.19	2.85	2.85	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV124	KS807	KS807	sewerage	Waste Water Infrastructure	Sewerage	Kilkeel Harbour SPS and Sewerage Improvements	0.00	901.13	0.00	37.03	28.00	34	33	18	15		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KV125			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Forkhill	2085.25	2747.82	0.00	-0.93	0.00	100	0	0	0		0	1	730	0	0	0		0	0	0	0	0	0	0	0
KW830			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Tandragee WwTW	482.53	1816.36	1555.32	260.14	0.90	50	0	0	50		0	0	0	1	19300	0		0	0	0	0	0	0	0	0
KX042			sewerage	Waste Water Infrastructure	Sewerage	Gortnagarn, Omagh Sewerage Scheme	357.80	51.58	0.00	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX117			sewerage	Waste Water Infrastructure	Sewerage	Straidarran, Claudy, Storm Sewer	86.99	13.29	13.29	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX122			sewerage	Waste Water Infrastructure	Sewerage	Newtown Street / Patrick Street, Strabane Phase 2	91.30	93.95	-0.95	2.78	92.12	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX126			sewerage	Waste Water Infrastructure	Sewerage	Glencam Road, Omagh Storm Sewer	118.91	142.19	154.68	6.48	-18.97	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	165
KX129			sewerage	Waste Water Infrastructure	Sewerage	Irvines	77.55	66.24	0.00	0.00	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX137			sewerage	Waste Water Infrastructure	Sewerage	Grange Sewerage Scheme	240.47	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX143			sewerage	Waste Water Infrastructure	Sewerage	Primrose Park, Sionmills Sewer	17.39	-1.90	-1.90	0.00	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX734			sewerage	Waste Water Infrastructure	Sewerage	Rossary Enniskillen Sewerage Scheme	212.13	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999			sewerage	Waste Water Infrastructure	Sewerage	Sewer Maintence	26166.57	0.00	0.00	0.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA074		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Larne WwTW	0.00	175.54	152.78	7.41	15.35	46	3	0	51		0	0	0	1	25000	0		0	0	0	0	0	0	0	0
KX999	KA108		sewerage	Waste Water Infrastructure	Sewerage	Larne Town Sewer Improvements, Stage 1	0.00	16.11	13.29	4.63	-1.81	90	0	0	10		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA113		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballyclare WwTW	0.00	20.60	18.03	-5.55	8.13	52	23	0	25		0	0	0	1	25000	0		0	0	0	0	0	0	0	0
KX999	KA143		sewerage	Waste Water Infrastructure	Sewerage	Aldergrove Sewerage Scheme	0.00	2261.63	42.70	1546.94	636.74	0	20	56	24		0	0	0	0	0	0		0	0	0	0	0	129	470	5087
KX999	KA146		sewerage	Management and General	Sewerage Management and General	Ballyclare Drainage Area Plan	0.00	18.03	18.03	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA152		sewerage	Waste Water Infrastructure	Sewerage	Aldergrove Flood Alleviation	0.00	2.85	2.85	0.00	0.00	0	0	50	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA153		sewerage	Waste Water Infrastructure	Sewerage	Castledawson Sewerage Rationalisation	0.00	-84.37	-154.68	68.51	1.81	0	20	0	80		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA161		sewerage	Waste Water Infrastructure	Sewerage	Creevery Sewerage Scheme Phase II	0.00	167.75	79.71	25.00	56.00	79	13	0	8		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA166		sewerage	Waste Water Infrastructure	Sewerage	Dunadry Road, Templepatrick Foul Sewer	0.00	0.97	1.90	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA167		sewerage	Waste Water Infrastructure	Sewerage	Stile Way Antrim	0.00	-1.90	-1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA168		sewerage	Waste Water Infrastructure	Sewerage	Milltown Road Antrim	0.00	80.91	6.64	45.36	28.90	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	50	1226
KX999	KA176		sewerage	Waste Water Infrastructure	Sewerage	Drumahoe Road, Millbrook, Larne Sewerage Scheme	0.00	5.69	5.69	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA179		sewerage	Waste Water Infrastructure	Sewerage	Belfast Road Antrim Storm Sewer	0.00	-0.93	0.00	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA197		sewerage	Waste Water Infrastructure	Sewerage	The Plains, Burnside Road, Doagh, Foul Sewer Extension	0.00	66.20	0.00	0.00	4.52	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA199		sewerage	Waste Water Infrastructure	Sewerage	Antrim Rd, Aldergrove - Trunk Sewer Replacement	0.00	293.46	195.48	25.00	65.93	0	78	11	11		0	0	0	0	0	0		0	0	0	0	0	900	0	0
KX999	KA200		sewerage	Waste Water Infrastructure	Sewerage	Ballycorr Road, Ballyclare, Storm Outfall	0.00	39.00	42.70	-3.70	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	194
KX999	KA201		sewerage	Waste Water Infrastructure	Sewerage	Ballyeaston Sewage System Upgrade	0.00	228.88	0.00	8.33	10.84	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA202		sewerage	Waste Water Infrastructure	Sewerage	The Woods, Old Glenarm Road, Larne, Storm Sewer Outfall	0.00	48.56	50.29	2.78	-4.52	0	100	0	0		0	0	0	0	0	1		0	0	0	0	0	0	0	380
KX999	KA203		sewerage	Waste Water Infrastructure	Sewerage	Huntingdale Way Ballyclare - SPS Rationalisation	0.00	6.74	10.44	-3.70	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA204		sewerage	Waste Water Infrastructure	Sewerage	Bramblewood, Crumlin - Sewer Repairs	0.00	5.69	5.69	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA205		sewerage	Waste Water Infrastructure	Sewerage	Antrim Road Aldergrove Sewer Realignment	0.00	0.93	0.00	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA207		sewerage	Waste Water Infrastructure	Sewerage	Exchange Avenue, Doagh, Storm Sewer Extension	0.00	39.79	0.00	1.85	37.93	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	1070
KX999	KA208		sewerage	Waste Water Infrastructure	Sewerage	Main Street, Crumlin Storm Sewer Outfall (Tesco)	0.00	146.45	0.00	1.85	3.61	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA210		sewerage	Waste Water Infrastructure	Sewerage	Moyra Road, Brookfield, Doagh, Foul Sewer Extension	0.00	25.29	0.00	0.00	25.29	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	145
KX999	KA211		sewerage	Waste Water Infrastructure	Sewerage	Old Glenarm Road, Larne, Foul Sewer Extension	0.00	9.03	0.00	0.00	9.03	70	0	0	30		0	0	0	0	0	0		0	0	0	0	0	0	0	81
KX999	KA213		sewerage	Waste Water Infrastructure	Sewerage	Sewers Structural Rehabilitation Package 1 (Milltown, Killyneese & Portglenc	0.00	3029.55	0.00	10.18	9.93	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA216		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Carnlough WWPS Septicity Dosing	0.00	87.36	0.00	0.00	5.42	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA217		sewerage	Waste Water Infrastructure	Sewerage	Ballylagan Road Straid, Storm and Foul Sewers	0.00	46.97	0.00	0.00	46.97	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	340
KX999	KA218		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Blackcave WWPS Uprade.	0.00	393.01	0.00	0.00	73.16	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KA219		sewerage	Waste Water Infrastructure	Sewerage	Belfast Road, Antrim , Storm Sewer Extension	0.00	23.48	0.00	0.00	23.48	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	194
KX999	KA220		sewerage	Waste Water Infrastructure	Sewerage	Mill Brae, Larne , Storm Sewer Extension	0.00	12.64	0.00	0.00	12.64	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	70
KX999	KA221		sewerage	Waste Water Infrastructure	Sewerage	Croft Road, Carnlough, Flood Alleviation Scheme	0.00	55.56	0.00	0.00	1.81	0	10	90	0											0	0	0	0	0	0
KX999	KA222		sewerage	Waste Water Infrastructure	Sewerage	Granger's Mill, Muckamore, Wastewater Pumping Main Relocation	0.00	90.82	0.00	0.00	2.71	0	100	0	0											0	0	0	0	0	0
KX999	KA223		sewerage	Waste Water Infrastructure	Sewerage	252 Larne Road, Carrickfergus.	0.00	15.90	0.00	0.00	1.81	0	0	0	100											0	0	0	0	0	0
KX999	KB035		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Cookstown WwTW	0.00	158.24	41.75	110.16	6.32	76	0	0	24		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB122		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Killygonlan/Mhoe	0.00	5.74	7.59	-1.85	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB228		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Portglenone STW Part 2	0.00	29.83	37.96	0.00	-8.13	0	58	0	42		0	0	0	1	3476	0		0	0	0	0	0	0	0	0
KX999	KB265		sewerage	Management and General	Sewerage Management and General	Northern Division Sewer Studies 1 -	0.00	2.85	2.85	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB285		sewerage	Waste Water Infrastructure	Sewerage	Sandhole WwTW.	0.00	43.74	11.39	30.55	1.81	0	15	0	85		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB288		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Clunto Richardson WWTW Imps	0.00	15.21	16.13	-0.93	0.00	25	50	0	25		0	1	1450	0	0	0		0	0	0	0	0	0	0	0
KX999	KB290		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Tullaghgarley STW Phase 2	0.00	127.84	134.75	12.96	-19.87	30	25	0	45		0	0	0	1	153000	0		0	0	0	0	0	0	0	0
KX999	KB312		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Clough WwTW	0.00	18.01	17.08	0.93	0.00	61	5	0	34		0	1	1462	0	0	0		0	0	0	0	0	0	0	0
KX999	KB315		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Pomeroy WwTW	0.00	256.19	108.18	143.49	4.52	24	21	0	55		0	1	2000	0	0	0		0	0	0	0	0	0	0	0
KX999	KB317		sewerage	Waste Water Infrastructure	Sewerage	EPF Flood Alleviation Project	0.00	124.34	125.26	-0.93	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB319		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Ballymacvea WwTW Rationalisation	0.00	37.06	14.23	10.18	12.64	68	27	0	5		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB321		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Knockloughrim WwTW Outfall	0.00	12.80	-6.64	19.44	0.00	0	0	0	100		0	1	286	0	0	0		0	0	0	0	0	0	0	0
KX999	KB339		sewerage	Waste Water Infrastructure	Sewerage	EMS Environmental Protection Reclamation	0.00	29.16	18.98	10.18	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB340		sewerage	Waste Water Infrastructure	Sewerage	Killyneese WwTW Outfall	0.00	14.38	-0.95	-0.93	16.26	76	0	0	24		0	0	0	1	15000	0		0	0	0	0	0	0	0	0
KX999	KB343		sewerage	Waste Water Infrastructure	Sewerage	Moneymore WWTW inlet improvements	0.00	-48.37	-47.45	-0.93	0.00	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB345		sewerage	Waste Water Infrastructure	Sewerage	Oaklea Road, Ballyronan Sewerage Scheme	0.00	-8.56	-9.49	0.93	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB356		sewerage	Management and General	Sewerage Management and General	Northern Das Stage 3A	0.00	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB357		sewerage	Management and General	Sewerage Management and General	Northern Das Stage 4A	0.00	-8.54	-8.54	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB362		sewerage	Waste Water Infrastructure	Sewerage	Chapel Street, Cookstown	0.00	330.29	31.32	297.17	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	506
KX999	KB364		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Ballymena Sewage Pumping Station Replacement, Tullygarley	0.00	110.69	37.01	58.32	15.35	0	93	0	7		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB374		sewerage	Waste Water Infrastructure	Sewerage	Tullywiggan WwTW Improvements	0.00	16.27	21.83	-5.55	0.00	20	30	0	50		0	1	45	0	0	0		0	0	0	0	0	0	0	0
KX999	KB385		sewerage	Management and General	Sewerage Management and General	Morans Cross Sewerage Scheme	0.00	92.32	-2.85	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB387		sewerage	Waste Water Infrastructure	Sewerage	Church Street, Cookstown	0.00	52.79	3.80	46.29	2.71	20	30	10	40		0	0	0	0	0	0		0	0	0	0	0	0	0	200
KX999	KB392		sewerage	Waste Water Infrastructure	Sewerage	William Court Bellaghy - Foul and Storm Sewer Ext.	0.00	10.69	20.88	-10.18	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
												Current Capital Investment Driver Allocation (%)														Actual Project Outputs					
									Current/Actual Project Expenditure [06/07£k]							Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d]		WwTW (>250pe) compliance with Water Order Consents		UWWTD passing UWWTD numeric consents		Internal sewer flooding (DG5) caused by overload		Low Pressure (DG2)	uCSOs removed/ made compliant	Water Distribution Network			Sewerage Network		
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	2008	2009	2010	Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]	[properties removed from register]	[no.]	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
KX999	KB396		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Turnaface Road Moneymore	0.00	88.74	81.61	-3.70	10.84	0	58	0	42		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB409		sewerage	Waste Water Infrastructure	Sewerage	Lissan Road Cookstown Replacement Storm Sewer	0.00	195.79	6.64	52.77	136.38	0	40	0	60		0	0	0	0	0	0		0	0	0	0	0	0	25	100
KX999	KB411		sewerage	Waste Water Infrastructure	Sewerage	Milburn Storm Sewer	0.00	22.24	1.90	19.44	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	60
KX999	KB412		sewerage	Waste Water Infrastructure	Sewerage	Cookstown Road Moneymore Foul Sewer Extension	0.00	33.42	4.74	27.77	0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	150
KX999	KB413		sewerage	Waste Water Infrastructure	Sewerage	Dunnamore Road, Dunnamore Storm Sewer Ext	0.00	3.82	4.74	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB414		sewerage	Waste Water Infrastructure	Sewerage	Coolreaghs Rd, Cookstown St Sewer	0.00	128.78	0.00	0.00	5.42	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB422		sewerage	Waste Water Infrastructure	Sewerage	Killyfaddy Road Magherafelt Sewerage Scheme	0.00	140.72	11.39	44.44	84.90	0	17	83	0		0	0	0	0	0	0		0	0	0	0	0	0	0	450
KX999	KB423		sewerage	Waste Water Infrastructure	Sewerage	Westland Rd, Cookstown - SPS Upgrade	0.00	222.92	0.00	13.89	2.71	0	21	73	6		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB425		sewerage	Waste Water Infrastructure	Sewerage	Caherty Road, Broughshane	0.00	192.74	3.80	44.44	144.51	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	790
KX999	KB427		sewerage	Waste Water Infrastructure	Sewerage	South Cookstown Sewer Network Improvements	0.00	370.05	0.00	0.93	0.90	50	0	50	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB430		sewerage	Waste Water Infrastructure	Sewerage	Derrynoyd Road Draperstown Foul & Storm Sewer Extension	0.00	20.75	0.00	0.93	18.06	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	190
KX999	KB437		sewerage	Waste Water Infrastructure	Sewerage	Whitewater Bridge Straw Foul Sewer Extension	0.00	32.56	0.00	38.88	-6.32	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB439		sewerage	Waste Water Infrastructure	Sewerage	Kilmascally Road, Ardboe, Storm Sewer	0.00	36.10	0.00	36.10	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB440		sewerage	Waste Water Infrastructure	Sewerage	Broughshane Road, Ballymena, Foul Sewer Extension	0.00	19.42	0.00	18.52	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	100
KX999	KB441		sewerage	Waste Water Infrastructure	Sewerage	Moneymore Road, Cookstown Sewerage Scheme	0.00	439.81	0.00	0.93	9.03	37	0	0	63		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB443		sewerage	Waste Water Infrastructure	Sewerage	Tullymore Park, Ballymena, Manhole Reconstruction	0.00	6.21	0.00	0.00	1.81	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB444		sewerage	Waste Water Infrastructure	Sewerage	Burn Road Cookstown Storm Sewer Extension	0.00	147.76	0.00	133.31	14.45	100	0	0	0		0	0	0	0	0	0		0	1	0	0	0	0	0	0
KX999	KB445		sewerage	Waste Water Infrastructure	Sewerage	Pomeroy Main Street Sewer Repl	0.00	71.60	0.00	10.18	61.42	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	156
KX999	KB447		sewerage	Waste Water Infrastructure	Sewerage	Moneymore Rd (88) Maghherfelt new foul and storm sewer	0.00	120.87	0.00	0.00	6.32	0	0	0	100											0	0	0	0	0	0
KX999	KB448		sewerage	Waste Water Infrastructure	Sewerage	Main Street 36- 42 Bellaghy,Magherafelt	0.00	52.93	0.00	0.00	2.71	0	0	0	100											0	0	0	0	0	0
KX999	KB449		sewerage	Waste Water Infrastructure	Sewerage	Shore Road, Ballyronan Foul Sewer Extension	0.00	36.15	0.00	0.00	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB451		sewerage	Waste Water Infrastructure	Sewerage	Kildrum Road, Shanksbridge, Kells Storm Sewer Extension	0.00	10.62	0.00	0.00	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB452		sewerage	Waste Water Infrastructure	Sewerage	Cushendall Road, (172-178),Ballymena,Storm Sewer Extension	0.00	89.92	0.00	0.00	1.81	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KB453		sewerage	Waste Water Infrastructure	Sewerage	St Patricks Street, Draperstown, Foul Sewer Extension	0.00	46.79	0.00	0.00	3.61	0	0	0	100											0	0	0	0	0	0
KX999	KB454		sewerage	Waste Water Infrastructure	Sewerage	Kilmascally Road, Ardboe, Foul and Storm Sewer Extension.	0.00	51.13	0.00	0.00	0.90	0	0	0	100											0	0	0	0	0	0
KX999	KC263		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Rasharkin WwTW	0.00	23.38	9.49	13.89	0.00	74	5	0	21		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC268		sewerage	Waste Water Non Infrastructure	In-line pumping stations	North East Antrim Sewerage Scheme	0.00	3.50	-6.64	8.33	1.81	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC271		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Dunloy WwTW	0.00	23.66	-35.11	2.78	56.00	0	31	0	69		0	1	1482	0	0	0		0	0	0	0	0	0	0	0
KX999	KC282		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Loughguille WwTW	0.00	360.56	131.90	228.66	0.00	34	25	0	41		0	1	2000	0	0	0		0	0	0	0	0	0	0	0
KX999	KC290		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Liscolman WwTW	0.00	1.90	1.90	0.00	0.00	25	50	0	25		0	1	1353	0	0	0		0	0	0	0	0	0	0	0
KX999	KC307		sewerage	Waste Water Infrastructure	Sewerage	Portrush Area Sewers	0.00	-0.88	0.95	-0.93	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC308		sewerage	Waste Water Infrastructure	Sewerage	Mussenden Rd Articlave	0.00	0.95	0.95	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC309		sewerage	Waste Water Infrastructure	Sewerage	Coleraine Rd, Portstewart SS	0.00	0.97	1.90	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC310		sewerage	Waste Water Infrastructure	Sewerage	Drumcon Sewerage Scheme	0.00	-11.11	0.00	-11.11	0.00	50	50	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC313		sewerage	Waste Water Infrastructure	Sewerage	Rasharkin Flood Alleviation and Sewer Extension	0.00	1047.63	15.18	930.38	102.06	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	1413
KX999	KC315		sewerage	Waste Water Infrastructure	Sewerage	Ballymoney/Coleraine Sewers	0.00	25.18	4.74	23.14	-2.71	0	90	0	10		0	0	0	0	0	5		0	0	0	0	0	0	0	140
KX999	KC316		water	Waste Water Infrastructure	Sewerage	The Park, Armoy - Watermain & Sewer	0.00	-4.61	-1.90	0.00	-2.71	50	50	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC324		sewerage	Waste Water Infrastructure	Sewerage	Anticur Rd/Carrowadoon Road, Dunloy Sewerage Scheme	0.00	12.36	11.39	2.78	-1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC327		sewerage	Waste Water Infrastructure	Sewerage	Bridge Road, Dunloy	0.00	-1.90	-1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC332		sewerage	Waste Water Infrastructure	Sewerage	Blackpark Road Ballycastle	0.00	-0.93	0.00	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC343		sewerage	Waste Water Infrastructure	Sewerage	Eagry Road, Bushmills Storm Sewer Ext	0.00	1.97	3.80	-0.93	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC349		sewerage	Waste Water Infrastructure	Sewerage	Church Road Rasharkin Storm Sewer Extension	0.00	220.74	0.95	12.96	206.83	0	100	0	0		0	0	0	0	0	0		0	1	0	0	0	0	0	387
KX999	KC350		sewerage	Waste Water Infrastructure	Sewerage	Agivey Road, Aghadowey Sewer Replacement	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC351		sewerage	Waste Water Infrastructure	Sewerage	Station Road Dervock Foul Sewer	0.00	50.04	2.85	46.29	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	50
KX999	KC352		sewerage	Waste Water Infrastructure	Sewerage	Castleroe Road Coleraine Foul Sewer Extension	0.00	24.70	25.62	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	185
KX999	KC353		sewerage	Waste Water Infrastructure	Sewerage	Knock Road Ballymoney Foul & Storm Sewer Extension	0.00	20.39	1.90	17.59	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	100
KX999	KC354		sewerage	Waste Water Infrastructure	Sewerage	Priestland Rd, Bushmills St Sew Ext	0.00	118.64	5.69	112.94	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	430
KX999	KC355		sewerage	Waste Water Infrastructure	Sewerage	Bravallan Road Ballymoney Storm Sewer	0.00	24.65	23.72	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	217
KX999	KC357		sewerage	Waste Water Infrastructure	Sewerage	Dunluce Road, Replacement Sewer	0.00	-0.93	0.00	-0.93	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC389		sewerage	Waste Water Infrastructure	Sewerage	Mountsandel Road, Coleraine - Sewer Upgrade	0.00	26.19	0.00	0.00	26.19	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	182
KX999	KC393		sewerage	Waste Water Infrastructure	Sewerage	Mounthamilton Road, Cloughmills - Foul Sewer Extension	0.00	6.48	0.00	6.48	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC394		sewerage	Waste Water Infrastructure	Sewerage	Mounthamilton S.P.S., Cloughmills Replacement	0.00	142.16	7.59	74.06	60.51	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	325
KX999	KC395		sewerage	Waste Water Infrastructure	Sewerage	St Patricks Avenue, Coleraine - Sewer Repair.	0.00	12.34	11.39	1.85	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	41	0	0
KX999	KC396		sewerage	Waste Water Infrastructure	Sewerage	Mussenden Road, Articlave, Storm Sewer Extension	0.00	24.12	1.90	22.22	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	188
KX999	KC398		sewerage	Waste Water Infrastructure	Sewerage	Hezlett Primary S.P.S. Overflow, Castlerock	0.00	41.61	0.00	2.78	38.84	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	120
KX999	KC400		sewerage	Waste Water Infrastructure	Sewerage	Knockahollet Sewerage Scheme - Technical Options	0.00	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC403		sewerage	Waste Water Infrastructure	Sewerage	Old Coleraine Road, Portstewart - Storm Sewer Extension.	0.00	21.19	0.00	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	40
KX999	KC405		sewerage	Waste Water Infrastructure	Sewerage	McClelland Park Dunloy Flood Alleviation DG5	0.00	50.92	0.00	50.92	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC406		sewerage	Waste Water Infrastructure	Sewerage	Ballycregagh Road, Cloughmills Foul Sewer Extension	0.00	14.47	0.00	0.93	13.55	50	0	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	140
KX999	KC407		sewerage	Waste Water Infrastructure	Sewerage	Middlepark Road, Cushendall, Relief Sewer	0.00	71.28	0.00	71.28	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	200
KX999	KC409		sewerage	Waste Water Infrastructure	Sewerage	Drumavoley Park, Ballycastle Foul Sewer.	0.00	22.60	0.00	0.93	21.68	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	232
KX999	KC410		sewerage	Waste Water Infrastructure	Sewerage	Beach Road, Portballintrae, Storm Sewer Extension	0.00	43.22	0.00	0.00	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KC411		sewerage	Waste Water Infrastructure	Sewerage	Quay Road, Ballycastle, Storm Sewer Extension	0.00	23.51	0.00	0.93	22.58	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	95
KX999	KC413		sewerage	Waste Water Infrastructure	Sewerage	Glebe Road, Rasharkin - Sewage Scheme	0.00	44.26	0.00	0.00	44.26	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	180
KX999	KC420		sewerage	Waste Water Infrastructure	Sewerage	Curran Strand, Portrush Pollution Investigation.	0.00	27.56	0.00	0.00	9.93	0	100	0	0											0	0	0	0	0	0
KX999	KC421		sewerage	Waste Water Infrastructure	Sewerage	Giant's Causeway Visitor Centre, Storm Sewer Extension	0.00	93.44	0.00	0.00	1.81	0	0	0	100											0	0	0	0	0	0
KX999	KD016		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Glenstall Rd SS	0.00	1.90	1.90	0.00	0.00	55	19	0	26		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD022		sewerage	Waste Water Infrastructure	Sewerage	Ringrash Rd Colraine FS	0.00	4.63	0.00	4.63	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD025		sewerage	Waste Water Infrastructure	Sewerage	Grange Road Ballymena	0.00	1.90	1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD031		sewerage	Waste Water Infrastructure	Sewerage	Annaghnore Rd Foul Sewer	0.00	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD033		sewerage	Waste Water Infrastructure	Sewerage	Knockloughrim Storm Sewer	0.00	12.36	13.29	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD034		sewerage	Waste Water Infrastructure	Sewerage	Knockloughrim Storm Sewer	0.00	-5.55	0.00	-5.55	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD039		sewerage	Waste Water Infrastructure	Sewerage	Victoria Rd, Ballyclare	0.00	4.30	-22.77	-0.93	28.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	115
KX999	KD041		sewerage	Waste Water Infrastructure	Sewerage	Moyle Rd Ballycastle	0.00	15.83	3.80	12.03	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD051		sewerage	Waste Water Infrastructure	Sewerage	Cairncastle Road, Ballygally Storm Sewer	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD052		sewerage	Waste Water Infrastructure	Sewerage	Tullagh Brow Foul Sewer Toome Rd	0.00	1.90	1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD062		sewerage	Waste Water Infrastructure	Sewerage	Glen Rd Waterfoot Larne FS.	0.00	-1.83	0.00	-0.93	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD068		water	Waste Water Infrastructure	Sewerage	West St, Ballycarry Storm Sewer & Watermain	0.00	0.90	-0.95	1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD074		sewerage	Waste Water Infrastructure	Sewerage	Relief Sewer, Finvoy Road, Ballymoney	0.00	8.33	0.00	8.33	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD089		sewerage	Waste Water Infrastructure	Sewerage	Rashee Rd Ballyclare Storm sewer	0.00	0.05	0.95	0.00	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD090		sewerage	Waste Water Infrastructure	Sewerage	Killygonlan/Mullanahoe Foul Sewer Replacement	0.00	6.64	6.64	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD092		sewerage	Waste Water Infrastructure	Sewerage	Agherton Drive Portstewart Foul Sewer Replacement	0.00	0.93	0.00	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD102		sewerage	Waste Water Infrastructure	Sewerage	Hospital Road Magherafelt	0.00	53.29	0.00	0.00	53.29	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	165
KX999	KD106		sewerage	Waste Water Infrastructure	Sewerage	Tamnymullan Lane, Maghera	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD114		sewerage	Waste Water Infrastructure	Sewerage	Ballyhampton Road, Larne Foul & Storm Sewer	0.00	26.57	26.57	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD117		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Tamneylennan	0.00	3.80	3.80	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD122		sewerage	Waste Water Infrastructure	Sewerage	Ballinderry Bridge Storm sewer	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD129		sewerage	Waste Water Non Infrastructure	In-line pumping stations		0.00	-0.95	-0.95	0.00	0.00	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD131		sewerage	Waste Water Infrastructure	Sewerage	Ballytromery Rd, Crumlin Storm Sewer	0.00	-3.80	-3.80	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD139		sewerage	Waste Water Infrastructure	Sewerage	Framework for small sewerage schemes Mountsandel Road Coleraine	0.00	0.05	0.00	1.85	-1.81	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD141		sewerage	Waste Water Infrastructure	Sewerage	Headland Avenue Storm relief sewer	0.00	8.29	-0.95	8.33	0.90	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD149		sewerage	Waste Water Infrastructure	Sewerage	Flood Alleviation Scheme Genshesk Road Ballycastle	0.00	0.05	0.95	0.00	-0.90	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD163		sewerage	Waste Water Infrastructure	Sewerage	Bann Road, Bendooragh Foul Sewer Extension	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD608		sewerage	Waste Water Infrastructure	Sewerage	Sandholes Rd SS Cookstown	0.00	3.82	4.74	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD611		sewerage	Waste Water Infrastructure	Sewerage	Foul and Storm Sewer at Circular Rd Castlerock	0.00	25.76	0.00	19.44	6.32	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD705		sewerage	Waste Water Infrastructure	Sewerage	Main Street Storm Sewer, Coagh	0.00	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD728		sewerage	Waste Water Infrastructure	Sewerage	Knockaroe Cookstown Snagging Contact	0.00	1.85	0.00	1.85	0.00	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD804		sewerage	Waste Water Infrastructure	Sewerage	Ballylig Rd, Magheramorne Foul Sewer	0.00	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD822		sewerage	Waste Water Infrastructure	Sewerage	Boleran Rd, Garvagh	0.00	-0.93	0.00	-0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD905		sewerage	Waste Water Infrastructure	Sewerage	Soldiers Hill, Coleraine - Foul & Storm Sewers	0.00	0.93	0.00	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD938		sewerage	Waste Water Infrastructure	Sewerage	The Meadows Ballymoney	0.00	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD945		sewerage	Waste Water Infrastructure	Sewerage	Aldergrove Hotel pumping system	0.00	11.39	11.39	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD957		sewerage	Waste Water Infrastructure	Sewerage	Dunnamore Sewerage Scheme	0.00	40.27	18.98	21.29	0.00	0	10	72	18		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD971		sewerage	Waste Water Infrastructure	Sewerage	Rusky Park, Aghadowey	0.00	-1.00	-2.85	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD972		sewerage	Waste Water Infrastructure	Sewerage	The Aird Bushmills	0.00	2.78	0.00	2.78	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD982		sewerage	Waste Water Infrastructure	Sewerage	Old Town Rd, Bellaghy	0.00	-6.48	-6.64	6.48	-6.32	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD983		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Randalstown PS Rationalization	0.00	-2.85	-2.85	0.00	0.00	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD984		sewerage	Waste Water Infrastructure	Sewerage	Roguery Road Toome	0.00	1.90	1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD985		sewerage	Waste Water Infrastructure	Sewerage	Torrens Pk/Finvoy Rd Ballymoney Combined Relief Sewers	0.00	8.13	0.00	0.00	8.13	0	100	0	0											0	0	0	0	0	0
KX999	KD988		sewerage	Waste Water Infrastructure	Sewerage	Foul Sewer Maghermenagh Gardens Portrush	0.00	4.52	0.00	0.00	4.52	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KD989		sewerage	Waste Water Infrastructure	Sewerage	Niblock Road Antrim	0.00	8.54	8.54	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KE386		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Glenavy Wastewater Treatment Works	0.00	1.90	1.90	0.00	0.00	40	20	0	40		0	1	400	0	0	0		0	0	0	0	0	0	0	0
KX999	KE527		sewerage	Management and General	Sewerage Management and General	Southern Div. D.A.S.-Stage 1	0.00	37.01	37.01	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KF015		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Tullyroan/Annaghmore/Ardress WwTW	0.00	-0.95	-0.95	0.00	0.00	61	19	0	20		0	0	0	1	2500	0		0	0	0	0	0	0	0	0
KX999	KF025		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Tamnamore/Mullenakill/Clontyclay - RBC Installations West & South	0.00	608.57	587.40	1.85	-2.71	0	35	26	39		0	3	604	0	0	0		0	0	0	0	0	0	0	2148
KX999	KF036		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Moygashel Inlet Works	0.00	-11.39	-11.39	0.00	0.00	60	20	0	20		0	1	850	0	0	0		0	0	0	0	0	0	0	0
KX999	KF045		sewerage	Waste Water Infrastructure	Sewerage	Station Road, Armagh Drainage Area Plan, Phase 1	0.00	7.29	0.00	2.78	4.52	25	25	25	25		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KF051		sewerage	Waste Water Infrastructure	Sewerage	Coalisland	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KF052		sewerage	Waste Water Infrastructure	Sewerage	Greenfields-Ballinahonemore,	0.00	-0.05	-1.90	1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KF076		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Gorestown Road Sewerage Scheme	0.00	319.53	82.56	236.07	0.90	0	19	0	81		0	0	0	0	0	0		0	0	0	0	0	0	0	1395

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	Current/Actual Project Expenditure [06/07£k] 2008	2009	2010	Current Capital Investment Driver Allocation (%) Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d] Taking into account Authorised Departures	Not taking into account Authorised Departures	WwTW (>250pe) compliance with Water Order Consents [no. of works]	[population equivalent]	WwTW passing UWWTD numeric consents [no. of works]	[population equivalent]	Internal sewer flooding (DG5) caused by overload [properties removed from register]	[m sewer replaced/ refurbished]	Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Actual Project Outputs: Water Distribution Network Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Sewerage Network Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
KX999	KF083		sewerage	Waste Water Infrastructure	Sewerage	Johnston Lodge, Hamiltonsbawn Fowl Sewer ext	0.00	42.75	43.65	0.00	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	115
KX999	KF085		sewerage	Waste Water Infrastructure	Sewerage	Mountjoy Rd Storm Sewer Extension, Coalisland	0.00	112.81	0.95	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KF086		sewerage	Waste Water Infrastructure	Sewerage	Fintona Road, Clogher, Foul Pumping Main Extension	0.00	23.70	1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KF087		sewerage	Waste Water Infrastructure	Sewerage	Laurelvale Main Street Sewage Replacements	0.00	6.35	0.95	-0.93	6.32	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	6	0	0
KX999	KF312		sewerage	Waste Water Infrastructure	Sewerage	Ashley Gardens Armagh foul sewer replacement	0.00	110.42	9.49	101.83	-0.90	0	0	100	0		0	0	0	0	0	5		0	0	0	0	0	186	0	0
KX999	KF313		sewerage	Waste Water Infrastructure	Sewerage	Lisanally Special School, Armagh Foul Sewer Replacement	0.00	152.93	6.64	147.19	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	106
KX999	KF315		sewerage	Waste Water Infrastructure	Sewerage	Bracken Court Coalisland Storm Sewer Extension	0.00	76.64	3.80	61.10	11.74	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	235
KX999	KF320		sewerage	Waste Water Infrastructure	Sewerage	Bush WwTWs	0.00	363.08	0.00	0.00	363.08	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	500
KX999	KF323		sewerage	Waste Water Infrastructure	Sewerage	Tamnamore Road, Killyman Sewage Pumping Main Extension	0.00	27.40	0.00	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KF325		sewerage	Waste Water Infrastructure	Sewerage	Annaghugh Hill Loughgall, Storm Sewer Extension	0.00	64.72	0.00	0.00	16.26	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KF328		sewerage	Waste Water Infrastructure	Sewerage	Dartan Road Tynan. FST. Pumping Main and Storm Sewer Ext	0.00	75.87	0.00	0.00	3.61	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KF331		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Grange Park, Dungannon WWPS Upgrade	0.00	127.81	0.00	0.00	1.81	0	100	0	0											0	0	0	0	0	0
KX999	KG002		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Waringstown Wastewater Treatment Works	0.00	-0.93	0.00	-0.93	0.00	0	0	0	0		0	0	0	1	7500	0		0	0	0	0	0	0	0	0
KX999	KG009		sewerage	Waste Water Non Infrastructure	Sludge Treatment Works	Ballynacor Sludge Treatment Dewatering Facility	0.00	-177.61	5.69	-183.30	0.00	0	52	0	48		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG012		sewerage	Waste Water Infrastructure	Sewerage	Mazetown Sewerage Scheme	0.00	14.30	17.08	-2.78	0.00	10	50	10	30		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG029		sewerage	Waste Water Infrastructure	Sewerage	EPF Flood Alleviation	0.00	-12.34	-12.34	0.00	0.00	0	20	80	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG032		sewerage	Waste Water Infrastructure	Sewerage	Halfpenny	0.00	0.95	0.95	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG036		sewerage	Waste Water Infrastructure	Sewerage	EPF Flood Alleviation -Obins St	0.00	0.97	1.90	-0.93	0.00	0	40	0	60		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG037		sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Annesborough(Lurgan)SPS - Screens	0.00	6.64	6.64	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG044		sewerage	Management and General	Sewerage Management and General	EMS Networks Contract	0.00	21.66	15.18	6.48	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG048		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	WwTW Compliance (2005) - South	0.00	-7.34	2.85	-10.18	0.00	30	15	0	55		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG050		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Scotch	0.00	23.38	9.49	13.89	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG059		sewerage	Waste Water Infrastructure	Sewerage	Old Lurgan Road Sewer Extensions	0.00	73.86	39.86	24.07	9.93	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	17
KX999	KG061		sewerage	Waste Water Infrastructure	Sewerage	Tullygally East Road Storm Sewer Extension	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG064		sewerage	Waste Water Infrastructure	Sewerage	Bay View, Jonesborough Sewer Replacement	0.00	14.19	12.34	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG067		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Glebe Hill Road, Tandragee Sewage Pumping Station	0.00	2.85	2.85	0.00	0.00	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG072		sewerage	Waste Water Infrastructure	Sewerage	Glen Road, Glenavy Foul Sewage Pumping Main Ext	0.00	-5.69	-5.69	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG073		sewerage	Waste Water Infrastructure	Sewerage	Ingleside Court, Donaghcloney Sewer Extension	0.00	5.55	0.00	5.55	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG076		sewerage	Waste Water Infrastructure	Sewerage	Main St, Glenavy Storm Sewer Extension	0.00	3.80	3.80	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG080		sewerage	Waste Water Infrastructure	Sewerage	Old Portadown Rd Storm and Foul Sewer Extension	0.00	7.61	8.54	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG088		sewerage	Waste Water Infrastructure	Sewerage	Carbet Road, Foul Sewage Pumping Main Extension	0.00	2.85	2.85	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG092		sewerage	Waste Water Infrastructure	Sewerage	Kilvergan Road Storm and foul Sewer Extensions	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG097		sewerage	Waste Water Infrastructure	Sewerage	Drumcree Road Ballyoran Portadown Foul Sewer Extension	0.00	20.37	0.00	20.37	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG099		sewerage	Waste Water Infrastructure	Sewerage	Union Street, Lurgan, Storm Sewer Extension	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG105		sewerage	Waste Water Infrastructure	Sewerage	Tandragee Road, Portadown, Storm Sewer Extension	0.00	1.90	1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG107		sewerage	Waste Water Infrastructure	Sewerage	Lagan Terrace, Donaghcloney Foul Sewer Extension	0.00	5.69	5.69	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG108		sewerage	Waste Water Infrastructure	Sewerage	Lough Road, Lurgan Storm Sewer Extension	0.00	86.24	49.35	68.51	-31.61	0	0	0	100		0	0	0	0	0	5		0	0	0	0	0	0	0	363
KX999	KG114		sewerage	Waste Water Infrastructure	Sewerage	Old Moira Road, Ballinderry Storm Sewer Extension	0.00	33.05	30.37	-0.93	3.61	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	124
KX999	KG124		sewerage	Waste Water Infrastructure	Sewerage	Old Newry Road, Banbridge Storm and Foul Sewer Extensions	0.00	77.47	65.48	10.18	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	272
KX999	KG128		sewerage	Waste Water Infrastructure	Sewerage	William Street (Lurgan) Sewer Replacement	0.00	27.36	0.95	-0.93	0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG135		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	WWTW Interim Solutions 06/07 South□□	0.00	161.44	166.07	-4.63	0.00	0	100	0	0		0	9	3706	5	65592	0		0	0	0	0	0	0	0	0
KX999	KG137		sewerage	Waste Water Infrastructure	Sewerage	Main Street Glenavy Storm Sewer Extension	0.00	56.42	0.95	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG142		sewerage	Waste Water Infrastructure	Sewerage	Banbridge Road Waringstown, Foul Sewer Extension	0.00	5.79	8.54	-1.85	-0.90	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG143		sewerage	Waste Water Infrastructure	Sewerage	Silverwood Golf Course Replacement Sewer	0.00	67.87	57.89	1.85	8.13	0	100	0	0		0	0	0	0	0	1		0	0	0	0	0	66	0	370
KX999	KG146		sewerage	Waste Water Infrastructure	Sewerage	Cloncarrish Road Birches Storm Sewer Extension	0.00	34.75	4.74	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG147		sewerage	Waste Water Infrastructure	Sewerage	Carbet Road Portadown Storm Sewer	0.00	42.66	39.86	3.70	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	230
KX999	KG148		sewerage	Waste Water Infrastructure	Sewerage	Mark Street Lurgan Storm Sewer Extension	0.00	68.19	62.63	5.55	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	136
KX999	KG149		sewerage	Waste Water Infrastructure	Sewerage	Dunkirk Road Waringstown Storm and Foul Sewer Extensions	0.00	80.73	81.61	0.93	-1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	315
KX999	KG150		sewerage	Waste Water Infrastructure	Sewerage	Moygannon Rd Donaghcloney Civil Contract	0.00	19.98	2.85	-0.93	18.06	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	48
KX999	KG155		sewerage	Waste Water Infrastructure	Sewerage	Acton Street, Acton Foul Sewer Extension	0.00	38.88	0.00	1.85	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG156		sewerage	Waste Water Infrastructure	Sewerage	Crumlin Road Lower Ballinderry Storm and Foul Sewer Extensions	0.00	156.50	0.00	10.18	146.32	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	382
KX999	KG158		sewerage	Waste Water Infrastructure	Sewerage	Birches Road to Cloncarrish Road Sewer Extension	0.00	10.82	3.80	0.00	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG160		sewerage	Waste Water Infrastructure	Sewerage	Meadow Lane Portadown Sewer Realignment	0.00	130.30	66.43	63.88	0.00	0	25	11	64		0	0	0	0	0	0		0	0	0	0	0	130	0	0
KX999	KG161		sewerage	Waste Water Infrastructure	Sewerage	Dollingstown to Lurgan Sewer Upgrade	0.00	19.74	0.00	0.93	12.64	23	10	40	27		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG163		sewerage	Waste Water Infrastructure	Sewerage	Obins Street Portadown Storm Sewer Extension	0.00	101.95	0.00	106.46	-4.52	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	334
KX999	KG164		sewerage	Waste Water Infrastructure	Sewerage	Strawhill Donaghcloney Storm Sewer Extension	0.00	170.33	0.00	5.55	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG165		sewerage	Waste Water Infrastructure	Sewerage	Steps Road, Magheralin Foul & Storm Sewer Extensions	0.00	120.08	0.00	4.63	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG166		sewerage	Waste Water Infrastructure	Sewerage	Gibsons Hill Lurgan Storm Sewer Extension	0.00	52.12	0.00	2.78	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG167		sewerage	Waste Water Infrastructure	Sewerage	Ripley Meadows Portadown Storm Sewer Upgrade	0.00	39.74	0.00	0.00	39.74	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	106
KX999	KG168		sewerage	Waste Water Infrastructure	Sewerage	Lyndale Manor Portadown Foul Sewer Extension	0.00	132.79	0.00	0.93	131.86	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	486
KX999	KG169		sewerage	Waste Water Infrastructure	Sewerage	Derrytrasna Road, Lurgan Sewage Pumping Main Extension	0.00	82.08	0.00	1.85	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG170		sewerage	Waste Water Infrastructure	Sewerage	Derrymore Road Aghagallon Storm Sewer Extension	0.00	31.72	0.00	4.63	27.10	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	59
KX999	KG171		sewerage	Waste Water Infrastructure	Sewerage	Ashfield & Gowdystown Sewerage Scheme	0.00	10.96	0.00	2.78	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG174		sewerage	Waste Water Infrastructure	Sewerage	4 Lake Street Lurgan, Foul & Storm Sewer Extensions	0.00	44.15	0.00	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KG175		sewerage	Waste Water Infrastructure	Sewerage	Cornmarket Street, Tandragee Storm Sewer Extension	0.00	38.84	0.00	0.00	38.84	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	85
KX999	KG176		sewerage	Waste Water Infrastructure	Sewerage	Crowhill Road, Bleary, Craigavon. Foul Sewer Extension	0.00	38.84	0.00	0.00	38.84	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	158
KX999	KG179		sewerage	Waste Water Infrastructure	Sewerage	Meadowbrook, Craigavon Foul and Storm Sewer Extension	0.00	20.77	0.00	0.00	20.77	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	81
KX999	KI461		sewerage	Management and General	Sewerage Management and General	Appraisal of DG5 At-Risk Register Locations	0.00	0.90	0.00	0.00	0.90	0	100	0	0											0	0	0	0	0	0
KX999	KL228		sewerage	Waste Water Infrastructure	Sewerage	Faughanvale Sewerage Scheme - Phase 2	0.00	4.63	0.00	4.63	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL301		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Culmore WwTW	0.00	765.18	743.97	17.59	3.61	51	49	0	0		0	0	0	1	150000	0		0	0	0	0	0	0	0	0
KX999	KL322		sewerage	Management and General	Sewerage Management and General	Derry DAP	0.00	64.53	64.53	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL329		sewerage	Management and General	Sewerage Management and General	Western DAS - Stg 1	0.00	43.65	43.65	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL351		sewerage	Waste Water Infrastructure	Sewerage	Caw Development	0.00	15.74	0.00	15.74	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL359		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Magheramason WwTW	0.00	-0.88	1.90	-2.78	0.00	60	20	0	20		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL382		sewerage	Waste Water Infrastructure	Sewerage	EPF Flood Alleviation -W Divis	0.00	-3.80	-3.80	0.00	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL383		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	H&S Measures Western Phase 2 Contract 2	0.00	105.19	99.64	5.55	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL388		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Western Div Minor Works	0.00	10.35	6.64	3.70	0.00	30	15	0	55		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL390		sewerage	Waste Water Non Infrastructure	Sludge Treatment Works	Western Division Minor Works	0.00	25.58	23.72	1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL396		sewerage	Waste Water Infrastructure	Sewerage	Woodvale Road, Eglinton, Derry	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL406		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	WwTW Quick Wins 2005	0.00	2.80	0.95	1.85	0.00	30	15	0	55		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL421		sewerage	Waste Water Infrastructure	Sewerage	Gortinure Road, Gortinwood, Storm and Foul Sewer Extension	0.00	163.64	6.64	178.67	-21.68	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	637
KX999	KL422		sewerage	Waste Water Infrastructure	Sewerage	Airfield Road, Foul Sewer Extension	0.00	6.74	10.44	-3.70	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	45
KX999	KL423		sewerage	Waste Water Infrastructure	Sewerage	Crevagh Park SPS Abandonment	0.00	75.24	15.18	55.55	4.52	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	42
KX999	KL425		sewerage	Waste Water Infrastructure	Sewerage	Mullaghmore	0.00	108.83	4.74	0.93	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL426		sewerage	Waste Water Infrastructure	Sewerage	Fincairn Road Drumahoe Storm Sewer Extension	0.00	35.56	2.85	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL427		sewerage	Waste Water Infrastructure	Sewerage	Ballykelly Main St, Replacement Sewer	0.00	345.31	12.34	358.27	-25.29	0	100	0	0		0	0	0	0	0	3		0	0	0	0	0	44	0	0
KX999	KL430		sewerage	Waste Water Infrastructure	Sewerage	Gortnahey Road, Gortnahey, Dungiven Foul Sewer Ext	0.00	15.78	1.90	13.89	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL435		sewerage	Waste Water Infrastructure	Sewerage	Killary Road Drainage Improvements	0.00	32.38	0.00	31.48	0.90	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	53
KX999	KL437		sewerage	Waste Water Infrastructure	Sewerage	Queens Quay combined sewer diversion Londonderry	0.00	21.29	0.00	21.29	0.00	100	0	0	0		0	0	0	0	0	0		0	1	0	0	0	0	0	11
KX999	KL439		sewerage	Waste Water Infrastructure	Sewerage	Cregg SPS, Claudy Emergency Overflow	0.00	26.94	0.00	30.55	-3.61	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	88	0	88
KX999	KL438		sewerage	Waste Water Infrastructure	Sewerage	Greenhaw Rd Storm Sewer Extension, Londonderry	0.00	199.52	0.00	6.48	147.22	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	26
KX999	KL441		sewerage	Waste Water Infrastructure	Sewerage	Storm sewer extension for new dev. adjacent to the Castle Dungiven	0.00	47.32	0.00	3.70	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KL460		sewerage	Waste Water Infrastructure	Sewerage	Foyle Springs, Derry Flood Alleviation	0.00	245.38	0.00	0.00	27.10	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN106		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Omagh WwTW	0.00	306.89	159.42	10.18	137.28	100	0	0	0		0	0	0	1	47000	0		0	0	0	0	0	0	0	0
KX999	KN140		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Fintona RBC Installations	0.00	9.65	16.13	-6.48	0.00	50	25	0	25		0	0	0	1	2605	0		0	0	0	0	0	0	0	0
KX999	KN145		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Drumlegagh	0.00	3.80	3.80	0.00	0.00	100	0	0	0		0	1	140	0	0	0		0	0	0	0	0	0	0	0
KX999	KN153		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Clady - RBC Installations West & South	0.00	174.33	172.71	-7.41	9.03	0	6	0	94		0	1	645	0	0	0		0	0	0	0	0	0	0	0
KX999	KN154		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Castlederg and Killen WwTW	0.00	0.46	18.98	-18.52	0.00	55	22	0	23		0	0	0	1	4750	0		0	0	0	0	0	0	0	0
KX999	KN177		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Beragh/Sixmilecross RBC Installation	0.00	168.75	89.20	76.84	2.71	26	19	0	55		0	1	1386	0	0	0		0	0	0	0	0	0	0	0
KX999	KN546		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Drumnakilly, Altamuskin & Carrowclare RBC Installations	0.00	726.04	665.21	49.99	10.84	61	15	0	24		0	3	840	0	0	0		0	0	0	0	0	0	0	0
KX999	KN547		sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Omagh Wwtw Inlet Works	0.00	50.29	50.29	0.00	0.00	46	18	0	36		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN561		sewerage	Waste Water Infrastructure	Sewerage	Arleston Park, Omagh Storm Sewer Replacement	0.00	11.18	2.85	8.33	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN565		sewerage	Waste Water Infrastructure	Sewerage	Hawthorn Road / Tirquin Road, Omagh Foul Sewer Extension	0.00	101.00	75.92	28.70	-3.61	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	2035
KX999	KN566		sewerage	Waste Water Infrastructure	Sewerage	Rodgers Villas, Omagh Storm Separation Scheme	0.00	-5.67	-4.74	-0.93	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN567		sewerage	Waste Water Infrastructure	Sewerage	Milltown/Loughmacrory Storm Sewer Extension	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN579		sewerage	Waste Water Infrastructure	Sewerage	Luganboy Road, Castlederg Foul and Storm Extensions	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN584		sewerage	Waste Water Infrastructure	Sewerage	Gortin Road Omagh Storm Sewer	0.00	147.09	147.09	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	675
KX999	KN588		sewerage	Waste Water Infrastructure	Sewerage	Campbell Terrace, Plumbridge Storm Sewer Ext	0.00	23.64	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN589		sewerage	Waste Water Infrastructure	Sewerage	Scarffs Entry Car Park Sewer Replacement	0.00	17.13	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN592		sewerage	Waste Water Infrastructure	Sewerage	Crevanagh Road, Omagh, Foul Sewer Pumping Main Extension	0.00	10.53	14.23	-3.70	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	245
KX999	KN598		sewerage	Waste Water Infrastructure	Sewerage	Prospect Terrace-Hospital Rd, Castlederg Storm Sewer Repl	0.00	-0.93	0.00	-0.93	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN605		sewerage	Waste Water Infrastructure	Sewerage	Loughmacrory Storm Sewer Extension.	0.00	25.67	27.52	-1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	85
KX999	KN607		sewerage	Waste Water Infrastructure	Sewerage	Creagmore Road, Drumquin Foul Sewer Ext	0.00	45.71	52.19	-6.48	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	291
KX999	KN608		sewerage	Waste Water Infrastructure	Sewerage	Sion Mills Foul Sewer Extension	0.00	34.78	1.90	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN609		sewerage	Waste Water Infrastructure	Sewerage	Hospital Rd,Castlederg.Foul Sewer Extension.	0.00	34.54	0.00	3.70	0.00	34	0	0	66		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN610		sewerage	Waste Water Infrastructure	Sewerage	Drumlegagh Storm Sewer Extension	0.00	116.78	4.74	1.85	110.19	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	495
KX999	KN612		sewerage	Waste Water Infrastructure	Sewerage	Strathroy, Omagh Storm Sewer	0.00	166.21	1.90	145.34	18.97	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	463
KX999	KN613		sewerage	Waste Water Infrastructure	Sewerage	Art Road Storm Sewer Ext, Artigarvan	0.00	48.29	1.90	2.78	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN614		sewerage	Waste Water Infrastructure	Sewerage	Carnalea Road Storm Sewer Extension,Seskinore	0.00	15.38	0.95	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KN616		sewerage	Waste Water Infrastructure	Sewerage	Derry Road, Strabane Storm Sewer	0.00	166.52	2.85	4.63	54.19	0	20	0	80		0	0	0	0	0	0		0	0	0	0	0	0	0	210

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
												Current Capital Investment Driver Allocation (%)														Actual Project Outputs					
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	Current/Actual Project Expenditure [06/07£k]			Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d]		WwTW (>250pe) compliance with Water Order Consents		WwTW passing UWWTD numeric consents		Internal sewer flooding (DG5) caused by overload		Low Pressure (DG2)	uCSOs removed/ made compliant [no.]	Water Distribution Network			Sewerage Network		
									2008	2009	2010					Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]	[properties removed from register]		Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
KX999	KN620		sewerage	Waste Water Infrastructure	Sewerage	Park Road ,Ballymagorry Sewer Exten	0.00	13.33	0.00	0.00	4.52	0	100	0	0											0	0	0	0	0	0
KX999	KN621		sewerage	Waste Water Infrastructure	Sewerage	Cooley Road, Sixmile Cross Storm Sewer Extension	0.00	90.46	0.00	0.00	3.61	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO017		sewerage	Waste Water Infrastructure	Sewerage	Mahon Rd Portadown	0.00	4.74	4.74	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO024		sewerage	Waste Water Infrastructure	Sewerage	Rathfriland sewerage scheme	0.00	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO042		sewerage	Waste Water Infrastructure	Sewerage	Cornakinnegar Sewerage Scheme	0.00	0.95	0.95	0.00	0.00	65	35	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO050		sewerage	Waste Water Infrastructure	Sewerage	Annaghmore	0.00	-1.85	0.00	-1.85	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO063		sewerage	Waste Water Infrastructure	Sewerage	Shore Rd Feumore	0.00	-3.70	0.00	-3.70	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO081		sewerage	Waste Water Infrastructure	Sewerage	Mowhan Rd Whitecross Storm sewer	0.00	-3.70	0.00	-3.70	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO093		sewerage	Waste Water Infrastructure	Sewerage	Ballylough Road Castlewellan	0.00	-0.93	0.00	-0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO108		sewerage	Waste Water Infrastructure	Sewerage	Umgola Heights Armagh Rep Sewer	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	kO109		sewerage	Waste Water Infrastructure	Sewerage	Larchwood,	0.00	10.44	10.44	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO124		sewerage	Waste Water Infrastructure	Sewerage	Lisaclare Sewerage Scheme	0.00	0.95	0.95	0.00	0.00	50	20	0	30		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO125		sewerage	Waste Water Infrastructure	Sewerage	Downpatrick Street, Rathfriland	0.00	16.90	9.49	7.41	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO126		sewerage	Waste Water Infrastructure	Sewerage	Back Road, Rathfriland, Storm Sewer	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO128		sewerage	Waste Water Infrastructure	Sewerage	Ballyroney Road, Rathfriland, Storm Sewer	0.00	12.34	12.34	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO136		sewerage	Waste Water Infrastructure	Sewerage	Mullalelish Road, Richhill Sewer	0.00	-4.74	-4.74	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO146		sewerage	Waste Water Infrastructure	Sewerage	Beechwood Villas Newry	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO147		sewerage	Waste Water Infrastructure	Sewerage	Newtownclough Surface Water Sewer	0.00	-4.63	0.00	-4.63	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO149		sewerage	Waste Water Infrastructure	Sewerage	Mourne Park Castlewellan Storm Sewer Replacement	0.00	7.41	0.00	7.41	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO155		sewerage	Waste Water Infrastructure	Sewerage	Newry Road Maybridge	0.00	-0.93	0.00	-0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO164		sewerage	Waste Water Infrastructure	Sewerage	Coolhill Replacement Rising Main	0.00	3.80	3.80	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO170		sewerage	Waste Water Infrastructure	Sewerage	Lough Road, Lurgan	0.00	53.12	52.19	0.93	0.00	90	0	0	10		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO173		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Ballynakilly Sewage Pumping Station	0.00	105.92	2.85	4.63	98.45	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	15
KX999	KO174		sewerage	Waste Water Infrastructure	Sewerage	Ballynamony, Aghacommon, Lurgan Storm Sewer	0.00	9.49	9.49	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO186		sewerage	Waste Water Infrastructure	Sewerage	Cavan Road Storm Sewer	0.00	2.85	2.85	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO187		sewerage	Waste Water Infrastructure	Sewerage	Castle Street, Rathfriland, Sewer Replacement	0.00	-13.29	-13.29	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO198		sewerage	Waste Water Infrastructure	Sewerage	Drumhillery Pk, Middletown Sewers	0.00	2.85	2.85	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO201		sewerage	Waste Water Infrastructure	Sewerage	Rathfriland Road/A1, Banbridge, Foul Sewer	0.00	115.77	115.77	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO204		sewerage	Waste Water Infrastructure	Sewerage	Banbridge Road, Kinallen, Storm Sewer	0.00	2.85	2.85	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO206		sewerage	Waste Water Infrastructure	Sewerage	Charlemont Road, Blackwatertown, Sewers	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO915		sewerage	Waste Water Infrastructure	Sewerage	The Linen Green Moygashel SOR sewers	0.00	0.90	0.00	0.00	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO947		sewerage	Waste Water Infrastructure	Sewerage	Chapel Road, Meigh	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KO971		sewerage	Waste Water Infrastructure	Sewerage	Convent Close, Armagh Sewer	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KP183		sewerage	Waste Water Infrastructure	Sewerage	Drumcard/Derrylester - RBC Installations West & South	0.00	-4.61	0.95	-5.55	0.00	50	25	0	25		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KP273		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballinamallard - RBC Installations W & S	0.00	346.99	338.77	3.70	4.52	45	22	0	33		0	0	0	1	2700	0		0	0	0	0	0	0	0	0
KX999	KP286		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Lisbellaw - RBC Installations West & South	0.00	164.33	98.69	62.03	3.61	45	44	0	11		0	1	1675	0	0	0		0	0	0	0	0	0	0	0
KX999	KP297		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Fivemiletown - RBC Installations West & South	0.00	60.06	33.21	26.85	0.00	40	20	0	40		0	0	0	1	2135	0		0	0	0	0	0	0	0	0
KX999	KP336		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Maguiresbridge WwTW	0.00	96.50	32.26	78.69	-14.45	82	0	0	18		0	0	0	0	0	0		0	1	0	0	0	0	0	0
KX999	KP344		sewerage	Waste Water Infrastructure	Sewerage	Enniskillen Drainage Area Plan	0.00	2472.95	324.54	50.92	270.05	82	18	0	0		0	0	0	0	0	0		0	12	0	0	0	0	0	0
KX999	KP352		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Belcoo - RBC Installations West & South	0.00	107.14	103.44	3.70	0.00	0	5	0	95		0	1	1564	0	0	0		0	0	0	0	0	0	0	0
KX999	KP353		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Augher WWTW	0.00	-3.52	0.00	3.70	-7.23	0	100	0	0		0	1	700	0	0	0		0	0	0	0	0	0	0	0
KX999	KP357		sewerage	Waste Water Infrastructure	Sewerage	Drumgoon, Maguiresbridge Storm Sewer	0.00	33.28	33.21	2.78	-2.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KP359		sewerage	Waste Water Infrastructure	Sewerage	Castlehume, Enniskillen Sewerage and Water Scheme	0.00	7.43	0.95	6.48	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KP371		sewerage	Waste Water Infrastructure	Sewerage	Loughshore Road Enniskillen Foul Sewer Extension	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KP587		sewerage	Waste Water Infrastructure	Sewerage	Lisnagole Road Lisnaskea Foul Sewer Ext	0.00	38.05	41.75	-3.70	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	192
KX999	KP588		sewerage	Waste Water Infrastructure	Sewerage	ST Patricks Terrace, Lisnaskea Flood Alleviation Scheme	0.00	91.67	3.80	85.17	2.71	0	0	0	100		0	0	0	0	0	3		0	0	0	0	0	0	0	212
KX999	KP590		sewerage	Waste Water Infrastructure	Sewerage	Loaneden, Kesh SPS Upgrade and PN Extension	0.00	90.39	0.00	4.63	84.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KP591		sewerage	Waste Water Infrastructure	Sewerage	New foul sewer for H/D at Caledon Rd, Aughnacloy	0.00	51.82	0.00	50.92	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	190
KX999	KP597		sewerage	Waste Water Infrastructure	Sewerage	Enniskillen New Acute Hospital Foul PM Extension	0.00	210.13	0.00	0.00	161.67	0	85	0	15		0	0	0	0	0	0		0	0	0	0	0	310	0	0
KX999	KR079		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballynadolly WwTW Improvements	0.00	21.48	-22.77	0.00	44.26	60	20	0	20		0	1	320	0	0	0		0	0	0	0	0	0	0	0
KX999	KR235		sewerage	Waste Water Infrastructure	Sewerage	Knock Valley Relief Sewer	0.00	73.35	84.46	-11.11	0.00	0	14	84	2		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR236		sewerage	Management and General	Sewerage Management and General	E Divis sewer studies stg 1	0.00	20.88	20.88	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR256		sewerage	Management and General	Sewerage Management and General	Easterrn Stage 2	0.00	49.35	49.35	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR283		sewerage	Management and General	Sewerage Management and General	Project Management DAS Prog	0.00	190.74	190.74	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR304		sewerage	Management and General	Sewerage Management and General	Dev Drainage Area Plan Prog	0.00	4.74	4.74	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR314		sewerage	Waste Water Non Infrastructure	Sludge Treatment Works	Belfast Incinerator Mercury removal	0.00	96.79	96.79	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR324		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Interim Improvements to WWTW	0.00	55.87	51.24	4.63	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR325		sewerage	Waste Water Non Infrastructure	Sludge Treatment Works	Electricity Supply To Belfast WWTW site	0.00	6.64	6.64	0.00	0.00	90	0	10	0		0	0	0	1	250000	0		0	0	0	0	0	0	0	0
KX999	KR338		sewerage	Waste Water Infrastructure	Sewerage	360-368 Doagh Road, Newtownabbey Sewer Extension	0.00	54.78	45.55	8.33	0.90	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	302
KX999	KR343		sewerage	Waste Water Infrastructure	Sewerage	O Neill Road, Glengormley Storm Sewer Extension	0.00	35.34	41.75	-3.70	-2.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	124
KX999	KR344		sewerage	Waste Water Infrastructure	Sewerage	Clare Glen, Belfast Storm Sewer	0.00	30.48	2.85	22.22	5.42	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	230
KX999	KR345		sewerage	Waste Water Infrastructure	Sewerage	Belfast City Entries Upgrade	0.00	-0.93	0.00	-0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR346		sewerage	Waste Water Infrastructure	Sewerage	Ivanhoe Avenue Belfast Storm & Foul Sewer Replacement	0.00	142.92	128.11	14.81	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	482	0	0
KX999	KR348		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	WWTW Compliance 2006 - East	0.00	33.68	14.23	19.44	0.00	40	20	0	40		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR351		sewerage	Waste Water Infrastructure	Sewerage	Springfield Avenue Storm Sewer Extension	0.00	116.74	117.67	-0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR353		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Laganbank Road, Belfast Sewer Diversion	0.00	6.57	4.74	0.93	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR358		sewerage	Waste Water Infrastructure	Sewerage	Befast City Centre Upgrades Phase 2	0.00	-0.81	-0.95	5.55	-5.42	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR361		sewerage	Waste Water Infrastructure	Sewerage	Carrowreagh Road Dundonald Storm Sewer	0.00	287.79	12.34	11.11	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR362		sewerage	Waste Water Infrastructure	Sewerage	Millbay Sewerage facilities	0.00	179.53	169.86	-11.11	20.77	62	0	38	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR365		sewerage	Waste Water Infrastructure	Sewerage	Springbank Industrial Estate Foul Sewer Ext	0.00	48.30	44.60	3.70	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	136
KX999	KR373		sewerage	Waste Water Infrastructure	Sewerage	Glenside Park, Replacement Combined Sewer	0.00	2.85	2.85	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR374		sewerage	Management and General	Sewerage Management and General	ECOS Appraisal & Refurbishment	0.00	40.80	40.80	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR376		sewerage	Waste Water Infrastructure	Sewerage	130a Upper Knockbreda Road, Belfast Storm Sewer Extension	0.00	5.72	6.64	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR377		sewerage	Waste Water Infrastructure	Sewerage	Glendarragh SPS - Replacement pumping main	0.00	43.63	4.74	38.88	0.00	0	100	0	0		0	0	0	0	0	4		0	0	0	0	0	440	0	0
KX999	KR386		sewerage	Waste Water Infrastructure	Sewerage	St Meryl Park / Kennedy Way Sewer Upgrade	0.00	261.18	4.74	256.43	0.00	0	100	0	0		0	0	0	0	0	2		0	0	0	0	0	0	0	0
KX999	KR392		sewerage	Waste Water Infrastructure	Sewerage	Burren Way, Cregagh	0.00	134.08	106.28	28.70	-0.90	0	100	0	0		0	0	0	0	0	2		0	0	0	0	0	316	0	20
KX999	KR394		sewerage	Waste Water Infrastructure	Sewerage	Rugby Road, Belfast Sewer Rehabilitation.	0.00	76.86	76.86	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR395		sewerage	Waste Water Infrastructure	Sewerage	Cloghan Park, Belfast Flood Alleviation	0.00	311.96	80.66	225.88	5.42	0	33	67	0		0	0	0	0	0	11		0	0	0	0	0	335	0	7
KX999	KR396		sewerage	Waste Water Infrastructure	Sewerage	Kylemore Park, Belfast Flood Alleviation	0.00	114.41	0.95	97.20	16.26	0	0	100	0		0	0	0	0	0	2		0	0	0	0	0	0	0	0
KX999	KR397		sewerage	Waste Water Infrastructure	Sewerage	Brooke Hall, Cairnshill Belfast Foul Sewer Extension	0.00	151.23	9.49	-4.63	4.52	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR410		sewerage	Waste Water Infrastructure	Sewerage	629 Upper Newtownards Road, Befast Storm Sewer Extension	0.00	23.97	0.00	2.78	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR411		sewerage	Waste Water Infrastructure	Sewerage	Antrim Road, Mallusk Foul and Storm Sewer Extension	0.00	161.87	0.00	8.33	153.54	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	395
KX999	KR413		sewerage	Waste Water Infrastructure	Sewerage	Grahamsbridge Road, Dundonald, Belfast Storm Sewer Extension.	0.00	55.70	0.00	25.00	30.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	157
KX999	KR417		sewerage	Waste Water Infrastructure	Sewerage	Ormeau Avenue Sewer investigation and feasibility study for pollution resolut	0.00	77.86	0.00	25.00	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR418		sewerage	Waste Water Infrastructure	Sewerage	Castle Place / High Street Sewer and Water main Upgrade	0.00	1191.95	0.00	693.39	498.55	86	14	0	0		0	0	0	0	0	0		0	1	0	0	0	471	0	0
KX999	KR419		sewerage	Waste Water Infrastructure	Sewerage	Annadale Avenue, Belfast Storm Sewer	0.00	128.25	0.00	6.48	7.23	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR420		sewerage	Waste Water Infrastructure	Sewerage	Inglewood Park, Bangor Storm Sewer	0.00	72.37	0.00	4.63	67.74	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	126.5
KX999	KR421		sewerage	Waste Water Infrastructure	Sewerage	Hillview Road Belfast Storm Sewer Extension	0.00	101.20	0.00	1.85	99.35	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	185.5
KX999	KR422		sewerage	Waste Water Infrastructure	Sewerage	Mersey Street, Belfast Storm Sewer	0.00	200.51	0.00	4.63	10.84	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR423		sewerage	Waste Water Infrastructure	Sewerage	Agnes Street - Foul Sewer Carrickfergus	0.00	32.87	0.00	4.63	1.81	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR424		sewerage	Waste Water Infrastructure	Sewerage	Green Walk Newtownabbey Storm Sewer Extnesion	0.00	30.82	0.00	4.63	26.19	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	70
KX999	KR425		sewerage	Waste Water Infrastructure	Sewerage	Dunmisk Park Belfast Storm Sewer	0.00	80.43	0.00	1.85	78.58	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	249.9
KX999	KR427		sewerage	Waste Water Infrastructure	Sewerage	Queens Bridge, Belfast - Assessment of Siphons	0.00	188.96	0.00	3.70	9.03	86	4	5	5		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR429		sewerage	Waste Water Infrastructure	Sewerage	York Street, Belfast Interchange	0.00	269.25	0.00	0.00	8.13	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR431		sewerage	Waste Water Infrastructure	Sewerage	Ballymurphy Stream, Belfast Hydraulic Upgrade	0.00	4013.77	0.00	27.77	13.55	86	4	5	5		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR432		sewerage	Waste Water Infrastructure	Sewerage	Beechmount Avenue Gortfin Street Hydraulic Upgrade	0.00	841.93	0.00	5.55	43.35	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR433		sewerage	Waste Water Infrastructure	Sewerage	Boucher Road, Belfast Hydraulic Upgrades	0.00	9658.39	0.00	0.00	18.06	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR434		sewerage	Waste Water Infrastructure	Sewerage	Annadale Flats, Belfast Hydraulic Upgrades	0.00	9.26	0.00	9.26	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR441		sewerage	Waste Water Infrastructure	Sewerage	Montgomery Rd, Flood Alleviation	0.00	1955.46	0.00	35.18	19.87	54	43	3	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR444		sewerage	Waste Water Infrastructure	Sewerage	Sydenham WWPS Strategic Investigations	0.00	131.19	0.00	10.18	20.77	42	58	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR448		sewerage	Waste Water Infrastructure	Sewerage	88 Larne Road, Carrickfergus Storm Sewer Extension	0.00	31.02	0.00	0.00	7.23	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR449		sewerage	Waste Water Infrastructure	Sewerage	Loop Interceptor Sewer from East Belfast.	0.00	20423.49	0.00	2.78	-0.90	80	0	15	5		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR450		sewerage	Waste Water Infrastructure	Sewerage	Fountainville Ave, Belfast, Swer Collapsed.	0.00	30.03	0.00	46.29	-16.26	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR452		sewerage	Waste Water Infrastructure	Sewerage	Baroda Street / Ormeau Park, Belfast CSO	0.00	637.85	0.00	0.00	68.64	56	40	0	4		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR453		sewerage	Waste Water Infrastructure	Sewerage	Ellis Street, Carrickfergus, Sewer replacement/rehabilitation	0.00	239.98	0.00	0.00	193.28	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	80
KX999	KR455		sewerage	Waste Water Infrastructure	Sewerage	Upper Newtownards Road, Belfast, Storm Sewer Extension	0.00	223.90	0.00	0.00	3.61	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR456		sewerage	Waste Water Infrastructure	Sewerage	Drumglass Park, Lisburn Road, Belfast. Storm Seperation.	0.00	217.79	0.00	0.00	6.32	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KR457		sewerage	Waste Water Infrastructure	Sewerage	Ladybrook, Belfast Sewer Investigation (Structural)	0.00	189.77	0.00	0.00	13.55	0	100	0	0											0	0	0	0	0	0
KX999	KR458		sewerage	Waste Water Infrastructure	Sewerage	287 Ballygomartin Road, Belfast Foul Sewer Extension.	0.00	74.96	0.00	0.00	2.71	0	0	0	100											0	0	0	0	0	0
KX999	KR460		sewerage	Waste Water Infrastructure	Sewerage	Ballysillan Road Belfast - Flood Alleviation	0.00	136.69	0.00	0.00	4.52	0	0	100	0											0	0	0	0	0	0
KX999	KR462		sewerage	Waste Water Infrastructure	Sewerage	Carrington Street Flooding Investigation	0.00	40.97	0.00	0.00	18.06	0	0	100	0											0	0	0	0	0	0
KX999	KR463		sewerage	Waste Water Infrastructure	Sewerage	Circular Road Belfast, Storm Sewer Extension	0.00	47.67	0.00	0.00	3.61	0	0	0	100											0	0	0	0	0	0
KX999	KR464		sewerage	Waste Water Infrastructure	Sewerage	Devonshire Street Belfast Storm Sewer Extension	0.00	73.20	0.00	0.00	2.71	0	0	0	100											0	0	0	0	0	0
KX999	KR465		sewerage	Waste Water Infrastructure	Sewerage	Sealstown Road, Storm Sewer Extension.	0.00	21.19	0.00	0.00	1.81	0	0	0	100											0	0	0	0	0	0
KX999	KR467		sewerage	Waste Water Infrastructure	Sewerage	Raby Street Belfast Sewer Alignment	0.00	54.67	0.00	0.00	1.81	0	100	0	0											0	0	0	0	0	0
KX999	KR468		sewerage	Waste Water Infrastructure	Sewerage	Roden Street, Belfast, Foul & Storm Sewer Extension	0.00	165.72	0.00	0.00	2.71	0	0	0	100											0	0	0	0	0	0
KX999	KS175		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Moneyreagh WwTW	0.00	182.65	182.20	18.52	-18.06	63	24	0	13		0	0	0	1	3418	0		0	0	0	0	0	0	0	0
KX999	KS178		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Killinchy/Whiterock - RBC Installation West & South	0.00	250.71	220.16	30.55	0.00	0	22	51	27		0	0	0	1	2271	0		0	0	0	0	0	0	0	0
KX999	KS185		sewerage	Waste Water Infrastructure	Sewerage	Comber Rd Sewerage, Newtownards	0.00	154.17	101.54	47.21	5.42	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS207		sewerage	Waste Water Infrastructure	Sewerage	Helens bay WwTW	0.00	5.76	8.54	-2.78	0.00	81	9	0	10		0	0	0	0	0	0		0	0	0	0	0	0	0	0

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
												Current Capital Investment Driver Allocation (%)														Actual Project Outputs					
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	Current/Actual Project Expenditure [06/07£k]			Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d]		WwTW (>250pe) compliance with Water Order Consents		WwTW passing UWWTD numeric consents		Internal sewer flooding (DG5) caused by overload		Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Water Distribution Network			Sewerage Network		
									2008	2009	2010					Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]			Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
KX999	KS213		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Greyabbey/Kircubbin	0.00	9.51	10.44	-0.93	0.00	60	20	0	20		0	0	0	2	3200	0		0	0	0	0	0	0	0	0
KX999	KS253		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Drumaness WWTW	0.00	1360.94	54.09	37.03	762.28	42	20	0	38		0	0	0	1	2651	0		0	0	0	0	0	0	0	0
KX999	KS270		sewerage	Waste Water Infrastructure	Sea outfalls and headworks	Kilkeel sea outfall	0.00	20.93	3.80	-0.93	18.06	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS301		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Dundrum WwTW	0.00	196.83	107.23	81.47	8.13	31	69	0	0		0	1	1951	0	0	0		0	0	0	0	0	0	0	0
KX999	KS305		sewerage	Waste Water Infrastructure	Sewerage	Ballynagross WwTW	0.00	85.41	85.41	0.00	0.00	42	58	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS313		sewerage	Waste Water Infrastructure	Sewerage	Spa /Drumaness WwTW	0.00	63.66	45.55	1.85	16.26	44	13	2	41		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS314		sewerage	Management and General	Sewerage Management and General	Eastern DAS Stage 3A	0.00	9.49	9.49	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS317		sewerage	Management and General	Sewerage Management and General	Eastern DAS Stage 4A	0.00	6.64	6.64	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS318		sewerage	Management and General	Sewerage Management and General	Eastern DAS Stage 5A	0.00	9.49	9.49	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS319		sewerage	Management and General	Sewerage Management and General	Eastern DAS Stage 6A	0.00	15.18	15.18	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS320		sewerage	Management and General	Sewerage Management and General	Eastern DAS Stage 6B	0.00	14.23	14.23	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS321		sewerage	Management and General	Sewerage Management and General	Eastern DAS Stage 7A	0.00	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS322		sewerage	Management and General	Sewerage Management and General	Eastern DAS Stage 7B	0.00	5.69	5.69	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS323		sewerage	Management and General	Sewerage Management and General	Eastern DAS Stage 8	0.00	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS325		sewerage	Waste Water Infrastructure	Sewerage	Donaghahaguy Road,Burren,Foul Sewer Extension	0.00	0.93	0.00	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS331		sewerage	Waste Water Infrastructure	Sewerage	Hill Street/Strangford Road, Ardglass Storm Sewer	0.00	-3.80	-3.80	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS334		sewerage	Waste Water Infrastructure	Sewerage	Main St Cloghey Storm Sewer	0.00	-7.59	-7.59	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS335		sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Briggs Rock Screening Plant	0.00	15.14	13.29	1.85	0.00	6	94	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS336		sewerage	Waste Water Infrastructure	Sewerage	Castle Street, Comber, Storm Sewer	0.00	171.00	2.85	154.60	13.55	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	342
KX999	KS337		sewerage	Waste Water Infrastructure	Sewerage	Carnesure Park, Comber Foul Sewer Replacement	0.00	81.26	0.00	2.78	2.71	0	48	26	26		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS338		sewerage	Waste Water Infrastructure	Sewerage	Scrogg Road Sewerage Scheme	0.00	12.61	23.72	-11.11	0.00	0	30	0	70		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS341		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Murlough SPS Overflow & Storm Pumps	0.00	0.88	-1.90	2.78	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS348		sewerage	Waste Water Infrastructure	Sewerage	Shimna Rd, Newcastle, Sewer Replacement	0.00	130.96	0.00	0.00	130.96	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	80	0	0
KX999	KS350		sewerage	Waste Water Infrastructure	Sewerage	Seapark Road, Holywood Storm Sewer	0.00	0.95	0.95	0.00	0.00	0	80	20	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS353		sewerage	Waste Water Infrastructure	Sewerage	Ballyrickard Sewage Pumping Main Replacement	0.00	-0.90	0.00	0.00	-0.90	0	50	0	50											0	0	0	0	0	0
KX999	KS354		sewerage	Waste Water Infrastructure	Sewerage	Bangor Academy Sewers, Castle Street	0.00	136.07	3.80	127.75	4.52	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	255
KX999	KS366		sewerage	Waste Water Infrastructure	Sewerage	Upper Greenwall Street Storm Sewer Ext.	0.00	20.86	0.95	1.85	18.06	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	77
KX999	KS369		sewerage	Waste Water Infrastructure	Sewerage	Ballylough Road/Aghlisnafin Road Castlewellan	0.00	84.52	3.80	87.95	-7.23	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	490
KX999	KS374		sewerage	Waste Water Infrastructure	Sewerage	Hunter's Mill Storm Attenuation and Network Improvements, Downpatrick	0.00	879.53	0.00	0.00	1.81	88	3	9	0											0	0	0	0	0	0
KX999	KS379		sewerage	Waste Water Infrastructure	Sewerage	Murlough SPS Upgrade & Network Improvements	0.00	798.31	0.00	4.63	13.55	85	0	10	5		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS386		sewerage	Waste Water Infrastructure	Sewerage	Longisland Drive SPS Rising Main (Kircubbin)	0.00	23.24	3.80	19.44	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	51
KX999	KS387		sewerage	Waste Water Infrastructure	Sewerage	Manse Road, Seaforde Storm Sewer Extension	0.00	65.45	0.00	4.63	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS388		sewerage	Waste Water Infrastructure	Sewerage	Cherrymount Park, Bangor Sewer Rehabilitation	0.00	2.85	2.85	0.00	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS389		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Ballymartin & Blackrock WwTWs	0.00	582.24	0.00	4.63	3.61	67	16	0	17		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS805		sewerage	Waste Water Infrastructure	Sewerage	Corry Park to Cumber Grove Sewer, Drumaness	0.00	76.95	0.00	1.85	8.13	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS806		sewerage	Waste Water Infrastructure	Sewerage	Movilla Road, Newtownards Foul Sewer Extension	0.00	157.45	45.55	107.39	4.52	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	415
KX999	KS809		sewerage	Waste Water Infrastructure	Sewerage	Carrowdore Sewer Replacement	0.00	299.77	13.29	229.59	56.90	0	77	0	23		0	0	0	0	0	0		0	0	0	0	0	220	0	90
KX999	KS813		sewerage	Waste Water Infrastructure	Sewerage	Carricknab Sewerage	0.00	155.35	0.00	5.55	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS816		sewerage	Waste Water Infrastructure	Sewerage	Magheraknock Road, Ballynahinch Sewer Replacement	0.00	27.82	1.90	25.92	0.00	0	44	56	0		0	0	0	0	0	0		0	0	0	0	0	251	0	0
KX999	KS817		sewerage	Waste Water Infrastructure	Sewerage	Saintfield Waste Water Pumping Station, Pumping Main Replacement.	0.00	110.30	0.00	41.66	68.64	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	490	0	696
KX999	KS819		sewerage	Waste Water Infrastructure	Sewerage	Newcastle Sewerage Central Prom., Bernagh Green & Burrendale Park	0.00	1.81	0.00	0.00	1.81	0	100	0	0											0	0	0	0	0	0
KX999	KS820		sewerage	Waste Water Infrastructure	Sewerage	Upper North St/Mark St, Newtownards Storm Sewer	0.00	38.90	0.00	2.78	36.13	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	163
KX999	KS821		sewerage	Waste Water Infrastructure	Sewerage	Castlewellan Road, Newcastle Storm Sewer Extension	0.00	84.77	0.00	0.93	5.42	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS822		sewerage	Waste Water Infrastructure	Sewerage	Ballywalter Road, Millisle Storm Sewer Extension	0.00	19.43	0.00	0.00	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS824		sewerage	Waste Water Infrastructure	Sewerage	Sprinfield Road, Portavogie Storm Sewer Extension	0.00	27.45	0.00	0.00	5.42	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS826		sewerage	Waste Water Infrastructure	Sewerage	Bryansford Road, Newcastle Storm Sewer	0.00	71.44	0.00	0.00	2.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS827		sewerage	Waste Water Infrastructure	Sewerage	Hamilton Road, Bangor Storm Sewer	0.00	160.88	0.00	4.63	156.25	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	385
KX999	KS828		sewerage	Waste Water Infrastructure	Sewerage	Glen Road, Comber Flood Alleviation	0.00	98.60	0.00	6.48	92.12	50	0	50	0		0	0	0	0	0	0		0	0	0	0	0	0	0	418
KX999	KS829		sewerage	Waste Water Infrastructure	Sewerage	Strangford Road, Ardglass Storm and Foul Sewers	0.00	53.00	0.00	2.78	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS831		sewerage	Waste Water Infrastructure	Sewerage	Dermott Park, Comber Storm Sewer Upgrading	0.00	72.37	0.00	4.63	67.74	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	145
KX999	KS834		sewerage	Waste Water Infrastructure	Sewerage	Sewers Structural Rehabilitation Package 2	0.00	1725.88	0.00	6.48	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS836		sewerage	Waste Water Infrastructure	Sewerage	Crawfordsburn Road, Bangor Storm and Foul sewer Extensions	0.00	67.98	0.00	0.00	41.55	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS838		sewerage	Waste Water Infrastructure	Sewerage	Downpatrick Street Crossgar, Storm sewer.	0.00	115.81	0.00	0.00	12.64	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS839		sewerage	Waste Water Infrastructure	Sewerage	Gransha Road, Bangor, Trunk Sewer replacement.	0.00	90.58	0.00	0.00	28.90	20	80	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS840		sewerage	Waste Water Infrastructure	Sewerage	Craigdarragh Rd To Seahill Rd Sewer Replacement	0.00	70.71	0.00	0.00	9.03	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS844		sewerage	Waste Water Infrastructure	Sewerage	Ballyhornan Outfall Screen .	0.00	442.55	0.00	0.00	9.03	70	30	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS846		sewerage	Waste Water Infrastructure	Sewerage	High Street, Ardglass Sewer Realignment	0.00	51.17	0.00	0.00	2.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KS847		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Comber Road WWPS N Type Conversion	0.00	163.45	0.00	0.00	90.32	0	100	0	0											0	0	0	0	0	0
KX999	KS849		sewerage	Waste Water Infrastructure	Sewerage	Morston Park, Bangor, Flood Alleviation Scheme	0.00	136.62	0.00	0.00	1.81	0	100	0	0											0	0	0	0	0	0
KX999	KS850		sewerage	Waste Water Infrastructure	Sewerage	Quarry Heights, Newtownards, Foul and Storm Sewer Extension	0.00	136.62	0.00	0.00	1.81	0	0	0	100											0	0	0	0	0	0
KX999	KT121		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Dunmurry WwTW & New Holland WwTW Odour Control	0.00	18.22	25.62	-7.41	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KT373		sewerage	Waste Water Infrastructure	Sewerage	Hulls Lane, Lisburn Foul Sewer Extension	0.00	95.84	95.84	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KT374		sewerage	Waste Water Infrastructure	Sewerage	Scroggy Road Glenavy	0.00	87.16	6.64	5.55	74.96	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	1125
KX999	KT375		sewerage	Waste Water Infrastructure	Sewerage	Prince William Road, Lisburn Foul Sewer Extension	0.00	94.54	4.74	89.80	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KT378		sewerage	Waste Water Infrastructure	Sewerage	Hawthorn Hill Foul Sewer Extension	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KT382		sewerage	Waste Water Infrastructure	Sewerage	McKeown Street Lisburn Environmental Improvements	0.00	193.87	0.00	0.93	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KT384		sewerage	Waste Water Infrastructure	Sewerage	Mandeville Avenue, Lisburn Foul Sewer Extension	0.00	10.18	0.00	10.18	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	43
KX999	KT385		sewerage	Management and General	Sewerage Management and General	Dundrod Drive Lisburn Storm Sewer Upgrade	0.00	43.44	0.00	3.70	39.74	0	0	50	50		0	0	0	0	0	0		0	0	0	0	0	0	0	180
KX999	KT386		sewerage	Waste Water Infrastructure	Sewerage	Lisburn Road, Culavey Road Hillsborough Storm Sewer	0.00	111.16	0.00	2.78	108.38	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	395
KX999	KT387		sewerage	Waste Water Infrastructure	Sewerage	Trinity Terrace Lisburn Foul & Stom Sewer Extensions	0.00	33.55	0.00	5.55	28.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	111.1
KX999	KT388		sewerage	Waste Water Infrastructure	Sewerage	224 Kingsway Dunmurry Storm Sewer Extension	0.00	67.00	0.00	2.78	12.64	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KT389		sewerage	Waste Water Infrastructure	Sewerage	Magheralave Road Lisburn, Foul Sewer Extension	0.00	97.15	0.00	1.85	5.42	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KT390		sewerage	Waste Water Infrastructure	Sewerage	Magheralave Road, Clonevan Park Storm Sewer Extension	0.00	141.20	0.00	0.00	9.03	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KT392		sewerage	Waste Water Infrastructure	Sewerage	2A Seymour St, Lisburn, Storm Sewer Extension.	0.00	154.31	0.00	0.00	4.52	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KT393		sewerage	Waste Water Infrastructure	Sewerage	Longstone St to Ridgeway St, Lisburn Storm Sewer	0.00	137.59	0.00	0.00	5.42	0	80	0	20		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KT394		sewerage	Waste Water Infrastructure	Sewerage	Mount Eagles, Stewartstown Road, Lisburn.	0.00	178.03	0.00	0.00	1.81	0	0	0	100											0	0	0	0	0	0
KX999	KU008		sewerage	Waste Water Infrastructure	Sewerage	Main Road Cloughey	0.00	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU037		sewerage	Waste Water Infrastructure	Sewerage	Harbour Road Portavogie Foul & Storm Sewer	0.00	5.69	5.69	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU038		sewerage	Waste Water Infrastructure	Sewerage	Springvale Road Ballywalter Foul & Storm Sewer	0.00	6.64	6.64	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU042		sewerage	Waste Water Infrastructure	Sewerage	Princetown Road, Bangor Foul & Storm Sewers	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU051		sewerage	Waste Water Infrastructure	Sewerage	Cloona Pk Dunmurray Fs	0.00	8.54	8.54	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU062		sewerage	Waste Water Infrastructure	Sea outfalls and headworks	Ballynagross Outfall Pipe Upgrade	0.00	0.95	0.95	0.00	0.00	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU088		sewerage	Waste Water Infrastructure	Sewerage	Carrowdore Sewer Replacement	0.00	8.54	8.54	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	712	0	0
KX999	KU092		sewerage	Waste Water Infrastructure	Sewerage	Lamont Avenue, Newtownards Storm Sewer	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU094		sewerage	Waste Water Infrastructure	Sewerage	Rhanbouy Park, Seahill Storm Separation	0.00	-4.63	0.00	-4.63	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU103		sewerage	Waste Water Infrastructure	Sewerage	Racecourse Hill Downpatrick Foul & Storm Sewer Extension	0.00	0.93	0.00	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU107		sewerage	Waste Water Infrastructure	Sewerage	(MW) Glenside Park Replacement Combined Sewer	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU110		sewerage	Waste Water Infrastructure	Sewerage	Whiterock Road, Killinchy Sewer & Watermain Replacement	0.00	4.72	3.80	0.93	0.00	0	70	0	30		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU115		sewerage	Waste Water Infrastructure	Sewerage	Corrs Corner Foul and Storm Sewer Extension	0.00	0.93	0.00	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KU120		sewerage	Waste Water Infrastructure	Sewerage	Chichester Square, Carrickfergus Foul Sewer Rep	0.00	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV007		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Lislea - RBC Installations West & South	0.00	-17.38	8.54	-25.92	0.00	50	25	0	25		0	1	350	0	0	0		0	0	0	0	0	0	0	0
KX999	KV010		sewerage	Waste Water Infrastructure	Sewerage	Loughbrickland WwTW	0.00	-7.52	-4.74	-2.78	0.00	40	25	0	35		0	1	1350	0	0	0		0	0	0	0	0	0	0	0
KX999	KV016		sewerage	Waste Water Infrastructure	Sewerage	Banbridge Drainage Area Improvements	0.00	261.38	251.47	-0.93	10.84	41	26	0	33		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV018		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Glassdrumman - RBC Installations W & S	0.00	5.72	6.64	-0.93	0.00	40	20	0	40		0	1	200	0	0	0		0	0	0	0	0	0	0	0
KX999	KV020		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Kilcoo - RBC Installations West & South	0.00	2.94	6.64	-3.70	0.00	40	20	0	40		0	1	900	0	0	0		0	0	0	0	0	0	0	0
KX999	KV029		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Rathfriland WwTW	0.00	122.95	144.24	-21.29	0.00	55	22	0	23		0	0	0	1	5586	0		0	0	0	0	0	0	0	0
KX999	KV030		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Blackskull - RBC Installations West & South	0.00	11.48	15.18	-3.70	0.00	40	20	0	40		0	1	615	0	0	0		0	0	0	0	0	0	0	0
KX999	KV037		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Mayobridge/Derryleckagh/Crown Cres.	0.00	255.64	240.08	8.33	7.23	40	10	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV038		sewerage	Waste Water Infrastructure	Sewerage	Mound rd Warrenpoint sew imps - EPF flood alleviation	0.00	222.93	220.16	2.78	0.00	54	25	0	21		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV047		sewerage	Waste Water Infrastructure	Sewerage	Beechhill - RBC Installations West & South	0.00	16.13	16.13	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV049		sewerage	Waste Water Infrastructure	Sewerage	Rathfriland Road, Newry Storm Sewer	0.00	14.81	0.00	14.81	0.00	0	60	0	40		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV050		sewerage	Waste Water Infrastructure	Sewerage	Dublin Road Kilcoo (Moyadd Cottages) Sewer Extension	0.00	14.19	13.29	0.00	0.90	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV055		sewerage	Waste Water Infrastructure	Sewerage	Downpatrick	0.00	32.26	32.26	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV059		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Nitrogen removal	0.00	-2.85	-2.85	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV064		sewerage	Waste Water Infrastructure	Sewerage	Lurganare WwTW	0.00	491.38	2.85	6.48	472.36	84	7	0	9		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV066		sewerage	Waste Water Infrastructure	Sewerage	Chapel Road Storm & Foul Sewer Extension	0.00	42.04	-11.39	5.55	47.87	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV076		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Castlewellan	0.00	-2.82	-1.90	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV088		sewerage	Waste Water Infrastructure	Sewerage	Circular Road, Dromore, Storm Sewer Extension	0.00	5.69	5.69	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV099		sewerage	Waste Water Infrastructure	Sewerage	Quillyburn Manor, Dromore Sewer Extension	0.00	-7.59	-7.59	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV102		sewerage	Waste Water Infrastructure	Sewerage	Windsor Hill, Newry Sewerage Scheme	0.00	230.61	190.74	5.55	34.32	0	94	0	6		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV106		sewerage	Waste Water Infrastructure	Sewerage	Ballymoyer Road Whitecross Storm Sewer Extension and Foul Sewer Upgra	0.00	52.93	44.60	8.33	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	193	0	52
KX999	KV116		sewerage	Waste Water Infrastructure	Sewerage	Abbey Park Kilkeel Sewer Replacement	0.00	538.12	494.40	14.81	28.90	0	72	28	0		0	0	0	0	0	0		0	0	0	0	0	0	0	1528
KX999	KV123		sewerage	Waste Water Infrastructure	Sewerage	Church View Drive, Lawrencetown Foul Sewer Extension	0.00	33.44	40.80	-5.55	-1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV127		sewerage	Waste Water Infrastructure	Sewerage	Castle Lane, Castlewellan Storm Sewer Ext	0.00	6.64	6.64	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV128		sewerage	Waste Water Infrastructure	Sewerage	Sheetrim Road Cullyhanna Foul Sewer Extension	0.00	67.19	3.80	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV129		sewerage	Waste Water Infrastructure	Sewerage	Old Newry Road, Banbridge Foul Sewer Ext	0.00	2.80	0.95	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV130		sewerage	Waste Water Infrastructure	Sewerage	Newry Road Mayobridge Storm Foul Sewer Extension	0.00	59.31	3.80	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV131		sewerage	Waste Water Infrastructure	Sewerage	Bann Road, Castlewellan Foul Sewer Ext	0.00	4.68	1.90	2.78	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV132		sewerage	Waste Water Infrastructure	Sewerage	A1 Banbridge Storm Sewer Extension	0.00	132.85	132.85	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV138		sewerage	Waste Water Infrastructure	Sewerage	Glen Hill Newry Foul Sewer Extension	0.00	154.54	4.74	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
									Current/Actual Project Expenditure [06/07£k]			Current Capital Investment Driver Allocation (%)				Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d]		WwTW (>250pe) compliance with Water Order Consents		WwTW passing UWWTD numeric consents		Internal sewer flooding (DG5) caused by overload				Actual Project Outputs: Water Distribution Network			Sewerage Network		
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	2008	2009	2010	Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]	Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
KX999	KV139		sewerage	Waste Water Infrastructure	Sewerage	School Road Killeen Foul Sewer Extension	0.00	97.90	0.00	1.85	0.00	33	0	0	67		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV140		sewerage	Waste Water Infrastructure	Sewerage	Rostrevor Road, Hilltown Storm Sewer Extension	0.00	112.29	3.80	0.00	4.52	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV141		sewerage	Waste Water Infrastructure	Sewerage	Limekiln Road Newry Foul Sewer Extension	0.00	11.41	12.34	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	35
KX999	KV142		sewerage	Waste Water Infrastructure	Sewerage	Chancellors Road, Newry Foul Sewage Pumping Main Extension	0.00	19.47	0.00	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV144		sewerage	Waste Water Infrastructure	Sewerage	Dromore Street Rathfriland Storm Sewer Extension	0.00	12.27	11.39	-0.93	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	49
KX999	KV147		sewerage	Waste Water Infrastructure	Sewerage	Main Street/Dromore Street, Rathfriland Sewer Replacement	0.00	97.17	0.00	1.85	6.32	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV150		sewerage	Waste Water Infrastructure	Sewerage	Forthill Road Newry Foul Sewer Extension	0.00	32.49	0.00	0.00	31.61	30	0	0	70		0	0	0	0	0	0		0	0	0	0	0	0	0	61
KX999	KV151		sewerage	Waste Water Infrastructure	Sewerage	Carrickdesland, Burren Foul Sewer Extension	0.00	106.51	0.00	1.85	100.25	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	601
KX999	KV152		sewerage	Waste Water Infrastructure	Sewerage	Abbey Grammar School Storm Sewer Extension	0.00	140.92	0.00	0.93	139.99	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	179
KX999	KV154		sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Newry Road Sewage Pumping Station, Warrenpoint Upgrade	0.00	2834.72	0.00	39.81	39.74	8	22	62	8		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV155		sewerage	Waste Water Infrastructure	Sewerage	Rostrevor Sewers Upgrading - Horners Lane Improvements	0.00	38.88	0.00	1.85	37.03	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	40
KX999	KV156		sewerage	Waste Water Infrastructure	Sewerage	Crieve Road, Newry Foul & Storm Sewer Extensions	0.00	187.77	0.00	0.00	3.61	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV158		sewerage	Waste Water Infrastructure	Sewerage	Manse Road Banbridge Foul & Storm Sewer Extensions	0.00	48.79	0.00	0.93	47.87	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	148
KX999	KV159		sewerage	Waste Water Infrastructure	Sewerage	Water Street / Horners Lane Sewer Upgrade/Replacement	0.00	148.10	0.00	0.00	2.71	50	50	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV160		sewerage	Waste Water Infrastructure	Sewerage	Fairy Glen, Crossmaglen Storm Sewer Extension	0.00	29.17	0.00	0.00	3.61	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV163		sewerage	Waste Water Infrastructure	Sewerage	7 Old Road Drumintee Sewer Pumping Main Extension	0.00	20.35	0.00	0.00	3.61	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KV164		sewerage	Waste Water Infrastructure	Sewerage	Livins Road, Attical Foul Sewer Extension	0.00	33.53	0.00	0.00	1.81	0	0	0	100											0	0	0	0	0	0
KX999	KW359		sewerage	Management and General	Sewerage Management and General	S Divis DAS Stg 2	0.00	17.08	17.08	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KW581		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Newry STW	0.00	10.32	5.69	4.63	0.00	34	32	0	34		0	0	0	1	75040	0		0	0	0	0	0	0	0	0
KX999	KW590		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Kinallen - RBC Installations West & South	0.00	36.39	27.52	-6.48	15.35	40	20	0	40		0	1	1800	0	0	0		0	0	0	0	0	0	0	0
KX999	KW597		sewerage	Waste Water Infrastructure	Sewerage	Camlough/Bessbrook Sewerage Scheme - Phases 2&3	0.00	98.19	86.35	6.48	2.71	53	38	0	9		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KW707		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	anbridge STW Imps	0.00	-7.57	-6.64	-0.93	0.00	50	25	0	25		0	0	0	1	40000	0		0	0	0	0	0	0	0	0
KX999	KW797		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Newry Sewers Upgrading	0.00	93.95	93.95	0.00	0.00	55	15	0	30		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX028		sewerage	Waste Water Infrastructure	Sewerage	Nutfield Road Maguiresbridge	0.00	1.90	1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX047		sewerage	Waste Water Infrastructure	Sewerage	Erganagh Road Foul Sewer, Castlederg	0.00	7.59	7.59	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX059		sewerage	Waste Water Infrastructure	Sewerage	Brownhill Rd. FS	0.00	1.85	0.00	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX060		sewerage	Waste Water Infrastructure	Sewerage	Gillgooley Road, Omagh Sewerage Scheme	0.00	-0.88	0.95	-0.93	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX072		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Omagh Road Drumquin	0.00	12.66	17.08	3.70	-8.13	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX078		sewerage	Waste Water Infrastructure	Sewerage	Newtown St/Patrick St, Strabane Sewers	0.00	2.89	3.80	0.00	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX089		sewerage	Waste Water Infrastructure	Sewerage	Strabane Road, Castlederg Storm Sewer	0.00	39.36	48.40	0.00	-9.03	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	74
KX999	KX104		sewerage	Waste Water Infrastructure	Sewerage	Old Tempo Road, Enniskillen Storm Sewer	0.00	5.51	1.90	0.00	3.61	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX107		sewerage	Waste Water Infrastructure	Sewerage	Aughhill SPS Rationalisation, Magilligan	0.00	6.64	6.64	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX112		sewerage	Waste Water Infrastructure	Sewerage	Bradley Way, Strabane Storm Sewer	0.00	0.93	0.00	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX114		sewerage	Waste Water Infrastructure	Sewerage	Ardmore Road, Derry Sewerage Scheme	0.00	-0.90	0.00	0.00	-0.90	0	100	0	0											0	0	0	0	0	0
KX999	KX123		sewerage	Waste Water Infrastructure	Sewerage	Learmore Road, Killen, Castlederg Storm Sewer	0.00	5.72	6.64	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX127		sewerage	Waste Water Infrastructure	Sewerage	Moorlough Road, Artigarvan Foul Sewer	0.00	2.85	2.85	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX130		sewerage	Waste Water Infrastructure	Sewerage	Dunnalong Road, Bready Storm Sewer	0.00	0.97	1.90	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX131		sewerage	Waste Water Infrastructure	Sewerage	Cooley Road, Sixmilecross Storm Sewer	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX132		sewerage	Waste Water Infrastructure	Sewerage	Claragh Road, Drumquin Foul Sewer	0.00	0.02	0.95	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX134		sewerage	Waste Water Infrastructure	Sewerage	Omagh Ring Sewer Replacement - Dromore Road	0.00	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX138		sewerage	Waste Water Infrastructure	Sewerage	Strahans Road, Strabane Storm Sewer	0.00	0.93	0.00	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX140		sewerage	Waste Water Infrastructure	Sewerage	Farmhill Road, Ballymagrory Foul Sewer	0.00	1.90	2.85	-1.85	0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX144		sewerage	Waste Water Infrastructure	Sewerage	Derrylaney, Teemore Foul Sewer	0.00	1.90	1.90	0.00	0.00	50	0	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX155		sewerage	Waste Water Infrastructure	Sewerage	Sligo Road, Enniskillen Combined Sewer	0.00	0.93	0.00	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX156		sewerage	Waste Water Infrastructure	Sewerage	Woodside to Victoria Rd. Sewers	0.00	-3.66	-0.95	0.00	-2.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX735		sewerage	Waste Water Infrastructure	Sewerage	Lough Skitter SS	0.00	4.74	4.74	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX910		sewerage	Waste Water Infrastructure	Sewerage	Tully	0.00	5.55	0.00	5.55	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX934		sewerage	Waste Water Infrastructure	Sewerage	Lisanally, Derry Storm Sewer	0.00	14.23	14.23	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
KX999	KX935		sewerage	Waste Water Non Infrastructure	In-line pumping stations	Mantlin Road, Kesh Sewerage Scheme	0.00	107.51	116.72	-7.41	-1.81	0	38	0	62		0	0	0	0	0	0		0	0	0	0	0	0	0	86
KX999	KX975		sewerage	Waste Water Infrastructure	Sewerage	Greysteel S&F Sewers	0.00	15.35	0.00	0.00	15.35	0	50	0	50		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000			water	Water Infrastructure	Water Distribution Mains	unnamed unallocated in yr & first time services	56579.15	0.00	0.00	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JA218		water	Water Infrastructure	Water Distribution Mains	Hillhead Road, Ballyclare Replacement Watermain	0.00	6.64	6.64	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JA220		water	Water Infrastructure	Water Distribution Mains	The Village Templepatrick Rpl W/M	0.00	1.85	0.00	1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JA225		water	Water Infrastructure	Water Distribution Mains	Ballyhampton Road, Larne - Replacement Watermain	0.00	28.47	28.47	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	622	0	0	0	0	0
ZZ000	JA229		water	Water Infrastructure	Water Distribution Mains	Maghereagh Rd. Randalstown W/M Rpl	0.00	3.80	3.80	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JA236		water	Water Infrastructure	Water Distribution Mains	Templepatrick Rd. Ballyclare W/M Extention	0.00	2.85	2.85	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JA242		water	Water Infrastructure	Water Distribution Mains	Loughbeg Road, Toomebridge, Water Main Extension	0.00	1.94	1.90	1.85	-1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JA244		water	Water Infrastructure	Water Distribution Mains	Pipe Road, Randalstown, Watermain Extension	0.00	12.34	12.34	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	224	0	0	0
ZZ000	JA249		water	Water Infrastructure	Water Distribution Mains	Craigstown Road, Randalstown, Watermain Extension	0.00	15.11	13.29	0.93	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	347	0	0	0
ZZ000	JA250		water	Water Infrastructure	Water Distribution Mains	Kilbride Road/Bryantang Road, Doagh, Watermain Extension	0.00	39.86	39.86	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	300	0	458	0	0	0
ZZ000	JA252		water	Water Infrastructure	Water Distribution Mains	Castle Road, Antrim, Watermain	0.00	1375.17	664.26	708.20	2.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	7289	0	0	0
ZZ000	JA254		water	Water Infrastructure	Water Distribution Mains	Birchill Road Antrim Watermain	0.00	367.99	0.00	73.13	275.47	0	88	0	12		0	0	0	0	0	0		0	0	0	0	1349	0	0	0
ZZ000	JA255		water	Water Infrastructure	Water Distribution Mains	Glenavy Road, Crumlin, Replacement Watermain	0.00	58.12	67.38	-9.26	0.00	0	0	100	0		0	0	0	0	0	0		0	0	1100	0	0	0	0	0
ZZ000	JA258		water	Water Infrastructure	Water Distribution Mains	Dublin Road/ Antrim Road, Aldergrove, Replacement Watermain	0.00	9.93	0.00	0.00	9.93	0	87	0	13		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JA260		water	Water Infrastructure	Water Distribution Mains	Clonkeen, Randalstown, Replacement Watermain	0.00	216.58	0.00	214.78	1.81	0	0	0	100		0	0	0	0	0	0		0	0	500	0	1700	0	0	0
ZZ000	JA261		water	Water Infrastructure	Water Distribution Mains	Old Ballybracken Road Barnish Road Kells Replacement Watermain	0.00	227.78	0.00	229.59	-1.81	0	0	100	0		0	0	0	0	0	0		0	0	0	0	4200	0	0	0
ZZ000	JA262		water	Water Infrastructure	Water Distribution Mains	Main Street/ New Street, Randalstown, Replacement Watermain	0.00	3.61	0.00	0.00	3.61	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JA263		water	Water Infrastructure	Water Distribution Mains	Aghnadarragh Road, Glenavy Watermain Extension	0.00	15.74	0.00	15.74	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JA265		water	Water Infrastructure	Water Distribution Mains	Enkalon Industrial Park, Randalstown Road, Antrim, Watermain Extension	0.00	31.63	0.00	0.93	30.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	570	0	0	0
ZZ000	JA269		water	Water Infrastructure	Water Distribution Mains	Castle Road/Whitehill Road Randalstown WM Replacement	0.00	414.36	0.00	0.00	406.43	60	10	30	0		0	0	0	0	0	0		0	0	101	0	4248	0	0	0
ZZ000	JA270		water	Water Infrastructure	Water Distribution Mains	Bellahill, Ballycarry, Co Antrim, WM Replacement.	0.00	78.44	0.00	0.00	37.03	0	100	0	0		0	0	0	0	0	0		0	0	0	0	142	0	0	0
ZZ000	JB462		water	Water Infrastructure	Water Distribution Mains	Ballymena North Zone Watermain Improvements	0.00	6.06	17.08	-7.41	-3.61	44	54	2	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB464		water	Water Infrastructure	Water Distribution Mains	Tuftarney SR To Clough SR TM	0.00	23.22	13.29	0.00	9.93	5	50	0	45		0	0	0	0	0	0		0	0	0	0	35	0	0	0
ZZ000	JB486		water	Water Infrastructure	Water Distribution Mains	Loughfea Rd C'town repl WM	0.00	3.64	0.00	0.93	2.71	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB498		water	Water Infrastructure	Water Distribution Mains	Ballymena South Zone Watermain Improvements	0.00	48.33	45.55	2.78	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB499		water	Water Infrastructure	Water Distribution Mains	Clough Zone Watermain Improvements	0.00	213.93	196.43	13.89	3.61	39	7	52	2		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB503		water	Water Infrastructure	Water Distribution Mains	Loan Zone Watermain Improvements	0.00	207.75	204.97	2.78	0.00	66	27	6	1		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB504		water	Water Infrastructure	Water Distribution Mains	Glarryford Zone Watermain Improvements	0.00	12.38	14.23	-1.85	0.00	97	0	0	3		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB505		water	Water Infrastructure	Water Distribution Mains	Kirkinriola Zone Watermain Improvements	0.00	-2.66	4.74	-7.41	0.00	56	4	39	1		0	0	0	0	0	0		28	0	0	0	0	0	0	0
ZZ000	JB511		water	Water Infrastructure	Water Distribution Mains	Ballygelly Rd, Buckna - Replacement Watermain	0.00	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB518		water	Water Infrastructure	Water Distribution Mains	Stewartstown Zone WM Improvements	0.00	-7.91	62.63	-40.73	-29.80	26	66	8	0		0	0	0	0	0	0		0	0	0	0	223	0	0	0
ZZ000	JB522		water	Water Infrastructure	Water Distribution Mains	Drumlamph Road, Castledawson, Watermain Extension	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB523		water	Water Infrastructure	Water Distribution Mains	Stewartstown Rd. W/M Ext	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB541		water	Water Infrastructure	Water Distribution Mains	Corvanaghan Rd Dunamore	0.00	1.02	3.80	-2.78	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB545		water	Water Infrastructure	Water Distribution Mains	Sluggan Rd. Pomeroy Rpl W/M	0.00	4.93	5.69	5.55	-6.32	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB553		water	Water Infrastructure	Water Distribution Mains	Tamlaght Rd, Tamlaght O Crilly - Replacement Watermain	0.00	-1.85	0.00	-1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB561		water	Water Infrastructure	Water Distribution Mains	Duntibryan Rd, Tobermore - Watermain Extension	0.00	-0.93	0.00	-0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB579		water	Water Infrastructure	Water Distribution Mains	Aughrim Rd, Magherafelt - Replacement Watermain	0.00	-4.76	0.00	-10.18	5.42	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB581		water	Water Infrastructure	Water Distribution Mains	Orritor Craigs Trunk Watermain Replacement	0.00	7.59	5.69	3.70	-1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB583		water	Water Infrastructure	Water Distribution Mains	Oak Park, Draperstown Repl. Wm.	0.00	51.06	5.69	45.36	0.00	0	50	50	0		0	0	0	0	0	0		0	0	0	0	380	0	0	0
ZZ000	JB584		water	Water Infrastructure	Water Distribution Mains	Tullyreavy Rd / Keenaghan Rd. Pomeroy Replaceement Watermain	0.00	2.85	2.85	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB591		water	Water Infrastructure	Water Distribution Mains	Ballynagilly Rd.Watermain & Booster Station	0.00	25.25	10.44	14.81	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB594		water	Water Infrastructure	Water Distribution Mains	Westland Rd. Cookstown Rpl W/M	0.00	0.82	17.08	0.00	-16.26	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB595		water	Water Infrastructure	Water Distribution Mains	Skerdan Rd. Portglenone Wm. Ext.	0.00	2.85	2.85	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB597		water	Water Infrastructure	Water Distribution Mains	Maghadone Rd. Moneymore W/M Ext	0.00	1.90	1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB599		water	Water Infrastructure	Water Distribution Mains	Killycurragh Rd. 2006 W/M Ext	0.00	-0.02	-0.95	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB606		water	Water Infrastructure	Water Distribution Mains	Tullycall Road Repl. Wm. Cookstown	0.00	-1.85	0.00	-1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB607		water	Water Infrastructure	Water Distribution Mains	Fallagloon Rd. Repl. Wm.	0.00	33.24	34.16	-0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB608		water	Water Infrastructure	Water Distribution Mains	Drumard Road Repl. Wm. Kilrea	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB615		water	Water Infrastructure	Water Distribution Mains	Moveagh Road Repl. Wm. Cookstown	0.00	0.93	0.00	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB616		water	Water Non Infrastructure	Facilities Pumping Stations	Cavanalinn Booster Station Pomeroy	0.00	-0.90	0.00	0.00	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB620		water	Water Infrastructure	Water Distribution Mains	Drumullan Rd. Coagh Watermain Extension	0.00	-20.88	-20.88	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB623		water	Water Infrastructure	Water Distribution Mains	Northern Key Transport Corridor, Ballymena Watermain Scheme	0.00	1830.02	14.23	242.55	1172.33	0	4	0	96		0	0	0	0	0	0		0	0	375	0	3935	0	0	0
ZZ000	JB624		water	Water Infrastructure	Water Distribution Mains	Ballymacombs Road	0.00	15.74	0.00	15.74	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB625		water	Water Infrastructure	Water Distribution Mains	Brookmount Road, Magherafelt	0.00	14.23	14.23	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB626		water	Water Infrastructure	Water Distribution Mains	Cloughwater Road Ballymena Watermain Extension	0.00	13.29	13.29	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	182	0	0	0
ZZ000	JB627		water	Water Infrastructure	Water Distribution Mains	Main St - Broughshane - Watermain Replacement	0.00	150.70	143.29	7.41	0.00	0	100	0	0		0	0	0	0	0	0		0	0	1170	0	0	0	0	0
ZZ000	JB628		water	Water Infrastructure	Water Distribution Mains	Gortgole Road Portglenone Watermain Extension	0.00	15.09	11.39	3.70	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	175	0	0	0
ZZ000	JB629		water	Water Infrastructure	Water Distribution Mains	Bancran Road, Draperstown, Watermain Extension	0.00	25.62	25.62	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	427	0	0	0
ZZ000	JB632		water	Water Infrastructure	Water Distribution Mains	Derganagh Road, Knockloughrim, Watermain Extension	0.00	18.03	18.03	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	160	0	0	0
ZZ000	JB633		water	Water Infrastructure	Water Distribution Mains	Knockanully Road, Martinstown, Watermain Extension	0.00	6.62	5.69	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	100	0	0	0
ZZ000	JB634		water	Water Infrastructure	Water Distribution Mains	Battery	0.00	41.78	42.70	-0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	770	0	0	0	0	0
ZZ000	JB635		water	Water Infrastructure	Water Distribution Mains	Pound Road, Magherafelt	0.00	47.49	49.35	-1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	375	0	100	0	0	0
ZZ000	JB636		water	Water Infrastructure	Water Distribution Mains	Old Ballymoney Road, Ballymena, Replacement Watermain	0.00	23.05	0.00	19.44	3.61	100	0	0	0		0	0	0	0	0	0		0	0	0	0	250	0	0	0
ZZ000	JB637		water	Water Infrastructure	Water Distribution Mains	Dunmore Lane, Cookstown, Watermain Extension	0.00	27.80	0.00	28.70	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB638		water	Water Infrastructure	Water Distribution Mains	Kildowney Hill, Glarryford, Replacement Watermain	0.00	52.38	0.00	0.00	52.38	50	50	0	0		0	0	0	0	0	0		0	0	1325	0	0	0	0	0
ZZ000	JB643		water	Water Infrastructure	Water Distribution Mains	Creagh Hill, Castledawson, Watermain Extension	0.00	12.34	12.34	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	240	0	0	0
ZZ000	JB644		water	Water Infrastructure	Water Distribution Mains	Bank Square, Maghera	0.00	15.25	17.08	-0.93	-0.90	50	0	0	50		0	0	0	0	0	0		0	0	80	0	0	0	0	0
ZZ000	JB645		water	Water Infrastructure	Water Distribution Mains	Tullygarley Road, Ballymena, Watermain Scheme	0.00	28.70	0.00	28.70	0.00	0	80	0	20		0	0	0	0	0	0		0	0	0	0	220	0	0	0
ZZ000	JB646		water	Water Infrastructure	Water Distribution Mains	Main Street, Castledawson, Replacement Watermain	0.00	2.85	2.85	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
									Current/Actual Project Expenditure [06/07£k]			Current Capital Investment Driver Allocation (%)				Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d]		WwTW (>250pe) compliance with Water Order Consents		WwTW passing UWWTD numeric consents		Internal sewer flooding (DG5) caused by overload				Actual Project Outputs: Water Distribution Network			Sewerage Network		
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	2008	2009	2010	Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]	Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
ZZ000	JB650		water	Water Infrastructure	Water Distribution Mains	Drummuck Road Maghera Watermain Extension	0.00	10.07	0.00	5.55	4.52	0	0	0	100		0	0	0	0	0	0		0	0	0	0	200	0	0	0
ZZ000	JB651		water	Water Infrastructure	Water Distribution Mains	Carnlough Road, Broughshane, Watermain Replacement	0.00	178.63	0.00	213.85	-35.22	100	0	0	0		0	0	0	0	0	0		0	0	2470	0	0	0	0	0
ZZ000	JB652		water	Water Infrastructure	Water Distribution Mains	Frys Road, Ballymena New Watermain	0.00	452.49	0.00	0.00	452.49	0	0	0	100		0	0	0	0	0	0		0	0	0	0	1792	0	0	0
ZZ000	JB653		water	Water Infrastructure	Water Distribution Mains	Loan Command SR, Inlet Watermain	0.00	582.95	0.00	0.00	562.68	100	0	0	0		0	0	0	0	0	0		0	0	0	0	4200	0	0	0
ZZ000	JB654		water	Water Infrastructure	Water Distribution Mains	Aughnahoy Road, Portglenone Watermain Extension	0.00	8.17	0.00	1.85	6.32	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB655		water	Water Infrastructure	Water Distribution Mains	Mullaghboy Road, Bellaghy, Watermain Replacement	0.00	82.60	0.00	90.72	-8.13	0	100	0	0		0	0	0	0	0	0		0	0	0	0	800	0	0	0
ZZ000	JB656		water	Water Infrastructure	Water Distribution Mains	Magherafelt Road, Tobermore, Watermain Extension	0.00	21.68	0.00	0.00	21.68	0	0	0	100		0	0	0	0	0	0		0	0	0	0	220	0	0	0
ZZ000	JB658		water	Water Infrastructure	Water Distribution Mains	Grange Lane, Magherafelt, Watermain Extension	0.00	2.71	0.00	0.00	2.71	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JB659		water	Water Infrastructure	Water Distribution Mains	Old Portglenone Road, Portglenone, Watermain Trunk	0.00	324.24	0.00	0.00	324.24	100	0	0	0		0	0	0	0	0	0		0	0	0	0	2420	0	0	0
ZZ000	JB660		water	Water Infrastructure	Water Distribution Mains	Lough Fea Road, Cookstown, Watermain Replacement.	0.00	57.40	0.00	57.40	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	1150	0	0	0
ZZ000	JB664		water	Water Infrastructure	Water Distribution Mains	Munie Road/Straidkilly Road, Glenarm, Watermain Replacement	0.00	115.61	0.00	0.00	115.61	0	100	0	0		0	0	0	0	0	0		0	0	1837	0	346	0	0	0
ZZ000	JB667		water	Water Infrastructure	Water Distribution Mains	Woodtown Road, Ballymena, Watermain Replacement	0.00	46.97	0.00	0.00	46.97	75	25	0	0		0	0	0	0	0	0		0	0	0	0	585	0	0	0
ZZ000	JB669		water	Water Infrastructure	Water Distribution Mains	Tullycall Road, Cookstown, Watermain Replacement.	0.00	55.09	0.00	0.00	55.09	0	100	0	0		0	0	0	0	0	0		0	0	0	0	1200	0	0	0
ZZ000	JC291		water	Water Non Infrastructure	Water Treatment Works	Rathland Island Water Supply Improvements	0.00	18.58	2.85	15.74	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC306		water	Water Infrastructure	Water Distribution Mains	Layde Road, Cushendall, Replacement Watermain	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC308		water	Water Infrastructure	Water Distribution Mains	Lisnagat Road, Moss-Side, Watermain Extension	0.00	-0.93	0.00	-0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC316		water	Water Infrastructure	Water Distribution Mains	Magheramore Road, Armoy - Watermain Extension	0.00	0.93	0.00	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC320		water	Water Infrastructure	Water Distribution Mains	Gateside Rd, Portrush - Watermain Extension	0.00	0.93	0.00	0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC332		water	Water Infrastructure	Water Distribution Mains	Moyan Road Stranocum Repl Wm	0.00	0.93	0.00	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC333		water	Water Infrastructure	Water Distribution Mains	Priestland Road, Bushmills, Repl. Wm.	0.00	0.93	0.00	0.93	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC337		water	Water Infrastructure	Water Distribution Mains	Greystone Crescent, Drevock Repl. Wm.	0.00	-11.36	-11.39	0.93	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC338		water	Water Infrastructure	Water Distribution Mains	Rusky Park, Aghadowey Wm. Ext.	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC339		water	Water Infrastructure	Water Distribution Mains	Green Road, Quilley Wm. Ext.	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC345		water	Water Infrastructure	Water Distribution Mains	Tullaghans Rd. Rasharkin Repl. Wm.	0.00	10.21	0.95	9.26	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC348		water	Water Infrastructure	Water Distribution Mains	The Glens, Limavady – Watermain Repl	0.00	167.57	113.87	53.69	0.00	0	100	0	0		0	0	0	0	0	0		0	0	1784	0	0	0	0	0
ZZ000	JC354		water	Water Infrastructure	Water Distribution Mains	Bendooragh Road, Ballymoney	0.00	26.57	26.57	0.00	0.00	0	0	0	100											0	0	0	0	0	0
ZZ000	JC357		water	Water Infrastructure	Water Distribution Mains	Burnquarter Road, Ballymoney, Watermain Extension	0.00	-4.74	-4.74	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC359		water	Water Infrastructure	Water Distribution Mains	Toberkeagh Road Bushmills Watermain Extension	0.00	3.80	3.80	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC360		water	Water Infrastructure	Water Distribution Mains	Burnquarter Road (West), Ballymoney, Watermain Extension	0.00	1.85	0.95	0.00	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	418	0	0	0
ZZ000	JC362		water	Water Infrastructure	Water Distribution Mains	Ballywillin Road, Portrush, Replacement Watermain	0.00	0.14	5.69	-5.55	0.00	0	100	0	0		0	0	0	0	0	0		0	0	350	0	0	0	0	0
ZZ000	JC363		water	Water Infrastructure	Water Distribution Mains	Barnside Road, Garvagh, Watermain Extension	0.00	56.01	56.94	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	1110	0	0	0
ZZ000	JC364		water	Water Infrastructure	Water Distribution Mains	Ballinlea Road, Stranocum, Replacement Watermain	0.00	130.91	129.06	1.85	0.00	100	0	0	0		0	0	0	0	0	0		0	0	3160	0	0	0	0	0
ZZ000	JC365		water	Water Infrastructure	Water Distribution Mains	Bushtown Road, Coleraine, Watermain Extension	0.00	12.08	0.00	13.89	-1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	460	0	0	0
ZZ000	JC368		water	Water Infrastructure	Water Distribution Mains	Lisheegan Road, Rasharkin	0.00	21.76	18.98	2.78	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	350	0	0	0
ZZ000	JC369		water	Water Infrastructure	Water Distribution Mains	Newbridge Road, Ballymoney, Replacement Watermain	0.00	24.09	0.95	23.14	0.00	0	100	0	0		0	0	0	0	0	0		0	0	700	0	0	0	0	0
ZZ000	JC370		water	Water Infrastructure	Water Distribution Mains	Windyhill Road/ Ballystrone Road, Coleraine,Watermain Extension	0.00	37.03	0.00	0.00	37.03	0	100	0	0		0	0	0	0	0	0		0	0	0	0	590	0	0	0
ZZ000	JC372		water	Water Infrastructure	Water Distribution Mains	Newbridge Road, Ballymoney, Watermain Extension	0.00	44.44	0.00	44.44	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	370	0	0	0
ZZ000	JC373		water	Water Infrastructure	Water Distribution Mains	Lisboy Road Dunloy Watermain Extension	0.00	1.81	0.00	0.00	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JC375		water	Water Infrastructure	Water Distribution Mains	Carnamoney Lane, Draperstown, Watermain Extension	0.00	16.66	0.00	16.66	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	250	0	0	0
ZZ000	JC376		water	Water Infrastructure	Water Distribution Mains	Tullysaran Road Watermain Extension	0.00	21.29	0.00	21.29	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	496	0	0	0
ZZ000	JC382		water	Water Infrastructure	Water Distribution Mains	Ballynarry Road, Derrykeighan, Watermain Extension	0.00	19.33	0.00	14.81	4.52	0	0	0	100		0	0	0	0	0	0		0	0	0	0	230	0	0	0
ZZ000	JC384		water	Water Infrastructure	Water Distribution Mains	Cushendall Road, Ballycastle, Watermain Extension	0.00	10.84	0.00	0.00	10.84	0	0	0	100		0	0	0	0	0	0		0	0	0	0	215	0	0	0
ZZ000	JD113		water	Water Infrastructure	Water Distribution Mains	Station Road	0.00	1.85	0.00	1.85	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD119		water	Water Non Infrastructure	Facilities Pumping Stations	Brackagh Lane, Moneymore Watermain	0.00	-3.80	-3.80	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD207		water	Water Infrastructure	Water Distribution Mains	Tullagh Road, Cookstown	0.00	3.93	6.64	0.00	-2.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD208		water	Water Infrastructure	Water Distribution Mains	Queen St Union Street, Ballymoney Watermain	0.00	1.81	0.00	0.00	1.81	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD209		water	Water Infrastructure	Water Distribution Mains	Portrush Rd Ballymoney Watermain Replacement	0.00	-0.90	0.00	0.00	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD211		water	Water Infrastructure	Water Distribution Mains	Newal Road, Ballymoney Watermain Replacement	0.00	1.81	0.00	0.00	1.81	0	100	0	0											0	0	0	0	0	0
ZZ000	JD214		water	Water Infrastructure	Water Distribution Mains	Finvoy Road	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD224		water	Water Infrastructure	Water Distribution Mains	Rowan Road, Ballymoney Watermain Replacement	0.00	-6.69	-7.59	0.00	0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD284		water	Water Infrastructure	Water Distribution Mains	Turnabarson	0.00	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD304		water	Water Infrastructure	Water Distribution Mains	Festival Pk, Cookstown, Replacement Watermain & Foul Sewer	0.00	7.23	0.00	0.00	7.23	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD319		water	Water Infrastructure	Water Distribution Mains	Carrowreagh Road, Armoy Watermain	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD329		water	Water Infrastructure	Water Distribution Mains	Shellinghill Road, Cullybackey Watermain	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD331		water	Water Infrastructure	Water Distribution Mains	Burn Road, Cookstown Watermain Extension	0.00	6.64	6.64	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD332		water	Water Infrastructure	Water Distribution Mains	Cavanakeeran Road Replacment Watermain	0.00	-0.95	-0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD333		water	Water Infrastructure	Water Distribution Mains	Craigmore Road, Randalstown Watermain Extension	0.00	0.90	0.00	0.00	0.90	0	0	0	100											0	0	0			
ZZ000	JD337		water	Water Infrastructure	Water Distribution Mains	Killycurragh Rd W/M Ext.	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD802		water	Water Infrastructure	Water Distribution Mains	SOR - Watermains N.I.-1	0.00	2.78	0.00	2.78	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD966		water	Water Infrastructure	Water Distribution Mains	Grange Rd Ballymena	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD974		water	Water Infrastructure	Water Distribution Mains	Ballymoney Road and Meadow Street Ballymena Mains Replacement	0.00	0.90	0.00	0.00	0.90	0	100	0	0											0	0	0	0	0	0
ZZ000	JD979		water	Water Infrastructure	Water Distribution Mains	Clare Heights Wm. ballyclare	0.00	1.85	0.00	1.85	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD985		water	Water Infrastructure	Water Distribution Mains	Orpinsmill Road, Ballyclare Watermain Replacement	0.00	12.03	0.00	12.03	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JD987		water	Water Infrastructure	Water Distribution Mains	Layde Road	0.00	1.85	0.00	1.85	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JF015		water	Water Infrastructure	Water Distribution Mains	Wmain Repl	0.00	7.59	7.59	0.00	0.00	10	50	0	40		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JF016		water	Water Infrastructure	Water Distribution Mains	Crewcat and Portadown Road Watermain Improvements	0.00	-8.94	1.90	0.00	-10.84	0	20	0	80		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JF030		water	Water Infrastructure	Water Distribution Mains	Coalisland Rd Dungannon repl WM	0.00	-1.90	-1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JF039		water	Water Infrastructure	Water Distribution Mains	Mullabrack Rd., Markethill Watermain Extension	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JF041		water	Water Infrastructure	Water Distribution Mains	Killeeshill Rd. Ballygawley Watermain Extension	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JF048		water	Water Infrastructure	Water Distribution Mains	Slaterock Road, Armaghbreague WM. Ext.	0.00	11.39	11.39	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JF050		water	Water Infrastructure	Water Distribution Mains	Derryvale Road, Coalisland Repl. Wm.	0.00	0.93	0.00	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JF059		water	Water Infrastructure	Water Distribution Mains	Ashfield Rd. Clogher WM Ext	0.00	3.80	3.80	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JF061		water	Water Infrastructure	Water Distribution Mains	Armagh City Zone WM Imps	0.00	121.94	404.25	-243.47	-38.84	21	51	0	28		0	0	0	0	0	0		0	0	2445	0	724	0	0	0
ZZ000	JF062		water	Water Infrastructure	Water Distribution Mains	Shantonagh Road, Fivemiletown, Watermain	0.00	6.64	6.64	0.00	0.00	0	0	0	100		0	0	0	0	0	0		3	0	0	0	0	0	0	0
ZZ000	JF574		water	Water Infrastructure	Water Distribution Mains	Carland Bridge (Cookstown Rd) Road Realignment	0.00	133.72	27.52	2.78	85.80	0	60	0	40		0	0	0	0	0	0		0	0	330	0	1347	0	0	0
ZZ000	JF575		water	Water Infrastructure	Water Distribution Mains	Dungannon Area Local Source	0.00	28.17	16.13	12.03	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JF576		water	Water Infrastructure	Water Distribution Mains	Lisbeg Rd Watermain Ext (2007)	0.00	24.58	20.88	3.70	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	440	0	0	0
ZZ000	JF577		water	Water Infrastructure	Water Distribution Mains	Ballyloughan Road, Hamiltonsbawn, Armagh Wm Ext	0.00	16.20	17.08	0.93	-1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	340	0	0	0
ZZ000	JF578		water	Water Infrastructure	Water Distribution Mains	College Hall Lane, Tynan, Watermain Extension	0.00	8.54	8.54	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	80	0	0	0
ZZ000	JF579		water	Water Infrastructure	Water Distribution Mains	Dungannon to Ballygawley (A4) Dualling Watermain Diversions	0.00	535.98	18.98	536.01	1278.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	11790	0	0	0
ZZ000	JF581		water	Water Non Infrastructure	Water Treatment Works	Clay Lake - Remedial Work	0.00	52.86	0.00	19.44	33.42	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JG017		water	Water Infrastructure	Water Distribution Mains	Castor Bay / Magheraliskmisk Zone Watermain Improvements	0.00	94.28	82.56	-0.93	12.64	34	32	31	3		0	0	0	0	0	0		782	0	0	0	0	0	0	0
ZZ000	JG020		water	Water Infrastructure	Water Distribution Mains	West of the Bann Zone Watermain Improvements-	0.00	11.39	11.39	0.00	0.00	14	34	51	1		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JG044		water	Water Infrastructure	Water Distribution Mains	Watermain Replacements - Southern Region	0.00	12.96	0.00	12.96	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JG046		water	Water Infrastructure	Water Distribution Mains	Portadown Watermains Rehabilitation	0.00	7.59	7.59	0.00	0.00	58	28	4	10		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JG047		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	PEIT	0.00	18.61	3.80	14.81	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JG058		water	Water Infrastructure	Water Distribution Mains	Bridgewater Park, Banbridge Watermain Extension	0.00	6.64	6.64	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JG062		water	Water Infrastructure	Water Distribution Mains	Lisnisky Lane/Portadown Road, Portadown	0.00	331.22	181.25	149.97	0.00	0	32	0	68		0	0	0	0	0	0		0	0	405	0	3273.5	0	0	0
ZZ000	JG065		water	Water Infrastructure	Water Distribution Mains	Dree Hill Road Watermain Extension	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JG066		water	Water Infrastructure	Water Distribution Mains	Manse Road, Ballyward Watermain Extension	0.00	17.17	20.88	-3.70	0.00	0	50	0	50		0	0	0	0	0	0		0	0	0	0	240	0	0	0
ZZ000	JG069		water	Water Infrastructure	Water Distribution Mains	Limekiln Lane, Aghalee WM Ext	0.00	36.06	36.06	0.00	0.00	0	80	0	20		0	0	0	0	0	0		0	0	0	0	276	0	0	0
ZZ000	JG070		sewerage	Management and General	Water Management and General	Lurgan and Portadown Public Realm Improvements	0.00	13.29	13.29	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JG071		water	Water Infrastructure	Water Distribution Mains	Dublinhill Road Dromore Watermain Extension	0.00	13.45	18.03	-2.78	-1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	350	0	0	0
ZZ000	JG072		water	Water Infrastructure	Water Distribution Mains	Scarva to Tandragee and Laurelvale to Tandragee Watermain Replacement	0.00	787.15	403.30	0.00	383.85	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JG073		water	Water Infrastructure	Water Distribution Mains	Lurgan & Portadown Public Realm Associated Infrastructure Improvements	0.00	608.34	0.00	20.37	587.97	5	70	5	20		0	0	0	0	0	0		0	0	1677	0	393	0	625	54
ZZ000	JL354		water	Water Non Infrastructure	Water Resource Facilities	Banagher AQU rep	0.00	2.85	2.85	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JL691		water	Water Infrastructure	Water Distribution Mains	Loughermore Distribution Improvements	0.00	42.82	7.59	0.00	35.22	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JL707		water	Water Infrastructure	Water Distribution Mains	Watermain Replacement Western Area B	0.00	6.32	0.00	0.00	6.32	25	75	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JL712		water	Water Infrastructure	Water Distribution Mains	Corrody to Prehen trunk Watermain Replacement	0.00	-1.69	0.00	4.63	-6.32	25	75	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JL722		water	Water Infrastructure	Water Distribution Mains	Straw Lane, Dungiven Replacement Watermain	0.00	10.21	5.69	0.00	4.52	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JL730		water	Water Infrastructure	Water Distribution Mains	Ballyhanedin Road, Claudy Watermain Extension	0.00	1.85	0.00	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JL732		water	Water Infrastructure	Water Distribution Mains	Drumbane Rd, Dungiven Watermain Extension	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JL738		water	Water Infrastructure	Water Distribution Mains	Coolagh Road, Greysteel - Replacement Watermain	0.00	30.32	29.42	0.00	0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	430	0	0	0
ZZ000	JL740		water	Water Infrastructure	Water Distribution Mains	Lisdoo Road,Strabane.Watermain Extension.	0.00	14.28	15.18	0.00	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	200	0	0	0
ZZ000	JL741		water	Water Infrastructure	Water Distribution Mains	Rathmore Rd Watermain Diversion	0.00	115.34	105.33	2.78	7.23	0	100	0	0		0	0	0	0	0	0		0	0	500	0	0	0	0	0
ZZ000	JL743		water	Water Infrastructure	Water Distribution Mains	Removal of Stradreagh Spring Source	0.00	147.04	69.27	3.70	74.06	0	0	0	100		0	0	0	0	0	0		0	0	0	0	770	0	0	0
ZZ000	JL744		water	Water Infrastructure	Water Distribution Mains	Old Eglish Road, Dungannon, Watermain Extension	0.00	20.81	18.03	2.78	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	320	0	0	0
ZZ000	JL746		water	Water Infrastructure	Water Distribution Mains	Balteagh Watermain Extension, Limavady	0.00	7.59	7.59	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	116	0	0	0
ZZ000	JL748		water	Water Infrastructure	Water Distribution Mains	Drum Rd Watermain Extension, Dungiven	0.00	-0.11	0.00	-4.63	4.52	0	0	0	100		0	0	0	0	0	0		0	0	0	0	200	0	0	0
ZZ000	JL749		water	Water Infrastructure	Water Distribution Mains	Letterlougher Road Claudy First Time Services Extension	0.00	10.48	12.34	-1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	160	0	0	0
ZZ000	JL751		water	Water Infrastructure	Water Distribution Mains	Brishey Springs Decommissioning, Dungiven	0.00	714.64	1.90	709.13	3.61	50	0	0	50		0	0	0	0	0	0		0	0	0	0	7700	0	0	0
ZZ000	JL753		water	Water Infrastructure	Water Distribution Mains	A2 (Maydown) Dualling - Watermain and Sewer Alterations	0.00	78.82	0.00	0.00	52.38	0	100	0	0		0	0	0	0	0	0		0	0	0	0	1760	0	0	0
ZZ000	JN372		water	Water Infrastructure	Water Distribution Mains	Loughmallan Road,Carrickmore Repl. Wm.	0.00	-0.95	-0.95	0.00	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN381		water	Water Infrastructure	Water Distribution Mains	Carrigans Rd, Newtownstewart	0.00	96.56	87.30	9.26	0.00	0	90	0	10		0	0	0	0	0	0		0	0	1200	0	0	0	0	0
ZZ000	JN382		water	Water Infrastructure	Water Distribution Mains	Urbalreagh Rd, Victoria Bridge	0.00	3.80	3.80	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN385		water	Water Infrastructure	Water Distribution Mains	St. Eugenes Street, Newtownstewart Replacement Watermain	0.00	-4.91	-11.39	6.48	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN386		water	Water Infrastructure	Water Distribution Mains	Loughmuck Rd, Clanabogan - Replacement Watermain	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN389		water	Water Infrastructure	Water Distribution Mains	Rezoning of Lenamore Springs Supply Area	0.00	223.14	225.85	0.00	-2.71	0	100	0	0		0	0	0	0	0	0		0	0	475	0	3375	0	0	0
ZZ000	JN391		water	Water Infrastructure	Water Distribution Mains	Effernan Road 2006	0.00	2.80	0.95	1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN403		water	Water Infrastructure	Water Distribution Mains	Barony Road, Omagh Replacement Watermain	0.00	20.14	5.69	0.00	14.45	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
												Current Capital Investment Driver Allocation (%)														Actual Project Outputs					
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	Current/Actual Project Expenditure [06/07£k]			Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Drinking Water Quality: compliance with Water Supply Reg.s (2002) [Ml/d]		WwTW (>250pe) compliance with Water Order Consents		WwTW passing UWWTD numeric consents		Internal sewer flooding (DG5) caused by overload		Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Water Distribution Network			Sewerage Network		
									2008	2009	2010					Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]			Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
ZZ000	JN408		water	Water Infrastructure	Water Distribution Mains	Castlebane Road Replacement Watermain, Castlederg	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN409		water	Water Infrastructure	Water Distribution Mains	Orchard Road Wm. Strabane	0.00	6.64	6.64	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN411		water	Water Infrastructure	Water Distribution Mains	Camus Road Repl. Wm. Douglas Bridge	0.00	32.26	32.26	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN412		water	Water Infrastructure	Water Distribution Mains	Fyfin Road Repl. Wm. Castlederg	0.00	9.49	9.49	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN413		water	Water Infrastructure	Water Distribution Mains	Listymore Road, Castlederg Repl. Wm.	0.00	38.91	38.91	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	596	0	0	0	0	0
ZZ000	JN414		water	Water Infrastructure	Water Distribution Mains	Knockinillar Road, Douglas Bridge Repl. Wm.	0.00	23.72	23.72	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN415		water	Water Infrastructure	Water Distribution Mains	Crew Road, Spamount Repl. Wm.	0.00	0.02	0.00	0.93	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN416		water	Water Infrastructure	Water Distribution Mains	Castlewarren Road, Donemana Repl. Wm.	0.00	-0.95	-0.95	0.00	0.00	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN417		water	Water Infrastructure	Water Distribution Mains	Brook Rd. Donemana Repl. Wm.	0.00	10.16	0.00	9.26	0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN418		water	Water Infrastructure	Water Distribution Mains	Seein Rd. Sion Mills Repl. Wm.	0.00	19.93	19.93	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN425		water	Water Infrastructure	Water Distribution Mains	Skreen Road, Omagh Wm. Ext.	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN432		water	Water Infrastructure	Water Distribution Mains	Mullawinny Road, Fintona, Co. Tyrone. Watermain Ext.	0.00	2.78	0.00	2.78	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN469		water	Water Infrastructure	Water Distribution Mains	Tonnagh Rd/Tattymoyle Rd,Fintona.Watermain Extension.	0.00	1.87	0.95	0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN470		water	Water Infrastructure	Water Distribution Mains	Eshmore Road,Watermain Extension.	0.00	-0.07	-2.85	2.78	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN471		water	Water Infrastructure	Water Distribution Mains	Greenan Rd,Trillick.Watermain Extension.	0.00	2.78	0.00	2.78	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN473		water	Water Infrastructure	Water Distribution Mains	Dublin Rd ,Omagh.Replacement Watermain	0.00	4.77	5.69	-0.93	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN474		water	Water Infrastructure	Water Distribution Mains	Ballygowans Road,Omagh.Watermain Extension.	0.00	19.00	19.93	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	280	0	0	0
ZZ000	JN475		water	Water Infrastructure	Water Distribution Mains	Ronan Road,Watermain Extension	0.00	8.54	8.54	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	106	0	0	0
ZZ000	JN476		water	Water Infrastructure	Water Distribution Mains	INISCLAN PUMPING MAIN EXTENSION	0.00	37.01	37.01	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	783	0	0	0
ZZ000	JN477		water	Water Infrastructure	Water Distribution Mains	Culvacullion Road, Watermain Extension	0.00	39.88	40.80	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	1150	0	0	0
ZZ000	JN478		water	Water Infrastructure	Water Distribution Mains	Meenacloy Road.Watermain Extension	0.00	10.44	10.44	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	158	0	0	0
ZZ000	JN479		water	Water Infrastructure	Water Distribution Mains	Tirwinney.Watermain Extension	0.00	15.21	16.13	-0.93	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	320	0	0	0
ZZ000	JN480		water	Water Infrastructure	Water Distribution Mains	Dunnamona Road,Omagh.Replacement Watermain.	0.00	194.39	0.00	193.48	0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	2800	0	0	0
ZZ000	JN481		water	Water Infrastructure	Water Distribution Mains	Cornavarrow,Omagh.Replacement Watermain	0.00	187.16	0.00	156.45	30.71	100	0	0	0		0	0	0	0	0	0		0	0	0	0	1500	0	0	0
ZZ000	JN482		water	Water Infrastructure	Water Distribution Mains	Killymore Road, Gortin Pumping Station	0.00	274.45	134.75	136.09	3.61	0	0	0	100		0	0	0	0	0	0		0	0	0	0	2150	0	0	0
ZZ000	JN489		water	Water Infrastructure	Water Distribution Mains	Camowen River/Killyclogher Road Watermain Replacement	0.00	70.83	0.00	15.74	55.09	0	100	0	0		0	0	0	0	0	0		0	0	0	0	160	0	0	0
ZZ000	JN493		water	Water Infrastructure	Water Distribution Mains	Georgian Villas, Omagh Repl Watermain	0.00	564.35	212.56	351.79	0.00	0	89	3	8		0	0	0	0	0	0		0	0	0	0	420	0	0	0
ZZ000	JN494		water	Water Infrastructure	Water Distribution Mains	Rodgers Road, Tattykeel Watermain Extension	0.00	14.81	0.00	14.81	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	370	0	0	0
ZZ000	JN495		water	Water Infrastructure	Water Distribution Mains	Creggan Road Carrickmore Watermain Extension	0.00	25.36	0.00	2.78	22.58	0	0	0	100		0	0	0	0	0	0		0	0	0	0	984	0	0	0
ZZ000	JN496		water	Water Infrastructure	Water Distribution Mains	Clanabogan Road Mullaghbane Replacement Watermain	0.00	33.87	0.00	18.52	15.35	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JN501		water	Water Infrastructure	Water Distribution Mains	Berryhill Rd, Strabane Realignment, Replacement WM	0.00	9.03	0.00	0.00	9.03	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JO001		water	Water Infrastructure	Water Distribution Mains	Mill Road Moneyslane	0.00	6.64	6.64	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JO059		water	Water Infrastructure	Water Distribution Mains	Drumfad SR, Dergenagh Rd, Lisnasure Rd, Watermains	0.00	5.55	0.00	5.55	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JO108		water	Water Infrastructure	Water Distribution Mains	Westland Road, Portadown	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JO813		water	Water Infrastructure	Water Distribution Mains	Contract No 1 Dugannon Area	0.00	2.71	0.00	0.00	2.71	0	100	0	0											0	0	0			
ZZ000	JO961		water	Water Infrastructure	Water Distribution Mains	Warrenpoint Watermains	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP620		water	Water Infrastructure	Water Distribution Mains	Roscah	0.00	22.66	19.93	0.93	1.81	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP621		water	Water Infrastructure	Water Distribution Mains	Cavanacarragh, Lisbellaw Watermain Extension	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP622		water	Water Infrastructure	Water Distribution Mains	Crom Estate, Teemore Watermain Extension	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP624		water	Water Infrastructure	Water Distribution Mains	Donagh To Ballagh Cross Replacement Watermain	0.00	11.39	11.39	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP626		water	Water Infrastructure	Water Distribution Mains	Leam Beg, Letterbreen Watermain Extension	0.00	1.90	1.90	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP627		water	Water Infrastructure	Water Distribution Mains	Ballagh Rd Fivemiletown Watermain Extension	0.00	-0.90	0.00	0.00	-0.90	0	0	0	100											0	0	0			
ZZ000	JP628		water	Water Infrastructure	Water Distribution Mains	Lougheyes Rd. Tempo W/M Ext	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP630		water	Water Infrastructure	Water Distribution Mains	Trustan Glebe, Macken watermain Extension	0.00	-0.95	-0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP634		water	Water Infrastructure	Water Distribution Mains	Trillick Road, Ballinamallard Repl. Wm.	0.00	3.80	3.80	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP637		water	Water Infrastructure	Water Distribution Mains	Castle St, Irvinestown – Watermain Repl	0.00	-11.99	0.95	-12.03	-0.90	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP639		water	Water Infrastructure	Water Distribution Mains	Burfitts Hill, Irvinestown – Watermain Repl	0.00	24.67	24.67	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP642		water	Water Infrastructure	Water Distribution Mains	Tempo Road, Co. Fermanagh WM Extension	0.00	1.85	0.00	1.85	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP644		water	Water Infrastructure	Water Distribution Mains	Edenbane, Tempo, Co. Fermanagh - Watermain Extension	0.00	-2.80	-1.90	0.00	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP646		water	Water Infrastructure	Water Distribution Mains	Gort Road Part 2 Eglish Watermain Extension	0.00	7.41	0.00	7.41	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP647		water	Water Infrastructure	Water Distribution Mains	Nutfield Road,Lisnaskea.	0.00	53.90	46.50	7.41	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP648		water	Water Infrastructure	Water Distribution Mains	Derryclawan,Lisbellaw.Watermain Extension.	0.00	11.43	12.34	0.00	-0.90	0	0	0	100		0	0	0	0	0	0		0	0	0	0	207	0	0	0
ZZ000	JP649		water	Water Infrastructure	Water Distribution Mains	Deerpark Lane watermain extension	0.00	37.34	23.72	2.78	10.84	0	0	0	100		0	0	0	0	0	0		0	0	0	0	445	0	0	0
ZZ000	JP652		water	Water Infrastructure	Water Distribution Mains	Drumharvey & Drumduff Watermain Extension	0.00	8.54	8.54	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	90	0	0	0
ZZ000	JP653		water	Water Infrastructure	Water Distribution Mains	Enniskillen New Hospital Watermain Ext	0.00	76.14	0.00	85.17	-9.03	0	0	0	100		0	0	0	0	0	0		0	0	0	0	280	0	0	0
ZZ000	JP654		water	Water Infrastructure	Water Distribution Mains	Erneside Roundabout Road Improvements	0.00	12.96	0.00	12.96	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP656		water	Water Infrastructure	Water Distribution Mains	Croaghrim Rd, Enniskillen Rep Watermain	0.00	124.03	0.00	123.13	0.90	0	100	0	0		0	0	0	0	0	0		0	0	0	0	500	0	0	0
ZZ000	JP657		water	Water Infrastructure	Water Distribution Mains	Thompsons Bridge Rep Watermain, Derrylin, Enniskillen	0.00	15.07	0.00	1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JP662		water	Water Infrastructure	Water Distribution Mains	A32 Cherrymount Link Road, Enniskillen - WaterMain Realignment	0.00	89.58	0.00	0.00	3.61	0	100	0	0											0	0	0	0	0	0
ZZ000	JR149		water	Water Infrastructure	Water Distribution Mains	Ballycregan/Carrowreagh Water Supply	0.00	6.64	6.64	0.00	0.00	30	40	10	20		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JR292		water	Management and General	Water Management and General	Water	0.00	7.59	7.59	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JR306		water	Water Infrastructure	Water Distribution Mains	Moorland	0.00	1.85	0.00	1.85	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JR320		water	Water Infrastructure	Water Distribution Mains	Breda South Zone Watermain Improvements	0.00	7.61	8.54	-0.93	0.00	25	72	3	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JR338		water	Management and General	Water Management and General	EMS Environmental Protection Supplyection Improvements - Eastern Divisio	0.00	20.58	8.54	12.03	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JR359		water	Water Infrastructure	Water Distribution Mains	Belfast Trunk Main Interconnections	0.00	109.06	106.28	2.78	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	70	0	0	0
ZZ000	JR368		water	Water Infrastructure	Water Distribution Mains	Barnhalt	0.00	2.84	0.00	5.55	-2.71	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JR377		water	Water Infrastructure	Water Distribution Mains	Hightown Road, Newtownabbey Watermain.	0.00	133.40	3.80	129.61	0.00	0	13	0	87		0	0	0	0	0	0		0	0	0	0	1235	0	0	0
ZZ000	JR400		sewerage	Waste Water Infrastructure	Sewerage	A2 Shore Road Re-alignment – Greenisland	0.00	838.79	0.00	52.77	37.93	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JR404		water	Water Infrastructure	Water Distribution Mains	Belfast City Centre Public Realm Phase 1, Area 1	0.00	393.88	320.74	73.13	0.00	0	100	0	0		0	0	0	0	0	0		0	0	235	0	1335	0	0	0
ZZ000	JR406		water	Water Infrastructure	Water Distribution Mains	Knockagh Road, Woodburn, Carrickfergus Replacement Watermain	0.00	23.54	15.18	9.26	-0.90	0	100	0	0		0	0	0	0	0	0		0	0	400	0	0	0	0	0
ZZ000	JR412		water	Water Infrastructure	Water Distribution Mains	Hydepark To Purdysburn Trunk Main, Connection At Newtownbreda Road.	0.00	4.63	0.00	4.63	0.00	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JR415		water	Water Infrastructure	Water Distribution Mains	Lead Service Pipe Replacement Scheme	0.00	286.31	0.00	0.00	286.31	100	0	0	0											0	0	0	0	0	0
ZZ000	JR422		sewerage	Management and General	Water Management and General	Provision OF AutoCAD for NIW	0.00	137.01	0.00	137.01	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JR424		water	Water Infrastructure	Water Distribution Mains	Betterment and Deferment of Renewal for Mains Diversion at QUB Playing F	0.00	42.58	0.00	42.58	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	240	0	0	0
ZZ000	JR432		water	Water Infrastructure	Water Distribution Mains	Whiteabbey Lower, Mains Replacement. Newtownabbey	0.00	1695.99	0.00	0.00	1399.93	100	0	0	0		0	0	0	0	0	0		0	0	1083	0	7822	0	0	0
ZZ000	JR433		water	Management and General	Water Management and General	Reinstatement Coring	0.00	0.90	0.00	0.00	0.90	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JS224		water	Water Infrastructure	Water Distribution Mains	Lough Cowey Zone Watermain Improvements	0.00	35.11	35.11	0.00	0.00	66	33	0	1		0	0	0	0	0	0		0	0	0	0	150	0	0	0
ZZ000	JS240		water	Water Infrastructure	Water Distribution Mains	Kilkeel & Annalong Water Supply	0.00	40.83	40.80	0.93	-0.90	100	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JS244		water	Water Infrastructure	Water Distribution Mains	Ards Area Watermains	0.00	0.97	1.90	-0.93	0.00	10	60	0	30		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JS251		water	Water Infrastructure	Water Distribution Mains	Castlewellan Road & Dundrum Road, Clough Watermains	0.00	3.68	0.95	0.93	1.81	0	60	0	40		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JS256		water	Water Infrastructure	Water Distribution Mains	Raffrey	0.00	0.95	0.95	0.00	0.00	0	70	0	30		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JS259		water	Water Infrastructure	Water Distribution Mains	Comber Area Replacement Watermains	0.00	0.95	0.95	0.00	0.00	10	60	0	30		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JS260		water	Water Infrastructure	Water Distribution Mains	Ballywalter Area Watermains	0.00	1.90	1.90	0.00	0.00	0	20	0	80		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JS265		water	Water Infrastructure	Water Distribution Mains	Annacloy Road, Annacloy Watermain	0.00	-38.91	-38.91	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JS267		water	Water Infrastructure	Water Distribution Mains	Dundrinne Road	0.00	5.69	5.69	0.00	0.00	50	40	0	10		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JS269		water	Water Infrastructure	Water Distribution Mains	Six Roads Ends Bangor, Replacement Watermains	0.00	4.74	4.74	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JS270		water	Water Infrastructure	Water Distribution Mains	Newcastle High Level Water Supply	0.00	-3.61	0.00	0.00	-3.61	0	100	0	0											0	0	0	0	0	0
ZZ000	JS276		water	Water Infrastructure	Water Distribution Mains	Kilmegan Road, Dundrum, Watermain	0.00	68.09	58.83	9.26	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	365	0	0	0
ZZ000	JS284		water	Water Infrastructure	Water Distribution Mains	Portaferry, Ballyquinton area mains replacment.	0.00	1080.97	0.00	0.00	1075.69	20	80	0	0		0	0	0	0	0	0		0	0	4520	0	9655	0	0	0
ZZ000	JT057		water	Water Infrastructure	Water Distribution Mains	Lagmore	0.00	86.10	0.00	86.10	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JT135		water	Water Infrastructure	Water Distribution Mains	Lisburn Area WMs	0.00	1.90	1.90	0.00	0.00	0	70	0	30		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JT139		water	Water Infrastructure	Water Distribution Mains	Hillhall Rd / Saintfield Rd Watermains Rehabilitation	0.00	4.74	4.74	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JT150		water	Water Infrastructure	Water Distribution Mains	Dundrum Road, Dromara	0.00	0.95	0.95	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JU054		water	Water Infrastructure	Water Distribution Mains	Finlays Rd Replacement Watermain	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JU109		water	Water Infrastructure	Water Distribution Mains	Ballynahinch	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JU114		water	Water Infrastructure	Water Distribution Mains	Eastern Division Minor Works, Priest Road	0.00	0.90	0.00	0.00	0.90	0	100	0	0											0	0	0	0	0	0
ZZ000	JU122		water	Water Infrastructure	Water Distribution Mains	Easten Div Minor Works Strangford Road - Downpatrick	0.00	2.78	0.00	2.78	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JU155		water	Water Infrastructure	Water Distribution Mains	Longlands Road Watermain	0.00	13.29	13.29	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JU965		water	Water Infrastructure	Water Distribution Mains	Gilnahirk Watermains	0.00	0.95	0.95	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV022		water	Water Infrastructure	Water Distribution Mains	Camlough Zone Watermain Improvements	0.00	13.29	13.29	0.00	0.00	8	89	0	3		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV026		water	Water Infrastructure	Water Distribution Mains	Newry Zone Watermain Improvements	0.00	802.34	642.44	261.06	-101.16	15	26	22	37		0	0	0	0	0	0		528	0	1045	0	2044	0	0	0
ZZ000	JV027		water	Water Infrastructure	Water Distribution Mains	Silent Valley Zone Watermain Improvements	0.00	2.85	2.85	0.00	0.00	9	91	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV038		water	Water Infrastructure	Water Distribution Mains	Watermain Improvements - Newry Area	0.00	61.66	60.73	0.93	0.00	0	86	0	14		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV039		water	Water Infrastructure	Water Distribution Mains	Seagahan to Corran Pumping Station Replacement	0.00	-1.90	-1.90	0.00	0.00	0	45	0	55		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV045		water	Water Infrastructure	Water Distribution Mains	Network Area East Watermains	0.00	0.95	0.95	0.00	0.00	0	80	0	20		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV053		water	Water Infrastructure	Water Distribution Mains	Drumintee Road, Killeavy, Newry Watermain Replacements	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV060		water	Water Infrastructure	Water Distribution Mains	Watermain Replacements Banbridge 1	0.00	-0.90	0.00	0.00	-0.90	0	100	0	0											0	0	0			
ZZ000	JV061		water	Water Infrastructure	Water Distribution Mains	Watermain Replacements - Banbridge phase 2	0.00	6.57	2.85	4.63	-0.90	30	30	30	10		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV063		water	Water Infrastructure	Water Distribution Mains	Fofanny/Rathfriland Zone Watermain Improvements	0.00	18.08	19.93	-1.85	0.00	47	39	13	1		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV064		water	Water Infrastructure	Water Distribution Mains	Rostrevor/Tullymurry Zone Watermain Improvements	0.00	33.21	33.21	0.00	0.00	2	62	29	7		0	0	0	0	0	0		104	0	0	0	0	0	0	0
ZZ000	JV065		water	Water Infrastructure	Water Distribution Mains	Warrenpoint Zone Watermain Improvements	0.00	592.08	566.52	11.11	14.45	2	41	24	33		0	0	0	0	0	0		145	0	1481	0	2645	0	0	0
ZZ000	JV066		water	Water Infrastructure	Water Distribution Mains	Camly Road Watermain Replacement	0.00	50.41	18.03	31.48	0.90	0	94	0	6		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV068		water	Water Infrastructure	Water Distribution Mains	Cashel Road, Silverbridge Watermain Extension.	0.00	-4.86	-9.49	4.63	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV076		water	Water Infrastructure	Water Distribution Mains	Scarva Street Banbridge Watermain Replacement	0.00	-4.38	2.85	0.00	-7.23	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV078		water	Water Infrastructure	Water Distribution Mains	Lisleitrum Road, Cullyhanna WM Extension	0.00	9.49	9.49	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV080		water	Water Infrastructure	Water Distribution Mains	Orchard Hill Road, Dromore	0.00	16.13	16.13	0.00	0.00	0	0	0	100		0	0	0	0	0	0		0	0	0	0	776	0	0	0
ZZ000	JV115		water	Water Infrastructure	Water Distribution Mains	Lurgan Road / Ballygowan Road Alignment	0.00	59.78	59.78	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	878	0	0	0
ZZ000	JV123		water	Water Infrastructure	Water Distribution Mains	Ashtree Hill Drumbanagher WM Ext	0.00	10.16	0.00	9.26	0.90	0	80	0	20		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV707		water	Water Infrastructure	Water Distribution Mains	Drumnahare Dist Imps	0.00	272.18	41.75	4.63	225.79	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
ZZ000	JV798		water	Water Infrastructure	Water Distribution Mains	East trunk Main Section 2	0.00	3.80	3.80	0.00	0.00	0	100	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0

1	1a	1b	2	3	4	5	15	44	49	53	57	79	112	113	114	143	144	147	148	149	150	153	154	155	157	159	160	161	162	163	164
									Current/Actual Project Expenditure [06/07£k]			Current Capital Investment Driver Allocation (%)				Drinking Water Quality: compliance with Water Supply Reg.s (2002) [MI/d]		WwTW (>250pe) compliance with Water Order Consents		WwTW passing UWWTD numeric consents		Internal sewer flooding (DGS) caused by overload				Actual Project Outputs					
CWP Project ID	Linked Project ID (Child Project of Col 1)	Linked Project ID (Substituted Project for Col 1)	Service Area	Primary Asset Category	Primary Asset Type	Project Name	Total Original SBP Project Cost [06/07£k]	Total Current/Actual Project Cost [06/07£k]	2008	2009	2010	Total Quality Enhancements	Base Service Provision	Enhanced Service Levels	Total Maintaining Supply Demand Balance	Taking into account Authorised Departures	Not taking into account Authorised Departures	[no. of works]	[population equivalent]	[no. of works]	[population equivalent]	[properties removed from register]	[m sewer replaced/ refurbished]	Low Pressure (DG2) [properties removed from register]	uCSOs removed/ made compliant [no.]	Water Distribution Network			Sewerage Network		
																										Length Renewed [m]	Length Renovated [m]	Brand New Length (m)	Length Renewed [m]	Length Renovated [m]	Brand New Length (m)
ZZ000	JV812		water	Management and General	Water Management and General	Bulk Metering Southern Division - Ballyroney Rd. Rathfriland	0.00	0.93	0.00	0.93	0.00	0	0	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JV818		water	Water Infrastructure	Water Distribution Mains	CARRICK RD WARRENPOINT WATERMAIN EXTENSION	0.00	0.07	0.00	2.78	-2.71	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JV820		water	Water Infrastructure	Water Distribution Mains	Carron Hill Supply Zone Management Plan	0.00	252.78	0.00	254.58	-1.81	14	51	0	35		0	0	0	0	0	0			0	0	0	0	1170	0	0	0
ZZ000	JV828		water	Water Infrastructure	Water Distribution Mains	Shot Lane / Fedney Hill Road Banbridge Watermains Upgrade	0.00	28.74	0.00	30.55	-1.81	0	0	0	100		0	0	0	0	0	0			0	0	0	0	269	0	0	0
ZZ000	JV831		water	Water Infrastructure	Water Distribution Mains	Watermain Extension at Ballymageough Rd, Kilkeel	0.00	62.32	0.00	0.00	62.32	0	0	100	0		0	0	0	0	0	0			0	0	808	0	201	0	0	0
ZZ000	JV835		water	Water Infrastructure	Water Distribution Mains	O'Callaghan Road, Silverbridge, Replacement Watermain	0.00	58.71	0.00	0.00	58.71	0	0	100	0		0	0	0	0	0	0			0	0	1000	0	0	0	0	0
ZZ000	JV836		water	Water Infrastructure	Water Distribution Mains	Moneydarragh Road, Annalong, Replacement Watermain	0.00	51.48	0.00	0.00	51.48	50	50	0	0												739	0	0	0	0	0
ZZ000	JX062		water	Water Infrastructure	Water Distribution Mains	Strabane By Pass Wm	0.00	-3.80	-3.80	0.00	0.00	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JX072		water	Water Infrastructure	Water Distribution Mains	Lisclooon Bridge Replacement Watermain	0.00	3.80	3.80	0.00	0.00	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JX107		sewerage	Waste Water Infrastructure	Sewerage	Loughmacrory WWTW – Overflow Pipe	0.00	5.69	5.69	0.00	0.00	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JX255		water	Water Infrastructure	Water Distribution Mains	Spring/Sheriffs	0.00	3.70	0.00	3.70	0.00	0	0	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JX305		water	Water Infrastructure	Water Distribution Mains	Castlefinn Road, Castlederg Watermain	0.00	6.53	1.90	4.63	0.00	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JX309		water	Water Infrastructure	Water Distribution Mains	Omagh Town Centre Environmental Improvement Scheme	0.00	-0.95	-0.95	0.00	0.00	50	50	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JX312		water	Water Infrastructure	Water Distribution Mains	Gallen Bridge Road, Newtownstewart Watermain	0.00	13.29	13.29	0.00	0.00	0	0	0	100		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JX314		water	Water Infrastructure	Water Distribution Mains	Ballyconnell	0.00	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JX317		water	Water Infrastructure	Water Distribution Mains	Whappstown Road Watermains	0.00	5.69	5.69	0.00	0.00	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JX318		water	Water Infrastructure	Water Distribution Mains	Tattymoyle Road, Fintona Watermain Replacement	0.00	6.64	6.64	0.00	0.00	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JX950		water	Water Infrastructure	Water Distribution Mains	Omagh through Pass/Tamlough Road Watermains	0.00	1.90	1.90	0.00	0.00	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JX963		water	Water Infrastructure	Water Distribution Mains	Ardnargle Replacement Watermain Limavady	0.00	14.23	14.23	0.00	0.00	100	0	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JZ003		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Sludge Logging System	0.00	18.03	18.03	0.00	0.00	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	JZ004		water	Management and General	Water Management and General	Water Resource Strategy	0.00	1.58	0.00	27.77	-26.19	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	KA196		sewerage	Waste Water Non Infrastructure	Terminal Pumping stations	Glenarm Sewage Pumping Station	0.00	304.42	3.80	68.51	232.12	66	18	8	8		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	KC417		sewerage	Waste Water Infrastructure	Sewerage	Mill Street , Ballycastle, Storm Sewer Outfall	0.00	9.03	0.00	0.00	9.03	0	0	0	100		0	0	0	0	0	0			0	0	0	0	0	0	0	45
ZZ000	KP147		sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Tempo SS	0.00	16.99	13.29	3.70	0.00	38	24	0	38		0	0	0	0	0	0			0	0	0	0	0	0	0	0
ZZ000	KS843		sewerage	Waste Water Infrastructure	Sewerage	Stella Maris, Strangford. Sewer Extension	0.00	18.06	0.00	0.00	18.06	0	0	0	100		0	0	0	0	0	0			0	0	0	0	0	0	0	37
JR434			water	Management and General	Water Management and General	Belfast Offices Rationalisation Phase 1	0.00	1519.74	0.00	0.00	27.10	0	100	0	0												0	0	0	0	0	0
JZ002			water	Water Infrastructure	Water Distribution Mains	Unit Cost System	0.00	336.22	126.21	167.56	42.45	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
JZ285			water	Management and General	Water Management and General	Water Resource Management Plan	0.00	550.30	0.00	0.00	380.24	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
KC415			sewerage	Waste Water Infrastructure	Sewerage	Ballysally CSO Coleraine - Works Package	0.00	462.02	0.00	0.00	23.48	100	0	0	0												0	0	0	0	0	0
KG173			sewerage	Waste Water Infrastructure	Sewerage	Portadown DAP Stage 1	0.00	2666.73	0.00	0.00	4.52	70	20	0	10												0	0	0	0	0	0
KL464			sewerage	Waste Water Infrastructure	Sewerage	BANK PLACE, DERRY SEWER REPL & POLLUTION	0.00	39.87	0.00	0.00	9.03	0	100	0	0												0	0	0	0	0	0
KS848			sewerage	Waste Water Non Infrastructure	Sewage Treatment Works	Newcastle Waste Water Treatment Works	0.00	8403.75	0.00	0.00	25.29	71	18	0	11												0	0	0	0	0	0
KZ001			sewerage	Waste Water Infrastructure	Sewerage	Framework for Small Sewerage	0.00	118.73	0.00	58.32	56.00	0	100	0	0		0	0	0	0	0	0			0	0	0	0	0	0	0	0
KZ002			sewerage	Management and General	Water Management and General	Strategic Capital Alliance	0.00	26.19	0.00	0.00	26.19	0	100	0	0												0	0	0	0	0	0

Column Ref.	Notes		
1	A unique and consistent project identification.		
2	Either "Water" or "Sewerage".		
3	Either "Infrastructure" or "Non-infrastructure".		
4	Either "WTW", "Service Reservoirs", "Water Mains", "WWTW", "Sewers", or "Other".		
5	Project name as it appears on NIW capital investment management systems.		
6	Short description of the main features of the project.		
7	Milestones as per Capital Works Programme used in the 2007 Strategic Business Plan.	Date for budget approval upon completion of feasibility stage of project development (A1).	
8		Date for commencement on site by contractor (not design stage).	
9		Date on which project first provides beneficial use to NIW.	
10		Date of end of maintenance period.	
11	Current/actual milestones in the current Capital Works Programme.	Date for budget approval upon completion of feasibility stage of project development (A1).	
12		Date for commencement on site by contractor (not design stage).	
13		Date on which project first provides beneficial use to NIW.	
14		Date of end of maintenance period.	
15	Total project cost as per Capital Works Programme used in the 2007 Strategic Business Plan. Quoted in 2006/07 GBP using COPI.		
16	Quarterly project cost profile as per Capital Works Programme used in the 2007 Strategic Business Plan. Quoted in 2006/07 GBP using COPI.	2007 Quarter 2 expenditure.	
17		2007 Quarter 3 expenditure.	
18		2007 Quarter 4 expenditure.	
19		2008 Quarter 1 expenditure.	
20		2008 Quarter 2 expenditure.	
21		2008 Quarter 3 expenditure.	
22		2008 Quarter 4 expenditure.	
23		2009 Quarter 1 expenditure.	
24		2009 Quarter 2 expenditure.	
25		2009 Quarter 3 expenditure.	
26		2009 Quarter 4 expenditure.	
27		2010 Quarter 1 expenditure.	
28		2010 Quarter 2 expenditure.	
29		2010 Quarter 3 expenditure.	
30		2010 Quarter 4 expenditure.	
31		2011 Quarter 1 expenditure.	
32		2011 Quarter 2 expenditure.	
33		2011 Quarter 3 expenditure.	
34		2011 Quarter 4 expenditure.	
35		2012 Quarter 1 expenditure.	
36		2012 Quarter 2 expenditure.	
37		2012 Quarter 3 expenditure.	
38		2012 Quarter 4 expenditure.	
39		2013 Quarter 1 expenditure.	
40		2013 Quarter 2 expenditure.	
41		2013 Quarter 3 expenditure.	
42		2013 Quarter 4 expenditure.	
43		2014 Quarter 1 expenditure.	
44	Current estimated total project cost. Quoted in 2006/07 GBP using COPI.		
45	A brief explanation is required if the current estimated project cost varies by more than 10% or £100k from that in the original SBP programme.		
46	Quarterly project cost profile reflecting current best estimates. Quoted in 2006/07 GBP using COPI.	2007 Quarter 2 expenditure.	
47		2007 Quarter 3 expenditure.	
48		2007 Quarter 4 expenditure.	
49		2008 Quarter 1 expenditure.	
50		2008 Quarter 2 expenditure.	
51		2008 Quarter 3 expenditure.	
52		2008 Quarter 4 expenditure.	
53		2009 Quarter 1 expenditure.	
54		2009 Quarter 2 expenditure.	
55		2009 Quarter 3 expenditure.	
56		2009 Quarter 4 expenditure.	
57		2010 Quarter 1 expenditure.	
58		2010 Quarter 2 expenditure.	
59		2010 Quarter 3 expenditure.	
60		2010 Quarter 4 expenditure.	
61		2011 Quarter 1 expenditure.	
62		2011 Quarter 2 expenditure.	
63		2011 Quarter 3 expenditure.	
64		2011 Quarter 4 expenditure.	
65		2012 Quarter 1 expenditure.	
66		2012 Quarter 2 expenditure.	
67		2012 Quarter 3 expenditure.	
68		2012 Quarter 4 expenditure.	
69		2013 Quarter 1 expenditure.	
70		2013 Quarter 2 expenditure.	
71		2013 Quarter 3 expenditure.	
72		2013 Quarter 4 expenditure.	
73		2014 Quarter 1 expenditure.	
74	When the project comprises a combination of both infratsructure and non-infrastructure assets, the portion of the cost attributed to infrastructure should be stated.		
75	Capital investment driver allocation, as per original SBP capital programme.	Total Quality Enhancement	
76		Total Base Service Provision (including "Backlog Base")	
77		Total Enhanced Service Levels	
78		Total Growth	
79	Current capital investment driver allocation (in accordance with NIW's July 2007 Capital Investment Driver Allocation Manual), expressed as a percentage.	Total Quality Enhancements (the sum of columns 80-111)	
80		Quality Enhancement sub-drivers (as defined in July 2007 Capital Investment Driver Allocation Manual)	
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112		Base Service Provision (including Backlog Base Service Provision, as defined in July 2007 Capital Investment Driver Allocation Manual)	
113		Enhanced Service Levels	
114		Total Supply/Demand Balance (the sum of columns 115-118)	
115		Supply/Demand Balance sub-drivers (as defined in July 2007 Capital Investment Driver Allocation Manual)	
116			
117			
118			
119	Date on which current Capital Investment Driver Allocation exercise was conducted..		
120	If the project has the benefit of reducung development constraints, the additional capacity (population) provided as a direct result of the project should be stated.		
121	The financial impact of the project (positive or negative) on NIW's gross Modern Equivalent Asset Value, quoted in 2006/07 GBP using COPI.		
122	The financial impact of the project (positive or negative) on NIW's operating costs, quoted in 2006/07 GBP using COPI.		
123	SBP project outputs (i.e. those anticpated in the SBP).	If the project is intended to ensure compliance with Water Supply Reg.s (2002), the volume of water which is ensured compliant should be quantified (Ml/d).	Taking into account Authorised Departures
124			Not taking into account Authorised Departures
125		If the project is intended to achieve Mean Zonal Compliance targets, the population receiving the water improved by the project should be quantified.	
126		If the project is intended to achieve Operational Performace Index targets, the population receiving the water improved by the project should be quantified.	
127		If the project is intended to ensure WwTW (>250 pe) compliance with Water Order Consents, outputs shall be quantified by number of works and population equivalent.	Number of WwTW (>250 pe) achieving compliance as a direct result of the project.
128			Population equivalent of WwTW achieving compliance as a direct result of the project.
129		If the project is intended to ensure WwTW pass UWWTD numeric consents, outputs shall be quantified by number of works and population equivalent.	Number of WwTW achieving compliance as a direct result of the project.
130			Population equivalent of WwTW achieving compliance as a direct result of the project.
131		If the project results in reduced supply interruptions, outputs shall be quantified by number of properties affected and length of main replaced/refurbished.	Number of properties achieving enhanced service level as a direct result of the project.
132			Length of main (m) replaced/refurbished in order to reduce supply interruptions.
133		If the project results in reduced internal flooding from overloaded sewers, outputs shall be quantified by number of properties affected and length of sewer replaced/refurbished.	Number of properties achieving enhanced service level as a direct result of the project.
134			Length of sewer (m) replaced/refurbished in order to reduce flooding.
135		If the project results in the removal of properties from the low pressure register, the number of properties removed from the register as a result of the project should be quantified.	
136		If the project results in reduced leakage, the daily volumetric reduction in leakage (Ml/d) as a result of the project should be quantified.	
137		If the project removes or makes compliant uCSOs, the number of uCSOs removed or made compliant as a result of the project should be quantified.	
138		If the project removes or makes compliant Unacceptable Intermittent Discharges (UID), the number of UIDs removed or made compliant as a result of the project should be quantified.	
139		If the project results in the replacement/renewal or renovation of water mains for any reason (including those reported in preceding columns), the total lengths shall be quantified.	Total length of main replaced/renewed with a new main (m).
140			Total length of main renovated/refurbished, without a replacement with a new main (m).
141		If the project results in the replacement/renewal or renovation of sewers for any reason (including those reported in preceding columns), the total lengths shall be quantified.	Total length of sewer replaced/renewed with a new sewer (m).
142			Total length of sewer refurbished (m).
143	Actual project outputs (i.e. those actually delivered by the project, or those currently anticipated to be delivered) to be quantified.	If the project is intended to ensure compliance with Water Supply Reg.s (2002), the volume of water which is ensured compliant should be quantified (Ml/d).	Taking into account Authorised Departures
144			Not taking into account Authorised Departures
145		If the project is intended to achieve Mean Zonal Compliance targets, the population receiving the water improved by the project should be quantified.	
146		If the project is intended to achieve Operational Performace Index targets, the population receiving the water improved by the project should be quantified.	
147		If the project is intended to ensure WwTW (>250 pe) compliance with Water Order Consents, outputs shall be quantified by number of works and population equivalent.	Number of WwTW (>250 pe) achieving compliance as a direct result of the project.
148			Population equivalent of WwTW achieving compliance as a direct result of the project.
149		If the project is intended to ensure WwTW pass UWWTD numeric consents, outputs shall be quantified by number of works and population equivalent.	Number of WwTW achieving compliance as a direct result of the project.
150			Population equivalent of WwTW achieving compliance as a direct result of the project.
151		If the project results in reduced supply interruptions, outputs shall be quantified by number of properties affected and length of main replaced/refurbished.	Number of properties achieving enhanced service level as a direct result of the project.
152			Length of main (m) replaced/refurbished in order to reduce supply interruptions.
153		If the project results in reduced internal flooding from overloaded sewers, outputs shall be quantified by number of properties affected and length of sewer replaced/refurbished.	Number of properties achieving enhanced service level as a direct result of the project.
154			Length of sewer (m) replaced/refurbished in order to reduce flooding.
155		If the project results in the removal of properties from the low pressure register, the number of properties removed from the register as a result of the project should be quantified.	
156		If the project results in reduced leakage, the daily volumetric reduction in leakage (Ml/d) as a result of the project should be quantified.	
157		If the project removes or makes compliant uCSOs, the number of uCSOs removed or made compliant as a result of the project should be quantified.	
158		If the project removes or makes compliant Unacceptable Intermittent Discharges (UID), the number of UIDs removed or made compliant as a result of the project should be quantified.	
159		If the project results in the replacement/renewal or renovation of water mains for any reason (including those reported in preceding columns), the total lengths shall be quantified.	Total length of main replaced/renewed with a new main (m).
160			Total length of main renovated/refurbished, without a replacement with a new main (m).
161		If the project results in the replacement/renewal or renovation of sewers for any reason (including those reported in preceding columns), the total lengths shall be quantified.	Total length of sewer replaced/renewed with a new sewer (m).
162			Total length of sewer refurbished (m).

Table 40 – Capital Investment Monitoring Return

This is the commentary for the CIM template for capital investment carried out during the period April 2009 to March 2010. This currently only includes Capital Works Programme (CWP) expenditure. The total capex reconciliation summary lines are as follows:

	£m
Amount on T40 in 09/10 prices	**211,628**
Amount on T40 in 06/07 prices (factor 1.1072)	191,138

Note: the CIM template (T40) is reported Gross with Capital contributions included.

	£m
The CWP programme element on T32 (as per oracle Financials)	221,061
Add rounding on uploaded to CAPTRAX	-32
Add Materials + Wages not uploaded to CAPTRAX	-11
Add Capital contributions	633
Figure from CAPTRAX on CIDA reports for AIR tables	220,385

	£m
Reports from CAPTRAX	220,385
Remove Capitalised Salaries	-8,757
Total as reconciled to T40	**211,626**

The table provides –

- All financial information, both SBP original and current actual.
- All target dates both SBP and current actual.
- The Parent Child relationship between SBP parent projects and previously reported Non SBP child projects. A recent review has been carried out to more accurately allocate child projects to particular SBP asset codes. The number of projects 'below the line' has been reduced from 66 projects in the AIR09 table to 9 in the AIR10 table.
- Identified substitute projects not originally included in the SBP.
- SBP QBEG figures and current actual CIDA allocations at summary level – the review of these has been completed with corrections and omissions made to the template.
- Actual non-financial outputs for infrastructure projects i.e. all pipes laid from 1 April 07 – template (Columns 159 – 164). This information is in accordance with the corresponding AIR tables – Chapter 11 and 16.

The CIM template, in its current form provides information on the capital investment programme managed by EP Directorate commonly referred to as the CWP. For the CWP it provides non-financial outputs for infrastructure projects and we are able to report properties removed from the DG2 register (Column 155) and properties removed from the DG5 Register (Column 153).

Outputs for non-infrastructure projects – quality improvements at Water Treatment Works (Column 144) and at Wastewater Treatment Works (Columns 147-150). We are also able to report CSO's made compliant (Column 157).

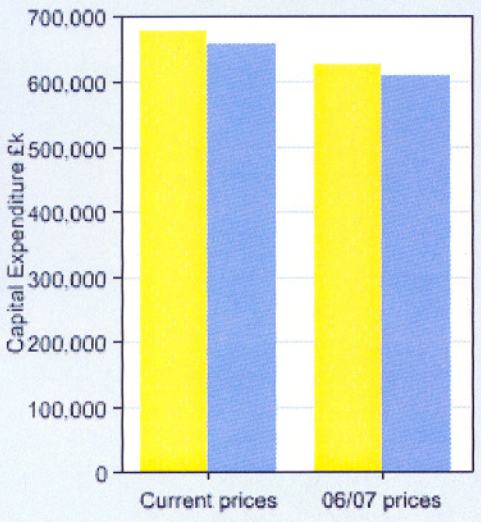
Current CIDA allocations in 09/10 have been updated and reviewed following the AIR09 audit to reflect the best current project output definitions and Reporter recommendations. A full CIDA methodology is included in Chapter 34.

Indexation
The CWP has been indexed to 06/07 prices using the COPI as assumed in the SBP. For 09/10 this is 1.11%.

Regulator dashboard end of March (09/10) (Q4)

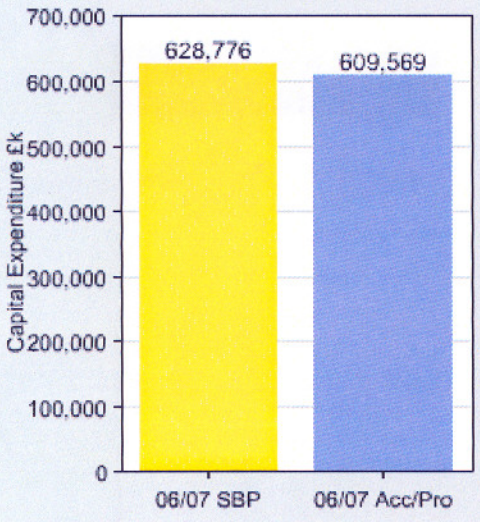
Choose the month required: March (09/10) Q4

3yr ExpenditureSBP/(Act&Projected)



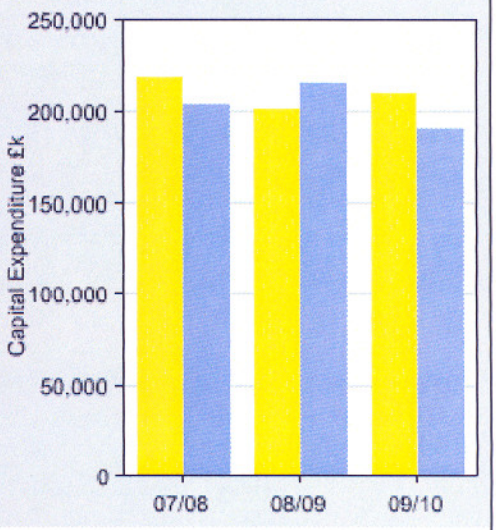
The current expenditure for CWP is below the 3yr SBP target, by -3.15%

3yr ExpenditureSBP/(Act&Projected)



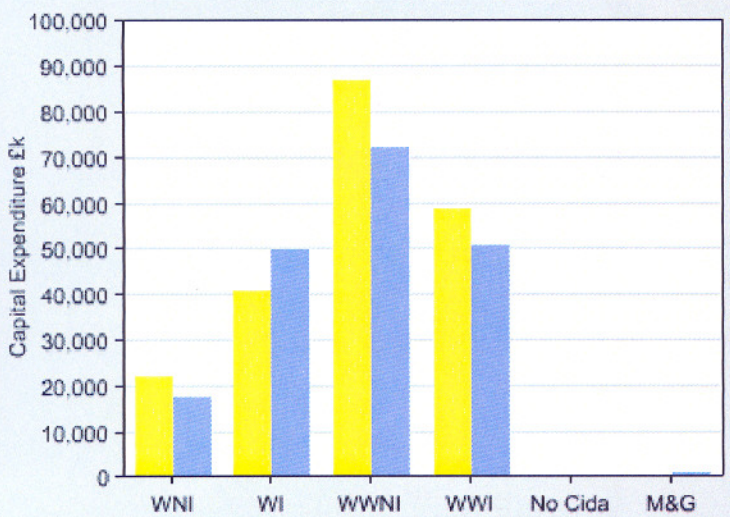
The current expenditure for 3 yr CWP is below the 3yr SBP target, by -3.15%

3yr ExpenditureSBP/(Act&Projected)



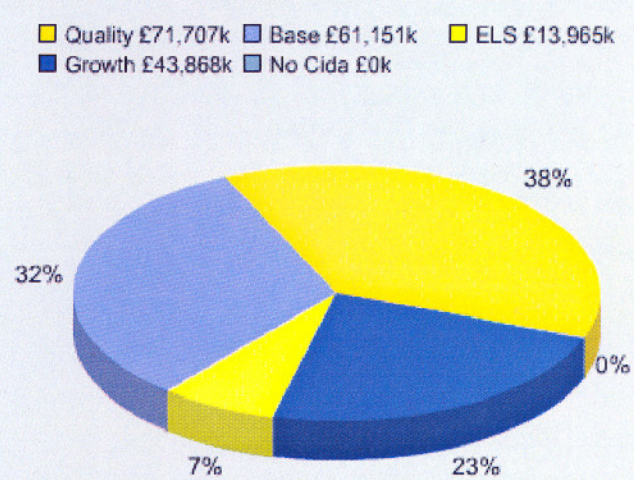
2007/08 expenditure was less than SBP.
2008/09 expenditure was greater than SBP.
2009/10 expenditure is less than SBP.

Expenditure by Sub Service 2009/10



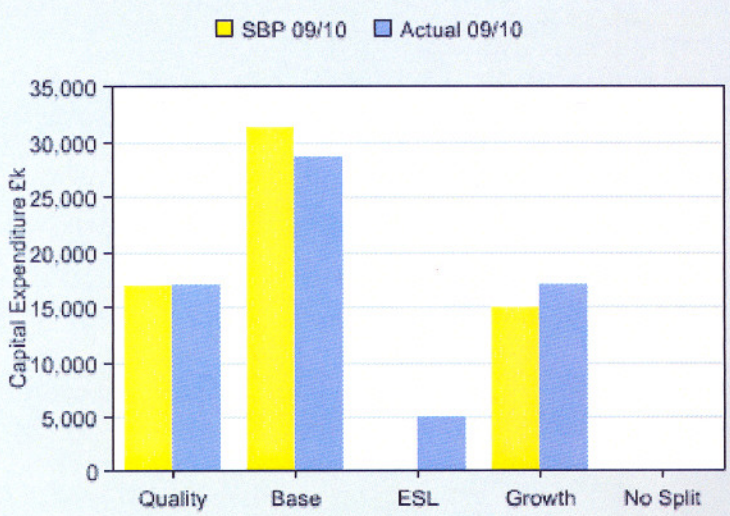
This graph shows expenditure to date split across the different sub-service areas.
Waste Water Non Infrastructure projects are receving the largest level of investment.

Actual/Projected Expenditure by Driver 2009/10



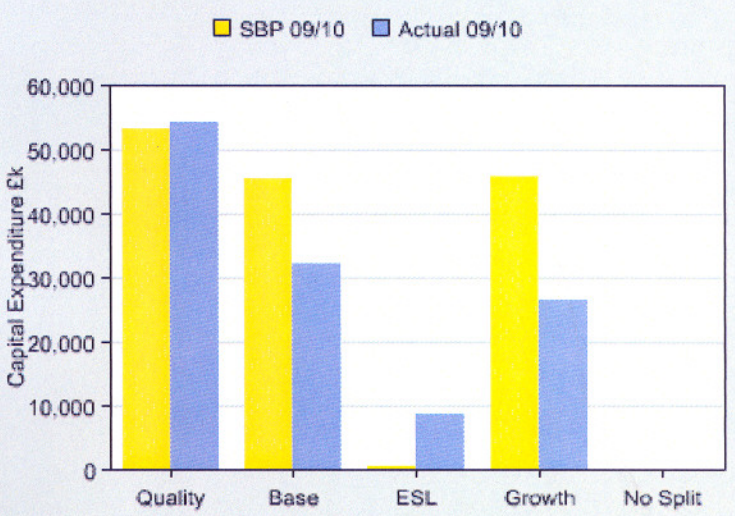
This graph shows expenditure split across the four investment drivers for both Water and Waste Water.
Expenditure is the largest under the Quality driver.

Expenditure Split by driver Water 2009/10



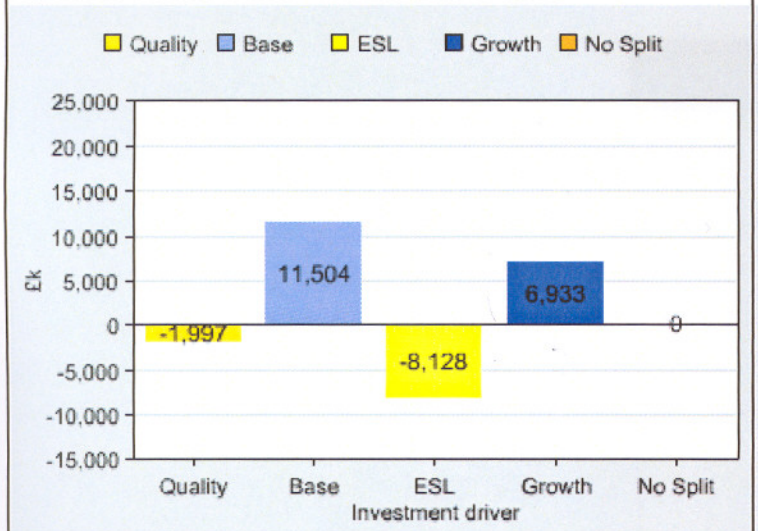
This graph shows expenditure to date split across the four investment drivers for NI Water.
Expenditure is the largest under the Base driver.

Expenditure Split by driver Waste Water 2009/10

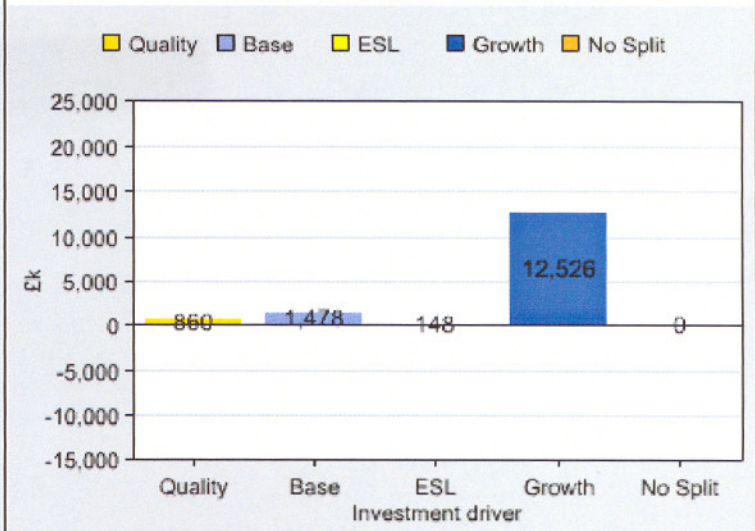


This graph shows expenditure to date split across the four investment drivers for Waste Water service.
Expenditure is the largest under the Quality driver.

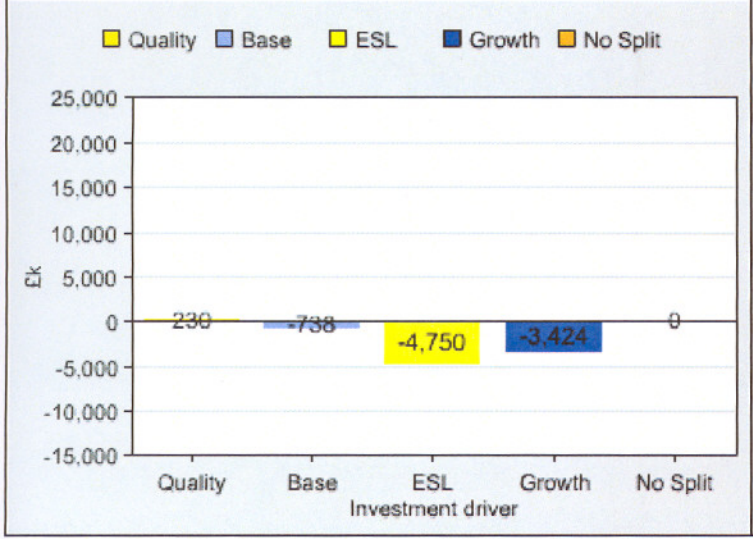
Variance Waste Water - Infrastructure 09/10



Variance Waste Water - Non Infrastructure 09/10



Variance Water - Infrastructure 09/10



Variance Water - Non Infrastructure 09/10

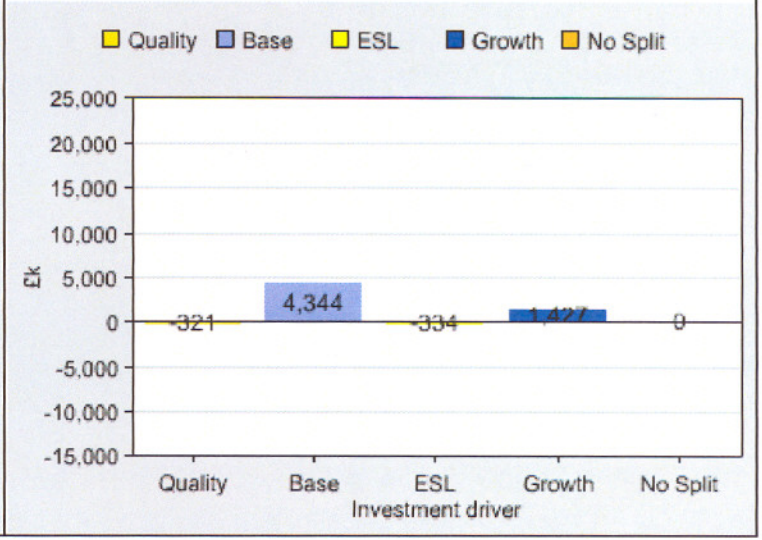


Table 41

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN 2010

ANNUAL INFORMATION RETURN- TABLE 41 KEY OUTPUTS
HEALTH & SAFETY INFORMATION (NIW only)

	DESCRIPTION	UNITS	DP	1 BASE YEAR SBP 2006-07	CG	2 REPORTING YEAR 2007-08	CG	3 REPORTING YEAR 2008-09	CG	4 REPORTING YEAR 2009-10	CG
A	**LOST TIME DUE TO SICKNESS AND ACCIDENTS AND INCIDENCE OF OCCUPATIONAL ILL HEALTH**										
1	Employee total	nr	0	1709	A2	1677	A2	1579	A2	1388	A2
2	Total days lost due to sickness, accident and occupational ill health	nr	0	21871	A2	18882	A2	17170	A2	10873	A2
3	Total days lost - rate per 1000 employees	nr	2	12815.00	A2	11259.39	A2	10873.97	A2	7833.57	A2
4	Number of incidents of occupational ill health	nr	0	152	A2	172	A2	250	A2	147	A2
5	Incidents of occupational ill health - rate per 1000 employees	nr	2	88.96	A2	102.56	A2	158.00	A2	105.91	A2
B	**RIDDOR REPORTS**										
6	Total RIDDOR incidents	nr	0	17	A1	16	A1	11	A1	11	A1
7	RIDDOR - rate per 1000 employees	nr	2	9.95	A1	9.54	A1	6.97	A1	7.93	A1
8	3-day accident rate per 1000 employees	nr	2	9.95	A1	9.54	A1	11.00	A1	7.93	A1
9	Major/fatal accident rate per 1000 employees	nr	2	0.00	A1	0.00	A1	6.97	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	
11	Total days lost due to sickness, accident and occupational ill health	nr	0			N/C		N/C		N/C	
12	Total days lost - rate per 1000 employees	nr	2			N/C		N/C		N/C	
13	Number of incidents of occupational ill health	nr	0			N/C		N/C		N/C	
14	Incidents of occupational ill health - rate per 1000 employees	nr	2			N/C		N/C		N/C	
D	**CONTRACTORS' RIDDOR REPORTS**										
15	Total RIDDOR incidents	nr	0			N/C		N/C		7 + 1 (DO)	B2
16	RIDDOR - rate per 1000 contractors' employees	nr	2			N/C		N/C		N/C	
17	3-day accident rate per 1000 contractors' employees	nr	0			N/C		N/C		N/C	
18	Major/fatal accident rate per 1000 contractors' employees	nr	2			N/C		N/C		0.00	A2

Table 41 – Health and Safety Information (NIW only)

Lines 1- 5 - Lost Time due to Sickness and Accidents and Incidence of Occupational Ill Health

In 2009/10 financial year NI Water lost a total of 10873 working days due to sickness which was equivalent to 7.8 working days per employee. The KPI for attendance in 09/10 was 95.7% and NI Water delivered an actual attendance rate of 96.5 %, 0.8% above the target, and an increase of 1.2% attendance on the previous year.

During 2009/10 NI Water underwent further restructuring which resulted in 76 employees leaving through a voluntary early severance/retirement (VER/VS) package.

NI Water has introduced a new Attendance Management policy in consultation with the trade unions. HR Advisors in conjunction with Line Managers have been meeting with staff that has breached sick absence trigger points to highlight the importance of good attendance. During the 09/10 year Human Resources have continued to 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 new technology.

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 October 2009. All accidents and incidents must be reported with 24 hours by line management. A new and independent electronic Risk Reporting System, capable of “tracking accidents” was tested in the latter part of 2008/09 and has now replaced the former labour intensive system, commencing on 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. All accidents, incidents and near misses are examined by the H&S Team to facilitate transferable learning and to ensure accident statistics are collated centrally for analysis by the Health & Safety Manager

Datix entries are examined by the H&S Team and statistical trends are presented monthly by the Head of H&S both at Executive Level and at Board for comment and query.

There were 11 RIDDOR reportable incidents within NIW in 2009/10 and all of these related 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 1388. This gives the RIDDOR rate per 1000 employees as 7.93 for 2009/10.

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 and no fatal injuries occurred in 2008/09.

Lines 10 – 14 - Contractors' Lost Time
Contractors are 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 currently includes contractors engaged in construction of new works (ref. line 15 commentary). NIW has, throughout 2009/10, been engaged in a rapid 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 rapid change in contract provision as outlined above, 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.

The HSENI is conducting a public strategy review for its 20/20 Vision and future reporting requirements are likely to be influenced more by a requirement to focus on demonstrating pro-active measures rather than re-active outcome statistics.

There were 7 RIDDORS and 1 Dangerous Occurrence reported.

The Contractor's Dangerous Occurrence (Datix reference NIW192) was recorded on 19 August 2009 and reported to NIW EC and Board at their September meeting. It happened in Carrickfergus and involved a large crawler crane working over an existing water culvert at the rear of a commercial property. The culvert partially collapsed and the crane sank into the culvert causing its jib to swing and the hook block and chains went through the roof into an unoccupied office. The crane driver suffered only

superficial cuts and grazes and no member of the public was injured. The property was evacuated and the emergency services were in attendance. All construction work ceased pending full investigation and recovery of the crane. HSENI were notified immediately but decided not to visit the scene due to the incident report and the actions already taken on site.

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 shared learning experience.

All Contractor and subcontractor incidents are recorded on DATIX and for 2009/10 the total number of RIDDOR incidents reported to NIW by all of its contractors was 7. Contractor performance is monitored monthly by the NIW Executive Committee and Board at their monthly meetings.

Lines 16-17
Information is not collected for this line as NIW has no ready method of calculating the numbers of contractors' employees working on NIW contracts.

Lines 18
There were no major or fatal accidents connected with NIW's contractors or sub-contractors, including transient workers. This allows this rate to be calculated as zero.

Table 41 – Health and Safety Information (NIW only)

Lines 1- 5 - Lost Time due to Sickness and Accidents and Incidence of Occupational Ill Health

In 2009/10 financial year NI Water lost a total of 10873 working days due to sickness which was equivalent to 7.8 working days per employee. The KPI for attendance in 09/10 was 95.7% and NI Water delivered an actual attendance rate of 96.5 %, 0.8% above the target, and an increase of 1.2% attendance on the previous year.

During 2009/10 NI Water underwent further restructuring which resulted in 76 employees leaving through a voluntary early severance/retirement (VER/VS) package.

NI Water has introduced a new Attendance Management policy in consultation with the trade unions. HR Advisors in conjunction with Line Managers have been meeting with staff that has breached sick absence trigger points to highlight the importance of good attendance. During the 09/10 year Human Resources have continued to 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 new technology.

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Datix entries are examined by the H&S Team and statistical trends are presented monthly by the Head of H&S both at Executive Level and at Board for comment and query.

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Given the rapid change in contract provision as outlined above, 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.

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superficial cuts and grazes and no member of the public was injured. The property was evacuated and the emergency services were in attendance. All construction work ceased pending full investigation and recovery of the crane. HSENI were notified immediately but decided not to visit the scene due to the incident report and the actions already taken on site.

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All Contractor and subcontractor incidents are recorded on DATIX and for 2009/10 the total number of RIDDOR incidents reported to NIW by all of its contractors was 7. Contractor performance is monitored monthly by the NIW Executive Committee and Board at their monthly meetings.

Lines 16-17
Information is not collected for this line as NIW has no ready method of calculating the numbers of contractors' employees working on NIW contracts.

Lines 18
There were no major or fatal accidents connected with NIW's contractors or sub-contractors, including transient workers. This allows this rate to be calculated as zero.

Table 42

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 42 KEY OUTPUTS
PPP SCHEMES
REPORTING YEAR 2009-2010

	DESCRIPTION	UNITS	DP	CG	Corresponding Report	Calculation	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
A	**PROJECT DESCRIPTION**																											
1	PPP Concession	text	na		na		Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Kinnegar	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Alpha	Kinnegar	Omega	Water	Sewerage
2	Service Area	text	na		na		WT	WT	WT	WT	WD/WT	WD	WD	WWT	WWT	WWT	WWT	WWT	WWT	WWS	WWS	WWS	WWS	All	All	All	Service	Service
3	Name of works	text	na		na		Balinrees	Castor Bay	Dunore Point	Moyola	DBFO LM & FKd BDG Cont TK	Ballymoney LM	Limavady LM	Kinnegar	Richhill	Armagh	Ballynacor	North Down	Ballyrickard	Ballynacor Lagoons	Ballynacor	Duncrue	Sludge Service	Total	Total	Total	Total	Total
4	Commencement date	date	na		na		10-Oct-08	09-Dec-08	11-Dec-08	16-Sep-08	16-Dec-08	15-Oct-08	15-Oct-08	24-May-01	08-Apr-09	27-Aug-09	Not Yet Granted	05-May-08	20-Apr-09	N/A	Not Yet Granted	31-Mar-10	31-Mar-10					
5	Service duration	yrs	0		na		23	23	23	23	23	N/A	N/A	23	23	23	Not Yet Established	24	23	N/A	Not Yet Established	23	23					
6	Service completion date	date	na		na		30-May-31	30-May-31	30-May-31	30-May-31	30-May-31	N/A	N/A	23-Apr-24	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32					
B	**PAYMENT TO PPP CONCESSIONAIRE**																											
7	Unitary Charge Capacity Charge	£m	3		na																							
8	Unitary Charge Variable	£m	3		na																							
9	Unitary Charge Deductions	£m	3		na																							
10	Atypical expenditure	£m	3		na																							
11	Efficiency Gains included in7-10	£m	3		na																							
12	Total PPP Payments (7to 10)	£m	3		na	Sum 7 to 10																						
13	Capital repayment	£m	3		na		0.396	0.781	0.843	0.315	0.203	0.166	0.202											2.906			2.906	
14	Maintenance	£m	3		na		0.025	0.066	0.092	0.041	0.000	0.000	0.000											0.224			0.224	
15	Residual interest	£m	3		na									0.232	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.232	1.933	0.000	2.165
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		1.545	3.043	3.284	1.227	0.792	0.648	0.786											11.325			11.325	
20	Total PPP Opex (18-19)	£m	3		na	Line 18-19																						
C	**WATER DISTRIBUTION DATA**																											
21	Distribution input	Mld	2	B2	Table 10 Line 26		27.02	102.16	119.47	14.80	N/A	N/A	N/A											263.45			263.45	
22	Length of mains	km	2	A1	Table 11 Line 12		N/A	N/A	N/A	N/A	16.42	N/A	N/A											16.42			16.42	
D	**WATER RESOURCE AND TREATMENT DATA**																											
23	Turbidity 95%ile greater or equal to 0.5NTU	1/0	0	A1	Table 11a Line 1		0	0	0	0	0	Not Tested	Not Tested															
24	Turbidity 95%ile less than 0.5NTU	1/0	0	A1	Table 11a Line 2		1	1	1	1	1	Not Tested	Not Tested															
25	Source Type	text		A1	Table 12 Block A		Impounding/River	River	River	River	N/A	N/A	N/A															
26	Treatment type	text		A1	Table 12 Block B		W4	W4	W4	W4	N/A	N/A	N/A											4 No. W4			4 No. W4	
27	Average pumping head	m	1	B4	Table 12 Block A		3.2	19.7	25.4	3.0	0.23	N/A	N/A											149.0			N/A	
E	**SEWERAGE DATA**																											
28	Total length of sewer	km	2	B2										0.00	0.09	0.20	11.51	10.40	1.00						0.00	10.40		10.40
29	Total length of critical sewer	km	2	B2										0.00	0.09	0.20	11.51	10.40	1.00						0.00	10.40		10.40
F	**SEWAGE TREATMENT AND DISPOSAL DATA**																											
30	Population equivalent of total load received	000		B3	Table 17b line 2									90.082	2.150	30.717	133.866	72.750	40.533	N/A	N/A				90.082	280.016		370.098
31	Load received by STW's	kg BOD/day	0	B3	Table 17d									5405	129	1843	8032	4365	2432	N/A	N/A				5405	16801		22206
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	A1	Table 17c									6	4	6	6	6	6	N/A	N/A							
G	**SLUDGE TREATMENT AND DISPOSAL DATA**																											
39	Total sludge imported from NI Water	ttds	3	B3										0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.610				0.000	0.610		0.610
40	Sludge produced by the PPP facility	ttds	3	B2										0.700	0.210	0.840	2.230	1.654	1.717	N/A	0.980	N/A			0.700	7.630		8.330
41	Sludge exported to Duncrue Incinerator	ttds	3											N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			0.000	0.000		0.000
42	Sludge exported to other PPP facilities	ttds	3	B2										0.000	0.020	0.110	0.250	0.000	0.000	0.000	0.000	N/A			0.000	0.380		0.380
43	Sludge exported to NI Water	ttds	3	B2										0.700	0.190	0.730	1.980	1.654	1.717	0.000	0.600	N/A			0.700	6.870		7.570
44	Sludge disposed of from site to - Farmland Untreated	ttds	3	A1	Table 17G Col 1									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		0.000
45	Sludge disposed of from site to - Farmland Convestions	ttds	3	A1	Table 17G Col 2									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		0.000
46	Sludge disposed of from site to - Farmland Advanced	ttds	3	B2	Table 17G Col 3									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.230	N/A			0.000	0.230		0.230
47	Sludge disposed of from site to - Incineration	ttds	3	A1	Table 17G Col 4									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		0.000
48	Sludge disposed of from site to - Landfill	ttds	3	A1	Table 17G Col 5									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		0.000
49	Sludge disposed of from site to - Composted	ttds	3	A1	Table 17G Col 6									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		0.000
50	Sludge disposed of from site to - Land Reclamation	ttds	3	A1	Table 17G Col 7									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		0.000
51	Sludge disposed of from site to - Other	ttds	3	B2	Table 17G Col 8									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150	N/A			0.000	0.150		0.150
52	Sludge disposed of from site - Total	ttds	3	B2	Table 17G Col 9									0.000	0.020	0.110	0.250	0.000	0.000	0.000	0.380				0.000	Meaningless Total		

Table 42 – Key Outputs PPP Schemes

Note: As the atypical expenditure in Alpha and the residual interest in Omega were not divisible by site the cross tots on lines 10, 12, 15, 17, 18 and 20 will not agree to the figures in the total column – the figures included in the total columns are correct for each concession

1. Changes To Data: This is a new Table designed to promote better understanding of the PPP works and draws its information from PPP sources. Consequently there is no commentary in respect of variations from the previous years data.

2. Amendments to Service Commencement Dates (Lines 4) No dates have been amended from those reported in the previous Reporting Period.

3. Adjustment to Contract Payment Mechanisms: These have not been adjusted from those in place in the previous Reporting Period (However, see also Line 11 Alpha commentary below).

4. Nature and Amounts Line:

Line 7 The Unitary Charge Capacity Charge applies to Alpha only. The data used is derived from the Invoices received from the Contractor, which separates the Unitary Charge Capacity Charge from the Unitary Variable Charge and the relevant Unitary Charge Performance Deductions, all in accordance with the Payment Mechanism Schedule of the Contract.

Line 8 The Unitary Charge Variable Charge applies to all three PPP Contracts. The data used is derived from the Invoices received from the Contractor which set out the Unitary Charge Variable Charge claimed. There are no payments in respect of the Ballynacor Sludge Facility and the Duncrue St Sludge Facility, rather a payment in respect of the Sludge Disposal Services.

Line 9 [redacted]

Alpha:
The Alpha Contractor, through engagement, invoices to the agreed amount which includes the relevant Performance Deductions. These Deductions are in accordance with the Payment Mechanism for failure events identified and can be separated by Facility (Scheme) as per the Payment Mechanism.

Omega:

[redacted]

Dispute:

[redacted]

To include them in Line 9 would be to double count and cause Line 20 to be at variance with the Company's audited accounts.

Kinnegar:

[redacted]

To include them in Line 9 would be to double count and cause Line 20 to be at variance with the Company's audited accounts.

Line 10
Alpha:

(a) Refund of Re-organisation costs: [redacted]

(d) Contractor Contribution to Alpha Official Opening (Launch) Sep 2009.

The official opening of the Alpha facilities cost £24k. The parties agreed to share the costs. A reduction of £12k was made in the monthly invoices from the Contractor to reflect the amount in favour of the Authority.

(e) Ex-gratia Payment relating to Dunore Boil Notice April 2009.

The Contractor offered an ex-gratia, without prejudice, payment to the Company to reflect costs it incurred as a result of the misrepresentative bacteriological sample causing the issuance of a precautionary boil notice April 2009. As there were no clear grounds for a Contractor breach, this was an appropriate means of reflecting its costs.

(f) Payments to other contractors arising from Boil Notice.

The Company incurred publishing costs of producing boil notices [redacted] and advertising [redacted] as an atypical cost and attributed this to the PPP cost code.

Omega:
(a) The Company had an opening accrual of [redacted] in respect of claims and beneficial use of sites not in Service but under the control, operation and Water Order Consent of the Contractor for the period 2008/09.

(b) Atypical Payments made during the year were as follows:

[redacted] – Costs incurred by the Contractor in cleaning up operational spills at the Ballynacor Existing Facilities during construction phase of the Works where the spillages were on areas under the CDM control of the Construction Sub contractor and not the Company.

[redacted] – Costs incurred by the Contractor in dealing with the transportation off site of pre-existing sludges at Ballyrickard WwTW at the time of Service Commencement, such costs that would otherwise have been for the account of NI Water as a Prudent Operator. [redacted]

[redacted]

[redacted]

[redacted]

Opening accrual [redacted]
Payments [redacted]
Closing Provision [redacted]
Total [redacted]

The figure of [redacted] is therefore presented as;

Armagh Scheme (Facility): [redacted]
Ballynacor Scheme (Facility): [redacted]
Ballyrickard Scheme (Facility): [redacted]
Duncrue St Sludge Scheme (Facility): [redacted]

Kinnegar:
There is no atypical expenditure on this Concession Agreement

Line 11
There are no amounts shown for the reasons set out below;

Alpha: An Authority Change (the Lab Service Change) was instructed on Alpha to bring in house the Bacteriological sample analysis with a [redacted] reduction in Project costs but a [redacted] liability to the Company's monthly reduction in Unitary charge for the period of the Service. [redacted] This is not shown as efficiency as the effect on the Company is neutral. [redacted]

Omega: Only one site was in service for the period prior to the Reporting Period, limiting the opportunity for Contractor Notice of Change efficiencies. None were implemented.

Kinnegar: There is no efficiency mechanism in this contract

Line 13 Capital Repayments - the element of Alpha payments paying off the finance lease creditor. The data reconciles with the Company's financial accounts. This figure has been attributed to individual sites in proportion to the opening capital value recognised in the NIW accounts as follows:

	Opening Capital Value	Capital Repayment
	£m	£m
Castor Bay	30,015	0.781
Dunore Point	32,390	0.843
Ballinrees	15,238	0.396
Moyola	12,106	0.315
Limavady LM	7,750	0.202
Ballymoney LM	6,392	0.166
DBFO LM	7,817	0.203
	111,708	2,906

Line 14 Capital maintenance carried out at Alpha sites during the year – figure supplied by Dalriada Water.

Line 15 Residual Interest – as Kinnegar and Omega are off balance sheet an element of the unitary charge is capitalised to reflect residual value in NIW accounts at the end of the contract – figures taken from Contractors Financial Models. The total for Omega is not divisible by Facility (Scheme). The data reconciles with the Company's financial accounts.

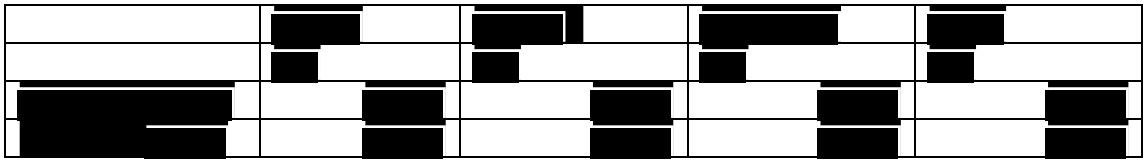
Line 16 Atypical payments capitalised – nil

Line 19 Interest
As Alpha is an on-balance sheet PFI contract the Company has recognised a finance lease creditor on its balance sheet - this figure represents the notional interest on the finance lease. The data reconciles with the Company's financial accounts. This figure has been attributed to individual sites in proportion to the opening capital value recognised in the NIW accounts as follows:

	Opening Capital Value	Interest
	£m	£m
Castor Bay	30,015	3,043
Dunore Point	32,390	3,284
Ballinrees	15,238	1,545
Moyola	12,106	1,227
Limavady LM	7,750	786
Ballymoney LM	6,392	648
DBFO LM	7,817	792
	111,708	11,325

The amounts disclosed in lines 12, 13,14,15,19 and 20 all agree to the figures disclosed in note 24 of the statutory accounts and so no further reconciliation is required.

A breakdown of the accruals included in the year end accounts in relation to unitary charges and disputed performance payments is as follows:



*excludes beneficial use accrual

Line 21 had been reported for AIR09 in Table 10 line 26. It should be noted that the DI for the DBFO Link Main is included in the Castor Bay DI and can not be separated.

Line 22 had been reported for AIR09 in Table 11 line 12 and has not changed in this submission.

Line 23 – 24 had been reported in Table 11a and will be compiled as per last year.

Lines 25 – 26 is the same information as for AIR09.

Line 27 has now been calculated for each Facility by the Contractor. This is new information being requested by the Regulator.

Lines 28 – 29 The North Down WwTW lengths are the same data as per AIR09. The additional information in relation to the other sites has been derived from Contractor records.

Line 30 now includes the additional facilities that have achieved Service Commencement.

Line 31 is defined by the Contractor in relation to Load received; this line now contains additional works as for line 30.

Lines 32 – 36 now contain the 95%ile and the Upper Tier compliance requirements for the relevant works.

Line 37 – 38 As per Lines 30 & 31.

Line 39 All other Northern Ireland Wastewater Sludges were disposed of by NI Water other than the amount attributed to disposal by Glen Water from Ballynacor Sludge Facility from 19 Feb – 31 March. Deducting the volumes disposed of by Glen Water from the facilities it was running (Indigenous sludge from Ballynacor, Armagh, and Richill) makes the balance 0.61 ttds disposed of from Ballynacor Sludge Facility.

Lines 40 This has been calculated by the Omega Contractor and by NI Water for Kinnegar on the basis of volume and dry solids content. The line total needs reconciliation in that 0.37 ttds was produced by the Armagh, Richhill and Ballynacor WWTW from 19 Feb – 31 March and dealt with in the Ballynacor Sludge Facility. It is therefore double counted in that disposal figure of 0.98ttds from the Ballynacor Sludge Facility.

Line 41 & Line 42 The PPP Duncrue St Facility was not in Service during the year. However, the Line 42 total of 0.37ttds reflects the amounts derived at Armagh, Richhill and Ballynacor WWTW that the contractor disposed of through his operation of the Ballynacor Sludge Facility over the period 19 Feb – 31 March.

Line 43: All PPP WWTW Sites exported to NI Water for disposal other than that produced at Armagh, Richhill and Ballynacor WWTWs for the period of 19 Feb – 31 March (see methodology).

Lines 44 – 52 the Company is reporting the data provided by Glen Water for its operation of the Ballynacor Sludge Facility for the period 19 Feb – 31 March, where Glen Water disposed of 0.98ttds through three outlets:

Incinerator No. 2 during testing and commissioning: 0.6ttds
Lime Stablisation for agri-use: 0.23ttds
Willow Coppicing: 0.15 ttds

Table 43

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 43 KEY OUTPUTS
PPP REPORTING - OPERATIONAL COSTS
REPORTING YEAR 2009-2010

	DESCRIPTION	UNITS	DP	Corresponding Report	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
A	**PROJECT DESCRIPTION**				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	PPP Concession			na	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Kinnegar	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Alpha	Kinnegar	Omega	Water	Sewerage
2	Service Area			na	WT	WT	WT	WT	WD/WT	WD	WD	WWT	WWT	WWT	WWT	WWT	WWT	WWS	WWS	WWS	All	All	All	Service	Service
3	Name of works			na	Balinrees	Castor Bay	Dunore Point	Moyola	DBFO LM & FBCT	Ballymoney LM	Limavady LM	Kinnegar	Richhill	Armagh	Ballynacor	North Down	Ballyrickard	Ballynacor Lagoons	Ballynacor	Duncrue	Total	Total	Total	Total	Total
B	**PPP INFORMATION**																								
4	Payment to Concessionaire	£m	3																						
5	Payment by Concessionaire to Operating Company	£m	3																						
C	**DIRECT COSTS TO NI WATER**								43.000																
6	Power	£m	3		0.328	2.604	2.997	0.524	0.020	N/A	N/A	N/A	0.051	0.085	0.000	0.795	0.178	N/A	0.000	0.000	6.473	0.000	1.109	6.473	1.109
7	Other direct costs	£m	3		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001
8	Total direct costs	£m	3	sum 6 + 7	0.328	2.604	2.997	0.524	0.020	0.000	0.000	0.001	0.051	0.085	0.000	0.795	0.178	0.000	0.000	0.000	6.473	0.001	1.109	6.473	1.110
9	General and support expenditure	£m	3		0.034	0.034	0.034	0.033	0.033	0.033	0.033	0.042	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.234	0.042	1.040	0.234	1.082
10	Total functional expenditure	£m	3	sum 8 + 9	0.362	2.638	3.031	0.557	0.053	0.033	0.033	0.043	0.181	0.215	0.130	0.925	0.308	0.130	0.130	0.130	6.707	0.043	2.149	6.707	2.192
D	**OPERATING EXPENDITURE - NI WATER**																								
11	Scientific services	£m	3		0.000	0.000	0.000	0.000	0.000	N/A	N/A	0.046	0.002	0.002	0.002	0.002	0.002	0.000	0.000	0.000	0.000	0.046	0.011	0.000	0.056
12	Rates	£m	3		0.284	1.099	1.294	0.158	N/A	N/A	N/A	0.268	0.003	0.038	0.000	0.100	0.078	N/A	0.000	0.000	2.835	0.268	0.219	2.835	0.487
13	Estimated terminal pumping costs	£m	3									N/A	N/A	N/A	0.000	0.194	N/A	N/A	N/A	N/A		0.000	0.194		0.194
14	Estimated sludge costs	£m	3									N/A	0.000	0.000	0.000	0.000	0.000								
E	**TOTAL PPP OPERATING EXPENDITURE**																								
15	Total PPP operating expenditure	£m	3	Sum 5, 10, 11 and 12																					

Table 43 – Key Outputs

Note: As the Alpha atypical expenditure was not divisible by site the cross tot on line 4 for Alpha will not agree – the total included in the total column is correct for the Payments to the Concessionaire.

Introduction: This is a new Table prepared to enable easier reporting of the PPP Contract issues. The contents of this Table had in previous years been reported over a range of other Tables. Whilst the company has not previously completed this Table, the commentary below indicates where variances would have occurred from AIR 09 had such a table been reported previously

Line 4: Alpha: Payment to Concessionaire:
The data is derived from the Contractors Monthly Invoice and can only be split on a Site-by-Site basis and in each case represents the sum of the Unitary Charge payments (Capacity + Variable – Deductions) agreed with the Contractor.

[redacted]

It also includes;

Lab Service Change: [redacted]

[redacted]

Launch Contribution: A deduction of £12k from Unitary Charge to reflect the Contractors share of the costs incurred in the official opening event in September 2009.

Ex Gratia Payment: A without prejudice payment by the contractor to reflect NI Water's costs in dealing with the Boil Notice at Dunore Pt in April 2009 [redacted]

Refund of Re-organisation Costs. [redacted]

Capital maintenance of £224k has been deducted from the Alpha payments in arriving at the PPP opex figure as detailed in Table 42.

Line 4: Kinnegar: Payment to Concessionaire:
The data is provided as an aggregate of the monthly invoiced amounts by the Contractor to the Company.

4: Omega: Payment to Concessionaire:
The data is provided as an aggregate of the monthly invoiced amounts by the Contractor to the Company in respect of the Services.

Line 5 – Alpha:
The data is as reported by the Contractor in respect of payments, excluding capital maintenance payments, to the Operating Contractor.

Variances from AIR09 reflect;

(i) variances in volumetric demand

Line 5 – Kinnegar:
The data is as extracted from the Concessionaires Invoices to the Authority.

Any variance from AIR 09 is in respect of the varying flows and loads and is not material.

Line 5 – Omega:
The data is as reported by the Contractor in respect of payments made to the Operating Contractor.

Variance from AIR09 reflect;

(i) Variances in flows received at North Down from the previous year
(ii) The additional sites for the Omega Contract entering Service in the course of the reporting period (Richhill, Ballyrickard, Armagh)

Line 6 – In respect of the Kinnegar Concession the Power costs are paid by the operating Company from the monthly payment from the Concessionaire. NI Water is unsighted in regard to this cost. The submission last year was estimated from bills submitted in relation to an operational claim.

In respect of Omega, last years report was in relation to North Down WwTW only whereas this year, other sites such as Ballyrickard, Armagh, Richhill and Ballynacor will be reported for at least partial years consumption. No change in the Alpha Site reporting.

Line 7 – No costs other than the cost of maintaining the Escrow agreement for Kinnegar

Line 9 – General and support costs have been arrived at by running a report on P101 cost centre. Costs were allocated by project on the basis of percentage time spent by each staff member working on each project 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. The revised methodology to include all Contracts Management Team costs and those of the PPP Advisory consultants reflects the more accurate figure in AIR10

Line 11 – 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. Costs relate to more accurate recording of the Scientific Service costs attributable to Kinnegar and North Down recorded in AIR09, along with the addition of such costs for Richhill, Armagh and Ballyrickard in AIR10

Line 12 – 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.

Line 12 – Kinnegar
Kinnegar rates charge was also taken directly from the Rates Bill.

Line 12 – Omega
The rates figure for Omega sites Richhill, Ballyrickard and Armagh were taken directly from the rates bills received from LPS and apportioned for part of the year where necessary. North Down was not included in the original 09/10 rates bill however has been included in a draft additional bill from LPS which was accrued at the year end. The figure for North Down agrees to the estimate from LPS.

Line 13 – TP Costs: This is the first year NIAUR have asked NI Water to provide this information. It is based on the relevant TPS associated with North Down only.

Line 14 – Sludge Costs – Nil for 2009/10.

Annual Information Return 2010

Section 3

Service Target Report

STR Table 1

NORTHERN IRELAND WATER- ANNUAL INFORMATION RETURN 2010

SERVICE TARGET REPORT - Table 1: Water Service

	DESCRIPTION	UNITS	DP	LAST KNOWN PERFORMANCE			2009-10 TARGET	2009-10 OUT TURN		2010-11 TARGET
				Reporting Year	Outurn	CG			CG	
A	**Providing adequate pressure**									
1	Percentage of NIW's connected properties experiencing inadequate pressure. (Where water pressure in a communication pipe fell below 7 metres static head on two occasions, each lasting not less than one hour, in a period of 28 consecutive days.)	%	2	N/A	N/A		None Set	N/A		None Set
2	Percentage of NIW's connected properties below the reference level of 10 metres head of pressure, at a flow of 9 litres per minute. (For ease of measurement NIW might adopt a surrogate pressure (usually 15 metres head) in the adjacent water main serving the property.)	%	2	2008-09	0.72	B4	0.60	0.27	B3	None Set
B	**Planned interruptions to water supply**									
3	Percentage of connected properties experiencing a planned interruption where the supply of water was not restored within the time period specified by NIW in its advance notice.	%	2	2008-09	2.37	B3	3.08	1.97	B3	1.62
4	Percentage of connected properties experiencing planned interruptions which lasted more than four hours, to whom NIW failed to provide adequate notification in writing at least 48 hours in advance.	%	2	2008-09	1.82	B3	5.43	0.74	B3	0.43
C	**Unplanned interruptions to water supply**									
	Percentage of connected properties experiencing unplanned interruptions to their water supply of greater than:									
5	3 Hours	%	2	2008-09	7.02	B3	6.10	6.01	B3	5.81
6	6 Hours	%	2	2008-09	1.02	B3	0.90	1.18	B3	1.00
7	12 Hours	%	2	2008-09	0.25	B4	0.23	0.46	B3	0.22
8	24 Hours	%	2	2008-09	0.08	B4	0.01	0.29	B3	0.01
9	Percentage of properties affected by an unplanned interruption due to a leak or burst on a strategic main, where the supply was not restored within 48 hours.	%	2	2008-09	1.92	B3	0.49	0.00	B3	0.44
10	Percentage of connected properties affected by an interruption (planned or unplanned) which lasted more than 24 hours who were offered alternative water supplies.	%	2	2008-09	100.00	B3	95.00	93.71	C4	97.50
D	**Water service (infrastructure)**									
11	Number of mains bursts (per 1000km of main).	Nr	2	2008-09	141.38	B3	174.00	146.85	B3	173.00
12	Percentage Mean Zonal Compliance with Prescribed Concentration/Value for Iron at the tap.	%	2	2008-09	98.24	A2	None Set	97.24	A2	97.80
E	**Water service (non-infrastructure)**									
13	Water treatment works coliform non-compliance	%	2	2008-09	0.08	A1	None set	0.08	A2	0.08
14	Number of provisional DWI (NI) enforcement notices at NIW's water treatment works.	Nr	0	2008-09	3.00	A1	None set	0	A1	None set
15	Number of final DWI (NI) enforcement notices at NIW's water treatment works.	Nr	0	2008-09	0.00	A1	None set	0	A1	None set
16	Number of provisional DWI (NI) enforcement notices at NIW's service reservoirs.	Nr	0	2008-09	0.00	A1	None set	0	A1	None set
17	Number of final DWI (NI) enforcement notices at NIW's service reservoirs.	Nr	0	2008-09	0.00	A1	None set	0	A1	None set
18	Percentage of water treatment works with leaving water turbidity samples 95%ile greater than or equal to 0.5 Nephelometric Turbidity Unit (NTU).	%	2	2008-09	14.29	A2	None set	10.00	A2	None set
19	Percentage of water treatment works with leaving water turbidity samples 95%ile below 0.5 Nephelometric Turbidity Unit (NTU).	%	2	2008-09	85.71	A2	None set	90.00	A2	None set
F	**Security of Supply.**									
20	Security of Supply Index Score (Planned).			2008-09	42	B4	44	88	A3	98
21	Security of Supply Index Score (Reference).			2008-09	42	B4	44	88	A3	98
22	Security of Supply Index Score (Critical).			N/C	N/C		None Set	N/A		None set
23	Band Achieved (Planned).			2008-09	D	B4	D	C	A3	B
24	Band Achieved (Reference).			2008-09	D	B4	D	C	A3	B
25	Band Achieved (Critical).			N/C	N/C		None Set	N/A		None set
	A: No deficit against target headroom (Score 100)									
	B: Marginal deficit against target headroom. (Score 90-99)									
	C: Significant deficit against target headroom. (Score 50-89)									
	D: Large deficit against target headroom (Score < 50)									
G	**Restrictions on water use**									
	Percentage of population served by NIW that has experienced water usage restrictions involving:									
26	Hosepipe Restrictions	%	2	2008-09	0.00	A1	None Set	0.00	A1	None Set
27	Drought Orders	%	2	2008-09	0.00	A1	None Set	0.00	A1	None Set
28	Sprinkler Restrictions	%	2	2008-09	0.00	A1	None Set	0.00	A1	None Set
29	Number of person weeks of hosepipe restrictions imposed by NIW over the reporting period	Nr	2	2008-09	0.00	A1	None Set	0.00	A1	None Set
H	**Leakage**									
30	Percentage compliance with preset leakage targets over a 3 year period (ML/d)	%	2	2008-09	180.93	B3	176.93	186.86	B2	173.00
I	**Drinking water quality**									
31	Mean Zonal Compliance (All parameters)	%	2	2008-09	99.49	A2	99.65	99.74	A2	99.70
32	Compliance with Drinking Water Quality Regulations (Taking account of ADs)	%	2	2008-09	99.66	A2	None set	99.73	A2	None set
33	Compliance with Drinking Water Quality Regulations (Not taking account of ADs)	%	2	2008-09	99.47	A2	None set	99.70	A2	None set
34	Mean Zonal Compliance with six parameter Operational Performance Indicator. (Iron, Manganese, Aluminium, Turbidity, Faecal Coliforms, Trihalomethanes.)	%	2	2008-09	97.07	A2	None set	98.70	A2	None set
35	Mean Zonal Compliance with Operational Performance Indicator (turbidity, iron and manganese)	%	2	2008-09	99.22	A2	99.10	98.90	A2	99.10

Service Target Report – Table 1: Water Service

Line 1 - Providing Adequate Pressure

Outturn

NIW is not currently in a position to report on the number of connected properties which received inadequate pressure below 7m static head on two occasions each lasting not less than 1 hour in a period of 28 consecutive days.

Performance Assessment

In order for NIW to set targets and report on this line it will be a requirement to provide comprehensive permanent pressure monitoring across the distribution network. Although this is not currently available, NI Water is continuing to identify critical point and surrogate logging locations across the network which will accommodate future permanent pressure monitoring. This work commenced during the reporting year and will continue throughout, and beyond, the forthcoming year. The longer term objective is to link continuous data from these sites to a corporate system to maximise the potential of this information and report on company performance. Appropriate software will need to be developed to achieve this.

Line 2 - Providing Adequate Pressure

Outturn

The following table provides a summary of the properties added and removed from the DG2 Register.

	No. of Properties
DG2 Properties at start of reporting period	**5770**
Additions due to better information	713
Reductions due to asset improvements – capital works	572
Reductions due to better information	3606
Reductions due to operational improvements	57
Allowable exclusions	94
Under investigation	1
DG2 Properties at end of reporting period	**2154**

Performance Assessment

The target set for 2009/10 was for the removal of 945 properties receiving inadequate pressure. This target was to be achieved through the validation of existing properties and their subsequent removal through better information as well as the removal of properties by company action through watermain rehabilitation schemes and operational improvements. In addition it was recognised that there could be additional properties to be added to the DG2 register based on better information from the logging programme. The target has been achieved with the removal of 3,616 properties. The number of reported properties on the Register represents 0.27% of total connected properties.

Line 3 - Planned Interruptions
Outturn
The percentage of connected properties experiencing a planned interruption where the supply of water was not restored within the time period specified by NIW in its advance notice is 1.97%.

The following table provides a summary of the numbers of properties that were issued a re-connection time for a planned interruption.

Interruption Types	**Properties Affected >6hrs**
Overruns of Planned and Warned	456
Planned and Warned	22,460
Planned re-classed as Unplanned (insufficient warning)	82
Planned re-classed as Unplanned (Actual Start before Planned Start)	20
Total number of customers experiencing a planned interruption *(from above)*	**23,123**
Percentage	**(456 / 23,123) x 100 = 1.972%**

Assumption: Unlike the guidance for STR: Table 1: Line 4 which clearly states that the assessment is to be based on interruptions lasting more than 4 hours, the guidance for this line provides no such indication. As this line relates to overruns of planned and warned interruptions and there is only an AIR: Table 2 requirement to report on overruns lasting more than 6 hours, NI Water has assumed that this assessment would also be based on interruptions lasting more than 6 hours.

Performance Assessment
Although NI Water has not introduced a Guaranteed Standards Scheme, the Company set a provisional target for 2009/10 of 3.08% and performance against this target was monitored internally on a monthly basis via reporting on the Customer Charter Scorecard until December 09. The outturn of 1.97% is within the provisional yearend target of 3.08% and less than the 2008/09 outturn of 2.37%.

2010/11 Target
At the time of completing AIR08, NI Water was asked to set targets for AIR09 and AIR10. The company based its targets on the AIR08 outturn and annual reductions of 10%.

As outturns are now available for three years (3.80%, 2.37%, 1.97%), the Company has decided to base its 2010/11 target on these outturns. The outturns were plotted on a graph and a “power” trendline was used to give a projected outturn for 2010/11 as this type of trendline was found to best fit the outturn profile. The equation of the trendline was found to be $y=0.0375x^{-0.606}$.

The equation was used to calculated a projected outturn and hence, 2010/11 target of **1.62**%.

Line 4 - Planned Interruptions
Outturn
The **percentage of connected properties experiencing planned interruptions which lasted more than four hours, to whom NIW failed to provide adequate notification in writing at least 48 hours in advance,** is 0.74%.

The following table provides a summary of the numbers of properties experiencing a planned interruption.

Interruption Types	**Properties Affected >4hrs**
Planned re-classed as Unplanned (insufficient warning)	297
Overruns of Planned and Warned	773
Planned and Warned	38,844
Planned re-classed as Unplanned (Actual Start before Planned Start)	125
Total number of customers experiencing a planned interruption *(from above)*	**40,039**
Percentage	**(297 / 40,039) x 100 = 0.742%**

Performance Assessment
Although NI Water has not introduced a Guaranteed Standards Scheme, the Company set a provisional target for 2009/10 of 5.43% and performance against this target was monitored internally on a monthly basis via reporting on the Customer Charter Scorecard until December 09. The outturn of 0.74% is within the provisional yearend target of 5.43% and less than the 2008/09 outturn of 1.81%.

2010/11 Target
At the time of completing AIR08, NI Water was asked to set targets for AIR09 and AIR10. The company based its targets on the AIR08 outturn and annual reductions of 10%.

As outturns are now available for three years (6.71%, 1.81%, 0.74%), the Company has decided to base its 2010/11 target on these outturns. The outturns were plotted on a graph and a “power” trendline was used to give a projected outturn for 2010/11 as this type of trendline was found to best fit the outturn profile. The equation of the trendline was found to be $y=0.0684x^{-1.992}$. The equation was used to calculated a projected outturn and hence, 2010/11 target of **0.43**%.

Line 5 - Unplanned Interruptions
Outturn
The **percentage of connected properties experiencing unplanned interruptions to their water supply of greater than 3 hours** is 6.01%.

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

Time Band	Outturn		Outturn		Outturn		08/09 KPI Target	09/10 KPI Target
	07/08 Props	07/08 %	08/09 Props	08/09 %	09/10 Props	09/10 %		
>3hrs	60,662	7.583%	55,984	6.962%	47,970	6.006	6.80%	6.10%

Note: Percentage outturns are based on total connected properties as follows: 800,018 (AIR08); 804,418 (AIR09); 798,740 (AIR10)

Note: NI Water completed a Service Target Report for the first time in 2008 and as a result, a target was not set for 2007/08.

Performance Assessment
Although NI Water has not introduced a Guaranteed Standards Scheme, the Company set a provisional target for 2009/10 of 6.10%. The outturn of 6.01% is within the provisional yearend target of 6.10% and less than the 2008/09 outturn of 6.96%.

2010/11 Target
At the time of completing AIR08, NI Water was asked to set targets for AIR09 and AIR10. The company based its targets on the AIR08 outturn and annual reductions of 10%.

As outturns are now available for three years (7.58%, 6.96%, 6.01%), the Company has decided to base its 2010/11 target on these outturns. The outturns were plotted on a graph and a “power” trendline was used to give a projected outturn for 2010/11 as this type of trendline was found to best fit the outturn profile. The equation of the trendline was found to be $y=0.0769x^{-0.2018}$. The equation was used to calculated a projected outturn and hence, 2010/11 target of **5.81**%.

Lines 6 to 8 - Unplanned Interruptions

Outturn

The **percentages of connected properties experiencing unplanned interruptions to their water supply of greater than 6 hours, 12 hours and 24 hours** are 1.18%, 0.46% and 0.29% respectively.

The following table provides details of the outturns for the last three years together with the corresponding year end targets. >6hr and >24hr targets were set for the first time in 2007/08.

Interruption Category		**Outturn** 2007/08 Props	**Outturn** 2007/08 %	07/08 KPI Target	**Outturn** 2008/09 Props	**Outturn** 2008/09 %	08/09 KPI Target	Outturn 2009/10 Props	Outturn 2009/10 %	09/10 KPI Target
>6hrs	U/P	9,483	1.185%		8,115	1.009%		9,427	1.180%	
	UTP	510	0.064%		96	0.012%		499	0.062%	
	O/R	835	0.104%		590	0.073%		452	0.057%	
	Total	**10,828**	**1.353%**	**2.0%**	**8,801**	**1.094%**	**1.2%**	**10,378**	**1.299%**	**1.0%**
>12hrs	U/P	1,839	0.230%		2,010	0.250%		3,675	0.460%	
	UTP	22	0.003%		33	0.004%		154	0.019%	
	O/R	99	0.012%		43	0.005%		118	0.015%	
	Total	**1,960**	**0.245%**	**0.25%**	**2,086**	**0.259%**	**0.15%**	**3,947**	**0.494%**	**0.15%**
>24hrs	U/P	72	0.009%		609	0.076%		2,294	0.287%	
	UTP	6	0.001%		4	0.000%		0	0.000%	
	O/R	0	0.000%		8	0.001%		1	0.000%	
	Total	**78**	**0.010%**	**0.03%**	**621**	**0.077%**	**0.01%**	**2,295**	**0.287%**	**0.01%**

Note: Percentage outturns are based on total connected properties as follows: 800,018 (AIR08); 804,418 (AIR09); 798,740 (AIR10)
Note: Targets excluding third party interruptions and overruns were not set for 2007/08 and 2008/09; the reason being that NI Water had already set alternative KPI targets for its Strategic Business Plan. These alternative targets included third party interruptions and overruns.

Performance Assessment
As NI Water did not set targets for 2008/09 excluding third party interruptions and overruns, the performance assessment will instead be based on its KPIs.

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

"Number of properties experiencing unplanned and unwarned interruptions (expressed as a percentage of households) in excess of:

1a) 6 hours, 1b) 12 hours and 1c) 24 hours"

Note: The number of properties experiencing unplanned and unwarned interruptions includes interruptions caused by third parties and unplanned interruptions (overruns of planned interruptions).

Note: KPIs 1a and 1c were introduced for the first time in April 2007

>6hr KPI
The 2009/10 final outturn of 10,378 properties (1.299% of connected properties) exceeds the yearend target of 1.0%. The 2007/08 and 2008/09 final outturns were within the yearend targets although the targets were set higher at 2.0% and 1.2% respectively. As NI Water is keen to see a downward trend in the outturn, further reductions in targets are proposed.

>12hr KPI
The 2009/10 final outturn of 3,947 properties (0.494% of connected properties) exceeds the yearend target of 0.15%. The 2007/08 final outturn was within target but the 2008/09 final outturn also exceeded the target. Target failure in 2008/09 was mainly attributed to a small number of incidents involving higher than average numbers of properties and interruption durations. Target failure in 2009/10 can be largely attributed to the severe weather in December and January and also, the end of March.

Freeze/Thaw: There were 489 unplanned interruptions due to burst mains between 24 December 09 and 21 January 10 compared to 276 for the same period in 2008/09. This represents a 77% increase. 18 of the interruptions in 2009/10 lasted more than 6 hours compared to 4 in 2008/09 (350% increase). 7 of the interruptions in 2009/10 lasted more than 12 hours compared to 1 in 2008/09 (600% increase). As a result of the burst main incidents, 2,291 properties were affected for more than 6 hours (123 in 2008/09) and 101 properties were affected for more than 12 hours (9 in 2008/09).

In addition to the properties affected by unplanned interruptions due to bursts, properties were affected by pressure reduction caused by high demand on the system and an estimated 1,564 properties were affected by frozen communication pipes. The following table shows the impact of the freeze/thaw on the annual target allowance.

	Number of Properties Affected in Jan 10	Total Connected Properties	% Connected Properties Affected in Jan 10	Annual Target Allowance	% Annual Target Allowance Used
>6hrs	4,360	798,740	0.55%	1%	55%
>12hrs	1,857	798,740	0.23%	0.15%	155%
>24hrs	1,609	798,740	0.20%	0.01%	2,014%

>24hr KPI
The 2009/10 final outturn of 2,295 properties (0.287% of connected properties) exceeds the yearend target of 0.01%. The 2007/08 final outturn was within target but the 2008/09 final outturn also exceeded the target. Target failure in 2008/09 was mainly attributed to a small number of incidents involving higher than average numbers of properties and interruption durations. Target failure in 2009/10 can be largely attributed to the severe weather in December and January and also, the end of March.

Line 9 - Unplanned Interruptions
Outturn
The **percentage of properties affected by an unplanned interruption due to a leak or burst on a strategic main, where the supply was not restored within 48 hours** is 0.00%.

There were no interruption records in 2008/09 relating to trunk mains where the cause of the interruption was a burst main/main repair and the length of interruption exceeded 48 hours.

Interruption Types	**Properties Affected >4hrs**
Number of properties experiencing an unplanned interruption >48hrs	0
Number of properties experiencing an unplanned interruption >0hrs	4,085
Number of properties experiencing a third party interruption >0hrs	717
Total number of properties experiencing an unplanned interruption or third party interruption >0hrs *(from above)*	**4,054 + 717 = 4,771**
Percentage	**(0 / 4,771) x 100 = 0.00%**

Performance Assessment
Although NI Water has not introduced a Guaranteed Standards Scheme, the Company set provisional targets for 2008/09 and 2009/10 of 0.55% and 0.49% respectively and these targets continue to be monitored internally on a monthly basis via reporting on the Customer Charter Scorecard. The outturn percentage of 1.92% exceeds the yearend target of 0.55%. The 2007/08 outturn percentage was 0.00%.

2010/11 Target
At the time of completing AIR08, NI Water was asked to set targets for AIR09 and AIR10. The company based its targets on the AIR08 outturn and annual reductions of 10%.

Although outturns are now available for three years (0.00%, 1.92%, 0.00%), they are unsuitable for establishing a trend. Therefore, the Company has decided to continue with its basis for setting targets for AIR09 and AIR10.

AIR10 Target = 0.49%; AIR11 Target = 0.49% - 0.049% = **0.44%**

Line 10 – Alternative Water Supplies
The following table provides a summary of the OMIS and E&P interruption records in 2008/09 where the length of interruption exceeded 24 hours. There were 33 records in total.

Month	Interrupt Number	Type of Interruption	No. of Properties >24hrs	Length of ITS (hrs)	Alternate Supplies
May 09	9327	Unplanned	1	27.5	Bottled Water
	E&P059	Overrun	1	33.5	Bottled Water
Jun 09	9518*	Unplanned	12	26	Bottled Water
	9505	Unplanned	5	38	Bottled Water
Oct 09	10452	Unplanned	29	39.25	Bowser
Nov 09	10570	Unplanned	2	28	None Requested
	10915	Unplanned	10	33.5	None Requested
Dec 09	11144*	Unplanned	20	36.5	None Requested
	11698	Unplanned	18	47.5	Bottled Water
	11700	Unplanned	180	60	Bottled Water
	11699	Unplanned	50	99.75	Bottled Water
	11142*	Unplanned	30	104.5	Bottled Water
	10990	Unplanned	41	126	Bottled Water & Bowser
	11697	Unplanned	40	175	Bottled Water
Jan 10	11723	Unplanned	6	25	None Requested
	11600	Unplanned	30	157.5	Bottled Water & Bowser
	11596*	Unplanned	9	193.25	Bottled Water & Bowser

Month	Interrupt Number	Type of Interruption	No. of Properties >24hrs	Length of ITS (hrs)	Alternate Supplies
Mar 10	12076	Unplanned	2	24.25	None Requested
	12467	Unplanned	21	37.5	None Requested
	12456	Unplanned	9	38.5	None Requested
	12207	Unplanned	38	39.25	None Requested
	12209	Unplanned	15	39.25	None Requested
	12461	Unplanned	8	43.5	None Requested
	12464	Unplanned	5	53.5	None Requested
	12212	Unplanned	21	53.75	None Requested
	12214	Unplanned	20	53.75	None Requested
	12468	Unplanned	59	54	None Requested
	12453	Unplanned	3	72.5	None Requested
	12215*	Unplanned	5	78	Bottled Water
	12457	Unplanned	5	78.5	None Requested
	12455	Unplanned	10	81	None Requested
	12460	Unplanned	25	91.25	None Requested
	12216	Unplanned	1	142	None Requested
TOTAL			**731**		

* Note: Records 11144, 11142 and 12215 were checked as complete before the alternate supplies field had been completed. The alternate supplies field was confirmed via phone call instead. Records 9518 and 11596 were confirmed via e-mail for the same reason.

Within NI Water, the Networks Water and Leakage functions use an input screen to record their DG3 information. This input screen has a facility for specifying whether or not alternate supplies were provided by the Company during an interruption.

Although the alternate supplies field is not included amongst the data fields extracted from OMIS and used to compile the DG3 Register, it has been possible to revisit the input screens of the OMIS records in order to establish this information.

E&P and CSD use a MS Excel spreadsheet template to record their DG3 information. This template includes a column for recording alternate supplies.

In the case of 14 of the 33 OMIS and E&P interruptions lasting more than 24 hours in 2009/10, alternative water supplies were provided to customers in the form of bottled water and/or bowser.

In the case of Interrupt Numbers 11723 and 12076, the Company was aiming to have supplies restored within 24 hours.

In the case of Interrupt Numbers 10570, 10915 and 11144, bottled water was not supplied. There were no requests for bottled water on Rapid Xtra.

In the case of the remaining interruptions, bottled water was not supplied. There were no requests for bottled water on Rapid Xtra. The Company was reliant on assurances from NIE that supply would be restored.

In December and January, a further 1,564 properties experienced an interruption lasting longer than 24 hours as a result of frozen communication pipes. And 2,160 properties experienced an interruption lasting longer than 24 hours as a result of frozen supply pipes. All of these properties received alternative supplies, amounting to 40-50,000 litres of water.

- 451 properties were offered alternative water supplies (OMIS & E&P records).
- 280 properties did not request alternative water supplies (OMIS & E&P records).
- 3,724 properties received alternative supplies because of frozen communication/supply pipes.

$$451 + 280 + 3{,}724 = 4{,}455$$

- 4,455 connected properties were affected by an interruption which lasted more than 24 hours (including 2,160 properties affected by frozen supply pipes, not included in the summation of AIR10 Table 2 Lines 8, 12, 16 & 19).

((4,455 – 280) / 4,455) x 100 = **93.71%**

Outturn
The **percentage of connected properties affected by an interruption (planned or unplanned) which lasted more than 24 hours who were offered alternative water supplies** is 93.71%.

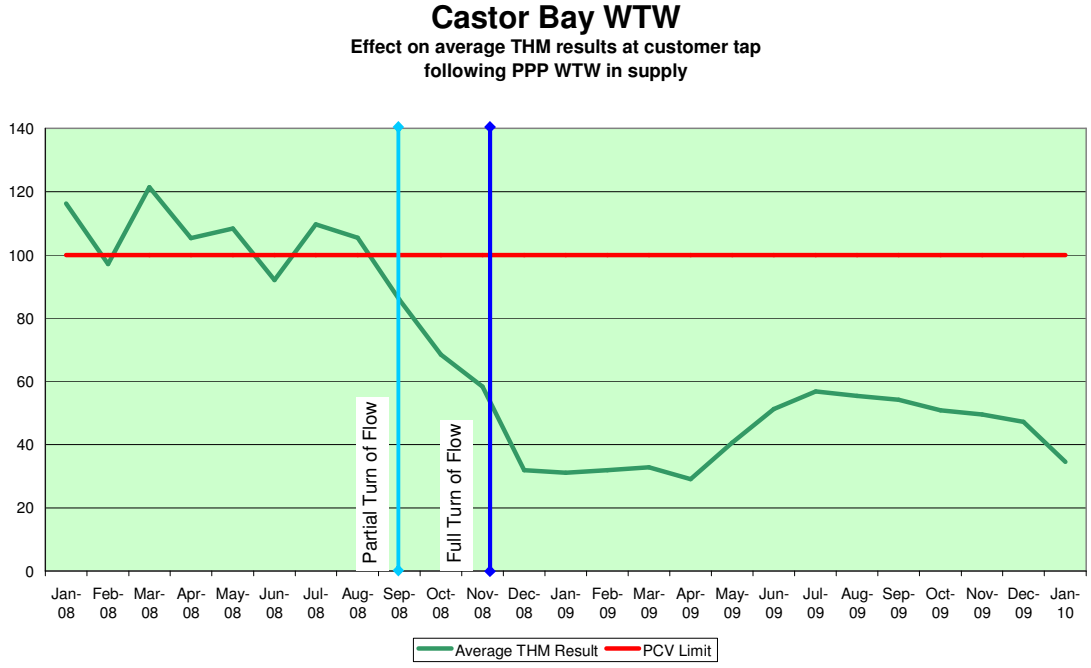
Performance Assessment
Although NI Water has not introduced a Guaranteed Standards Scheme, the company set a provisional target for 2009/10 of 95% and performance against this target was monitored internally on a monthly basis via reporting on the Customer Charter Scorecard until December 09. The outturn percentage of 93.71% is close to the yearend target of 95%. The 2008/09 outturn percentage was 100%.

2010/11 Target
At the time of completing AIR08, NI Water was asked to set targets for AIR09 and AIR10. The company based its targets on annual reductions of 5%, resulting in an AIR10 target of 95%.

The Company has decided on a 2010/11 target of **97.50%**.

Lines 12 – 19 and 21 – 35 – Water Service and drinking water quality
Background – Year on Year
The quality of water supplied by NI Water to customers has improved between 2008 and 2009:

- Mean Zonal Compliance has increased from 99.49% in 2008 to 99.74% in 2009 (NI Water assessed waiting for confirmation from DWI)
    - The increase in water quality is to a large extent due to a decrease in exceedances of the Total Trihalomethane parameter as the new Public Private Partnership (PPP) sites came into service. As a comparison, during 2008 NI Water had 141 THM exceedances. In 2009 this reduced to 30. See example graph for Castor Bay WTW below:



- The Operational Performance Index (for NI Water based on turbidity, iron and manganese as agreed with the Drinking Water Inspectorate (DWI)) decreased from 99.22% in 2008 to 98.90% in 2009 (NIW assessment on Turbidity, Iron and Manganese). This is largely due to a number of samples which engendered simultaneous exceedances in all 3 parameters.

- The percentage compliance measured at Water Treatment Works (WTWs) decreased from 99.95% in 2008 to 99.92% in 2009.

- The percentage compliance measured at Service Reservoir (SR) decreased slightly from 99.93% in 2008 to 99.92% in 2009.

- Overall out of 235,468 measurements (directive standards, national standards, indicator parameters and additional monitoring requirements) made at customer tap, WTWs, SRs and Authorised Supply Points, 99.90% met the standards.

Please note a total re-zoning exercise was carried out for 2009 based on more accurate DMA data. The new 2009 Water Supply Zones are not

contiguous with the previous zones, and as such have been given new codes and names, with the codes reflecting the leakage supply areas, and the names reflecting the supplying WTW / SR and the major conurbation in the zonal area.

Authorised Departures Discussion

- Authorised Departures – NI Water had a number of authorised departures in place during 2009 (details below). The AD end date is the date authorised by DWI, being one year after the completion of the programme of work to allow commissioning. The ADs listed are at zonal level, and are derived from the original supplying WTW authorisations (available if required) apart from 1 pesticide AD which was applied at the authorised supply point as this was the point of measurement. Further ADs may be applied for in the future if required by DWI. In the table below, those zones where the AD had expired by the 31st December 2009 are highlighted in yellow, with the remaining zones with active ADs highlighted in green.

2009 ADs by Water Supply Zone/Authorised Supply Point with AD End

Site Code	Site Name	Parameter	Units	AD Value	AD Start	AD End	Active at year end
ZN0501	Moyola Magherafelt	Total Trihalomethanes	ug/l	150	01/01/2007	16/07/2009	No
ZN0503	Unagh Cookstown	Total Trihalomethanes	ug/l	150	01/01/2007	16/07/2009	No
ZS0502	Forked Bridge Dunmurry	Total Trihalomethanes	ug/l	150	01/01/2007	24/09/2009	No
ZS0503	Forked Bridge Stoneyford	Total Trihalomethanes	ug/l	150	01/01/2007	24/09/2009	No
ZS0801	Castor Bay Ardress	Total Trihalomethanes	ug/l	150	01/01/2007	24/09/2009	No
ZS0802	Castor Bay Lurgan	Total Trihalomethanes	ug/l	150	01/01/2007	24/09/2009	No
ZS0803	Castor Bay Portadown	Total Trihalomethanes	ug/l	150	01/01/2007	24/09/2009	No
ZN0303	Dunore Point Ballymena	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZN0401	Dunore Point Antrim	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0101	Belfast Ballygomartin North	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0102	Belfast Ballygomartin South	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0103	Belfast Ballyhanwood	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No

Site Code	Site Name	Parameter	Units	AD Value	AD Start	AD End	Active at year end
ZS0104	Belfast Breda North	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0105	Belfast Breda South	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0106	Belfast North	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0107	Belfast Oldpark	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0108	Belfast Purdysburn	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
ZS0110	Dunore Point Glengormley	Total Trihalomethanes	ug/l	150	01/01/2007	15/10/2009	No
W2501	Altmore	MCPA	ug/l	0.5	22/11/2007	24/12/2009	No
ZN0901	Altmore Cabragh	Total Trihalomethanes	ug/l	150	01/01/2007	24/12/2009	No
ZN0902	Altmore Donaghmore	Total Trihalomethanes	ug/l	150	01/01/2007	24/12/2009	No
ZN1102	Seagahan Armagh	Total Trihalomethanes	ug/l	150	01/01/2007	24/12/2009	No
ZN0704	Lough Bradan Drumquin	Total Trihalomethanes	ug/l	150	07/08/2007	06/08/2010	Yes
ZN0706	Lough Macrory Killyclogher	Total Trihalomethanes	ug/l	150	07/08/2007	06/08/2010	Yes

The individual associated WTWs were assessed against both being in service at the end of the year and also the expiry of their Authorised Departure. This led to 7 WTWs being assessed with 6 sites being excluded from the calculation as highlighted here – sites in yellow are excluded, and the site in green included.

2009 WTWs affected by Authorised Departures

Site Code	Water Treatment Works	Ml/d	Out of service	AD Expiry	Included	Volume Ml/d
W1301P	Moyola	14.51		16/07/2009	No	
W2308P	Castor Bay	80.74		24/09/2009	No	
W2501	Altmore	3.74		24/12/2009	No	
W2514	Seagahan	10.92		24/12/2009	No	
W3301P	Dunore Point	119.40		15/10/2009	No	
W3315P	Forked Bridge	21.18		15/10/2009	No	
W4513	Lough Braden	8.32		06/08/2010	Yes	8.32
					Total affected DI	**8.32**

2009 ADS by Water Supply Zone showing population affected

Zone Code	Zone Name	Population	AD End	Affected by AD	Population Affected
ZN0303	Dunore Point Ballymena	28805	15/10/2009	No	0
ZN0401	Dunore Point Antrim	78060	15/10/2009	No	0
ZN0501	Moyola Magherafelt	55768	16/07/2009	No	0
ZN0503	Unagh Cookstown	15582	16/07/2009	No	0
ZN0704	Lough Bradan Drumquin	25398	06/08/2010	Yes	25398
ZN0706	Lough Macrory Killyclogher	21143	06/08/2010	Yes	21143
ZN0901	Altmore Cabragh	4636	24/12/2009	No	0
ZN0902	Altmore Donaghmore	8816	24/12/2009	No	0
ZN1102	Seagahan Armagh	39875	24/12/2009	No	0
ZS0101	Belfast Ballygomartin North	43929	15/10/2009	No	0
ZS0102	Belfast Ballygomartin South	41279	15/10/2009	No	0
ZS0103	Belfast Ballyhanwood	62934	15/10/2009	No	0
ZS0104	Belfast Breda North	48620	15/10/2009	No	0
ZS0105	Belfast Breda South	64924	15/10/2009	No	0
ZS0106	Belfast North	39223	15/10/2009	No	0
ZS0107	Belfast Oldpark	75546	15/10/2009	No	0
ZS0108	Belfast Purdysburn	44937	15/10/2009	No	0
ZS0110	Dunore Point Glengormley	36184	15/10/2009	No	0
ZS0502	Forked Bridge Dunmurry	63234	24/09/2009	No	0
ZS0503	Forked Bridge Stoneyford	26494	24/09/2009	No	0

Zone Code	Zone Name	Population	AD End	Affected by AD	Population Affected
ZS0801	Castor Bay Ardress	32363	24/09/2009	No	0
ZS0802	Castor Bay Lurgan	70380	24/09/2009	No	0
ZS0803	Castor Bay Portadown	74273	24/09/2009	No	0
				Total	**46541**
			All population		**2250260**
			Percentage affected		**2.068%**
			Percentage not affected		**97.932%**

Table Completion
As discussed in the methodology, the main numeric input for the STR Table 1 Lines 12-13 and 31-35 is based on NI Water's year end water quality report. This is produced and the figures agreed with DWI as soon as possible after year end.

The lines relating to Enforcement Notices at NI Water's various sites are completed by the Water Regulation section within the Environmental Regulation function. There is a considerable amount of correspondence and negotiation over the year between this section and DWI, and the figures reflect the outcome of such correspondence.

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

Lines 20 – 25 - Security of supply
As indicated in AIR09 NI Water is currently developing a water resource management plan. The security of supply index has been calculated based on this Draft 2010-2035 Water Resource Management Plan (DWRMP).

The new plan has adopted the latest methodology for producing water resource management plans and there has been a significant step change in the reported SOSI since 2008/09, which was 42, to the reported 88 for 2009/10. This is due to a number of reasons;

- A new approach for headroom (UKWIR (2002), *An Improved methodology for assessing Headroom*. Report 02/WR/13/2) used in the ongoing DWRMP has been utilized to assess the level of uncertainty in the supply demand balance. This methodology is more comprehensive than the previous approach and has reduced the level of uncertainty with regard to headroom which in turn has resulted in a lower headroom requirement than previous calculations for SOSI by NI Water.

- Revised Water Resource Zone (WRZ) boundaries that accurately reflect the current water supply situation within Northern Ireland. The 2002 water resource strategy had allowed for 15 water resource zones

but with various network improvements since 2002 the current plan has been able to identify a total of 5 independent water resource zones. Previous SOSI calculations have indicated an overall surplus of WAFU across Northern Ireland as a whole but the low SOSI score was more a reflection of the inherited system of many small individual water supply systems. Separate supply demand balances are constructed at WRZ level. Surpluses in one or more WRZs may then be available for transfer across WRZs boundaries to meet deficits. A number of changes have taken place since the 2002 WRS and the current review has enabled a detailed reassessment of the supply system and the 5 WRZs identified are an accurate reflection of the water supply system. As a result there are fewer isolated zones and the WAFU can be made available more easily across Northern Ireland.

- A Review of the outage allowance has resulted in a 1% reduction as compared to the 2002 WRS allowance. The assessment of outage for WRS 2002 was based on discussions with each of the four Water Service Divisions in existence at the time, but no historic outage data were available. A nominal outage allowance of 3% of distribution input was assumed. For WRMP 2010 a structured interview was held with key NI Water staff to develop an understanding of outage, identify sources most at risk from outage events, and where possible to quantify these risks. After these consultations the outage was revised to 2%, based on the latest information available and an element of expert judgement.

- Distribution Input has been reduced further 2008/09

As a result of the ongoing implementation of the 2002 Water Resource Strategy the latest assessment through the ongoing WRMP indicates a more integrated water supply system. When this is taken into account through an assessment of SOSI, NI Water is now a band C rating. With the planned implementation of the abstraction from the River Strule during 2010/11 and a further reassessment of the distribution of deployable output across water resource zones when the strategic model for trunk main flows becomes available as part of the WRMP project the improvement is expected to continue for 2010/11.

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.

The primary planning scenario for the WRMP is the **dry year annual average scenario (DYAA)**, which is defined by a period of low rainfall and unconstrained demand. This forms the basis of the WRMP, because the overall objective of the WRMP is to ensure that even under drought conditions, when supplies may be stressed, the level of demands associated with hot dry conditions can be met in full.

Some companies might also 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.

Lines 26 – 29 - Restrictions on water use
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.

There were no restrictions placed on the use of water during the reporting year. The high reliability assessment (A1) is based on the established procedures for the making of any order to prohibit or restrict the use of water. The high accuracy grade reflects the fact that no orders were made during the reporting year.

Northern Ireland Water does not operate a sprinkler license system.

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.

Line 30 – Leakage

Introduction

The outturn figure for reconciled leakage for 2009/10 is 186.86 Ml/d. The previous year's value was 180.9 Ml/d. The primary factor for the increase in leakage was the impact of the 2010 winter freeze/thaw as well as some adjustment as a result of the adoption of company specific data and better information. Commentary in relation to the Leakage performance is detailed within the Table 10 returns.

The most significant issue was the adverse weather conditions encountered during the winter months. Met Office records indicate that the 2009/10 winter was the coldest since 1963 and the second coldest in the last 100 years. Temperatures plummeted as low as -13C at night and by day they struggled to rise above freezing which is highlighted by the high number of air frost days recorded.

The freezing conditions and subsequent thaw caused widespread disruption to the water distribution network with a high rise in the number of burst main and frozen pipe occurrences. NI Water has continued throughout 2009/10 with Phase 2 of the Water Balance Action Plan

Meanwhile NI Water has continued throughout 2009/10 with work in relation to the Water Balance Action Plan. As highlighted in AIR09 the scale of the work being undertaken is considerable. To date NI Water has established a number of company specific assessments. In particular the production of specific figures for household use and the hour to day factor increased the reported leakage estimate by approximately + 2 Ml/day.

Prior to the freeze/thaw NI Water were on target to achieve a reduction of 4.0 Ml/d over the 2009/10 year. However the impact of the extreme weather conditions was such that leakage levels increased significantly in January 2010. Despite the ongoing poor winter weather immediate action was taken to recover the leakage situation during the months of February and March 2010 and substantive gains were made. However the overall impact meant that there was an additional 3175 Ml of leakage, which equated to an additional 9.0 Ml/d of leakage (averaged across the 2009/10 year), as a result of the extreme winter weather conditions.

The combined effect of the winter freeze and the introduction of company specific assessments are estimated to have contributed an additional + 11 Ml/day resulting in a reported leakage estimate of 186.8 Ml/day.

Phase I of the Water Balance Action Plan had the impact of rebasing reported leakage for AIR09 to a figure of 180.9 Ml/day. This revised estimate was audited by the Reporter and subsequently adopted by NIAUR for the establishment of targets throughout the PC10 period.

STR Table 2

NORTHERN IRELAND WATER- ANNUAL INFORMATION RETURN 2010

SERVICE TARGET REPORT - Table 2: Sewerage Service

	DESCRIPTION	UNITS	DP	LAST KNOWN PERFORMANCE			2009-10 TARGET	2009-10 OUT TURN		2010-11 TARGET
				Reporting Year	Outturn	CG			CG	
A	**Sewer flooding**									
1	Percentage of connected properties experiencing internal flooding from NIW's sewers.	%	2	2008-09	0.00	B4	None Set	0.00	B4	None Set
2	Percentage of connected properties internally flooded due to overloaded NIW sewers.	%	2	2008-09	0.00	B4	None Set	0.00	B4	None Set
3	Percentage of flooding incidents attributable to severe weather.	%	2	2008-09	0.00	B4	None Set	0.00	B4	None Set
4	Percentage of properties internally flooded due to other causes.	%	2	2008-09	0.00	B4	None Set	0.00	B4	None Set
	Percentage of NIW's connected properties ***at risk*** of internal flooding due to the incapacity of NIW's sewers:									
5	Once in every ten years.	%	2	2008-09	0.12	D6	None Set	0.12	DX	None Set
6	Twice or more in every ten years.	%	2	2008-09	0.01	DX	None Set	0.00	DX	None Set
7	Once in every twenty years.	%	2	2008-09	0.00	DX	None Set	0.00	DX	None Set
B	**Sewerage service (infrastructure)**									
8	Sewer collapses per 1000km of sewer.	Nr	2	2008-09	96.30	C5	None Set	68.70	B3	None Set
C	**Sewerage service (Non-infrastructure)**									
9	Percentage population equivalent (pe) served by NIW STWs that do not comply with the conditions of their discharge consents for sanitary determinands, phosphorus determinands and disinfection conditions.	%	2	2008-09	9.55	A2	6.50	7.50	A2	None Set
10	Percentage of sewage sludge NIW disposed of in an unsatisfactory manner.	%	2	2008-09	0.00	A1	0.00	0.00	A1	0.00
D	**Sewerage Service Serviceability Indicators**									
	Sub-threshold indicators of forecast:									
11	(i) biochemical oxygen demand (BOD) (Max > 2)	%	2	2008-09	92.64	A2	None Set	68.95	A2	None Set
12	(ii) biochemical oxygen demand (BOD) (95%ile > 1)	%	2	2008-09	88.80	A2	None Set	65.41	A2	None Set
13	(iii) biochemical oxygen demand (BOD) (Mean > 0.5)	%	2	2008-09	87.92	A2	None Set	65.72	A2	None Set
14	(iv) suspended solids (SS) (Max > 2)	%	2	2008-09	93.83	A2	None Set	70.10	A2	None Set
15	(v) suspended solids (SS) (95%ile > 1)	%	2	2008-09	90.84	A2	None Set	67.59	A2	None Set
16	(vi) suspended solids (SS) (Mean > 0.5)	%	2	2008-09	90.51	A2	None Set	68.62	A2	None Set
17	(vii) ammonia (NH3) (Max > 2)	%	2	2008-09	92.80	A2	None Set	71.02	A2	None Set
18	(viii) ammonia (NH3) (95%ile > 1)	%	2	2008-09	89.05	A2	None Set	66.71	A2	None Set
19	(ix) ammonia (NH3) (Mean > 0.5)	%	2	2008-09	94.47	A2	None Set	72.45	A2	None Set
E	**Wastewater quality**									
	Wastewater treatment works serving greater than 250 population equivalent not achieving compliance with Water Order Consents expressed as a:-									
20	(i) percentage of works.	%	2	2008-09	9.40	A2	13.00	8.14	A2	15.00
21	(ii) percentage of population equivalent.	%	2	2008-09	9.40	A2	6.50	6.20	A2	5.20
	Wastewater treatment works not achieving compliance with Urban Waster Water Treatment Directive (UWWTD) Consents expressed as a:-									
22	(i) percentage of works.	%	2	2008-09	7.80	A2	8.00	7.10	A2	10.10
23	(ii) percentage of population equivalent.	%	2	2008-09	9.70	A2	None Set	7.46	A2	None Set
24	Percentage compliance with Urban Waste Water Treatment Directive (UWWTD) consent standards for Biochemical Oxygen Demand (BOD).	%	2	2008-09	93.51	A1	None Set	2.74	A2	None Set
25	Percentage compliance with NIEA phosphorous targets at phosphorous removal sites.	%	2	2008-09	100.00	A1	None Set	100.00	A2	None Set

Service Target Report - Table 2: Sewerage Service

Lines 1 to 4 – Sewer flooding

As yet, no service targets have been set for Table 2: Lines 1 to 4 of the Service Target. This situation will be reviewed during the course of the reporting year when meaningful targets may be able to be established.

Lines 5 to 7 – Properties 'at risk' of flooding

As yet, no service targets have been set for Table 2: Lines 5 to 7 of the Service Target Report because these targets depend on the information reported through the three DG5 'At Risk' Registers and these registers are still being developed.

NIW had a target to investigate and make an initial determination of all internal flooding records as either DG5 Reportable or DG5 Excluded by October 2008. It is NIW's intention to wait until additional investigations are carried out on these determinations before setting targets based on information reported through the three DG5 'At Risk' Registers.

By delaying the setting of targets, NIW will have a more accurate understanding of the expected annual numbers of reportable incidents and hence, the numbers of properties that NIW could realistically expect to remove from the registers through the Capital Works Programme.

DG5 Register Development 2010 onwards.

As stated NIW's' Flooding register is still at the development stage with only partial reporting capability. It is our aim to move towards full flooding reporting capability.

To achieve this aim NIW have created a DG5 expert panel comprised of key personnel. Initially, the role of the DG5 panel is to provide a forum in which all areas of the business can feed into the flooding register development exercise for both internal and external flooding. However, as the Flooding Register and supporting business processes develop, the focus of this panel will shift to agreeing additions to and removals from the DG5 register, while ensuring the business process is maintained at all levels.

NIW are currently agreeing a programme for the development of the Flooding register along with methodologies, processes, definitions and roles and responsibilities.

NIW will work towards full reporting capability for both internal and external flooding incidents before the end of the PC10 period.

Line 8 – Sewer collapses

Information for the AIR10 return for this line was gathered as AIR09 for the lines on Table 16a, Line 1 – Number of Rising Main Failures, Line 2 – Number of Gravity Sewer Collapses and Line 3 – Number of Sewer Blockages should be gathered by Field Managers using checked and paid invoices from the

Sewer Maintenance Contractor and submitted through their line management (Area Managers) as per Line Specific Methodology.

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 AIR11 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

Line 10 - The percentage of unsatisfactory sludge disposal

Northern Ireland Water (NIW) continues to have zero unsatisfactory sludge disposals.

NIW has again assigned a confidence grade of A1 to percentage unsatisfactory sludge disposal as the total is zero.

NIW remains committed to compliance with the requirements of the "Safe Sludge Matrix". Greater than 40% of all sewage sludge disposed in 2009/10, approximately 42.08%, was recycled to agricultural farmland (lime stabilisation) i.e. Farmland Advanced.

A total of 7.02% of sewage sludge was disposed of in 2009/10, to land reclamation at various sites in mainland G.B. i.e. Land Reclamation disposal.

Regulation by NIEA within Northern Ireland permitted the safe disposal of sludge cake to forestry during 2009/10 and has been recorded with disposal to willows as "Other" at 4.26%.

A small quantity of poor quality sludge cake was disposed of to landfill. The total estimated quantity of grit and screenings removed as part of the sewage treatment process and disposed of separately under Tender C018 (Collection, Transportation and Disposal of Waste by skip) has been collated for the available duration of the tender and subsequently added to the total quantity of sewage sludge disposed to landfill in 2009/10.

All other untreated sludge was disposed of to incineration (approx. 45%).

Note: The production of surplus sewage sludge cake when the incinerator is shut down for annual maintenance etc. requires the collection, transportation and disposal of sludge cake from the cake store to Farmland Advanced, Other (forestry & willow coppicing) and Land Reclamation. The quantity of sludge cake disposed of to these outlets from the Belfast incinerator has been captured monthly by the Area sludge officer.

NIW has assigned a confidence grade of B2 to total sludge disposal as the company has systems in place to record the volumes and the measured percentage dry solids.

Lines 11-19 – Sewerage service serviceability indicators
These lines are copied from Table 16b please refer to the commentary submitted for Table 16b.

1.1.1 Lines 9 and 20 – 25 - Sewerage service and wastewater quality

Introduction
The Northern Ireland Environment Agency (NIEA) issues Water Order Consents (WOC) which set out legally binding conditions under which discharges to the aquatic environment are permitted. NI Water has in the order of 1500 WOC covering all Waste Water Treatment Works (WWTW), Water Treatment Works and sewerage systems.

NIEA assesses compliance on a calendar year basis, with WOC conditions to give the "official" compliance figure. However to inform Management of progress on achieving Key Performance Indicators (KPI) and address any potential problems, monthly reports on progress are produced.
In 2009 the KPI's related to wastewater treatment performance were:

- The percentage of WWTW serving more than 250 Population Equivalent (PE) compliant with the WOC.
- The percentage of PE served by compliant WWTW.
- The percentage of qualifying WWTW meeting the numeric standards of the Urban Waste Water Treatment Regulations (UWWTR).

The 2009 PE figures for KPI's are obtained from Asset Management and agreed with NIEA in October/November 2008.

Changes implemented for AIR 10
Following comments from the Reporter and the reporting requirements of the Utility Regulator for PC10 reporting the following changes have been implemented in AIR10 and for developing future KPI targets.

1. The most significant change in compiling AIR10 data is that the base for the WWTW in service and the PE for each is the position as determined by Asset Management at 31st March 2010. This will ensure consistency with other AIR10 Tables. The impact of this is:

    - Any WWTW which were decommissioned between 1st Jan 2009 and 31st March are not included in the assessment, hence the AIR 10 compliance figures are not compatible with those of the KPI outturn.
    - The WWTW which have been removed are:
        Bullays Hill
        Castlewellan
        Randalstown
        Seagoe
        Lisbarnet
        Bush
        Bellanaleck

Magheralin
Poundburn

- The updated PE's also mean that the AIR10 return is not comparable to that of the 2009 KPI outturn as the latter were set on the basis of the PE figures of October / November 08.
- All wastewater compliance figures for KPI are impacted by the changes.

2. Only WWTW serving greater than 250 PE with numeric standards are included.
3. Following on from (2) it should be noted that the Asset Management figures for AIR 10 contain a number of WWTW which have just crossed the 250 PE but for which NIEA has not yet issued standards.
4. Upper Tier Limits are not included in WWTW compliance assessment when the PE served by compliant WWTW is to be determined e.g. in 2009 Newry failed the UTL but met the LUT, hence it counted as a fail for WWTW compliance but a pass for PE compliance.
5. Only the resident PE is included for compliance assessment i.e. tourists/visitors are not included in the total PE.
6. Following on from (5) this approach poses problems for UWWTR definitions. The total PE, both resident and visitor numbers is an integral part of defining which works is subject to the UWWTR numeric standards e.g. Benone WWTW would not be a numeric UWWTR works if the holiday/visitor numbers were not included. For this reason the PE is included in UWWTR compliance.

For all the reasons given above it must be emphasised that the AIR10 outturn is not comparable to that of the 2009 KPI outturn.

Parameters of KPI targets

The first target relates to the percentage of WWTW serving greater than 250 PE whose effluent quality complies with the WOC numeric standards. This includes the Private Public Partnership WWTW. Compliance for numeric standards is assessed on spot samples scheduled for collection to a programme agreed with NIEA.

The second target relates to the performance of the same WWTW but measurement is against the PE served by WWTW compliant with the numeric WOC.

The third target relates to the WWTW which are subject to the UWWTR numeric standards. These are WWTW serving greater than 10000 PE discharging to coastal waters and WWTW serving greater than 2000 PE discharging to rivers or estuaries.

Compliance against all three targets is assessed on a running total commencing the end of March on a monthly basis to produce reports for OMT and ET. As compliance starts at 100% and fall through out the calendar year,

there are insufficient samples in the first months to make a meaningful assessment of compliance, hence the March start.

How the compliance is measured

Line 20 - The percentage of WWTW serving more than 250 Population Equivalent non-compliant with the NIEA numeric WOC

The WOC specifies the number of samples to be taken per year and the parameters which have to be determined. WWTW may fail if the required number of samples are not taken or the full range of parameters not determined.

Compliance for each WWTW is assessed on a parameter basis over a calendar year using the look-up tables of the Urban Waste Water Treatment Regulations (NI) 1995. This statistically derived methodology permits a certain number of exceedances, based on the number of samples taken, for each parameter included in the WOC e.g. where 24 samples are taken, 3 exceedances of each parameter are permitted. When this number of exceedances is surpassed a WWTW is deemed to fail. The relevant section of the Look-up Table is given in Appendix 1.

A number of WWTW have an additional clause in the consent known as an Upper Tier Limit on certain parameters. One exceedance of this standard will lead to the WWTW failing for the year.

The WOC standards are contained in the Laboratory Information Management System (LIMS) and audit sample results are automatically assessed against the standard. LIMS generates a standard report listing all WWTW with numeric standards and indicating the number of exceedances and whether the works has passed or failed. The LIMS report is accessed through:

<Reporting><Sewage Reports><EHS Monthly Reports – All sites>

A small number of WWTW have nutrient standards, nitrogen and/or phosphorous, although these are an annual average. While LIMS calculates a running average, which is displayed in the report referred to above, it does not have the facility to compare this against a standard. This requires that the average is compared manually on an ongoing basis with the WOC standard. All standards can be viewed on the company server.

Exceedances can be discounted from compliance assessment should NIW be able to demonstrate to NIEA that, at the time of the exceedance, a works was not under normal operating conditions. The definitions of abnormal operating conditions are given in Appendix 2 but NIEA may permit discounts under other conditions e.g. skewing of performance through too many samples being lifted in a short period caused by rescheduling of samples. Should a sample be discounted it must be replaced by another sample taken on the same day of the week. A replacement sample when entered in LIMS will register automatically on the compliance report.

NIEA can also issue interim time banded standards during capital upgrades of a WWTW. This is a more relaxed standard applicable for a specified period over which construction work may disrupt the normal treatment processes. When this time banded standard is entered in LIMS it is taken into account in the production of the compliance report.

At monthly intervals (for the KPI, EC and OMT) and at the end of the calendar year, the number of WWTW which have passed the numeric WOC is calculated as percentage of the total number of works to determine compliance with the target.
Non-compliance for line 8 is the reciprocal of this.

Line 21 - The percentage of PE served by non-compliant WWTW
The PE served by non-compliant WWTW is calculated as a percentage of the PE served by the total number of WWTW with numeric WOC. As referred to above it should be noted that the UTL is not applied in determining this compliance.

Line 22 - The percentage of qualifying WWTW meeting the numeric standards of the Urban Waste Water Treatment Regulations (UWWTR)
The UWWTR standard is the same for all qualifying WWTW unlike the WOCs which are set on an individual basis dependant on the receiving water course.

Compliance is based on 24 hour composite samples taken by automatic samplers. The UWWTR standards are contained in the WOC and the same principles of compliance assessment apply i.e. look-up tables, upper tier limits, interim standards and discounting of samples. The UWWTR standards are given in Appendix 3. However there is one significant difference. In assessing compliance with the UWWTR standards there is the option of assessing parameter compliance on a percentage removal basis inlet to effluent.

If both inlet and effluent are taken, then it is permissible to assess compliance on a percentage removal basis, 70% BOD, 75%COD, from inlet to effluent or on the effluent results. Hence if a sample meets one of these criteria then it is deemed to pass. If the percentage removal criteria is achieved this will override an Upper Tier exceedance.

Where relevant compliance with nutrient standards is assessed against the UWWTR annual average standard.

At monthly intervals (for the KPI, ET and OMT) and at the end of the calendar year, the number of WWTW which have passed the UWWTR standards is calculated as percentage of the total number of works to determine compliance with the target.

Non-compliance for line 9 is the reciprocal of this.

Line 23 - The percentage of PE served by non-compliant UWWTR numeric standard WWTW

The PE served by non-compliant WWTW is calculated as a percentage of the PE served by the total number of WWTW. As referred to above it should be noted that the UTL is not applied in determining this compliance.

Roles and Responsibilities in Production of Compliance Statistics

LIMS Manager/Deputy

In conjunction with the Waste Water Manager:

- Obtain PE figures from Asset Management Section in October each year and agree with NIEA by November.
- Agree the WWTW to be considered for compliance assessment and sampling schedule with NIEA in November for the following year.
- Liaise with Asset Management on PE's to be used in AIR.

Sole responsibility;

- Liaise with the Laboratory Sampling Manager/Deputy in scheduling samples.
- Review standards within LIMS as instructed by the Wastewater Regulation Manager.
- Amend standards within LIMS in response to Interim Time Banded standards as instructed by the Wastewater Regulation Manager.
- Liaison with Sampling Manager /NIEA on rescheduling in all instances where either spot or composite samples are not taken as scheduled.
- Activate automatic samplers for collection of UWWTR composite samples.
- Liaison with sampling manager and Waste Water Services scientific staff where samplers fail to operate.

Waste Water Manager/Deputy

- Joint assessment with the LIMS Manager of PE's, WWTW for compliance assessment and sample scheduling.
- Submit applications for Interim Time Banded Standards in a timely manner to ensure the standards are in place prior to commencement of a Capital works project.
- Submit applications for sample discount within the 15 day time scale set by NIEA.
- Liaise with Waste Water Service staff on ITBS and discounting of sampling.
- Liaise with the LIMS Manager/Deputy on updating standards/discounts as received from NIEA.
- On a monthly basis from March onwards produce compliance data on the basis of the methodology outlined above to meet the time frame of the KPI, ET and OMT reports.
- Liaise with Waste Water Service staff on a monthly basis to agree compliance figures.

- Produce the end of year compliance figures by the end of February the following year.
- In conjunction with NIEA cross check on WWTW standards prior to the start of each calendar year.
- Review procedures prior to commencement of each calendar year.

Head of Environmental Regulation.

- Audit the compliance figures as produced by the Waste Water Manager prior to submission. This is done in conjunction with the Head of Waste Water Services.
- Liaise with the Head of Waste Water Services on general compliance issues.
- Liaise with the Head of Waste Water Services on setting KPI targets.

Appendix 1

No of Samples	Permitted Exceedances
4-7	1
8-16	2
17-28	3
29-40	4
41-53	5

Appendix 2

NORMAL OPERATING CONDITIONS UNUSUAL SITUATIONS AND NORMAL LOCAL CLIMATIC CONDITIONS

1. THE REGULATIONS' TERMINOLOGY

1.1 The term "normal operating conditions" is used in paragraph 4(b) of Part II of Schedule 3; the phrase "unusual situations such as those due to heavy rain" is used in paragraph 5 of Part II of Schedule 3; "normal local climatic conditions" are referred to in regulation 4(4)(a).

2. INTERPRETATION

2.1 In order to assist in interpreting the weather conditions that might be considered to be abnormal or unusual, a definition of exceptional weather conditions is given below, together with an example of what might be considered to be other kinds of abnormal or unusual operating conditions.

2.2 The abnormal conditions set out below include capital works construction and periods of industrial action. Both are being considered by the Regulatory Committee, along with other possible exceptions suggested by other Member States. An amendment to this guidance note will be issued in the light of any guidance from the Regulatory Committee.

2.3 Definitions

2.3.1 For the purpose of this *registered standard / consent* the works shall be deemed to have been under 'normal operating conditions' except during a period when the following apply:

a. 'Unusual weather conditions' which shall include the following:
   i) low ambient temperature as evidenced by effluent temperature of 5^{o}C or less, or by the freezing of mechanical equipment in the works;
   ii) significant snow deposits;
   iii) fluvial flooding;
   iv) weather conditions causing unforeseen loss of power to the works which could not be ameliorated by the reasonable provision and operation of standby generator facilities.

b. A reduction in the level of treatment due to periods of industrial action or acts of vandalism that could not have been reasonably prevented.

c. When the Regulator has issued a variation of the registered standard for reasons such as construction of capital works.

Appendix 3

Parameter	Concentration mg/l	Upper Tier mg/l	Comments
BOD	25	50	
SS	35	87.5	
COD	125	250	
Total Phosphorus*	1 2		PE>100000 PE 10000-100000
Total Nitrogen *	10 15		PE>100000 PE 10000-100000

STR Table 3

NORTHERN IRELAND WATER- ANNUAL INFORMATION RETURN 2010

SERVICE TARGET REPORT - Table 3: Customer Service

	DESCRIPTION	UNITS	DP	LAST KNOWN PERFORMANCE			2009-10 TARGET	2009-10 OUT TURN		2010-11 TARGET
				Reporting Year	Outturn	CG			CG	
A	**Making and keeping appointments**									
1	Percentage of customers with whom NIW missed appointments (meter related) or failed to give at least 24 hours notice of cancellation.	%	2	N/C	N/C		None Set	n/a		None Set
2	Percentage of customers for whom NIW failed to specify an AM or PM appointment OR on request, a 2-hour period during which they would visit them (meter related).	%	2	N/C	N/C		None Set	n/a		None Set
3	Percentage of customers with whom NIW missed appointments (other) or failed to give at least 24 hours notice of cancellation.	%	2	N/C	N/C		None Set	n/a		None Set
4	Percentage of customers for whom NIW failed to specify an AM or PM appointment OR on request, a 2-hour period during which they would visit them (other).	%	2	N/C	N/C		None Set	n/a		None Set
B	**Responding to account queries**									
5	Percentage of account accuracy queries substantively responded to within 10 working days.	%	2	N/C	N/C		None Set	n/a		None Set
6	Percentage of "change of payment method" requests the company was unable to action, AND did not reply to the customer within 5 working days.	%	2	N/C	N/C		None Set	0.00	B3	None Set
7	Percentage of billing contacts answered within 5 working days.	%	2	2008-09	98.64	B3	98.00	98.13	B3	99.90
C	**Responding to customer complaints**									
8	Percentage of written complaints NIW answered within 10 working days.	%	2	2008-09	97.60	B2	98.00	99.42	B4	98.50
9	Percentage of customer complaints resolved successfully upon first contact.	%	2	N/C	N/C		None Set	n/a		None Set
10	Percentage of customer complaints resolved successfully on first visit.	%	2	N/C	N/C		None Set	n/a		None Set
11	Failure demand: Percentage of incoming contacts initiated by company failure.	%	2	N/C	N/C		None Set	n/a		None Set
D	**Bills for metered customers**									
12	Percentage of domestic metered customers who received at least one bill during the year based on a meter reading undertaken by NIW, or a reading provided by the customer (either in response to an estimated bill or as a result of a request for a meter reading).	%	2							
13	Percentage of non-domestic metered customers who received at least one bill during the year based on a meter reading undertaken by NIW, or a reading provided by the customer (either in response to an estimated bill or as a result of a request for a meter reading).	%	2	2008-09	93.25	B2	None Set	92.26	B2	95.00
E	**Ease of telephone Contact**									
14	Percentage of calls abandoned.	%	2	2008-09	1.12	A2	1.00	2.58	A2	1.00
15	Percentage of calls - All lines busy.	%	2	2008-09	0.00	A2	1.00	0.00	A2	0.10
16	Call handling satisfaction score. (Min 0, Max5)	Nr	2	2008-09	4.40	A2	4.60	4.60	A2	4.65
17	Percentage of customer calls answered within 30 seconds. (During relevant business hours on Waterline, Billing Enquiries & Leakline)	%	2	2008-09	97.09	A2	97.00	92.62	A2	None Set
F	**Assessed Customer Service Information**									
18	How many hours per 7 day week is the NI Water Call Centre open?	Nr	2					168.00	A1	168.00

Service Target Report - Table 3: Customer Service

Table 3 covers targets and performance for Customer Service provision;

- Block A (lines 1-4) covers appointments,
- Block B (lines 5-7) covers response to account queries,
- Block C (lines 8-11) covers response to customer complaints,
- Blocks D and E (lines 12-13 and 14-17) cover performance with regards billing of metered customers and telephone contact respectively.

Northern Ireland Water is currently able to submit completed returns for Blocks D and E, with partial returns for Blocks B and C (lines 6, 7 and 8).

Northern Ireland Water is currently unable to submit complete returns for Block A and the remaining lines of B and C, as the targets are either not set/not measured or the systems/processes have not been adequately developed to enable robust reporting.

Lines 1 – 4 - Making and Keeping Appointments
Despite improvements in the contractual position, the Company has not been able to implement a complete monitoring system for making and keeping appointments.

For example, although meter readers may attend a visit as requested by a customer, there is not a formalised process in relation to the booking of appointments / cancellations which could be reported against.

An AM or PM slot is not currently offered, the customer is advised that the window is between the working hours of 8am and 4pm.

Lines 5 – 7 - Responding to Account Queries
NIW had 99,126 DG6 billing contacts throughout the reporting year, 97,271 of which were dealt with within five working days giving a performance of 98.1% against a target of 98%. The DG6 target for the current reporting has increased to 99.9%.

Lines 8 – 11 - Response to Customer Complaints
Of the 3469 written complaints received throughout the reporting year, 3449 were closed within ten working days (regardless of when they were received) giving a DG7 performance of 99.42% against a target of 98%. The DG7 performance target has increased to 98.5% for the current reporting year.

Lines 12 & 13 - Bills for Metered Customers
At present no decision has been made on the billing of domestic customers in Northern Ireland.

The Company aims to read the meters of non-domestic customers twice a year and bill accordingly. Customers may also read their own meters and

report their consumption through the company's Billing Line. If for any reason a customer's meter can not be read, an estimated bill will be generated. NIW issued 62,825 metered customers a bill based on either a company or customer read during the reporting year out of 68,093 total metered accounts (not excluded from the indicator) giving a DG8 performance of 92.26% against a target of 95%. The reasons for failing to meet this target have been set out in the Table 5 Company Commentary. The target for the current reporting year will remain at 95%.

Lines 14 – 17 - Ease of Telephone Contact

During the reporting year 351,864 calls were received on advertised contact lines. Of these 9.069 were abandoned by the customer – 2.58% of calls abandoned falls short of the 1% target set for the reporting year. This failure was mainly due to the severe winter weather in December 2009/January 2010. The target for *abandoned calls* will remain at 1% for the current year.

No customers who phoned during the reporting year received a busy tone. The target for '*all lines busy'* will remain at 0.1% for the current year.

NIW's customer call handling satisfaction score (out of 5), as assessed by the McCallum Layton survey, was as follows:

Quarter 1	4.46
Quarter 2	4.57
Quarter 3	4.60
Quarter 4	4.80
Average	**4.60**

This gives an average call handling satisfaction for the reporting year of 4.6, meeting the set target. A target of 4.65 has been set for the current year. Out of the 351,864 calls received on advertised contact lines, 323,492 were answered within 30 seconds giving a performance of 92.62% and therefore missing the set target of 95%. A target of 97% has been set for the current year.

Ongoing Developments

NIW continues to develop its policies and strategies for improving customer service through its Customer Service Delivery projects within the Business Improvement Programme.

These projects will build upon the work of the Customer Hub. The programme of work is customer process driven and will attract considerable cross directorate support and engagement if it is to meet its objectives. It will support the medium and long term objectives within PC10, which build upon the short or immediate term issues currently being tackled. In particular Customer Services will address the volume of calls it currently receives. A number of strategic projects will be initiated in the PC10 period to specifically address call volumes and overall levels of customer service. These include:

- DG6 – project specifically aimed at improving overall bill accuracy to reduce call volumes and the effectiveness on handling bill queries end-to-end.

- Call Centre – Work Control Centre links – development of call handling scripts to better diagnose calls coupled with a substantial improvement on the volumes and quality of communications between the call centre and the work control centre will substantially reduce the volume of repeat calls.

- CRM Self Service – development of self-service channels (web and IVT) to reduce the number of calls that need to be answered by call agents, e.g. on-line applications for new connections or septic tank empty requests.

NIW recognises that to continuously improve is a fundamental requirement of customer service and to meet ever more challenging targets it must invest not only in changing the way it handles customer issues (the processes) but the way the business thinks about customer issues (the culture). It is essential that every person along the customer issue resolution path recognises that they are resolving a customer issue and that the resolution recommended by NIW should try and resolve the customer issue once and for all.

The ongoing projects within the Business Improvement Programme will deliver benefits in terms of efficient processes and service delivery, and having efficiently installed, effective and managed processes NIW will be able to produce accurate and timely information to assist completion of key customer performance reporting and use this information to model their medium and longer term customer objectives more accurately.

NIW is required to demonstrate greater efficiencies in order to reduce costs and deliver improvements of service to the customer experience by reducing the frequency, severity and cost of service failure. These improvements will reduce the risk of damage to reputation and incurring legislative costs due to service failure, and mitigate the risk of failing to meet regulatory requirements.

NIW's 2010 vision states that 'customer service will in future be directly linked via contact handling, through our future processes to operations, and the payment for services'. It is therefore essential that NIW continue to improve processes in a demonstrable way in order to deliver against this vision.

STR Table 4

NORTHERN IRELAND WATER- ANNUAL INFORMATION RETURN 2010

SERVICE TARGET REPORT - Table 4: Environmental Impact / Sustainability

	DESCRIPTION	UNITS	DP	LAST KNOWN PERFORMANCE			2009-10 TARGET	2009-10 OUT TURN		2010-11 TARGET
				Reporting Year	Outturn	CG			CG	
A	**Sustainability indicators**									
1	Percentage of NIW's power usage derived from renewable sources.	%	2	2008-09	11.30	A2	10.00	12.72	A2	11.00
2	Percentage of water mains and sewers installed using trenchless technologies.	%	2	2008-09	97.00	A2	92.00	98.18	A2	92.00
3	Percentage of NIW's excavated material that was re-used in reporting year.	%	2	2008-09	91.00	B2	75.00	83.00	B2	75.00
4	Carbon emissions profile: Total tonnes of CO2 equivalent (tCO2e) produced in reporting period.	Nr	2	2008-09	176033.00	B3	None set	186629.00	B3	None set
5	Tonnes of CO2 equivalent (tCO2e) offset in reporting period.	Nr	2	N/C	N/C		None set	Nil return		None set
B	**Pollution incidents**									
6	Total number of pollution incidents attributed to NIW per million resident population equivalent (pe) served.	Nr	2	2008-09	131.19	C5	None set	143.59	C5	None set
7	Number of H, M and L (High, Medium and Low) category pollution incidents occurring at NIW combined sewer outflows and foul sewers per million resident population equivalent (pe) served.	Nr	2	2008-09	95.28	C5	None set	110.52	C5	None set
8	Number of High and Medium category pollution incidents resulting from NIW's sewage collection and treatment activities per million resident population equivalent (pe) served.	Nr	2	2008-09	25.85	C5	None set	24.01	C5	None set
9	Number of Low category pollution incidents resulting from NIW's sewage collection and treatment activities per million resident population equivalent (pe) served.	Nr	2	2008-09	103.42	C5	None set	115.05	C5	None set
10	Number of High and Medium category pollution incidents resulting from NIW's water treatment and distribution activities per million resident population served.	Nr	2	2008-09	0.96	C5	None set	1.11	C2	None set
11	Number of Low category pollution incidents resulting from NIW's water treatment and distribution activities per million resident population served.	Nr	2	2008-09	0.96	C5	None set	4.43	C2	None set

Service Target Report - Table 4: Environmental Impact/Sustainability

Line 1 – Percentage of NIW's power usage derived from renewable sources

The totals in this section include self generated renewable electricity and electricity purchased through contracts with licensed electricity suppliers. NI Water's exceeded their target of 10% of renewable energy use by March 2010. NI Water total renewable energy use was calculated at 12.72% for this reporting period. NI Water has aligned with Government Targets of 10% by 2010 and up to 15% by 2015 so long as it does not entail excessive cost.

Line 4 – Carbon emissions profile

The carbon emissions quantities supplied for period 2009/10 are compiled using company data input to the UKWIR CAW for estimating Operational HG emissions. The total estimated emissions relate to electricity, other fuels, sludge, company owned vehicle transport, private mileage and airline travel. Carbon emissions associated with transport by taxi, train, bus, shipping, freight, or chemicals and supply chain are not included in this figure.

Current Position – Carbon emissions

- This AIR10 return has been made using the UKWIR CAW Ver. 4.0 for estimating operational GHG emissions and following iteration with NIAUR as to their requirements.
- Calculations to convert to C02 emissions have been made using the UKWIR CAW Ver. 4.0 for estimating operational GHG emissions as industry standard conversion factors have been applied within the workbook. The rates for conversion within the workbook are protected therefore there is no risk of making inadvertent conversion errors.
- This NIW AIR10 return does not include any data for 3 of the basket of 6 GHG's i.e. HFCs, PFCs and SF6.
- Travel in company vehicles is accounted for using diesel consumption figures from fuel dispense measurement systems.
- A nil return has been made for emissions from journeys made by taxi, train and bus transport.
- A nil return has been made for rail, shipping and freight transport.
- Data has been submitted for emissions associated with staff air travel.
- Carbon emissions associated with chemicals and supply chain are not included in the return.

The majority of our GHG emissions are associated with electricity and we have very accurate figures for usage however some shortcomings in data quality for other areas have led to an overall lower confidence grade.

Line 5 – Tonnes of CO2 equivalent offset in reporting year

No mechanisms were in place to measure carbon offset within NI Water in the reporting period. An ongoing review of carbon emissions is underway to determine measures for accounting, mitigation and adaptation in line with other Water UK companies approach. Targets set for carbon offsetting, mitigation and adaptation will most likely align with current aspirational

Government targets but will be dependent upon relevant funding to enable compliance with any targets set in the future.

Lines 6 - 11 – Pollution incidents
The Northern Ireland Environment Agency (NIEA) monitors pollution incidents, assesses their severity and attributes them to NI Water, Industry, agriculture etc.

The incidents are classified as high, medium or low severity. This classification is assumed to equate to the category 1, 2 and 3 pollution incidents, the latter being the classification used by the EA in England and Wales.

For NI Water incidents, NIEA attributes them to specific assets e.g. CSOs, SPSs and this can be verified by NI Water.

The audit reports produced by NIEA are supplied to NI Water on a regular basis. It was agreed that this should be on a monthly basis with each month's data provided by the end of the following month. This information is supplied to Operations Services from NIEA. The time frames have not always been achieved by NIEA.

To date, NI Water has installed telemetry into 397 Wastewater Pumping Stations therefore increasing the visibility of potential overflows from these assets. Work will continue throughout 2010/11 with further installations planned. In addition, CSO monitors have been installed at 225 sites in 09/10. Of these sites, 41 require some additional modification to ensure a reliable communication. This upgrade is dependent on funding.

Phase 2 of the CSO monitors project plans to install 352 monitors, approximately 200 in 2010/11 financial year and the remainder in 11/12. This is however dependant on the business case being approved and procurement through an existing tender. If the contract has to be re-tendered this will lead to delays and hence much fewer CSO's (if any) will be installed this financial year.

NI Water let, in August 2008, a bundled contract to a single Sewer Maintenance Contractor, which has improved the speed of response to potential incidents across the province. As part of this contract the contractor had to devise pre-planed maintenance runs for sewers and SPSs with the ultimate aim of reducing sewer blockages over the term of this 5 year contract.

NI Water also held training and awareness sessions for operational staff involved in dealing with pollution incidents during the reporting period.

The 2009 data supplied by NIEA has been analysed by Operations Services as follows:

Definition	No of Incidents
Total number of incidents	317
Number of H, M, and L incidents at CSOs and foul sewers (SPS on the sewerage systems have been included).	244
Number of H&M incidents resulting from sewage collection and treatment activities.	53
Number of L incidents resulting from sewage collection and treatment activities.	254
Number of H&M incidents resulting from water treatment and distribution.	2
Number of L incidents resulting from water treatment and distribution.	8

The figure for 'million population equivalent served' has been taken from AIR10 Table 15 line 6 which is defined as 'Equivalent population served – resident'. The figure given is 2.20766 million with a confidence grade for the line of C5 so the same grading has been applied to lines 6 to 9.

The figure for the million population served by potable water supply is provided from AIR10 Table 2 Key Outputs Water Service Line 20. This figure is 1.805800 million and is given a confidence grade of C2. The same grading has been applied to lines 10 and 11.

Annual Information Return 2010

Section 4

Level of Service Methodologies

Northern Ireland Water

Level of Service Methodology

DG2 Low Pressure

Level of Service DG2 - Risk of Low Pressure

Introduction

NIW's first DG2 Register produced for AIR08 identified that there were 10,321 properties receiving a service below the reference level. This first assessment was based primarily on modelled data from Zonal Study investigations. For AIR08 an 'Under Investigation' database was populated containing 105,024 properties and these were subsequently investigated for AIR09. In addition the company undertook an extensive programme of field logging to verify the robustness of this data. The first phase of verification along with the inclusion of historical Watermain Rehabilitation schemes reduced the number of DG2 properties to 5770 at the end of March 2009.

During 2009/10 the field logging programme has been progressed to the extent that all properties on the original DG2 register have now been substantively validated resulting in a number of properties being removed from, and others being added to, the register based on "better information." Further removals have also been made as a result of "company action" in the form of Watermain Rehabilitation schemes concluded this year. Finally a number of removals have also been attributed to networks improvements.

Line 3 – Properties below reference level at end of year

Definition: Properties receiving pressure below the reference level at the end of the year.

Method 1: DG2 Properties - Procedure for the investigation and recommendation for removal and addition of properties on the DG2 register.

The procedure for the investigation and recommendation for removal and addition of properties to the DG2 Register is based on the 'DG2 NIW Procedures April 2008' document produced by the NIW Leakage Data Management Unit. The objectives of the investigation are as follows:

1. The verification of data attributing to the DG2 entries.
2. Removal of DG2 entries on the register as a result of more robust data being available.
3. The addition of properties to the register as a result of more robust data being made available.
4. The identification and investigation of properties receiving less than 7.5 m at the point of connection.
5. Removal of DG2 entries resulting from capital works and networks improvements.

The investigation for each DMA containing DG properties was divided into three actions for items 1 - 4 above.

- A desktop study.
- DMA pressure logging/site investigation.
- A final report on each investigation.

As a result of Post Project Rehabilitation Appraisals provided by Asset Management DG2 removals are processed due to company action under item 5.

1. The Desktop Study

The desktop study consists of a review of all relevant data attributing to the DG2 entries. The objective is to determine the pressure at the connection point serving the property taking in to consideration the ground elevation at the connection point and the available total head (TH) i.e. TWL of service reservoir. To enable this figure to be calculated it is necessary to determine the nature of supply to the property, for example:

- Gravity.
- Pumped.
- Pressure Managed, (PSV or PRV).

The initial study looks at the TH at each property as recorded in the DG2 Register, compared to the calculated estimated TH at the same property. Figure 1 shows an example of the calculation from a gravity supply.

			Data from NIW DG2 Register			Desktop Calculations Using Static TH		
DMA Name	X Coords	Y Coords	Property Elevation (m)	Property Pressure (m)	Pressure Type	Connection Elevation DEM (m)	Reservoir TWL DEM (m)	Estimated TH at Property (m)
Burnside	284005	431868	40	11	Surrogate	40	55	15
Burnside	284007	431861	40	11	Surrogate	40	55	15

Figure 1:

2. The Site Investigation/Provision of Information

The example above indicates that the total head may provide a satisfactory pressure at the property under investigation but in accordance with the NIW approved methodology this does not carry enough substantive evidence to support removal from the DG2 Register thus promoting the need for site investigation.

The objective of the 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 the NIW guidelines 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 are taken in any adjoining DMAs. This is to identify 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:

- DG2 properties labelled with DG2 register water pressure.
- Pointer Property data showing elevation at each property (Pointer Plus Version October 2008).
- Water pipes, fittings i.e. SVs, Fire Hydrants (FHs) terminating nodes etc.
- DMAs and PMAs (where applicable).
- Background Vector maps.
- Required pressure logging points.

2.1 Additional Information

The procedure for the investigation into properties potentially receiving < 7.5m head is to undertake a survey of each site on the Register. The key information from the survey is as follows:

- Determine if property is not derelict or is not connected to the watermain.
- Determine if property has relevant x, y co-ordinates.
- Determine if property is connected to NIW supply.
- Determine if possible, the actual point of connection.
- Establish if possible a spot pressure at the property.
- Determine if necessary an accurate elevation at the point of connection or the property itself.

3. Final Report.

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.

Removal of Properties due to Company Action / Networks Improvements
On completion of company action, 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 DG 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 to provide audit trail. Further audits are conducted and finally the DG2 register is updated off indicating affected sites remaining on the register, additions if appropriate and all known exclusions.

The option of introducing removals due to networks improvements is investigated via rationalising adjacent DMA boundaries following adjacent DMA pressure loggings as per step 2 in the method statement above. Resulting networks amendments follow the removal process and the submission of final reports leads to an update of the DG2 register.

Deviation from the conditions laid out by NIW for DG2 Register.
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 identified properties are in receipt of a surrogate pressure <15m they will remain or be added to the Register in accordance with NIW procedure.

Calculation: Properties taken from DG2 Register but does not include allowable exclusions.

Line 4 – Properties receiving low pressure but excluded from DG2
Definition: Properties known to receive low pressure but excluded from the DG2 register.
Method 2: – Properties entered on the DG2 Register using the methodology stated under line 3 but excluded from line 3 where the supporting documentation has confirmed the property elevation is within 15m of the service reservoir serving the property.
Calculation: – Properties taken from DG2 Register deemed to be allowable exclusions.

Line 4a – Properties receiving pressure below a surrogate level of 7.5m at end of year
Method 3: – Properties entered on the DG2 Register using the methodology stated under line 3 but excluded from line 3 where the supporting documentation has confirmed the property elevation is within 15m of the service reservoir serving the property.
Calculation: – Properties taken from DG2 Register receiving pressure <7.5m.

Sources of Information
For AIR10 data was obtained from completed rehabilitation schemes and networks improvements (capital works), NI Water Asset Information Centre and field studies accompanied by final reports submitted by Crowder Consulting.

Scope and Coverage
One of the primary objectives throughout AIR10 was to conclude the validation exercise on existing properties within the DG2 register which commenced in AIR09. Similarly the ongoing removal of properties due to company action via the processing of PPRA reports and networks improvements was targeted. Finally a commitment was given to conduct an extensive investigation into all properties that previously indicated a recorded pressure below 7.5m.

Assumptions and Exclusions
The only exclusions listed are those within 15m elevation of the service reservoir. 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 AIR09 are identified in ‘Method (1)’ and ‘Method (2)’. A surrogate pressure of 15m has been used to identify DG2 properties.

Northern Ireland Water

Level of Service Methodology

DG3 Supply Interruption

This document has been laid out as follows:

1.0 OBJECTIVE & AIM

To identify the number of properties affected by planned and unplanned supply interruptions lasting longer than 3 hours, 6 hours, 12 hours and 24 hours.

The aim of the register is to allow verification and audit of the reported information for DG3 and to enable the identification of the properties affected. It should contain information on the timing, duration and cause of each interruption and sufficient information to enable all properties affected by interruptions lasting more than three hours to be identified. Therefore, the register should include:

- properties affected (by name and location or number and street);
- date and time of interruption;
- duration of interruption and time supply restored;
- cause of interruption;
- notice given; and
- the name of person responsible for entering records in the system.

The DG3 Register is compiled and held by Operations Services Section in Northland 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. End time is when the company is satisfied that water has been fully restored to an acceptable pressure to the affected properties. This is not necessarily the same as when the main supply valve is open.

3.3 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.

3.4 Event
Event is the term used by Northern Ireland Water Limited to describe its involvement in an abnormal occurrence in its services to customers.

3.5 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.

3.6 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'.

3.7 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.

3.8 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.

3.9 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.

3.10 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 interruption information for the interruption record, as occasions arise where it is not clear which function should carry out the repair work.

In general whichever function operates the valves to cut off supply at the site of interruption is also responsible for the collection and ownership of the interruption information. This means, for example, that although leakage services is responsible for carrying out the repair to the interruption, Networks

water is responsible for the collection of the information if they have operated the valves.

4.1 Planned Interruptions (lasting > 3 Hours)

Planned interruptions to supply arise as a result of work being carried out by different functions within Operations Directorate or by functions within other NIW Directorates. These have been identified as follows:

- Planned interruptions carried out by Networks Water.
- Planned interruptions carried out by Leakage.
- Planned interruptions carried out by Engineering and Procurement (E&P). and
- Planned interruptions carried out by Customer Services Directorate (CSD).

Regardless of the source of the interruption to supply all planned interruptions must follow the procedures for giving the appropriate warnings. Each function is responsible for collection and recording all appropriate information to be included in the DG3 register.

All affected properties must be notified by letter, or card drop, at least 48 hours before the shutdown, notifying them of the planned times and dates of shutdown and the restoration of supply. A minimum of 48 hrs warning must be given for planned interruptions greater than 3 hrs. The start of the warning occurs when the last card has been delivered or the last letter sent to the properties affected. If for example, there is estimated to be 500 properties to be warned then the card drop operation starts at 9.00am and finishes at say 2.00pm, the warning period starts at 2.00pm, on say, 2nd July for 48hrs. Work should not start on site on the planned interruption until 2.00pm on the 4th July.

A copy of the letter of notification or the information contained on the card used in the card drop should be sent to the following for information – Customer Relations Centre Front Desk, Work Planning Unit, Telemetry Control Centre, Functional Manager and relevant Northern Ireland Fire and Rescue Service. For contact details see Appendix A.

The number of properties affected by a planned interruption should be determined by the most accurate means available at the time of:

a) planning activity;
b) the interruption; or
c) any subsequent more detailed investigation.

At the time of the initial assessment this is likely to be by property count or an estimate based on local knowledge. For recommendation for estimating numbers of properties see paragraph 5.3.

4.2 Planned interruptions carried out by Networks Water or Leakage

Field Staff on site is to record all information on a proforma sheet (see Appendix D). The proforma sheet contains the raw data associated with the interruption and is taken to an appropriate computer workstation for input into OMIS. These proforma sheets must be kept for audit purposes.

The Networks Water or Leakage Field Manager responsible for the planned works is required to ensure that all relevant information is input to the OMIS Interruption Reporting System and all documentation is retained for audit purposes.

Details of the OMIS input sheet and the OMIS user guide can currently be obtained from Operation Services in Northland House.

4.3 Planned interruptions carried out by E&P or CSD.

Information relating to interruptions carried out by E&P and CSD use a combination of an interruption Proforma and an excel spread sheet. An appropriate member of E&P or CSD 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 Northland 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 staff 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.

Local Network Water Area Managers may be made aware of interruptions other than as a result of customer calls. In such cases, the Field Manager should ensure that relevant details are passed to the Work Planning Unit for processing.

Details input to the OMIS Reporting System are to include the interruption start time, as noted by the first affected customer, the time at which the supply was restored and whether a third party or an electrical supply failure was the cause.

4.5 Records of numbers of properties affected

The number of properties affected by an interruption should be determined by the most accurate means available at the time of:

a) the interruption; and
b) any subsequent more detailed investigation.

At the time of the initial assessment this is likely to be by property count or an estimate based on local knowledge.

5.0 RECORDS

Overall responsibility for DG3 records lies with the Head of Networks – Water, however the DG3 Register is compiled and held by Operations Services in Northland House.

Networks Water and Leakage record interruption information on the OMIS system. E&P and CSD record interruption information on excel spread sheet.

5.1 OMIS Interruption Recording System

OMIS allows five types of interruptions to be recorded:

- Unplanned;
- Planned;
- Unplanned Third Party;
- Overruns; and
- Planned – unwarned (Leakage only).

The OMIS information sheet (proforma) form Appendix D of this document.

When all information is input into OMIS and is saved, the information is then included in the interruptions register within OMIS. This interruption record can be revisited with more accurate information until the interruption is checked as complete. The information contained on the OMIS input screen is then permanently transferred to the interruption 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 operative or the supervisor. 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.

Local Network Water Area Managers and the Network Business Unit 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 Local Network Water Area Manager as soon as possible the next working day.

Inputs to the OMIS Interruption System shall be closed out by the 10th of each following month. Checking of input data and local audit checks are to be carried out by the Networks Business Unit. Following these checks the networks Business Unit will release the data to Operations Services for inclusion into the DG3 register and calculations for KPIs.

5.2 Interruption Excel Spreadsheet

Planned interruptions undertaken by E&P and CSD 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 CSD staff and sent to Operations Services for inclusion into the DG3 register. All proformas should be stored by E&P and CSD for Audit purposes.

Details of the Interruptions Proforma (see appendix D) and spreadsheet can currently be obtained from Operation Services in Northland House.

5.3 House numbers and Addresses

It is a requirement of NIAUR that the numbers of houses and their addresses, that experience an interruption to supply that exceeds 3 hours, should be recorded. The number of properties affected by an interruption should be determined by the most accurate means available at the time. This is likely to be:

a. Property count

Operatives on site tending to a relatively simple interruption may have sufficient knowledge to estimate accurately the number of properties affected. This can be done by carrying out a property count. This then should be recorded on OMIS as say 1- 10 High Street or 15 – 25 Main Road (property count). The house count can be done during the course of the repair to the interruption being carried out.

5.4 Records of Interruptions

Information that is to be recorded for both planned and unplanned interruptions is contained in the OMIS user guide held in Operation Services.

In general all interruption to supply should be recorded. However there are large numbers of very short interruptions to supply carried out by Leakage function and CSD. These interruptions are routine, inconsequential and last no longer that 30mins. Information about these interruptions are held by managers in Leakage and CSD and are therefore not required for the interruption to supply register. Discretion should however be used in all cases. If difficulties arise, or there happens to be an exception to the type of routine interruption referred to above, that gives rise to an interruption that lasts for more than 1 hour then, this interruption should be recorded. Guidance on

which interruptions that should be recorded is to be given by Leakage and CSD 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 operative or networks manager.

All Interruption records held on OMIS are to be approved by appropriate line management within each function *and closed off by the 10th of the following month e.g. all records for say April should be approved and closed by the 10th May.* Operations Services will email the different functions reminding them of the deadline at the end of each month. Interruption records held by E&P and CSD should be sent to Operations Services by the same date.

5.5 Historical records

All associated documentation is to be kept for seven years.

5.6 Audit Trail

The maintenance of audit trails is very important. During AIR audits the Reporter would more than likely want to investigate several interruptions and the associated documentation. It is therefore imperative that all records including proformas corresponding to individual interruption records are stored locally for audit purposes.

5.7 Amendments to Information

All amendments to the base data contained in OMIS or information changed during the course of the development of the DG3 Register in excel must be supported by a detailed explanation.

6.0 REPORTING

6.1 NIWL Reports

The OMIS Interruption System can be updated on a continuous basis as and when interruptions occur. The Monthly Summary Reports can be generated following the quality assurance checks carried out by Deputy Network *Managers and the Networks Business Unit and the release of data by the Fun*ctional Managers. These reports are used by Operations Service function to compile a DG3 register for each month and corresponding KPIs.

The following reports are generated by Operations Services for Management information:

- DG3 monthly.
- Interruption to Supply KPIs.
- Annual DG3 Supply Interruption Report (developed to mirror the current AIR – Table 2 report as set out in the Annual Information Return Reporting Requirements and Definitions Manual 2010, Issue 1.0 – March 2010).

6.2 Development of the DG3 Register and KPIs

Interruption data for each month is collected from 3 different sources (as described above) into a "Composite Interruption Data" spreadsheet held in Operations Services in NIW Head Office. 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 Methodology for Estimating the Number of Properties Affected by Frozen Service Pipes in 2009/10

A service pipe may be frozen in one of three ways:

1. Communication pipe frozen – NI Water responsible.

2. Supply pipe frozen – Customer responsible.
3. Communication pipe and supply pipe frozen – NI Water responsible.

During the freeze/thaw, a limited number of investigations were conducted in order to establish the extent of frozen pipe problems at certain properties. The results of these investigations remain the only firm evidence in support of the extent to which the company or the customer was responsible.

If the results are viewed as a sample representing all frozen pipe problems, then knowing the total number of problems, the numbers of company and customer related problems can be estimated.

In the absence of a more complete set of records, NI Water has taken the decision to estimate numbers by following the process described and to review the way it establishes and records the extent of frozen pipes for future reporting.

The sample consists of **66** random investigations into the extent of frozen pipe problems.

The following table provides details of the 66 excavations.

Reference	Area	Address	Findings
001	Londonderry	[redacted] Dungiven	Supply pipe frozen
002	Londonderry	[redacted] Dungiven	Supply pipe frozen
003	Londonderry	[redacted] Dungiven	Supply pipe frozen
004	Londonderry	[redacted] Dungiven	Supply pipe frozen
005	Londonderry	[redacted] Dungiven	Supply pipe frozen
006	Londonderry	[redacted] Kilfennan	Supply pipe frozen
007	Londonderry	[redacted] Coleraine	Supply pipe frozen
008	Magherafelt	[redacted] Magherafelt	Supply pipe frozen
009	Magherafelt	[redacted] Cookstown	Supply pipe frozen
010	Magherafelt	[redacted] Moneymore	Supply pipe frozen
011	Magherafelt	[redacted] Moneymore	Supply pipe frozen
012	Ballygawley	[redacted] Fivemiletown	Supply pipe frozen
013	Ballygawley	[redacted] Ballygawley	Supply pipe frozen
014	Ballygawley	[redacted] Newmills	Communication pipe frozen
015	Ballygawley	[redacted] Carrickmore	Supply pipe frozen
016	Omagh	[redacted] Omagh	Supply pipe frozen
017	Omagh	[redacted] Omagh	Supply pipe frozen
018	Omagh	[redacted] Omagh	Supply pipe frozen
019	Omagh	[redacted] Omagh	Supply pipe frozen
020	Omagh	[redacted] Omagh	Communication pipe frozen
021	Omagh	[redacted] Trillick	Supply pipe frozen
022	Omagh	[redacted] Omagh	Supply pipe frozen
023	Omagh	[redacted] Omagh	Communication pipe frozen

Reference	Area	Address	Findings
024	Omagh	[redacted] Omagh	Supply pipe frozen
025	Omagh	[redacted] Omagh	Communication pipe frozen
026	Omagh	[redacted] Omagh	Communication pipe frozen
027	Omagh	[redacted] Dromore	Supply pipe frozen
028	Omagh	[redacted] Dromore	Supply pipe frozen
029	Omagh	[redacted] Lammy	Communication pipe frozen
030	Omagh	[redacted] Omagh	Supply pipe frozen
031	Omagh	[redacted] Omagh	Supply pipe frozen
032	Omagh	[redacted] Omagh	Supply pipe frozen
033	Omagh	[redacted] Omagh	Communication pipe frozen
034	Omagh	[redacted] Trillick	Communication pipe frozen
035	Omagh	[redacted] Dromore	Supply pipe frozen
036	Ballymena	[redacted] Ballymoney	Communication pipe frozen
037	Ballymena	[redacted] Ballymoney	Communication pipe frozen
038	Ballymena	[redacted] Ballymoney	Communication pipe frozen
039	Ballymena	[redacted] Ballnamore	Communication pipe frozen
040	Ballymena	[redacted] Ballymena	Supply pipe frozen
041	Ballymena	[redacted] Ballymena	Supply pipe frozen
042	Ballymena	[redacted] Kells	Supply pipe frozen
043	Ballymena	[redacted]	Supply pipe frozen
044	Ballymena	[redacted]	Supply pipe frozen
045	Ballymena	[redacted]	Supply pipe frozen
046	Ballymena	[redacted] Ahoghill	Supply pipe frozen
047	Ballymena	[redacted]	Supply pipe frozen
048	Enniskillen	[redacted] Lack	Communication pipe frozen
049	Enniskillen	[redacted] Edern	Communication pipe frozen
050	Enniskillen	[redacted]	Communication pipe

Reference	Area	Address	Findings
		Kesh	frozen
051	Enniskillen	[redacted] Kesh	Communication pipe frozen
052	Enniskillen	[redacted] Kesh	Communication pipe frozen
053	Enniskillen	[redacted] Kesh	Supply pipe frozen
054	Enniskillen	[redacted] Kesh	Supply pipe frozen
055	Enniskillen	[redacted] Drumskinney	Communication pipe frozen
056	Enniskillen	[redacted] Kesh	Communication pipe frozen
057	Enniskillen	[redacted] Irvinestown	Communication pipe frozen
058	Enniskillen	[redacted] D/G	Communication pipe frozen
059	Enniskillen	[redacted] D/G	Communication pipe frozen
060	Enniskillen	[redacted] D/gonnelly	Communication pipe frozen
061	Enniskillen	[redacted] Blaney	Communication pipe frozen
062	Enniskillen	[redacted] Kinawley	Communication pipe frozen
063	Enniskillen	[redacted] Tempo	Communication pipe frozen
064	Eastern Area	[redacted] Belfast	Communication pipe frozen
065	Eastern Area	[redacted] Lisburn	Communication pipe frozen
066	Eastern Area	[redacted] Banbridge	Supply pipe frozen

According to the results of the excavations,

- 28 excavations found that the communication pipe was frozen (42%). Note that in most cases the supply pipe was also frozen.
- 38 excavations found that the supply pipe was frozen (58%).

The total number of problems relating to frozen pipes was determined as follows:

1. 55,280 calls were logged at the Customer Response Centre between 21 December and 21 January. These calls were transposed by CRC staff into the Ellipse system. As a result, 13,397 “No Water” complaints were input into the Ellipse system for action. It is noted that duplicate calls made by customers were linked to the original calls and that CRC were still receiving “non-incident” calls e.g. meter consumption and account queries, septic tank emptying requests, blocked sewer reports, etc.

2. A report was derived from Ellipse listing the 13,397 Work Requests created during the reporting period (24-12-2009 to 21-01-2010) with a Request Type of “NO - No Water”.

3. Records were sorted according to Date and Address fields and filtered to remove duplicate records. The number of records remaining after this process was **5,316**.

4. Records were removed if they related to areas that experienced operational difficulties such as bursts, empty reservoirs and non-functioning pumping equipment. These records were identified as a result of Field Manager reviews and OMIS and Upward report comparisons. The number of records remaining after this process was **3,724**. This represents the estimated number of no water complaints received by the Company as a result of frozen pipes.

By applying the earlier percentages, the Company has estimated the numbers of frozen communication pipes and frozen supply pipes.

(3,724 / 100) x 42 = **1,564** communication pipes frozen (NIW responsibility)
(3,724 / 100) x 58 = **2,160** supply pipes frozen (customer responsibility)

Assumption: It is not known how long interruptions lasted relating to frozen pipes. The company has therefore assumed that in each instance, the interruption would have lasted for more than 24 hours.

The numbers of properties affected by interruptions lasting longer than 3, 6, 12 and 24 hours have been increased by 1,564.

1.2 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 Networks Business Unit is responsible for the procurement of information for DG3 within the Networks function. The Business Unit is supported by three functional managers.

Operations - Leakage Services

- The deputy leakage managers are responsible for the procurement of information for DG3 within the leakage function.

Engineering and Procurement E&P

- The E&P Directorate are responsible for the installation of new watermains. Interruptions to supply arise as a result of connecting properties to the new watermains.

Customer Services Directorate

- The CSD 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 Relations Centre Front Desk (Tel: 028 [redacted] or 028 [redacted]

Operations Services

Operations Services is responsible for the following:

- Receipt of all interruption information from Networks Water, Leakage, E&P and CSD,
- 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: 028[redacted] (or Ext: [redacted]

TCC E-mail Addresses:-

[redacted]

[redacted]

Altnagelvin Telemetry Control Centre [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 Ops Water - Local Area Managers / Deputy Network Managers

- Inform CSD and Work Planners of planned interruption 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.
- Deputy Network Managers to carry out audit checks on OMIS entries and Interruption Register.
- Deputy Network Managers to advise Functional Managers 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 Local Networks Area Manager of actions taken and interruption details.

Network Functional Managers

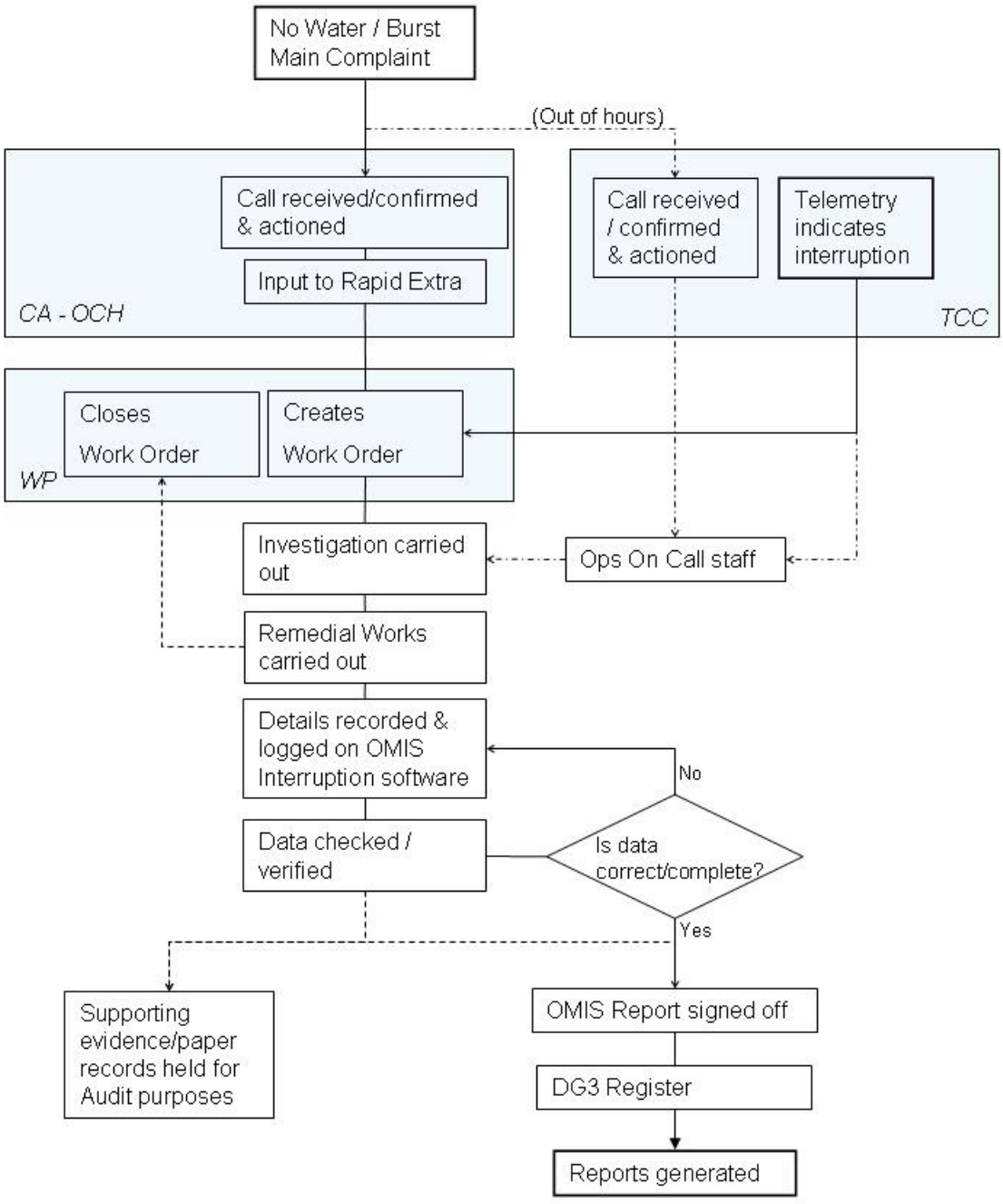
- Approve OMIS Interruption Register and release data for reporting purposes.

Regulation & Business Performance Section

- Submit Annual Report to NIAUR.

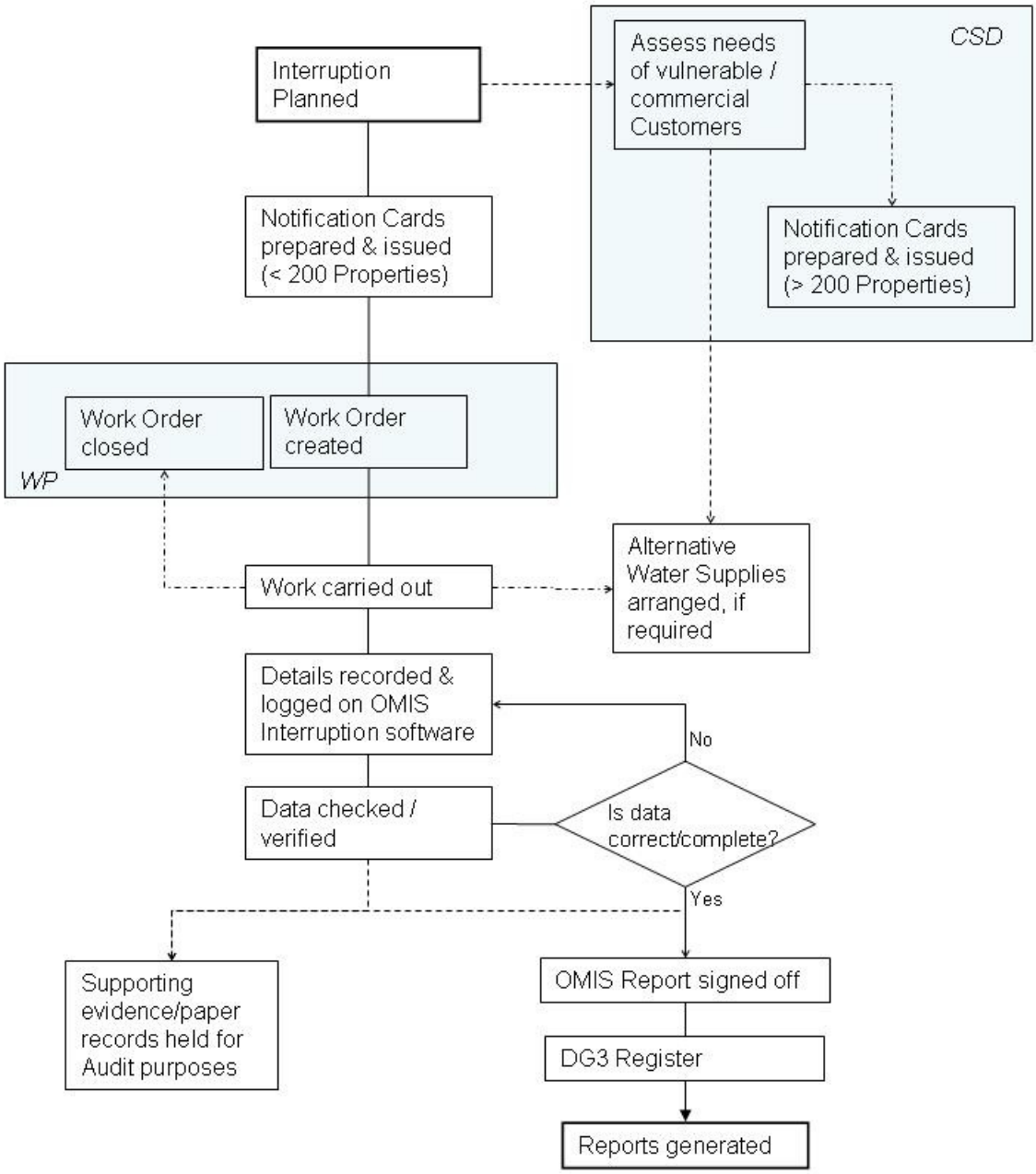
DG3 Process Flow Diagram - Unplanned

Appendix B

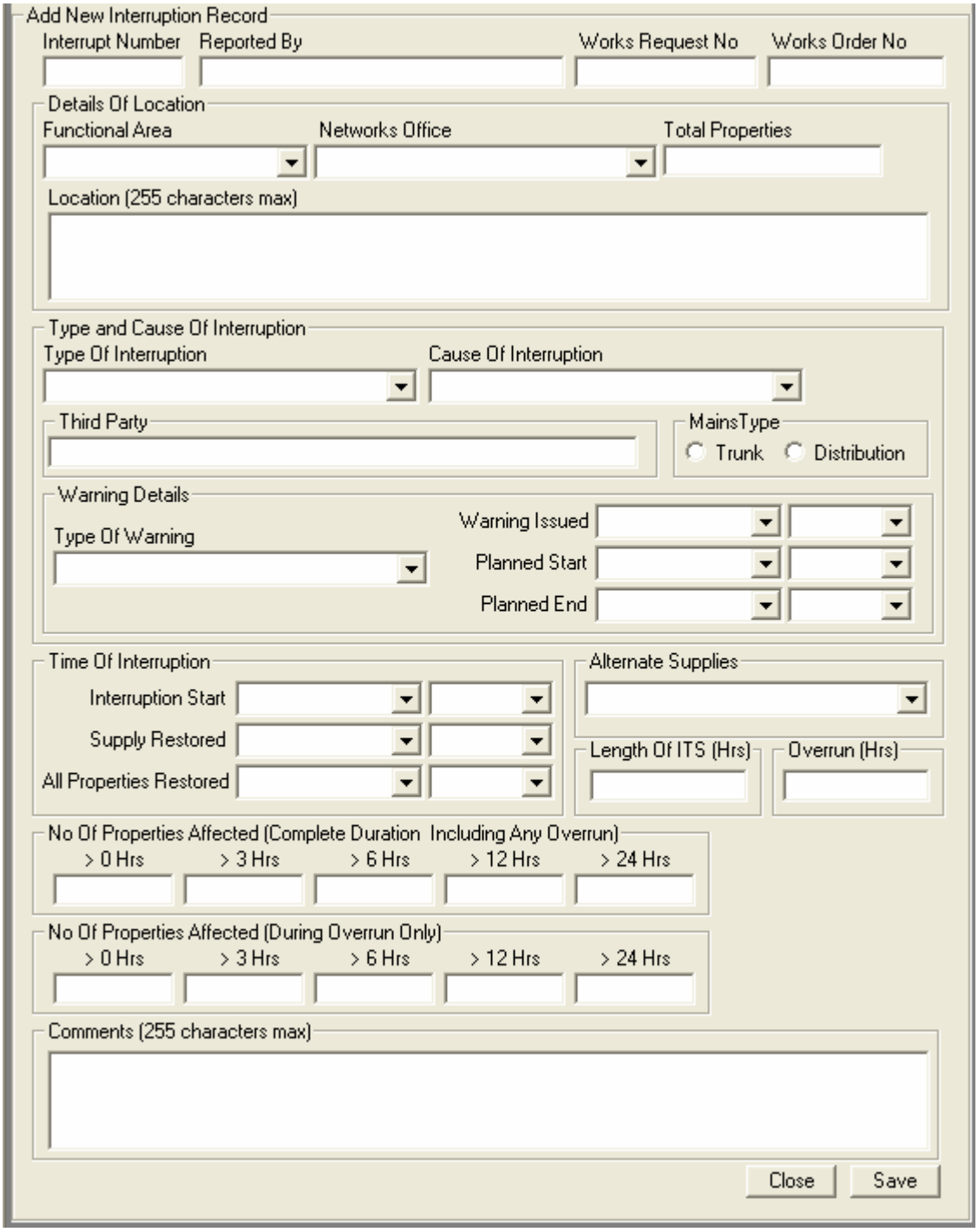


DG3 Process Flow Diagram - Planned

Appendix C



Appendix D – Proforma - Interruption Information Sheet



Northern Ireland Water

Level of Service Methodology AIR 10

DG5 Flooding

Contents

1. Introduction

Objective and Aim

Companies must maintain verifiable records for DG5. The aim of the records is to provide an auditable method for identifying the specific, properties which are affected by flooding or are at risk of experiencing flooding.

As part of these records companies must maintain a DG5 register which should form a database of all properties which are at risk of experiencing sewer flooding more than once in twenty years. It will enable the identification by address of individual properties which are below the reference level and should also contain information on (for example) complaints and the results of their investigation, problems which are attributable to customers apparatus and properties which experience sewer flooding but are covered by one of the allowable exclusions.

The register must clearly identify those properties below the reference level, distinguish them from those which have flooded but are not below the reference level and provide a verifiable reason for the exclusion (e.g. flooding was a result of a blockage).

The records should include:

- date of incident;
- properties affected identified by address;
- cause of flooding (including source and reason, where known);
- action taken;
- name of persons completing the records; and
- the 'at risk' category for reporting under DG5.

If a property on the register is not reported as being at risk under DG5, the reason should be stated.

The DG5 register is in the process of being developed and during the course of the development it has been necessary to run a 2 tire approach for the determination on internal flooding incidents namely Historical Data and 'LiveData' i.e. data captured for the reporting year of 2009/2010. See Line-Specific Methodology Statement.

Reporting Requirements

Four main outputs are required to be produced relating to the flooding for AIR 10;

- DG5 Annual Flooding Summary – properties internally flooded as a result of overloaded sewers and other causes.
- DG5 Properties on the 'at risk' register – properties at risk of flooding due to overloaded sewers, more frequently than once in twenty years and once or twice in ten years, requiring further investigation, problem status of properties on the register, annual changes to the register.

- DG5 Annual External Flooding Summary – includes areas externally flooded as a result of overloaded sewers and other causes.
- DG5 Areas on the External 'at risk' register – areas at risk of flooding more frequently than once in twenty years and once or twice in ten years, problem status of the external areas on the register, annual changes to the register.

The information relating to the above are contained in Tables 3 and 3A of the AIR09 Return. See Appendix A.

Definitions

Flooding incidents: For the purpose of the return, a flooding incident is defined as an event of internal flooding (as defined below) from a public sewer (whether foul, combined or surface water).

Internal flooding: For the purposes of DG5, internal flooding is defined as flooding which enters a building or passes below a suspended floor. For reporting purposes, buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes.

Buildings whose prime purpose is storage or installation of domestic appliances are excluded. This exclusion encompasses both:

- Detached garages (whether situated inside the boundary of the property and separated from the main building or outside the boundary but with common access as in a garage block); and

- Linked detached garages (i.e. garages which are attached to a property but separated from it by an external passageway).

However, garages forming an integral part of a property are classed as part of the building and are included, even if their prime purpose is storage, etc.

Overloaded sewers: A sewer is overloaded when the flow from a storm is unable to pass through it due to a permanent problem (e.g. flat gradient, small diameter). Temporary problems such as blockages, siltation, collapses and equipment or operational failures are excluded. No account should be taken of the severity of the storm causing the incident.

Properties at risk: These are defined as properties that have suffered or are likely to suffer internal flooding from public foul, combined or surface water sewers due to overloading of the sewerage system more frequently than the relevant period (either once in twenty years or once or twice in ten years).

Severe weather: All flooding incidents should be reported irrespective of the severity of the storm. Companies may indicate in the commentaries when flooding incidents have been due to severe rainfall and this information will be taken into account when producing the 'Levels of service' report.

Uninhabited cellars: An uninhabited cellar is defined as an integral part of a building that is at least partially below ground level. It is not used for habitation. Where such a cellar is in regular use as part of the normal living accommodation it is termed a basement and any flooding should be reported as a normal internal flooding incident.

Reporting
NIW Reports -The following reports are generated by Operations Services for Management information:

DG5 (Internal and External) Annual Flooding Summary - Annual
DG5 (Internal and External) Properties on the Risk Registers - Annual
Monthly Reports for NIW Executive Team
Nr of overloaded sewers (Hydraulic Capacity Problems)
Nr of Overloaded Sewers (Blockage, Collapsed Sewer, Equipment failure)
Nr of Properties on the 1 in 10 year at risk 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 2010
The DG5 Registers are in the process of being developed using historic and current flooding records, of varying quality, dating back to 2000. These initially contained 1,600 records in the Internal Database and 40,000 records in the External Database. In order to develop a DG5 Database each of the records contained in each of the databases has to be investigated to see if the flooding information meets the DG5 Criteria. Records are then determined as being DG5 Reportable and are assigned to an appropriate "At Risk" register. Those records that do not meet the DG5 Criteria are recorded in the "excluded" section of the Database. It was proposed to have 100% of the initial Internal flooding records investigated and determined by October 2008, which was achieved. 100% of the initial external flooding is to be determined by October 2010.

2. DG5 Flooding incidents

Internal
Data gathering and calculation is as described below.
Sources/Process for all lines 2 to 11
A download of internal sewer flooding records was obtained from the Ellipse system or the period April 09 to March 10 on a month by month basis.
The records were sorted firstly by Creation Date field, then by Street Name field, then by Property Number field, and finally by Town/City field.
Investigations were carried out for each reported incident and those properties found not be flooded after investigation using information from the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly, are removed, the remaining properties were combined for a yearly total.

Assumption
For the purpose of AIR09, NIW has assumed that a single incident includes recorded complaints from the same property on the same day or within three days.
"Three days" was chosen on the basis that a noticeable volume of repeat calls tends to be received within three days of an incident occurring. There is then a much longer passing of time before calls are again received from the same locality, suggesting that the original incident has passed and that the calls relate to a different incident.

Lines 2, 3, 6, 8, 9 and 10
A count was then made on these records that represented one internal flooding complaint per unique property, meaning that properties affected by more than one incident were reported only once, as per the definition.

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

Line 4
A sort was carried out on all addresses to eliminate properties with 'flooding other causes' as found from the investigations using the information gathered from the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly.

The remaining properties are those either flooded due to overloaded sewers or flooding due to overloaded sewers attributed to severe weather.
A Met Office report was obtained for each of these lines to ascertain if the cause of the internal flooding was due to weather conditions.

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

Lines 5 and 11
As stated in last year's methodology. From JR08 for England and Wales, it is reasonable to report zero properties for cellar flooding. Given that NI is not likely to have as many properties with cellars as in parts of England and Wales and that such detailed information is unavailable for NIW's property flooding records derived from Ellipse or the returned Flooding Incident Report Forms, the decision has been taken to assume zero properties for cellar flooding

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

Line 7
A count was then made on these records that represented one internal flooding complaint per unique property identified as caused by blockage, collapse or equipment failure.

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

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

Changes in Methodology over the Previous Year
As stated NIW's' Flooding register is still at the development stage with only partial reporting capability. It is our aim to move towards full flooding reporting capability. Therefore as recommended by the regulator properties flooded (Other Causes) have been to 'requiring further investigation line'. These will be investigated as part of the remit of the newly created a DG5 expert panel comprised of key personnel.
Initially, the role of the DG5 panel is to provide a forum in which all areas of the business can feed into the flooding register development exercise for both internal and external flooding. However, as the Flooding Register and supporting business processes develop, the focus of this panel will shift to agreeing additions to and removals from the DG5 register, while ensuring the business process is maintained at all levels.
NIW are currently agreeing a programme for the development of the Flooding register along with methodologies, processes, definitions and roles and responsibilities.
NIW will work towards full reporting capability for both internal and external flooding incidents before the end of the PC10 period.

External
Data gathering and calculation is as described below
Sources/Process for all lines all Lines 1 to 11
Data gathering and calculation is as described below

Lines 1 & 7
Sources/Primary Process
1. A download of external sewer flooding records was obtained from the Ellipse system for the period April 09 to March 10.
2. The records were sorted firstly by Date field, then by Property Number field, then by Street Name field and finally by Town field.

The purpose of this initial sorting process was to ensure that records relating to the same external area were grouped together and records relating to the same incident were also grouped together. The order in which records were arranged was as follows:-

- Records representing complaints regarding the same external area on the same day.

- Records representing complaints regarding the same external area on different days.
- Records representing complaints regarding neighbouring external areas in the same street on the same day.
- Records representing complaints regarding neighbouring external areas in the same street on different days.
- Records representing complaints regarding external areas in neighbouring streets on the same day.
- Records representing complaints regarding external areas in neighbouring streets on different days

3. A string of text was created for each record consisting of the contents of the Property Number field, the Street Name field and the Town field in that order.
4. A query was created returning a response of "True" in row 1 if the string of text in row 2 equalled the string of text in row 1.
5. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
6. Records with "0", "1", "2" or "3" subtraction results and "True" responses were eliminated.

Note: Records returning "0" and "True" responses represented complaints from the same property on the same day. Records returning "1" and "True" responses represented complaints from the same property within one day, etc.

Assumption
For the purpose of AIR10, NIW has assumed that a single incident includes recorded complaints from the same property on the same day or within three days.

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

7. The remaining records were representative of one external flooding complaint per unique property per unique external flooding incident.

The remaining records may have included properties flooded both internally and externally during the same event.

8. The records were labelled as "External" and combined with the confirmed annual "Internal" records (also labelled) and representative of one internal flooding complaint per unique property per unique internal flooding incident.
9. The records were sorted firstly by Date field, then by Property Number field, then by Street Name field and finally by Town field.

10. A string of text was created for each record consisting of the contents of the Property Number field, the Street Name field and the Town field in that order.
11. A query was created returning a response of "True" in row 1 if the string of text in row 2 equalled the string of text in row 1.
12. The responses to the above query were copied to another column and dropped down one cell.
13. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
14. All internal records were eliminated.
15. External records were also eliminated but only if they returned a value of "0", "1", "2" or "3" and "True".
16. The remaining records were representative of one external flooding complaint per unique property per unique external flooding incident.

The remaining records did not include properties flooded both internally and externally during the same event.

Sources/Secondary Process

1. Records representative of one external flooding complaint per unique property per unique external flooding incident were derived using the Primary Process previously described.
2. A string of text was created for each record consisting of the contents of the Property Number field, the Street Name field and the Town field in that order.
3. A query was created returning a response of "True" in row 1 if the string of text in row 2 equalled the string of text in row 1.
4. Records with "True" responses were eliminated.
5. The remaining records were representative of one external flooding complaint per unique property, meaning that external areas affected by more than one incident were reported only once, as per the definition. The remaining records were apportioned using the following process:-

Assumption – Apportionment

The raw data for this return has been derived from the Ellipse system and is typical of that provided by the customer only. As such, the cause of flooding is undetermined in each case and the extent of flooding is also undetermined. The decision has been taken to base the apportionment of data on averages for England and Wales since it is thought that this would give the best approximation to apportionment based on actual causes and extents.

Lines 2, 3, 4 & 5

Sources/Secondary Process

1. Records representative of one external flooding complaint per unique property per unique external flooding incident were derived using the Primary Process previously described.
2. The Street Name field was split into two separate fields (SN1 and SN2).
3. A string of text was created for each record consisting of the contents of the SN1 field and the contents of the Town field in that order.

4. A query was created returning a response of “True” in row 1 if the string of text in row 2 equalled the string of text in row 1.
5. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
6. Records with “0”, “1”, “2” or “3” subtraction results and “True” responses were eliminated.

Note: Records returning “0” and “True” responses represented complaints from the same external area, neighbouring external area or neighbouring street on the same day. Records returning “1” and “True” responses represented complaints from the same external area, neighbouring external area or neighbouring street within one day, etc.

Assumption
For the purpose of AIR10, NIW has assumed that a single incident includes recorded complaints from the same property, neighbouring properties and neighbouring streets on the same day or within three days.

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

7. The remaining records were representative of one external flooding complaint per unique external flooding incident. The remaining records were apportioned using the following process:-

Assumption – Apportionment
The raw data for this return has been derived from the Ellipse system and is typical of that provided by the customer only. As such, the cause of flooding is undetermined in each case and the extent of flooding is also undetermined. The decision has been taken to base the apportionment of data on averages for England and Wales since it is thought that this would give the best approximation to apportionment based on actual causes and extents.

Line 6
Sources/Secondary Process
1. Records representative of one external flooding complaint per unique property per unique external flooding incident were derived using the Primary Process previously described.
2. The Street Name field was split into two separate fields (SN1 and SN2).
3. A string of text was created for each record consisting of the contents of the SN1 field and the contents of the Town field in that order.
4. A query was created returning a response of “True” in row 1 if the string of text in row 2 equalled the string of text in row 1.
5. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
6. Records with “0”, “1”, “2” or “3” subtraction results and “True” responses were eliminated.

Note: Records returning “0” and “True” responses represented complaints from the same external area, neighbouring external area or neighbouring street on the same day. Records returning “1” and “True” responses represented complaints from the same external area, neighbouring external area or neighbouring street within one day, etc.

Assumption
For the purpose of AIR10, NIW has assumed that a single incident includes recorded complaints from the same property, neighbouring properties and neighbouring streets on the same day or within three days.

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

7. The remaining records were representative of one external flooding complaint per unique external flooding incident. The remaining records were apportioned using the following process:-

Assumption – Apportionment
1. The raw data for this return has been derived from the Ellipse system and is typical of that provided by the customer only. As such, the cause of flooding is undetermined in each case and the extent of flooding is also undetermined. The decision has been taken to base the apportionment of data on Monthly weather assessment reports for Northern Ireland which were obtained from the Met Office site for the period April 08 to March 09.

Example:-
http://www.metoffice.gov.uk/climate/uk/2008/january.html
Northern Ireland diary of highlights

2. The reports were studied and references to heavy rain or flooding were extracted from the main body of text.
3. The extracts were further studied with a view to acquiring dates on which the province as a whole or parts of the province were subject to severe weather. Therefore the number of heavy rainfall days was extracted and the proportion of external flooding incidents was proportioned accordingly across heavy rainfall and non-heavy rainfall days.

Line 8
Sources
1. A download of external sewer flooding records was obtained from the Ellipse system for the period April 09 to March 10.
2. The Ellipse records were combined with all historical flooding records from the External Flooding Database, less any Ellipse records already included.

Historical flooding records included all determined and undetermined records at 31 March 2009.

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

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

The purpose of this initial sorting process was to ensure that records relating to the same external area were grouped together and records relating to the same incident were also grouped together. The order in which records were arranged was as follows:-

- Records representing complaints regarding the same external area on the same day.
- Records representing complaints regarding the same external area on different days.
- Records representing complaints regarding neighbouring external areas in the same street on the same day.
- Records representing complaints regarding neighbouring external areas in the same street on different days.
- Records representing complaints regarding external areas in neighbouring streets on the same day.
- Records representing complaints regarding external areas in neighbouring streets on different days.

4. A string of text was created for each record consisting of the contents of the Property Number field, the Street Name field and the Town field in that order. (This was used to determine the number of unique properties per incident.
5. A query was created returning a response of “True” in row 1 if the string of text in row 2 equalled the string of text in row 1.
6. The responses to the above query were copied to another column and dropped down one cell.
7. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
8. Records with “0”, “1”, “2” or “3” subtraction results and “True” responses were eliminated.

Note: Records returning “0” and “True” responses represented complaints from the same property on the same day. Records returning “1” and “True” responses represented complaints from the same property within one day, etc.

Assumption
For the purpose of AIR10, NIW has assumed that a single incident includes recorded complaints from the same property on the same day or within three days.

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

9. Records with "False" "True" responses were eliminated.

These records represented the most recent complaints from properties having made multiple complaints. Records become redundant once they have been compared with the records directly above.

10. Records with "False" "False" responses were eliminated.

These records represented external areas flooded once in the last 10 years.

11. Records with subtraction results in excess of "3650" and "True" responses were eliminated.

These records represented external areas flooded more than once in excess of 10 years.

12. Records were retained if they returned a subtraction result between "4" and "3650" inclusive and "True" responses.

These records represented external areas flooded more than once in the last 10 years. However, the same area could have appeared more than once, once for every separate incident.

13. Records were again sorted by Property Number field, Street Name field and Town field to ensure the order was correct for the next stage in the process.
14. A query was created returning a response of "True" in row 1 if the string of text in row 2 equalled the string of text in row 1.
15. Records with "True" responses were eliminated.
16. The remaining records were representative of one external flooding complaint per unique property.

Assumption – Apportionment
The decision has been taken to base the apportionment of data on averages for England and Wales since it is thought that this would give the best approximation to apportionment based on actual causes and extents.

Lines 9, 10 & 11
Sources/Secondary Process

1. Records representative of one external flooding complaint per unique property per unique external flooding incident were derived using the Primary Process previously described.
2. The Street Name field was split into two separate fields (SN1 and SN2).
3. A string of text was created for each record consisting of the contents of the SN1 field and the contents of the Town field in that order.
4. A query was created returning a response of "True" in row 1 if the string of text in row 2 equalled the string of text in row 1.
5. The dates of consecutive records were subtracted to give a value in row 1 (i.e. row 2 date minus row 1 date, etc).
6. Records with "0", "1", "2" or "3" subtraction results and "True" responses were eliminated.

Note: Records returning "0" and "True" responses represented complaints from the same external area, neighbouring external area or neighbouring street on the same day. Records returning "1" and "True" responses represented complaints from the same external area, neighbouring external area or neighbouring street within one day, etc.

Assumption
For the purpose of AIR10, NIW has assumed that a single incident includes recorded complaints from the same property, neighbouring properties and neighbouring streets on the same day or within three days.

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

7. The remaining records were representative of one external flooding complaint per unique external flooding incident. The remaining records were apportioned using the following process:-

Assumption – Apportionment
The raw data for this return has been derived from the Ellipse system and is typical of that provided by the customer only. As such, the cause of flooding is undetermined in each case and the extent of flooding is also undetermined. The decision has been taken to base the apportionment of data on averages for England and Wales since it is thought that this would give the best approximation to apportionment based on actual causes and extents.

Changes in Methodology over the Previous Year
There have been no changes in the methodology from that as reported for AIR 08. The raw data is from the same source i.e. Ellipse Work Management System and figures are derived using the Line- Specific Methodology Statements and calculation sheets. It should be noted that the figures for AIR09 are considerably increased on those presented for AIR08; the only explanation for this may be the very wet summer in 2008.

As the data used to populate these lines was obtained from the Ellipse system it is not possible to interrogate the figures shown in Table 3a to satisfy the comments requested in the Utility Regulator guidance notes for Table 3a.

Future Reporting
There are currently approximately 40,000 undetermined records of reported External Flooding NIW proposal is still to have these investigated and determined so that the DG5 External Registers can be suitably populated, target date is now March 2011 because of restructuring within NIW

3. DG5 Properties at risk of flooding

Internal
Data gathering and calculation is as described below
Calculation Process Lines 12 to 15a
Data gathering and calculation is as described below

Sources/Process for incidents reported within reporting year of 2009/2010
A download of internal sewer flooding records was obtained from the Ellipse system for the period April 09 to March 10 on a month by month basis.

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

Investigations were carried out for each reported incident and those properties found not be flooded after investigation using information from the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly, are removed, the remaining properties were combined for a yearly total.

The purpose of this initial sorting process was to ensure that records relating to the same property were grouped together and records relating to the same incident were also grouped together for the same date.

The cause of each confirmed internal flooding incident is confirmed by using the above steps with the records that have been excluded from inclusion to the 'At Risk' register for one or more of the following reasons:

- The cause of flooding was equipment failure;
- The cause of flooding was sewer blockage;
- The cause of flooding was sewer collapse; and/or
- The return period of the storm was more than 1 in 20.

have been identified and a count kept for AIR return and records determined as DG5 Reportable have been assigned to one of three "At Risk" registers – 2 in 10, 1 in 10 or 1 in 20. These "At Risk" registers are held on an MS Excel worksheet along with a section for Excluded records.

Sources/Process for incidents held within NIW Historical Records
The internal flooding Historical Register is a collection of historical events that have taken place since January 2000. Flooding events are recorded as addresses of properties that have been flooded. There are a number of different sources for the information contained in this register of flooding events and the quality of information differs from source to source.

Data sources used to compile the historical records are as follows:
- Central Claims Unit.
- Drainage Area Studies.
- Eastern Division Flooding Records.
- Customer Enquiry management System (CEMS).
- Work Planning System (WPS).
- Captrax.
- Anecdotal Evidence.
- Ellipse.

Because the data was contained in sources that indirectly related to flooding incidents the data is not considered to be good quality.

Determination of historical data was carried out using the available information obtained from the above sources, and was carried out as follows:
- A visual check was made against each incident reading all data held on all sources for each incident at each address.
- Where there was no information written on the cause of flooding this incident was placed by default to the 1:10 register. Pending further investigations.
- Where a mention was made of blockage or equipment failure etc. then this incident was excluded.
- Additional investigations using Operational and Asset management staff were carried out to check each defaulted property against their local knowledge to confirm flooding, a reason for flooding or work has been carried out to alleviate the cause of the flooding.

The addresses remaining therefore have no apparent cause of flooding and will remain defaulted onto the 1:10 register until further investigations into weather conditions or frequency of flooding at each location will move the property from one category to another or remove altogether. The removals of properties will be reported upon on lines T3 lines 20 – 22 for AIR10.

Process
Those properties found to be ‘At Risk’ from records reported this reporting year are combined those the properties found to be at risk from the Historical Records and assigned as follows:
- The number of records assigned to the Internal 2 in 10 “At Risk” Register was counted to give the figure for Line 12.
- The number of records assigned to the Internal 1 in 10 “At Risk” Register was counted to give the figure for Line 13.

- The numbers of records assigned to the Internal 2 in 10 and 1 in 10 "At Risk" Registers were summated to give the figure for Line 14.
- The number of records assigned to the Internal 1 in 20 "At Risk" Register was counted to give the figure for Line 15.

Changes in Methodology over the Previous Year
The DG5 register is in the process of being developed and during the course of the development it has been necessary to run a 2 tier approach for the determination on internal flooding incidents namely Historical Data and 'Live Data' i.e. data captured for the reporting year of 2009/2010. See Line- Specific Methodology Statement.

External
Data gathering and calculation is as described below.

Calculation Process lines 12 to 15
Data gathering and calculation is as described below.

Lines 12, 13, 14 & 15
Reporting Restriction
NIW is currently in the process of determining all records held within the External Flooding Register as either DG5 Reportable or Excluded. Undetermined records are deemed to be under investigation. Therefore, it has only been possible to report on the total number of determined records at 31 March 2009 in this part of the table.

Records determined as DG5 Reportable have been assigned to one of three "At Risk" registers – 2 in 10, 1 in 10 or 1 in 20. These "At Risk" registers are held on an MS Excel worksheet along with a section for Excluded records. Records have been excluded for one or more of the following reasons:-

- The cause of flooding was equipment failure;
- The cause of flooding was sewer blockage;
- The cause of flooding was sewer collapse;
- The return period of the storm was less frequent than 1 in 20; and/or
- The mitigation work is complete and the external area is no longer at risk of flooding.

Process

- The number of records assigned to the External 2 in 10 "At Risk" Register was counted to give the figure for Line 12.
- The number of records assigned to the External 1 in 10 "At Risk" Register was counted to give the figure for Line 13.
- The number of records assigned to the Internal 1 in 20 "At Risk" Register was counted to give the figure for Line 14.
- The numbers of records assigned to the External 2 in 10, 1 in 10 and 1 in 20 "At Risk" Registers were summated to give the figure for Line 15.

Changes in Methodology over the Previous Year

There have been no changes in the methodology from that as reported for AIR 08. NIW has not commenced work on the determination of External records as it was decided for this reporting year to concentrate on Internals. Therefore there has been no increase in the number as quoted for AIR08.

Appendix A – AIR 10 Table 3 Internal Flooding

A	DG5 ANNUAL FLOODING SUMMARY
1	Number of domestic properties connected to sewerage system
	(I) OVERLOADED SEWERS
2	Properties flooded in the year (overloaded sewers)
3	Flooding incidents in the year (overloaded sewers)
4	Flooding incidents (overloaded sewers attributed to severe weather)
5	Props. where flooding limited to uninhabited cellars only (o/loaded sewers)
	(ii) OTHER CAUSES
6	Properties flooded in the year (other causes)
7	Properties which have flooded more than once in the last ten years (other causes)
8	Flooding incidents (other causes - equipment failures)
9	Flooding incidents (other causes - blockages)
10	Flooding incidents (other causes - collapses)
11	Props. where flooding limited to uninhabited cellars only (other causes)

B	DG5 PROPERTIES ON THE AT RISK REGISTER
	(i) AT RISK SUMMARY
12	2 in 10 risk at end of year
13	1 in 10 risk at end of year
14	Total 1 in 10 and 2 in 10 properties at risk at end of year
15	1 in 20 risk at end of year
15a	Potential risk of property flooding identified requiring further investigation to assess at risk category.
16	Props. at risk but not flooded in the past 10 yrs (excluding severe weather)
17	Properties not at risk of flooding internally but suffering restricted toilet use (RTU)
	(ii) PROBLEM STATUS OF PROPERTIES ON THE 1 IN 10 & 2 IN 10 REGISTERS
18	Cost beneficial problems where risk is reduced temporary measures (mitigation)
19	Non cost beneficial problems where risk is reduced by temporary measures (mitigation)
20	Cost beneficial problems without mitigation awaiting solution and those which have not been appraised
21	Non cost beneficial problems without mitigation
	(iii) ANNUAL CHANGES TO 2 IN 10 & 1 IN 10 REGISTERS
22	Removed by company action
23	Removed because of better information
24	Added because of better information
25	Added because of increased demand
	(iv) PROBLEM STATUS OF PROPERTIES ON THE 1 IN 20 REGISTER
26	Cost beneficial problems where risk is reduced temporary measures (mitigation) (1 in 20)
27	Non cost beneficial problems where risk is reduced by temporary measures (mitigation) (1 in 20)
28	Cost beneficial problems without mitigation awaiting solution and those which have not been appraised (1 in 20)
29	Non cost beneficial problems without mitigation (1 in 20)
	(v) ANNUAL CHANGES TO THE 1 IN 20 REGISTER
30	Removed by company action (1 in 20)
31	Removed because of better information (1 in 20)
32	Added because of better information (1 in 20)
33	Added because of increased demand (1 in 20)

Appendix B – AIR 10 Table 3a External Flooding

A	ANNUAL FLOODING SUMMARY
	(I) OVERLOADED SEWERS
1	Areas flooded externally in the year (overloaded sewers)
2	Curtilege flooding incidents in the year (overloaded sewers)
3	Highway flooding incidents (overloaded sewers)
4	Other flooding incidents (overloaded sewers)
5	Total flooding incidents (overloaded sewers)
6	External flooding incidents (overloaded sewers attributed to severe weather)
	(ii) OTHER CAUSES
7	Areas flooded externally in the year (other causes)
8	Areas which have flooded more than once in the last 10 years (other causes)
9	Flooding incidents (other causes - equipment failure)
10	Flooding incidents (other causes - blockages)
11	Flooding incidents (other causes - collapses)

B	AREAS ON THE 1:10, 2:10, 1:20 AT RISK REGISTER
	(I) AT RISK SUMMARY
12	2 in 10 risk at end of year
13	1 in 10 risk at end of year
14	1 in 20 risk at end of year
15	Total at risk on the 1:10, 2:10, 1:20 register at end of year
	(ii) PROBLEM STATUS OF EXTERNAL AREAS ON THE 1:10, 2:10, 1:20 REGISTER
16	Cost beneficial problems where risk is reduced temporary measures (mitigation)
17	Non cost beneficial problems where risk is reduced by temporary measures (mitigation)
18	Cost beneficial problems awaiting solution and problems which have not been appraised
19	Non cost beneficial problems which have not been solved by mitigation
	(iii) ANNUAL CHANGES TO 1:10, 2:10, 1:20 REGISTER
20	Removed by company action (external only)
21	Removed by company action (external linked)
22	Removed because of better information
23	Added because of better information
24	Added because of increased demand
25	Removed from external to internal register

APPENDIX C- Flooding Incident Report

Northern Ireland Water Blockage & Flooding Incident Report

Blockage ☐
U -Cellar
Int. Flooding ☐

Ext. Flooding ☐

Please specify

A. Details of Sewer Blockage Work Order Ref No
……..…

Received – Time ……..…..(24 Hr Clock) Date
……..……

Name ……
Address
……

……

Telephone No.
……

Nature of Complaint
……

Name of NIW Officer notifying Contractor
……

Contractor Notified Time ……(24 Hr Clock) Date
……..

B. Report Section

Contractor's Arrival On Site/Assessment Time……(24 Hr)
Date ……..

Completion Time ……(24 Hr)Date
……..

Method Used – Rodding Yes / No Jetting Yes / No

Cause of Blockage
……
…

……
……..

Confirmation Private/Public Sewer If Private, was work carried out? Yes / No

Is there a fault in the system? Yes / No If Yes, give details
……...
……
…….....

.....
.....

C. Flooding Incident Information (continued overleaf)

1) Internal Flooding (NIW representative must be informed immediately)

Number of buildings where flooding not limited to uninhabited basements
……

Address(es)
……
…….....

……
……

……
……

Number of buildings where flooding limited to uninhabited basements
……..

Address(es)
……
…….....

……
……

……
……

Buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes, and garages forming an integral part of a property. Detached and linked detached garages are excluded, as are buildings whose prime purpose is storage or installation of domestic appliances.

2) External Flooding :-

Definition: A two metre radius around the point of flooding, usually a manhole.

Number of external areas flooded within the curtilage of residential buildings
(includes detached & linked detached garages)
…….

Address(es)
……
…….....

……
……

……
……

Number of highways flooded (includes roads, footpaths)…….....

Address(es)
……
…….....

……
……

……
……

Number of non-residential external areas flooded (includes schools, commercial
premises, offices, public buildings, open spaces, agricultural land and car parks) ……

Address(es)
……
…….....

……
……

……
……

3) Comments on cause of flooding :-

Blockage ☐ Overloaded Sewer ☐ Collapsed Sewer ☐ M&E Equipment Failure ☐

Defective Private Drain ☐ Septic Tank ☐ Road Gulley ☐

Rivers Agency ☐ Unknown Cause ☐ No Flooding ☐

Comment
……
…….

……
……

……
……

4) Additional Details :-

Exceptional rainfall ☐ Restricted Toilet Use ☐ Previous History ☐

Previous History Comment
…….

……
……

Contractor'sSignature
……

1.3 This form to be completed and signed by Contractor upon completion of work and copy returned to the Work Plan

Northern Ireland Water

Level of Service Methodology

DG6 Response to Billing Contacts

DG6 RESPONSE TO BILLING CONTACTS

1. Methodology and Procedures

1.1 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.

1.2 DG6 response to billing contacts (Process Summary):

1. Telephone Contact (go to step 4) or Documentation received (in Capital House).
2. Documentation opened by the Echo Customer Support Team.
3. Scan and Index (documentation only which is archived after scanning).
4. Raise and allocation of CMS contact type.
5. Assess and Investigate.
6. Update and compose response.

1.3 All customer response letters are printed by Echo 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:

1.4 Items generated in Rapid:

1.4.1 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.

1.4.2 Following a daily file transfer (which is an overnight process), the BSA team 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.

2. Definitions

2.1 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.

2.2 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.

2.3 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.

2.4 Billing contacts include calls that are made to pay a bill as this will result in an action being taken on the customers account.

2.5 We received clarification from both the Reporter and NIAR near the end of the reporting year that telephone complaints which relate to billing should be included as DG6 contacts. We are currently in discussion with Echo as to how this could be achieved for the next reporting year.

2.6 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.

3. Exclusions

3.1 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.

3.2 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.

4. End of year (contacts not dealt with at end of year)

4.1 If a billing contact is not resolved by the time the year end report is run (and a holding response is issued in the subsequent year) it will be reported in the contacts received for the reporting year. It will not be included in the percentage calculation of the time taken to deal with contacts in the reporting year. The system is set up so that any item closed which has a holding response, is recorded as being closed on the date of the holding response. In this case (where a holding response was issued in the subsequent year) it will therefore be included in the percentage calculation for the time taken to close for the subsequent year.

5. Auditing

5.1 Internal Audits – This process falls within Echo's Quality Management system and is audited several times a year under ISO9001/2000.

5.2 Performance and the achievement of Billing enquiries are recorded as per the Contact Handling Expected Service Levels which are measured monthly in accordance with Contract Schedule 2.2. Detailed monthly monitoring reports of actual performance are generated by Echo from RapidXtra and presented in the monthly Business Review Pack (MBRP) to NIW within 5 working days of the end of each month covering lines 1.1.1 to 1.1.9 in accordance with schedule 8.4.

5.3 NIW validates DG6 performance information on a monthly basis, against the information provided by Echo in the contractual MBRP. Any discrepancies on monthly DG6 performance are raised with Echo and escalated. Validation of figures provided by Echo are carried out by NIW in accordance with *Contract Schedule 2.2* and recorded in the relevant CBC Performance Criteria Review Summary which is published for comment and review. At year end reports are validated and analysed at operational level.

5.4 Echo performs a regular quality review on 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.

5.5 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.

5.6 NIW conducted call listening monitoring on a monthly basis between April and September until the Triage process was introduced and resources were re-assigned. A random selection of calls were made and assessed:

- For accuracy;
- To determine if memo contents are clear and precise;
- To ensure the conversation is accurately recorded on Rapid; and
- To ensure correct use of CMS code.

Any findings were reported to Echo management.

5.7 An end to end process review is carried out by internal audit.

6. Sources of information

6.1 System used

6.1.1 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.

6.1.2 The software comprises of CallMedia Enterprise Console with an integral reporting suite which distributes calls based on skills sets and SLA's.

6.1.3 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.

6.1.4 All contacts received should be recorded on Rapid. Reports from Rapid are generated by Echo and are used to report on DG6 performance.

6.2 Changes in system during the report year

6.2.1 There have been no reported system changes agreed with NIW since the previous reporting period.

6.3 Actual data

6.3.1 Actual data is extracted from the billing system RapidXtra and used to report DG6 performance (table 4, lines 1-5). Rapid DG6 analysis is produced monthly and for the reporting year, providing the necessary information essential for the Director General's reporting requirements.

6.4 Sampling

6.4.1 Actual data is used to report DG6 performance (Table 4, lines 1-5). No sampling is used.

6.5 Reliability

6.5.1 All data is taken from the main billing system to ensure it is reliable and accurate.

7. Responses

7.1 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.

7.2 Use of telephone

7.2.1 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.

7.3 Use of letters

7.3.1 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 Echo 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.

7.4.1 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.

7.4 Use of personal visit

7.4.1 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 Account Services Department who take ownership for resolution and closure of the contact. The Account Services 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.

7.5 Response time

7.5.1 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.

7.5.2 Current guidance is for emails/faxes received on non-working days to be included in the calculation of response time. An email received on a Saturday should be counted as day zero. This does not currently happen and we plan to engage with ECHO and the Reporter this year to discuss this issue.

7.6 CCNI

7.6.1 Written billing contacts received via the Consumer Council for Northern Ireland (CCNI) office on a customer's behalf are being included.

7.7 Holding reply

7.7.1 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.

7.7.2 A substantive holding reply will close a contact for DG6 reporting purposes but not for NIW until all actions have been taken. Echo provides a reply no later than 15 days from contact (or 17 days if a personal visit is required). If there is no resolution, a further holding letter is sent. Enquiries and follow up questions will not be counted as a DG6 contact.

7.7.3 Where NIW is unable to provide the date by which investigations or further actions will be complete, the company will include the number of days in which the company will contact the customer again and the number of days after the contact that the substantive response will be sent to the customer.

8. Other Issues

8.1 Please refer to DG6 Company Commentary.

Northern Ireland Water

Level of Service Methodology

DG7 Response to Written Complaints

DG7 METHODOLOGY 2009/10

1. Methodology and Procedures

1.1. 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.

1.2. DG7 response to written complaints (Process Summary)

1st April '09 – 23rd October '09

1. Documentation received (in Capital House);
2. Documentation opened by the Echo Customer Support Team;
3. Documentation scanned, logged & indexed;
4. CMS contact type raised and allocated;
5. Complaint allocated to Case Management Team;
6. Case Management Team investigate and case manage complaint;
7. Pass to relevant part of the business for investigation and resolution; and
8. Review information provided by field, update accounts, draft and issue response.

26th October '09 onwards

7. Documentation received (in Capital House);
8. Documentation opened by the Echo Customer Support Team;
9. Documentation scanned, logged & indexed;
10. CMS contact type raised and allocated;
11. Pass to NIW Triage Team for Assessment;
12. Triage Team confirm DG7 categorisation;
13. Allocate contacts requiring case management to Case Management Team;
14. Case Management Team investigate and case manage complaint;
15. Pass to relevant part of the business for investigation and resolution; and
16. Review information provided by field, update accounts, draft and issue response.

1.3. Allocation to DG7

1.3.1. Written complaints are recognised from all other correspondence by following the definition of a written complaint as set out in the Reporting Requirements and Definitions Manual 2010. All incoming written correspondence is received by the scanning and indexing team (Customer Support) and date stamped. It is then sorted and allocated to operational correspondence, payment notification, DG6 or DG7 according to the Utility Regulator's definitions.

1.3.2. The reported response times for all written complaints are derived from the Rapid database. All complaints with the exceptions of exclusions detailed in section 3.1 are included in this total.

2. Definitions

2.1. 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.

2.2. 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.

2.3. 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.

3. Exclusions

3.1. 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; and
- Public liability claims (although any related complaint should be included as normal).

3.2. End of Year

3.2.1. If a complaint is not resolved by the time the year end report is run (1 May 09) but a substantive holding response is issued in the subsequent year then it will be reported in the complaints received figure line 1 for the reporting year, but it will not be included the calculation of the % of time taken to resolve figure line 2-5 in the reporting year. Once the item is resolved and closed the system is set up so that any item closed which has a substantive holding response, is recorded as being closed on the date of the substantive holding response, which in this case is the subsequent year. It will therefore be included in the subsequent year's figures for time taken to close.

3.2.2. If a complaint is not resolved by the time the year end report is run (24 April) but a substantive holding response has been issued in the reporting year, then it will be reported in the complaints received figure (line 1) for the reporting year but it will not be included in the calculation of the % of complaints resolved time figure line 2-5. Once the item has been closed during the subsequent year it will be closed to a date in the reporting year gone so will not be included in the subsequent year's figures.

3.2.3. The number of complaints which will appear in neither years report for time taken to closed is calculated by assessing the volume of written DG7's that were received in year 2009/10, remained open on 24 April 2010 but will be closed back to a substantive holding response date in 2009/10.

3.2.4. We print the DG7 reports generated on 24 April 2010.

4. Auditing

4.1. Internal audits

4.1.1. This process falls within the Echo Quality Management System which is audited several times a year under ISO9001/2000.

4.1.2. In addition each response undergoes Quality Assurance checks before issue.

- The first is carried out by the agent who has the item allocated to them. They check that the item has been correctly:
  - Categorised to DG7.
  - Coded.
  - Scanned to the correct account.

- Since 26th October '09, the Triage Team verify the DG7 categorisation.
- Since 26th October '09 the Triage Team 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 and process is followed.
- From 1st April 2009 – 23rd October, for each calendar month a quality check of 30 randomly selected complaints was carried out by NIW. This was a check against an agreed criteria.
- From 1st April 2009 – 23rd October every tier 2 complaint, CEO and Director complaint was quality checked by NIW escalation team.

4.1.3. Monthly Business review pack. Any discrepancies on monthly DG7 performance are raised with Echo and escalated.

5. Sources of Information

5.1. Complaints are date stamped at point of receipt by Account Services, sorted into the relevant categories, scanned then indexed, thus ensuring security and minimising administration.

5.1.1. 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.

5.1.2. It is at the indexing stage that the scanned items are categorised, thus allowing the description to be input above.

5.2. System Changes

5.2.1. There have been no system changes from the previous reporting period agreed by NIW.

5.3. Actual Data

5.3.1. Management reports are produced from the Rapid system, including a daily hit-list which identifies by section any item of correspondence outstanding.

5.3.2. Rapid DG7 analysis is produced monthly, and for the reporting year and provides the necessary information essential for the Director General's reporting requirements.

5.3.3. Written complaints for the year 2008/09 have been monitored, controlled and responded to by our Customer Relations Centre operated by Echo.

5.4. Sampling

5.4.1. Sampling is not used in compiling data for DG7.

5.5. Reliability

5.5.1. All data is taken from the main billing system to ensure that it is reliable and accurate.

6. Responses

6.1. 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.

6.2. 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:

6.2.1. Provide an explanation of our policy or procedure and indicate why no further action is required.

6.2.2. Informs the customer that action to resolve the complaint has been taken and identifies when this action occurred.

6.2.3. Informs the customer when the action to resolve his/her complaint will be taken if it cannot be done immediately e.g. capital works scheduled for month and year and will be completed month and year.

6.2.4. Every response answers all issues or questions raised by the customer.

6.3. Use of Telephone

6.3.1. Where appropriate telephone calls are used to respond to written complaints. Telephone calls are also used to update customers as the progress of complaints under investigation. The customer account is annotated with details of the call in these cases. Complaints closed to telephone calls also receive written confirmation.

6.4. Use of Standard Letters

6.4.1. Standard letters are not used to respond to complaints, all responses are personalised and customised.

6.5. Use of Personal Visit

6.5.1. 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.

7. Assumptions

7.1. NI Direct

7.1.1. Complaints received through NI direct are not reported.

7.2. Telephone Complaints

7.2.1. Complaints received via telephone are recorded under DG9 telephone complaints not DG7.

7.3. Date of Receipt

7.3.1. Complaints are date stamped at point of receipt and this is used as date of receipt to NIW

7.4. Date of Dispatch

7.4.1. The date of despatch refers to the date a response is sent to the customer.
7.4.2. The date of despatch is recorded as the date closed.

7.5. Response Time

7.5.1. This is the number of working days between receipt of a written complaint by NIW up to and including the date of despatch of the

response. The date received provided it is a working date is considered day zero and the next working day is day one. Current guidance is for emails/faxes received on non-working days to be included in response time e.g. Email received on Saturday should be counted as day zero. This does not happen currently and we plan to engage with ECHO and the Reporter this year to discuss this issue.

7.6. Substantive Holding Reply

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

7.6.2. 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.

7.6.3. 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.

7.7. Repeat Contact

7.7.1. 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.

7.7.2. This is done even if the NIW consider the complaint has been dealt with as far as we are able.

7.8. CCNI

7.8.1. Complaints received in writing via CCNI will be logged as complaints and recorded in DG7 figures.

7.8.1.1. CCNI Enquiries and follow up questions will not be recorded as complaints.

7.9. Complaints to or about Contractors

7.9.1. Complaints made directly to contractors about work carried out on our behalf will only be recorded if NIW are notified. If NIW are notified it will be recorded even it is handled directly be the contractor.

7.9.2. Complaints about contractors received by NIW are reported even if they are referred to the contractor to deal with.

Northern Ireland Water

Level of Service Methodology

DG8 Bills for Metered Customers

DG8 - BILLS FOR METERED CUSTOMERS

1. Definitions

1.1 Every time a metered account is billed a reading type is updated onto the billing system (Rapid) to identify the type of reading.

1.2 The reading types and estimated indicator are used to distinguish the meter reading status of each metered account analysed in the DG8 report.

1.3 The Rapid DG8 analysis report ensures we correctly identify each of the reporting requirements in the sequence shown.

2. Total Metered Accounts

2.1 The report confirms the number of accounts which either water or water and sewerage consumption is calculated.

3. Company Reading and Billed

3.1 If a Company reading has been taken during the current financial year and a bill raised against that reading it will be included under the 'Meters read by Company' indicator. The exception to this is those meters that are billed outside of Rapid. (trade effluent meters)

4. No Bills Received During Reporting Year

4.1 Bill status is scanned for no bills issued during the reporting year and is reported under the 'Not Billed this year' indicator.

4.2 Meters included in this category are identified as having a reading entered but the 'bill sent' flag set to 'No'

5. Customer Readings

5.1 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.

5.2 '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'

6. Estimated Only

6.1 Any meters that have not satisfied any of the preceding indicators will be recorded under the 'Meters Estimated Only' indicator.

6.2 '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.

7. Unread for Two Years

7.1 If no Company reading exists during a two year period, it will be reported under the 'No Company Reading for 2 Years' indicator.

7.2 Specifically two years back from the end date of the DG report.

8. Exclusions

8.1 The following are excluded from the indicators:
- 8.1.1. Charged on another basis (not metered consumption).
- 8.1.2. Test meters.
- 8.1.3. Trade-effluent meters.
- 8.1.4. DRD or NIW meters.
- 8.1.5. Fire supplies.
- 8.1.6. Properties occupied less than six months.
- 8.1.7. Complex accounts – Including combination meters.
- 8.1.8. Void properties.

9. Billing Policy

9.1 Frequency of Bill Issue :
- 9.1.1. Household properties – the Company do not currently bill domestic properties.
- 9.1.2. Non-household – the Company aim to read at twice a year and bill twice yearly.
- 9.1.3. Large non-household users – the Company aim to read and bill monthly.

10. Customer Reads

10.1 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.

11. Data Collection

11.1 Frequency of reading:
- 11.1.1. Non-household properties are scheduled to be read twice a year. The reading schedule for the 1st read is completed over a six month period.
- 11.1.2. Non-household – large volume users are read and billed monthly.

12. Method of Meter Reading

12.1 Details of metered accounts scheduled for reading are transferred to an electronic data storage unit (PDA), which is subsequently updated upon the meter being read. The information obtained is then transferred back to the Rapid billing database.

13. Policies

13.1 Access Denied / Meter Reading Unobtainable

13.1.1. 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.

13.2 Faulty Meters

13.2.1. Where a faulty meter is identified, the Meter Reader will replace it dependent on the type of meter installed. Details of both the old and new meter will be recorded on a meter replacement docket and passed to the meter account management section to amend the account.

13.2.2. When the Meter Reader cannot replace the meter our maintenance contractor will change it. The request is passed to the meter maintenance section by the meter reader. When the meter has been replaced the contractor advises the meter reader of the replacement details. The old and new meter details will then by returned by the meter reader on a meter replacement docket for updating on the billing system.

13.3 Abnormal Readings

13.3.1. An abnormal reading can be identified by one of two factors:

13.3.1.1. A meter reading that gives a usage that does not fall in line with previous usage patterns, identified by the Meter Reader, billing system or customer.

13.3.1.2. A meter reading that does not correlate with previous readings taken.

13.3.2. The PDA unit automatically calculates the usage between a new reading and the previous reading. The Reader checks the usage against the previous readings that are displayed on the PDA. If the usage appears to be abnormal, the Reader will enter a report onto the PDA and or use a pre set indicator to explain why (trouble codes).

13.3.3. 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 not, the Reader will be required to revisit the meter to obtain another reading and any other details that would justify the abnormal usage. Customer readings that also fall into the abnormal usage trend are similarly visited to confirm the usage.

13.4 **Previous Misreads**

13.4.1. Accounts that are identified as having previously been misread are subject to re-calculation based on the most recent meter reading.

13.5 **Data Transfer**

13.5.1. **Company Reads**

13.5.1.1. Before the start of each reading period, whether monthly or six monthly, all accounts, relating to the specific period, are transferred from the Rapid system onto Routestar. The accounts are then downloaded onto the PDAs for the actual reading of the accounts. Each day the Reader will upload the PDA and those accounts that have had a reading and or an abnormal reading indicator inserted are transferred to Rapid.

13.5.1.2. The data transfer from the Routestar to Rapid is not solely automatic and currently requires manual assistance.

13.6 **Customer Reads**

13.6.1. 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.

14. Updating, Post Bill Issue

14.1 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.

15. Data Measurement

15.1 The Rapid billing system is used to provide the reported information.

15.2 A new connection job closure ellipse report is generated every week to confirm property details. This information is passed to our meter installation contractor by secure FTP. The contractor installs the meter and provides a data file weekly with the meter details including the first read. Once this information is provided it is automatically uploaded into

Rapid. The accounts are then included as part of the scheduled reading pattern. Data provided by the contractor is used to cross check this data.

16. Procedures

16.1 The data for DG8 reporting requirements is compiled by the Rapid billing system as the 'DG8 analysis' report. This report is based on meter numbers.

16.2 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.

16.3 A bill is only counted as issued if it is sent to the customer within the reporting year. Any that are sent after this date will be included in the following reporting years figures.

17. Sources of Information

17.1 The reading indicators are extracted from Rapid RPU005 meter consumption update screen. The DG8 analysis report extracts this information and compiles this in line with the requirements.

18. Assumptions

18.1 Those accounts excluded from the analysis are categorised using the definitions provided by the reporting requirements.

19. Other Issues

19.1 Echo, on behalf of Northern Ireland Water, are responsible for the billing activity.

19.2 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.

19.3 Sewerage only customers if not TE customers are charged on an unmeasured basis.

Northern Ireland Water

Level of Service Methodology

DG9 Telephone Contact

Contents

DG9 Telephone Contact

2 Definitions

2.1 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 Phone** (for customers with hearing difficulties): 0800 0515 446
- **Debtline (Collections & Recovery Department):** 0845 8770 050

In addition, an MLA hotline (0845 300 6461) was initiated on 21st August 2007 to provide a direct means of contact for elected representatives and council members telephoning to enquire about specific issues in their constituencies.

2.2 Company Agent

Northern Ireland Water (NIW) has contracted out the provision of Customer Billing and Contacts (CBC) to a consortium organisation 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 consortium members.

2.3 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
- **Text Phone:** 24 hours a day, 7 days a week, 365 days a year
- **Debtline:** Monday to Friday - 08.00 to 17.00
- **MLA:** 24 hours a day, 7 days a week, 365 days a year

A reduced service is available on the following main public holidays: Christmas Day, Boxing Day, New Years Day, Easter Sunday, 12th and 13th July.

2.4 Table 5, Lines 13-17

Total Calls Received on Customer Contact Lines

2.4.1.1 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.

2.4.1.2 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.

All Lines Busy

2.4.1.3 The 'all lines busy' category measures the degree of difficulty customers experience in being able to connect with a company agent or automated system. All calls receiving an engaged tone or hearing an all lines busy message are reported. This also includes calls where a customer hears the engaged tone as a result of a problem with the line where the call has been received via Call Master (Call Master is a Cable and Wireless tool used to report on the activity of the ACD/switch. This is the stage before Call Media as this is the only point at which All Lines Busy can be monitored/reported on).

Total Calls Abandoned

2.4.1.4 The 'calls abandoned' category aims to capture the total number of callers who abandon their call before it is substantively answered by NIW. All calls abandoned, including those abandoned within 30 seconds are reported.

Call Handling Satisfaction

2.4.1.5 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

2.4.1.6 Please see below a list of issues categorised via CMS type. These include billing, water service and wastewater issues. As a general policy, NIW records all telephone calls about these issues as complaints:

- Orig CMS Type
- Appearance-Animalcules
- Appearance-Discoloured (Blue/green)
- Appearance-Discoloured (Brown/black/orange)
- Appearance-General Conditions
- Appearance-Hardness
- Appearance-Particles
- Appearance-Stained Washing
- Appearance-White-Air
- Appearance-White-Chalk
- Bad Smell Treatment Wks/pumping Stn
- Bl- Debit Error Overcharge
- Bl- Disconnection Without Just Cause
- Bl- Disputed Liability For Measured Bill
- Bl-A V R No Response To Message Left
- Bl-Account Closed In Error
- Bl-Bill Arising From Disputed Meter Read
- Bl-Bill/final Notice Not Received
- Bl-Debit Error
- Bl-Delay In Changing Acc To Measured
- Bl-Delay In Issuing Bill
- Bl-Delay In Issuing Refund
- Bl-Disconnection Without Just Cause-Comm
- Bl-Disputed Liability For Unmeas Bill
- Bl-Error In Previous Response
- Bl-Fixed Charge Incorrect
- Bl-Incorrect Account Details
- Bl-Increase In Charges
- Bl-Lack Of Information To Customers
- Bl-Late Response
- Bl-Leak Allowance
- Bl-Liability For Charges
- Bl-Measured Billing Error - Overcharge
- Bl-Meter Reading Frequency
- Bl-Method Of Payment
- Bl-Methods Of Billing For Measured Cust
- Bl-Methods Of Billing For Unmeas Cust
- Bl-No Reply To Original Contact

- Blocked Sewer Inc Cleanup & Disinfect
- Bl-Original Contact Not Received
- Bl-Other Charging Methods
- Bl-Payment Not Allocated To Correct Acc
- Bl-Poor Information On Bill
- Bl-Promised Action Not Completed
- Bl-Reply Crossed In Post
- Bl-Sending Of Estimated Accounts
- Bl-Standing Charges
- Bl-Timing Of Reminders
- Boil Notice
- Cs-Error In Previous Response Any
- Cs-Late Response All
- Cs-No Reply To Original Contact C S
- Cs-Original Contact Not Received C S
- Cs-Promised Action Not Completed All
- Dangerous Opening (W)
- Dangerous Openings (S)
- Defective Surface Covers (S)
- Defective Surface Covers (W)
- Driving/vehicles
- Faulty Stopcock
- Flooding External (S)
- Flooding Internal (S)
- General Complaint
- High Consumption
- High Water Pressure
- Illness-Medical Opinion
- Illness-Oral
- Illness-Sick/diarrhoea/gastro/crypto
- Illness-Skin
- Key Account Issue
- Leakage
- Le-Error In Previous Response
- Le-Late Response
- Le-Promised Action Not Completed
- Low Water Pressure
- Me Access/maintenance/replacement
- Me Accuracy And Testing
- Me Meter Reader Behaviour
- Me Metering Of Existing Properties
- Me Optional Metering - Other
- Me Other Meter Problem
- Me Quality Of Meter Installation By NIW
- Me Time Taken To Install Meter By Company
- Me-Customer Meter Fault Report
- Missing Payment

- Nc NIW No Show
- No Approval Letter Received
- No Sewer Available
- No Water Complaint
- Noise In Pipes
- Ot - Attitude/behaviour Of Staff
- Ot - Contractor Activity
- Ot - Contractor Attitude
- Ot - Customer Service Behaviour
- Ot - Driving Vehicles
- Ot Error In Previous Response
- Ot Inadequate Notice Given By Company
- Ot Late Response
- Ot Operations Behaviour
- Ot Poor Advice From Company
- Ot Promised Action Not Completed
- Other For Water Service
- Ot-Reminder Notice
- Pollution (Sewerage)
- Rehabilitation Contract
- Reinstatement
- Report A Fault
- Rr-Debt Recovery Procedure
- Rr-Late Response
- Rr-Legal
- Rr-No Reply To Original Contact
- Rrpromised Action Not Completed
- Rr-Timing Of Reminders
- Rr-Wording Of Final Notice
- Run Of Water (W)
- Site Complaint
- Site Complaint - Sewerage
- St Septic Tank Damage Caused By Contract
- Sw Bad Smell Treatment Works/pump Station
- Sw Damage & Disruption During Construct
- Sw Delay In Repair To Sewers/drains
- Sw Flooding Internal & External
- Sw New Sewers Conns
- Sw Other Sewerage Service Problem
- Sw Pollution - River
- Sw-Bad Smell Stw/sps
- Sw-Blocked Sewer
- Sw-Dangerous Openings
- Sw-Flooding External (S)
- Sw-Fractured/collapsed Sewer Pipe
- Sw-Late Response All
- Sw-Reinstatement (S)

- Sw-Run Of Water (Sewerage)
- Sw-Site Complaint
- Sw-Sps Fault
- Taste & Odour-Chlorine
- Taste & Odour-Earthy/musty
- Taste & Odour-Other Taste/odour
- Taste & Odour-Petrol/diesel
- Taste & Odour-Tcp
- Trade Effluent
- Water Flowing Over Land
- Water Flowing Over Road
- Water Quality(Cust Concern)-Incid Rel-Gener
- Water Quality(Cust Concern)-Campaigns
- Water Quality(Cust Concern)-Incident Rel
- Water Quality(Cust Concern)-Life Style
- Water Quality(Cust Concern)-Pets/animals
- Water Quality(Cust Concern)-Sample
- Water Quality(No Concern)-Fluoride
- Water Quality(No Concern)-Other Info
- Water Quality(No Concern)-Water Hardness
- Water Quality(No Concern)-Water Qual Rep
- Ww Contractor Attitude
- Ww Damage & Disruption During Construct
- Ww High Pressure/pressure Surge
- Ww Interruption - Incident Related
- Ww Leakage - Fail/delay In Repair Main
- Ww Low Pressure - Daily Problem
- Ww Low Pressure - Intermittent Occurrence
- Ww No Water
- Ww No Water>24hrs
- Ww Other Pressure Problem
- Ww Other-Relating To Main/pipes
- Ww Site Complaint -Water
- Ww-Appearance-Discol(Brown/black/orange)
- Ww-Appearance-White Chalk
- Ww-Contractor
- Ww-Flooding (W)
- Ww-Late Response All
- Ww-No Water
- Ww-Promised Action Not Completed
- Ww-Site Complaint
- Ww-Taste & Odour (Other Taste & Odour)
- Ww-Water Pressure
- Ww-Water Qual (Cust Concern) Campaign

2.4.1.7 **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.

2.4.1.8 **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.

2.5 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).

3 Call Receipt / Telephony Structure

3.1 Telephone Providers Network

The supplier during the reporting year was Cable & Wireless.

3.2 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.

3.3 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.

3.4 Reporting/Validation

All calls are recorded within Call Media (the telephony system) including their status i.e. answered or abandoned. This is used in conjunction with the providers' network to determine calls answered, calls answered within 30 seconds, % calls abandoned and % lines not busy to understand full DG9 position.

DG9 performance is reported internally on a daily, weekly and monthly basis. Daily/weekly scorecards showing DG9 performance, including year to date performance are reported by Echo. A detailed monthly Business Review Pack is also presented to NIW within 5 working days of the end of each month.

NIW Contract Office run independent Call Media reports (covering monthly and reporting year) and Rapid reports (for telephone complaints) and reconcile against those provided by Echo.

NIW previously carried out monthly quality assurance checks (minimum of 2 hours a month) on random calls up to November 09. Call results are discussed with Echo and an overall score is reported back to both Echo and NIW Contract Office. Calls are scored based on three categories:

1) Opening and Salutation
2) Skills and Knowledge
3) Soft Skills.

These are due to recommence June 2010.

Please see below for a full list of the checks carried out under each category:

Opening/Salutation
Correct opening/salutation
You are speaking to/my name is
Customer account number requested
1st line of address confirmed
If 3rd party - check permission / DP adhered to
Full name requested / updated
Postcode Updated
Contact tel number requested / confirmed
Reason for call identified
Skills and Knowledge
Correct advice given to the Customer
Correct procedure / policy quoted
Check customer in charge on RAPID & paying
RAPID updated correctly
Correct timescales stated

Call transferred correctly
Correct CMS code selected
Call Logged
Correct job raised
Call back actioned
Agent's notes satisfactory
Soft Skills
Appropriate language / Questioning used
Listening noises
Avoided interrupting the Customer
Courteous telephone manner
Advisor sounded interested
Initiative used to resolve enquiry / complaint
Willingness to help shown
Confidence and Competence shown
Advisor controlled the call
Summary of actions given to the Customer
Correct closing statement

4 Call Handling

4.1 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 handled, 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.

4.2 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.

4.3 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

5 Messaging

5.1 Use and activation of IVRs (Interactive Voice Response)

Interactive Voice Response (IVR) was not used by NIW during the reporting year. A recorded introductory message however was set up and assigned to each queue, i.e. Billing Enquires Line. The message greets the customer and thanks them for calling the relevant queue. It explains that an agent with be with them shortly and to note that calls are recorded to help provide quality assurance and training.

For Waterline, customers hear an additional message, "press one for new water connections, or for all other enquires please continue to hold".

If a customer telephones out of hours, the customer will receive an out of hour's message.

In the event of disaster recovery and building evacuation, a recorded message is activated which explains to customers that calls can not be answered at the moment, please call back later.

Where an incident has been declared, NIW may authorize the use of a recorded message to intercept and answer customer calls from the area(s) affected by the incident.

5.2 Use and activation of message manager systems

No message manager systems were used during the reporting year.

5.3 Use and activation of answering machines

Answering machines were not used during the reporting year.

5.4 Use and activation of touchtone systems

Other than recorded messages and the option customers hear when they contact Waterline "press one for new water connections, or for all other enquires please continue to hold", no touchtone systems were used during the reporting year.

6 Company Systems

6.1 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.

6.2 Location

All systems are located at Capital House, Belfast. There is currently a 210 line capacity dedicated to NIW customers. This line capacity has proved more than sufficient to date with no incidences of this requirement being reached or exceeded. The scale of the current capacity was implemented in preparation for domestic billing which was deferred in April 2007.

6.3 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).

7 Other Issues

7.1 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.

7.2 NIW Switchboard

During the reporting year the telephone number for NIW switchboard was displayed in small type at the very bottom of the company website (see below). This is a business line and should not be advertised to NIW customer base. Calls to this business line have not been included in total calls received. This telephone number has since been removed from NIW website. Any calls received from customers on this business line would have been referred to the appropriate customer contact line and captured via Call Media.

Northern Ireland Water Limited, Registered Office, Northland House, 3 Frederick Street, Belfast, BT1 2NR.
Registered Number :NI054463

7.3 Type Talk and Text Phone

NIW has provided for a standalone Textphone service for use only by customers who have their own textphone. This service is provided for customers with hearing difficulties.

Type Talk is a third-party service whereby the customer rings a Type Talk operator, who in turn contacts the Customer Relations Centre via the normal customer line (Waterline/Leakline/Billing, etc) on behalf of the customer. This is recorded as a call received on the appropriate line.

During the reporting year NIW advertised a Type Talk service on the company website (0800 0515 446), this is a misprint and actually refers to the Textphone service offered to customers with hearing difficulties.

Following a quality check conducted by NIW, a call using a textphone to this number was not answered. After investigation it was identified that the Textphone service has not been operational during the reporting year, having only been operational from May 2009. Calls received on this line during the reporting year can not be reported and this service failure is currently under investigation.

7.4 Rejected Calls

NIW is currently investigating the number of rejected calls reported in Call Media reports across principle advertised customer contact points. Calls are currently rejected for any of the following reasons:

- The time being out of working hours
- There being no users currently logged on with the skill to handle the task

- The queue is too full and cannot accept any more tasks. Each queue holds 500 calls at any one time.
- The task queued for the 'Max Queue Time' and was returned to the connector.

NIW is investigating if it is appropriate to 'reject' calls based on these reasons.

During the reported year, Call Media rejected 4,287 calls across all principle advertised customer contact points. These figures are not included in total calls received. A breakdown is available below:

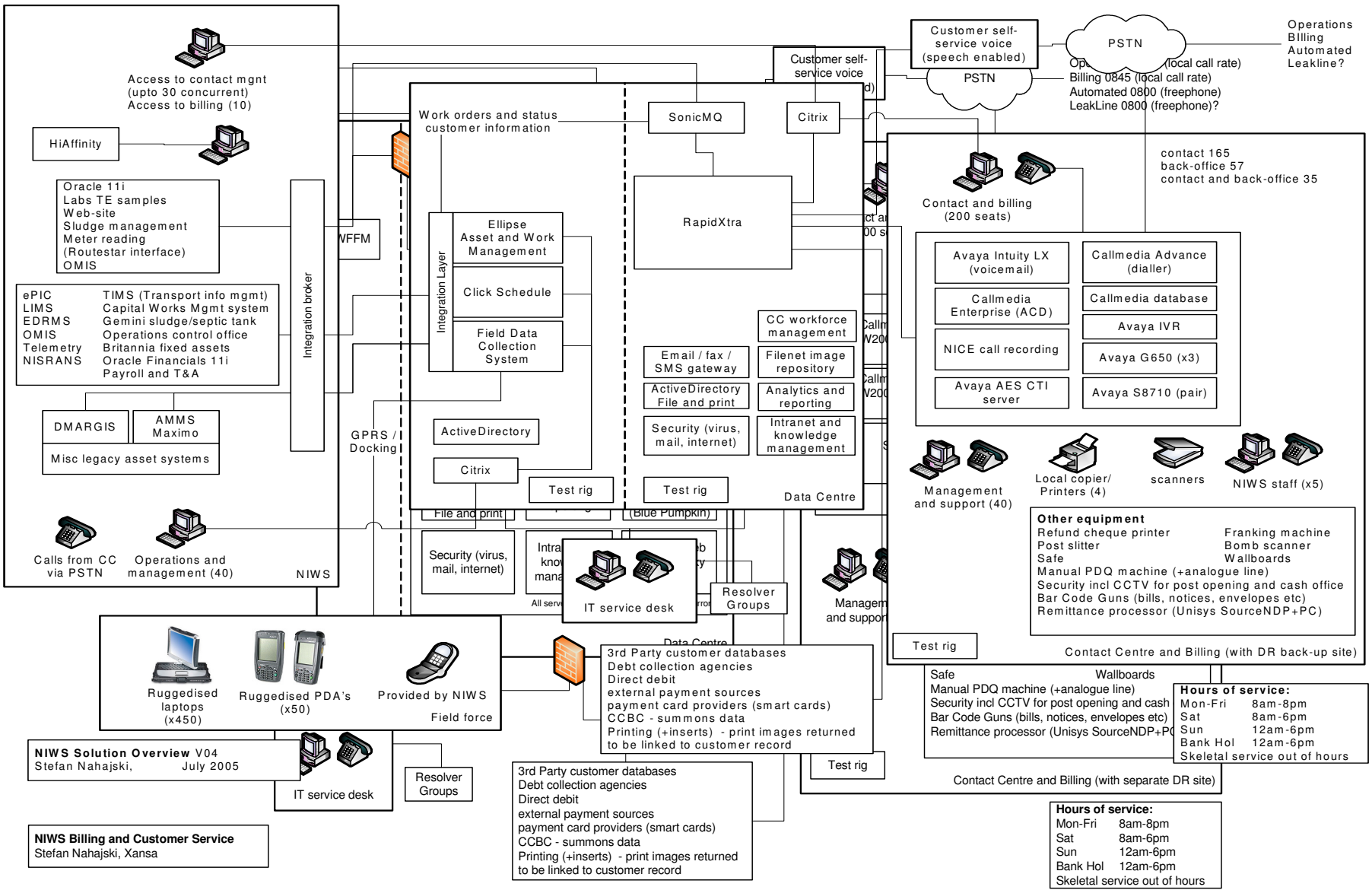
- **Billing Enquiries: 349**
- **Waterline: 0**
- **New Connections: 260**
- **Leakline: 0**
- **Debtline (Collections & Recovery Services): 3,678**

(Customers calling the debt line after hours are rejected. The customer will receive a message informing them that they have called out of hours and that this service is currently closed)

- **MLA: 0**

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 2010

Section 5

Customer Research Appendix

Contents

1. Customer Satisfaction

1.1. 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.

1.2. Customers' satisfaction with regards to call handling is assessed by McCallum Layton, an independent market research company. McCallum Layton carry out quarterly surveys (Waves) of customers who have called the Company for any reason. The score for the answer to survey question 18 ("*Overall, how satisfied were you with how your call was handled1-5?*") is the call handling satisfaction score.

Wave 1	• Sampling period: Monday 20th April 2009 to Sunday 26th April 2009 (inclusive) • Interview period: Monday 27th April 2009 to Thursday 30th April 2009 (inclusive)
Wave 2	• Sampling period: Monday 20th July 2009 to Sunday 26th July 2009 (inclusive) • Interview period: Monday 27th July 2009 to Thursday 30th July 2009 (inclusive)
Wave 3	• Sampling period: Monday 26th October 2009 to Sunday 1st November 2009 (inclusive) • Interview period: Monday 2nd November 2009 to Friday 6th November 2009 (inclusive)
Wave 4	• Sampling period: Monday 1st March 2010 to Sunday 7th March 2010 (inclusive) • Interview period: Monday 8th March 2010 to Friday 12th March 2010 (inclusive)

1.3. The primary objective is to provide a measurement of customer satisfaction in telephone call handling, by water industry companies.

1.4. 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.

2. Methodology

2.1. 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.

2.2. Overall Northern Ireland Water (NIW) achieved 408 interviews in total.

2.3. 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.

3. Sampling

3.1. Sample Provision

3.1.1. NIW is advised of the week in which call data will be collected for a survey two weeks in advance.

3.1.2. NIW is required to record all incoming calls to the contact centre for the seven days in question, irrespective of how calls were handled.

3.1.3. 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).

3.1.4. 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 09/10**
4,151	3,986	4,474	4,151	**16,762**

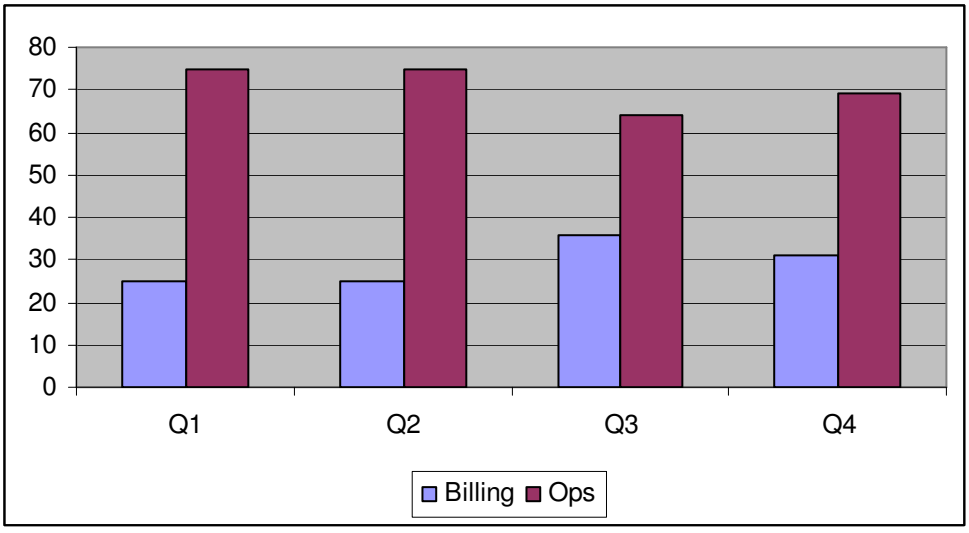
3.2. Sample Management

3.2.1. 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.

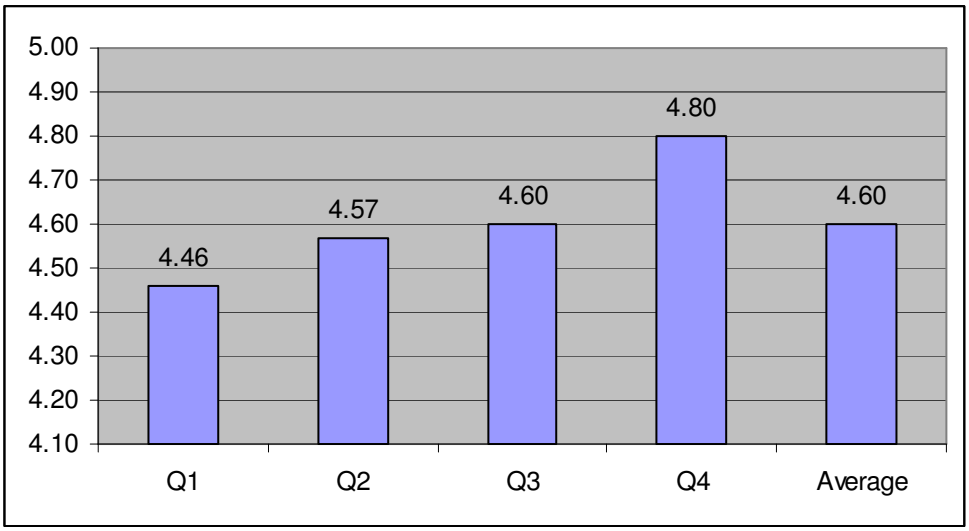
3.2.2. Given that NIW is not billing domestic customers (unlike other UK water companies), it is important to establish the proportion of calls received by day and query type to ascertain the quotas needed to ensure a representational spread of interviews was achieved.

3.2.3. The following table shows the NIW percentage split for billing and operations, per quarter.



4. Overall Performance Assessment

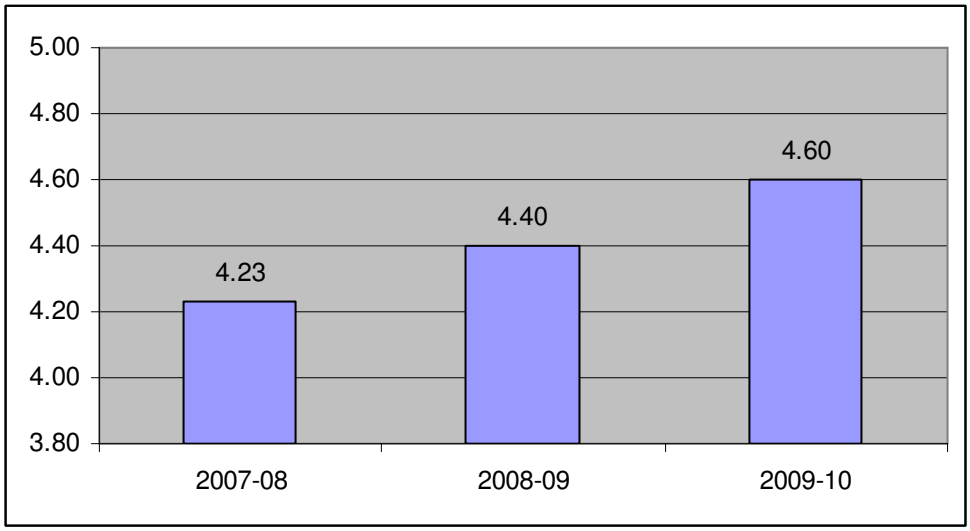
4.1. NIW achieved an overall score of 4.6/5.0 for the reporting year, meeting the target set at the beginning of the year of 4.60, as follows;



4.2. In the last quarter of 2009/2010 NIW was ranked:

- 3rd out of the 24 companies with a score of 4.80, and
- 1st out of the 12 water and sewerage companies.

4.3. Overall, the annual score has increased over the past 3 years, as follows;



5. Customer and Stakeholder Views for the PC10 Business Plan

5.1. As part of the PC10 submission, NIW commissioned the Consumer Council to carry out the customer research for the PC10 Business Plan on its behalf. The project was delivered by ICS Consulting via the OneAM consortium, and PIMR who are a Belfast-based market research company engaged by CCNI to undertake customer consultation on water issues.

5.2. The main findings of the research were:

- Maintaining the current level of drinking water quality was the customer's top priority when considering the water supply service we provide;
- Low water pressure was not an important issue for customers;
- The reduction of internal sewage flooding events was customers' highest priority, not only within Sewerage Services but when considering the service NIW provide in its entirety;
- Customers prioritised reducing the environmental damage the Company caused to inland water ways over pollution to coastal waters and carbon emissions;
- When considering the customer service that they receive from NIW, consumers stated that how quickly the Company responded to them when they needed something was their top priority; and
- NIW's customers have a much higher opinion of the company than media reports would suggest. For example, 82% of customers stated that they were satisfied with the service provided by NIW.

5.3. The research identified 24 recommendations to be taken forwards between CCNI and NIW. These can be found in the report - Tapping into Consumers Views on Water, available on the Consumer Council for Northern Ireland's website by typing water in the search box.

http://www.consumercouncil.org.uk/publications

5.4. During 2009/10, 18 of these recommendations have been progressed to the point of completion with the remaining 6 planned for completion during 2010/11.

5.5. CCNI is planning an 18-month review in September 2010 to report on completion and to demonstrate the importance that NIW and CCNI has put on delivering on these customer views.

6. Codes of Practice

6.1. As required under Licence, NIW has been actively engaged with CCNI in the review of the existing customer Codes of Practice (CoP), which must be submitted to the Utility Regulator by 31st May to comply with licence requirements.

6.2. These were first submitted on 31st May 2007 and we are required to review not less than once in every 3 years. Since the Licence then allows a period of two months for the Utility Regulator to review and approve the Codes.

6.3. The four CoP's, which have been agreed with CCNI, are:

- Water Supply Services;
- Sewerage Supply Services;
- Dealing with Leaks; and
- Complaints.

6.4. We also publish another CoP on Priority Services. This CoP is not a licence requirement and therefore not subject to the same regulatory constraints, although we need to review all Codes in the same cycle given the links and references contained within each.

6.5. Given our target customer base, it is proposed that we adopt a name, format and layout consistent with other NI Utilities to avoid any confusion. It has been proposed that 'Priority Services' will be renamed 'Customer Care Register' and will include Critical Care.

THE WATER INDUSTRY QUALITY OF TELEPHONE CALL HANDLING

ANNUAL REPORT 2009/2010

March 2010

Our Ref: MC/AK/1991.4 - FINAL

McCallum Layton

Research and Marketing Consultants

C O N T E N T S

1 BACKGROUND AND OBJECTIVES

1.1 Background

Since the Water Industry in England and Wales was privatised in 1989, the 21† individual water companies have been regulated by the Water Services Regulation Authority (Ofwat). Water UK represents UK water and waste water service suppliers at a national and European level.

In order to allow a consistent and relative comparison between the companies' performances, the Water Services Regulation Authority introduced a number of key measures of customer service. One of these measures, DG9, concerns the level of service received by customers when telephoning their water company. A customer satisfaction survey (Quality of Call Handling) is used to establish performance against this measure.

The Quality of Call Handling research undertaken in 2009/10 was conducted on a quarterly basis. This report represents the annual report of survey findings covering the last four waves of research.

Wave 1
Sampling period: Monday 20th April 2009 to Sunday 26th April 2009 (inclusive)
Interview period: Monday 27th April 2009 to Thursday 30th April 2009 (inclusive)

Wave 2
Sampling period: Monday 20th July 2009 to Sunday 26th July 2009 (inclusive)
Interview period: Monday 27th July 2009 to Thursday 29th July 2009 (inclusive)

Wave 3
Sampling period: Monday 26th October 2009 to Sunday 1st November 2009 (inclusive)
Interview period: Monday 2nd November 2009 to Friday 6th November 2009 (inclusive)

Wave 4
Sampling period‡: Monday 1st March 2010 to Sunday 7th March 2010 (inclusive)
Interview period: Monday 8th March 2010 to Friday 12th March 2010 (inclusive)

‡ Scottish Water provided sample from the period: Monday 22nd February 2010 to Sunday 28th February 2010 (inclusive)

Northern Ireland & Scottish Water are included in the DG9 survey for 2009/10

Moreover, there have been changes to the following company names:
Tendring Hundred – Veolia Water East
Three Valleys – Veolia Water Central
Folkestone & Dover – Veolia Water South East

† Please note, Mid Kent was included in previous surveys but has now merged with South East Water

1.2 Objectives

The primary objective is to provide a measurement of customer satisfaction in terms of telephone call handling, by water industry companies.

The resultant data is required to be statistically robust based on the sample received from the water companies, to allow comparison both between companies each year, and for each company on a year on year basis.

2 METHOD AND SAMPLE

2.1 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.

However, a slightly different approach was required for Bristol & Wessex, who share call handling for billing, but have separate call handling for operations. In this case, 100 interviews were conducted with customers who had contacted the joint billing call centre, whilst the number of operations interviews varies from wave to wave, depending on the sample provided (see Table 1).

All surveys were administered using our in-house Computer Aided Telephone Interviewing (CATI) unit.

Each individual water company's survey was undertaken by multiple interviewers to prevent any possibility of interviewer bias.

The total number of interviews actually achieved in the April 2009, July 2009, November 2009 and March 2010 surveys was 9,430. This was split by company as shown below in Table 1.

Table 1: Interviews Achieved						
	TARGET (per wave)	**Achieved Q1 09/10**	**Achieved Q2 09/10**	**Achieved Q3 09/10**	**Achieved Q4 09/10**	**Achieved Total**
Anglian & Hartlepool	100	101	100	109	100	410
Bournemouth	100	100	100	103	100	403
Bristol Operations	Varies	23	27	16	14	80
Bristol & Wessex Billing	100	100	91	109	100	400
Cambridge	100	100	101	100	100	401
Dee Valley	100	104	100	100	102	406
Essex & Suffolk	100	102	100	108	100	410
Veolia Water S East	100	100	100	101	100	401
Northumbrian	100	100	100	101	100	401
Northern Ireland	100	105	100	103	100	408
Portsmouth	100	100	100	104	101	405
Severn Trent	100	100	100	100	100	400
South East	100	100	106	100	100	406
South Staffs	100	100	101	100	100	401
South West	100	100	100	100	102	402
Southern	100	103	100	100	101	404
Sutton & East Surrey	100	100	100	100	100	400
Veolia Water East	100	101	100	101	102	404
Thames	100	103	101	99‡	100	403
Veolia Water Central	100	100	102	101	100	403
United Utilities	100	99†	101	100	102	402
Welsh Water	100	102	100	100	102	404
Wessex Ops	Varies	22	20	18	15	75
Yorkshire	100	100	100	100	100	400
Scottish	100	100	100	101	100	401
Overall	**Varies**	**2365**	**2350**	**2374**	**2341**	**9430**

† One of the United Utilities customers interviewed in Wave 1 was an electricity customer not a water customer so has been removed from the sample; an additional interview was obtained to replace this customer in Wave 2.

‡ After further analysis it became apparent that one of Thames Water's customers interviewed in Wave 3 had had written contact, rather than telephone contact, with the water company and was therefore removed from the result.

2.2 Sample Provision

Individual water companies are advised of the week in which call data will be collected for survey purposes two weeks in advance.

Each company is required to record **all** incoming calls to their call centre for the seven days in question, irrespective of how the call was handled (eg, IVR, automated message, agent etc), which is then supplied to McCallum Layton password protected for data protection purposes.

For supply of sample, each water company was provided with an Excel template containing the following fields:

- **Contact Name** (customer or business name)
- **Business or Domestic** (to indicate if a business or domestic customer)
- **Telephone number** (to include area dialling code and with no spaces)
- **Date of contact** (date call made to the water company, recorded as DD/MM/YY or DD/MM/YYYY)
- **Customer reference number** (to trace any responses back through the system if necessary)
- **Operational and Billing flag** (to indicate the nature of the call)

The provision of the telephone number and date of the call were essential, with the remaining information being highly desirable.

In addition to the sample, each company also completed an Audit sheet which detailed the total number of calls received, number of records excluded from the sample and any factors the company feels may have affected their performance during the sampling period. Table 2 shows the actual number of useable records received from each water company in each wave.

2.3 Sample Management

Upon receipt of the sample, McCallum Layton then applied the following sample management procedures for each water company:

Removal of non-useable records – eg overseas telephone numbers, records with no telephone number/s, visually identifiable incorrect telephone numbers (not enough digits/too many digits etc).

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.

Table 2 shows the total number of useable records for each individual water company

Table 2: Useable Records Received (After Sample Management)					
Water Company	**Q1 09/10**	**Q2 09/10**	**Q3 09/10**	**Q4 09/10**	**Total**
Anglian & Hartlepool	24,849	24,175	19,956	30,631	99,611
Bournemouth	1,872	1,796	1,681	1,958	7,307
Bristol Operations	874	655	632	712	2,873
Bristol & Wessex Billing	10,278	9,777	9,299	15,656	45,010
Cambridge	1,435	1,323	1,221	1,496	5,475
Dee Valley	1,804	1,943	1,965	2,451	8,163
Essex & Suffolk	7,916	7,292	8,610	9,354	33,712
Veolia Water S East	766	812	894	865	3,337
Hartlepool	585	598	622	460	2,265
Northumbrian	9,684	11,345	11,705	14,618	47,352
Northern Ireland	4,151	3,986	4,474	4,151	16,762
Portsmouth	2,670	3,881	3,411	3,800	13,762
Severn Trent	18,243	35,913	48,488	52,922	155,566
South East	5,817	7,269	8,744	13,724	35,554
South Staffs	10,294	7,230	8,390	10,842	36,756
South West	13,788	11,909	13,345	14,882	53,924
Southern	27,797	24,492	19,209	19,926	91,424
Sutton & East Surrey	1,548	2,036	2,484	2,890	8,958
Veolia Water East	809	856	814	760	3,239
Thames	60,244	44,887	46,608	64,160	215,899
Veolia Water Central	13,484	13,149	12,635	12,257	51,525
United Utilities	38,201	26,112	35,563	46,237	146,113
Welsh Water	17,193	16,462	13,081	24,480	71,216
Wessex Ops	1,570	1,367	1,270	1,640	5,847
Yorkshire	23,443	24,110	26,318	31,382	105,253
Scottish	6,404	5,222	7,514	6,386	25,526
Total	**305,719**	**288,597**	**308,933**	**388,640**	**1,291,889**

NB The number of useable records listed here is after McCallum Layton's sample management procedures which excludes records with no numbers, numbers with missing digits or too many digits, and also duplicate numbers (ie multiple calls from the same number). It also excludes those who have been interviewed in one of the previous three surveys. The audit sheet figures include duplicate records and therefore are likely to differ from the figures above.

2.4 Quotas

Once sample management had been completed, McCallum Layton then established the proportion of calls received by day and by query type for each individual water company (where such information was provided). This allowed McCallum Layton to ascertain the quotas needed to ensure a representational spread of interviews was achieved.

Whilst the definition of contact type used to set the quotas comes from the sample provided by the water companies, the actual type of contact recorded for each respondent was based on the customer's definition of the nature of the call; hence there is a discrepancy between the quotas set and the breakdown of billing and operational calls actually achieved.

Table 3 shows the sample splits by billing and operations used to set the quotas for each water company

Table 3: Sample Provided By Contact Type								
Water Company	**% Billing**				**% Ops**			
	Q1 09/10	**Q2 09/10**	**Q3 09/10**	**Q4 09/10**	**Q1 09/10**	**Q2 09/10**	**Q3 09/10**	**Q4 09/10**
Anglian & Hartlepool	93	93	92	92	7	7	8	8
Bournemouth	92	92	92	94	8	8	8	6
Bristol Operations	-	-	-	-	100	100	100	100
Bristol & Wessex Billing	100	100	100	100	-	-	-	-
Cambridge	93	91	91	94	7	9	9	6
Dee Valley	94	93	94	95	6	7	6	5
Essex & Suffolk	87	87	88	88	13	13	12	12
Veolia Water S East	99	92	93	92	1	8	7	8
Hartlepool	79	85	88	88	21	15	12	12
Northumbrian	76	77	81	82	24	23	19	18
Northern Ireland	25	25	36	31	75	75	64	69
Portsmouth	26	37	40	44	74	63	60	56
Severn Trent	59	86	87	86	41	14	13	14
South East	87	82	85	84	13	18	15	16
South Staffs	93	93	94	95	7	7	6	5
South West	83	82	85	84	17	18	15	16
Southern	87	84	79	75	13	16	21	25
Sutton & East Surrey	93	93	94	94	7	7	6	6
Veolia Water East	98	92	96	96	2	8	4	4
Thames	89	89	87	92	11	11	13	8
Veolia Water Central	86	86	79	80	14	14	21	20
United Utilities	91	92	92	95	9	8	8	5
Welsh Water	80	83	92	89	20	17	8	11
Wessex Ops	-	-	-	-	100	100	100	100
Yorkshire	27	32	100†	100†	73	68	-	-
Scottish	-	-	-	-	100	100	100	100
Overall	**83**	**80**	**84**	**88**	**17**	**20**	**16**	**12**

† Yorkshire water changed their sampling method in Q3 and Q4 and couldn't differentiate between billing and operations, so we recorded 100% billing for both quarters.

2.5 Sampling Procedure

McCallum Layton then applied a 1 in n sampling procedure to ensure a random selection of contactors was selected for interviewing.

3 FINDINGS

3.1 Customer Type

Table 4: Domestic / Business Split										
	Q1 09/10		Q2 09/10		Q3 09/10		Q4 09/10		Total	
Water Company	**% Dom**	**% Bus**	**% Dom**	**% Bus**	**% Dom**	**% Bus**	**% Dom**	**% Bus**	**% Dom**	**% Bus**
Anglian & Hartlepool	98	2	95	5	94	6	94	6	95	5
Bournemouth	95	5	93	7	91	9	98	2	94	6
Bristol	87	13	92	8	94	6	95	5	92	8
Cambridge	96	4	97	3	95	5	100	0	97	3
Dee Valley	98	2	95	5	91	9	100	0	96	4
Essex & Suffolk	98	2	95	5	94	5	98	2	96	3
Veolia Water S East	97	3	100	0	98	2	99	1	99	1
Mid Kent										
Northumbrian	89	11	93	7	93	6	94	3	92	7
Northern Ireland	70	30	70	30	62	38	75	24	69	31
Portsmouth	82	18	96	4	88	11	93	6	90	10
Severn Trent	94	5	94	6	95	4	96	3	94	5
South East	98	2	96	4	95	5	95	5	96	4
South Staffs	99	1	99	1	95	5	95	5	97	3
South West	96	4	95	5	95	5	94	6	95	5
Southern	92	8	96	4	98	2	97	3	96	4
Sutton & East Surrey	97	3	97	3	100	0	99	1	98	2
Veolia Water East	97	3	98	2	97	3	94	6	97	3
Thames	92	8	96	4	91	8	92	8	93	7
Veolia Water Central	95	4	88	12	90	10	95	5	92	8
United Utilities	93	7	93	7	90	9	96	4	93	7
Welsh Water	93	7	95	5	94	5	94	6	94	6
Wessex	89	11	92	8	95	5	96	4	93	7
Yorkshire	95	4	97	3	86	14	93	7	93	7
Scottish	100	0	93	7	73	27	87	11	88	11
Overall	**93**	**7**	**94**	**6**	**91**	**8**	**94**	**5**	**93**	**7**

Overall 93% of respondents were domestic customers and 7% business customers. For each water company the majority of respondents were domestic customers.

NB Some figures do not total 100% due to respondents refusing to say whether they were domestic or business.

3.2 Reason For Contact – Customer Definition

Table 5: Reason For Contact															
	Q1 08/09			Q2 08/09			Q3 08/09			Q4 08/09			Total		
Water Company	**% Bill**	**% Ops**	**% Other**	**% Bill**	**% Ops**	**% Other**	**% Bill**	**% Ops**	**% Other**	**% Bill**	**% Ops**	**% Other**	**% Bill**	**% Ops**	**% Other**
Anglian & Hartlepool	87	12		84	13	1	91	8		86	14		87	12	
Bournemouth	75	22		90	10		78	18	4	79	19	2	80	17	1
Bristol	76	22	1	74	26		86	14		83	16		80	19	
Cambridge	93	7		87	13		85	12	1	93	7		90	10	
Dee Valley	87	13		85	12	1	89	11		84	16		86	13	
Essex & Suffolk	80	19	1	87	11	1	86	14		85	14		85	14	
Veolia Water S East	77	20		81	17		88	9		85	9		83	14	
Northumbrian	71	28	1	75	22		80	16	1	67	32		73	24	
Northern Ireland	35	63		25	74	1	41	57		31	68	1	33	65	
Portsmouth	64	33	1	67	26	4	69	29	1	61	35	1	65	31	2
Severn Trent	51	47	1	82	17	1	85	11	1	78	20	2	74	24	1
South East	85	13		72	27		87	12	1	90	9		83	16	
South Staffs	80	17		88	11		88	11		90	8	1	87	12	
South West	76	23	1	67	28	3	80	19		78	20	1	75	22	1
Southern	85	13		81	17		89	11		76	23		83	16	
Sutton & East Surrey	88	9	2	91	9		94	6		88	12		91	9	1
Veolia Water East	91	7	1	85	12	1	87	12		92	8		89	10	
Thames	84	15	1	83	15		80	18	2	85	14		83	15	1
Veolia Water Central	73	26		81	18		78	21		82	17		79	20	
United Utilities	78	19	3	78	20	2	84	15	1	85	14		81	17	1
Welsh Water	70	26	1	71	27	2	81	19		70	30		73	26	1
Wessex	74	24	1	78	22		83	17		83	15	1	80	19	
Yorkshire	76	23	1	80	18	1	83	17		70	27	2	77	21	1
Scottish	0	100		0	100		0	100		0	100		0	100	
Overall	**73**	**25**	**1**	**74**	**24**	**1**	**80**	**19**	**1**	**75**	**23**	**1**	**76**	**23**	**1**

Respondents were asked why they had contacted their water company. Overall, 76% of calls were with regards to billing and 23% were operational in nature.

NB Some figures do not total 100%, due to respondents refusing to provide the reason for contact.

3.3 Overall Performance Assessment

Table 6 below shows the annual scores for each water company over the last three years, and the confidence grade accuracy band for each. Four hundred interviews provide a 95% confidence level that the results are +/-0.1 (for means) and +/-5% (for percentages). This falls into the Ofwat confidence grade accuracy band of '2', assuming companies are providing full data sets. As in previous years, in 2009/10 all companies provided adequate data to allow enough interviews to take place to achieve this confidence level[1].

Table 6: Annual Scores

Water Company	Annual satisfaction score 2006-07	Annual satisfaction score 2007-08	Annual satisfaction score 2008-09	Annual satisfaction score 2009-10	Confidence grade accuracy band
Bristol	4.62	4.70	4.79	4.79	2
Wessex	4.59	4.72	4.75	4.79	2
Essex & Suffolk	4.50	4.66	4.65	4.77	2
Dee Valley	4.69	4.81	4.73	4.75	2
Bournemouth	4.52	4.60	4.65	4.75	2
Veolia Water East	4.54	4.73	4.82	4.74	2
Cambridge	4.54	4.75	4.72	4.73	2
South Staffs	4.48	4.58	4.68	4.73	2
Portsmouth	4.59	4.64	4.66	4.73	2
Welsh Water	4.57	4.61	4.65	4.72	2
Veolia Water S East	4.62	4.71	4.67	4.69	2
Yorkshire Water	4.50	4.66	4.68	4.65	2
Veolia Water Central	4.43	4.51	4.64	4.63	2
Northumbrian	4.50	4.64	4.68	4.62	2
Anglian/Hartlepool	4.47	4.59	4.49	4.61	2
N Ireland	n/a	4.23	4.40	4.60	2
Sutton & East Surrey	4.37	4.45	4.55	4.57	2
Severn Trent	4.08	4.39	4.42	4.57	2
South East	4.44	4.40	4.48	4.55	2
South West	4.36	4.53	4.50	4.53	2
Scottish	-	-	4.51*	4.49	2
United Utilities	4.29	4.41	4.32	4.48	2
Southern	4.27	4.31	4.33	4.38	2
Thames	4.32	4.42	4.41	4.35	2

* Score based on only two waves of data

[1] Assuming the water companies are providing the full data set of contacts in the sampling week

3.4 Key Drivers Of Satisfaction With Call Handling

In order to assess which individual aspects of a customer call are most important in driving overall satisfaction with the handling of that call, we have conducted some correlation analysis on the data at an overall (national) level.

A correlation measures both the strength and direction of the linear relationship between two variables. The Kendall tau correlation coefficient has been used, as we are interested in the degree of correspondence between two ratings.

Correlation coefficients lie between -1 and 1, with a score of 0 indicating no correlation whatsoever, and a score of 1 or -1 indicating a perfect correlation (either positively or negatively).

Table 7: Correlation Of Individual Service Factors With Overall Satisfaction With The Way In Which The Call Was Handled

Company Service Indicators	Correlation Coefficient (Ranking of importance) yr 09/10	Correlation Coefficient (Ranking of importance) yr 08/09	Correlation Coefficient (Ranking of importance) yr 07/08
Q16 Satisfaction with company willingness to help	0.701 (1)	0.710 (1)	0.707 (2)
Q17 Satisfaction with the politeness of the person spoken to during the call	0.698 (2)	0.681 (2)	0.711 (1)
Q15 Satisfaction that the person spoken to in the company understood the reason for calling	0.647 (3)	0.633 (3)	0.642 (3)
Q10 Satisfaction with having the call answered by an automated message rather than a person	0.604 (4)	0.580 (4)	0.560 (5)
Q21 Satisfaction with the final resolution of the call	0.568 (5)	0.567 (5)	0.561 (4)
Q14 Satisfaction with the number of people that were spoken to	0.565 (6)	0.561 (6)	0.533 (6)
Q11 Ease of using the automated system (where applicable)	0.468 (7)	0.521 (7)	0.521 (7)
Q8 Satisfaction with the time taken to answer the call	0.395 (8)	0.400 (8)	0.438 (8)

The results of the correlation analysis are consistent with the results from the previous year 08/09. The key drivers, of satisfaction with the way in which the call was handled, are those service attributes with the highest correlations and hence the

greatest importance. These are staff politeness and willingness, followed by staff understanding of the reason for the call.

The time taken to answer the call had the lowest correlation coefficient, although this is still a moderate correlation, which indicates that it is more important for staff to be able to deal with the call efficiently than to answer the phone quickly.

That is not to say that if the speed of water companies answering the call fell significantly, that satisfaction would not be affected; if this did happen it is likely that the correlation of speed of answering the call with overall satisfaction, and hence its relative importance, would increase.

3.5 Survey Results

The following charts show results at each of the following levels:

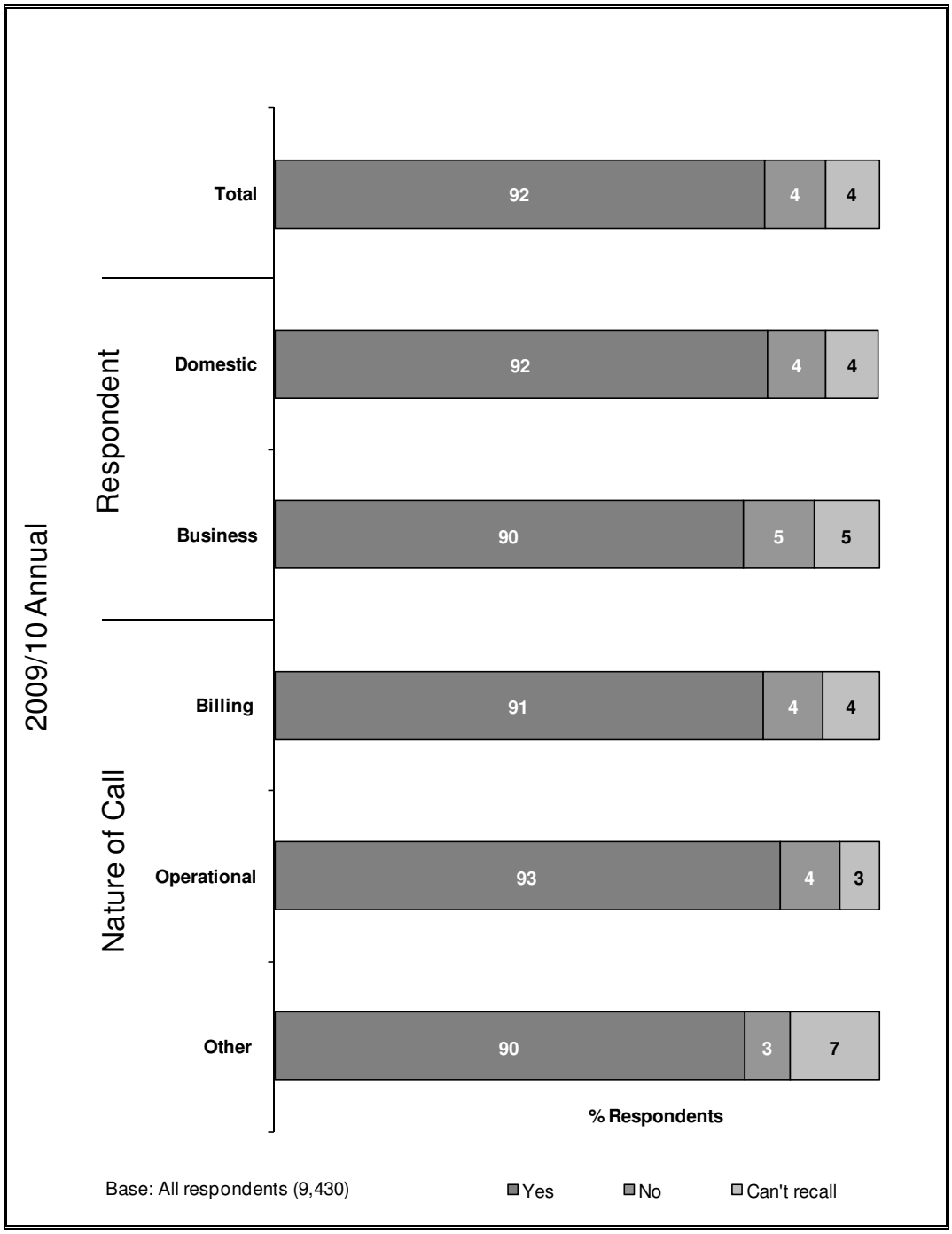
- Industry average for the year
- Water company average for the year
- Water company score per wave

The results are ranked in order from 1st – 24th based upon the annual average score for each water company.

Where the water company average for the year is significantly different (at the 95% level) to that of the industry average, this has been denoted by an asterisk (*) eg on page 13, 96% of Cambridge customers got through to the company on the first attempt, a result which was significantly better than that for the water industry as a whole. While on page 16 only 87% of Southern Water customers got through to the company on their first attempt, this is significantly lower than that for the water industry as a whole.

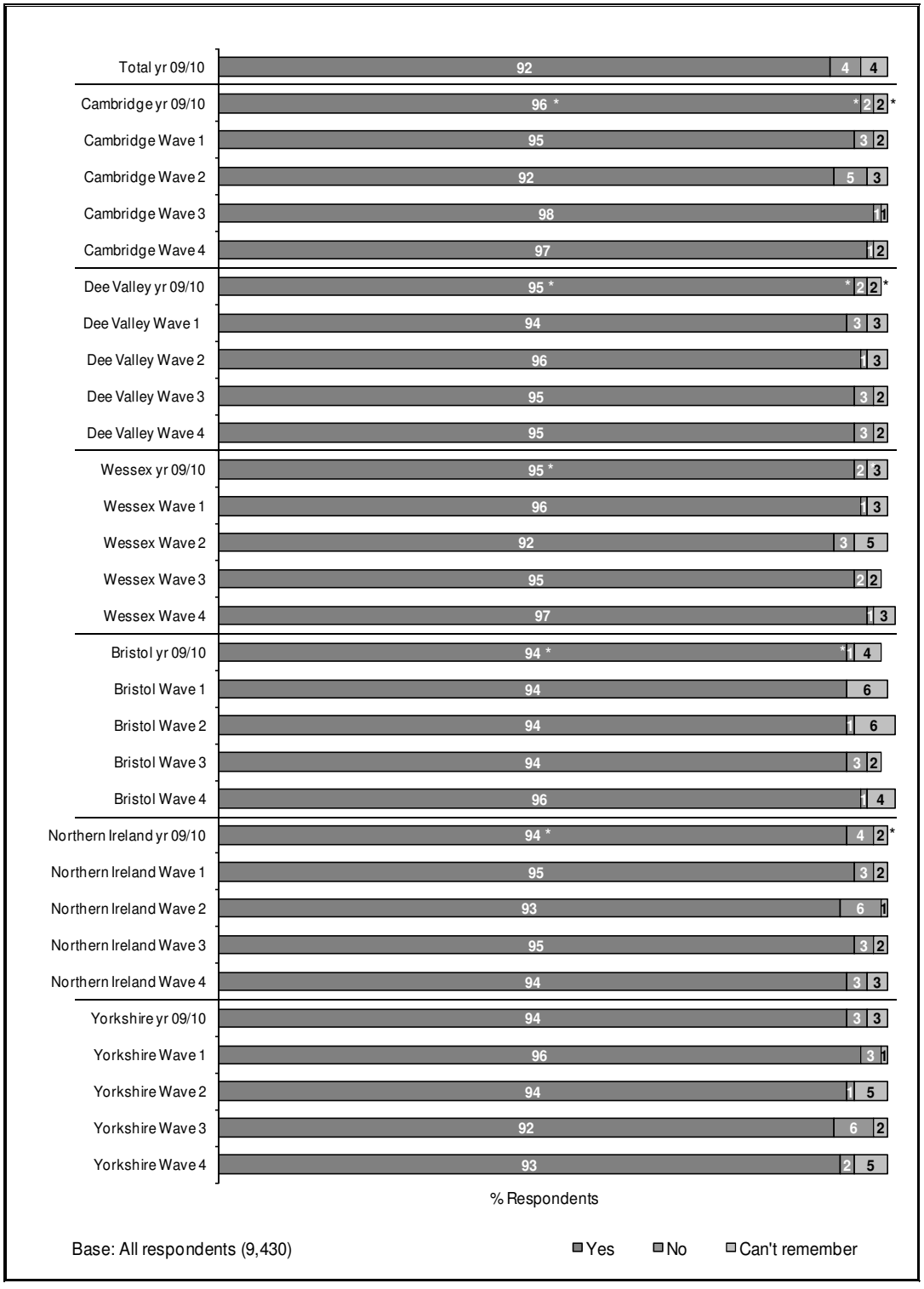
Please note Q6 is excluded from this report as it is based on only a low number of respondents. Q19 is omitted as it is an open ended question. Results for both questions can be found in the quarterly tabulations.

Q5 Did you get through to the company on your first attempt, whether to an automated message or a person?



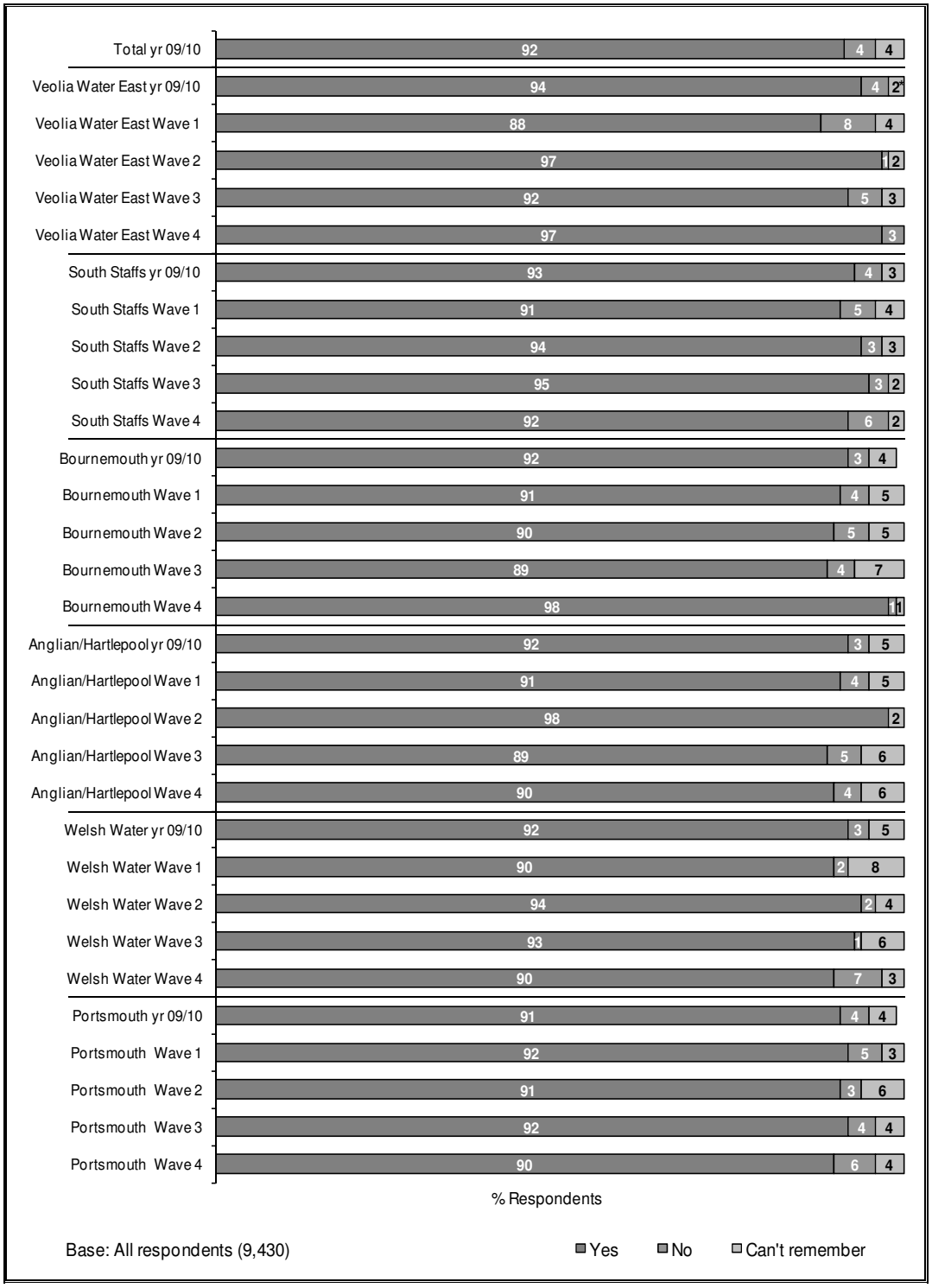
Q5 Did you get through to the company on your first attempt, whether to an automated message or a person?

Companies Ranked 1st – 6th



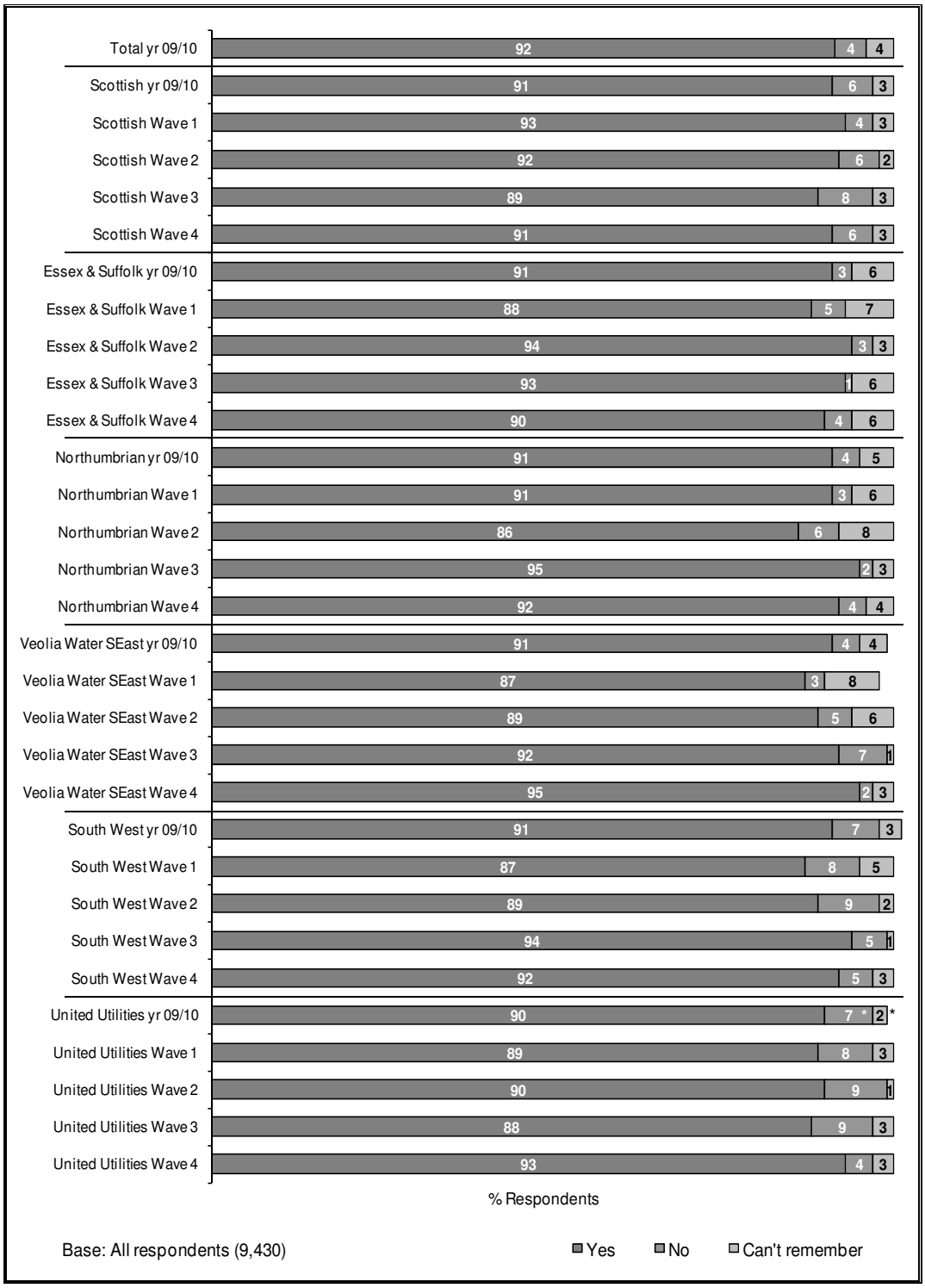
Q5 Did you get through to the company on your first attempt, whether to an automated message or a person?

Companies Ranked 7th – 12th



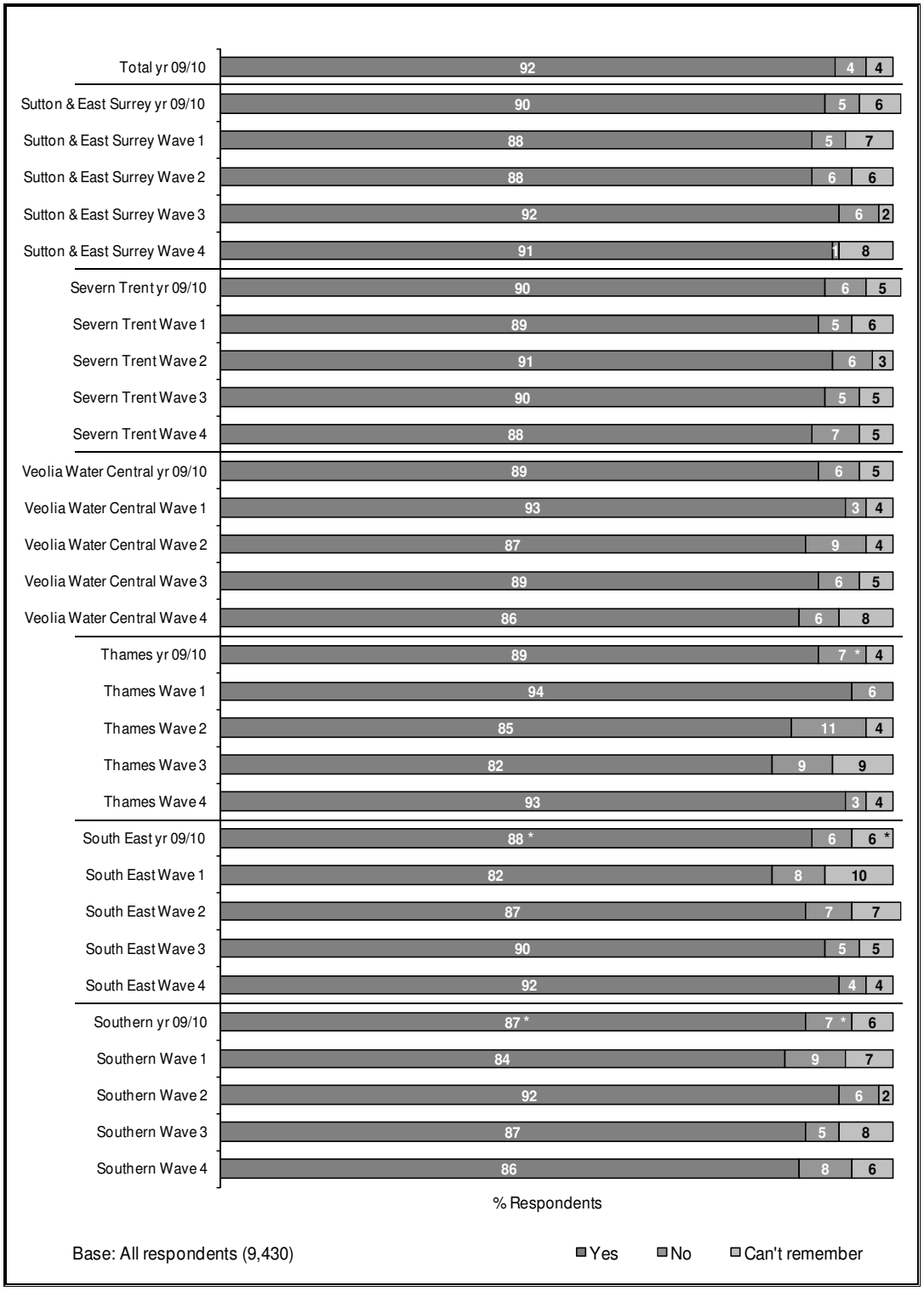
Q5 Did you get through to the company on your first attempt, whether to an automated message or a person?

Companies Ranked 13th – 18th



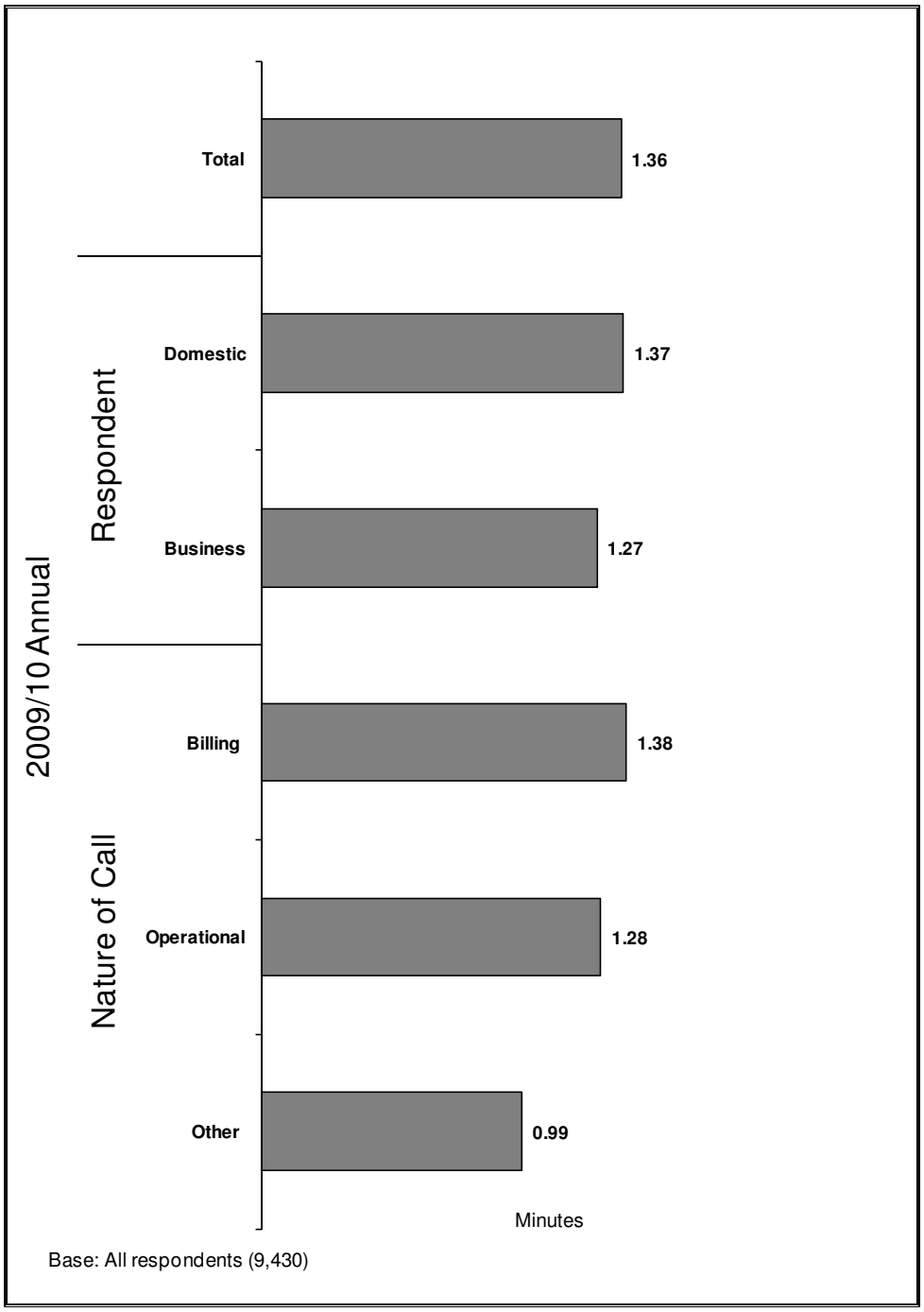
Q5 Did you get through to the company on your first attempt, whether to an automated message or a person?

Companies Ranked 19th – 24th



Q7 On the call on which you did get through, how long did you have to wait before it was first answered (either by a person or an automated system?) UNPROMPTED

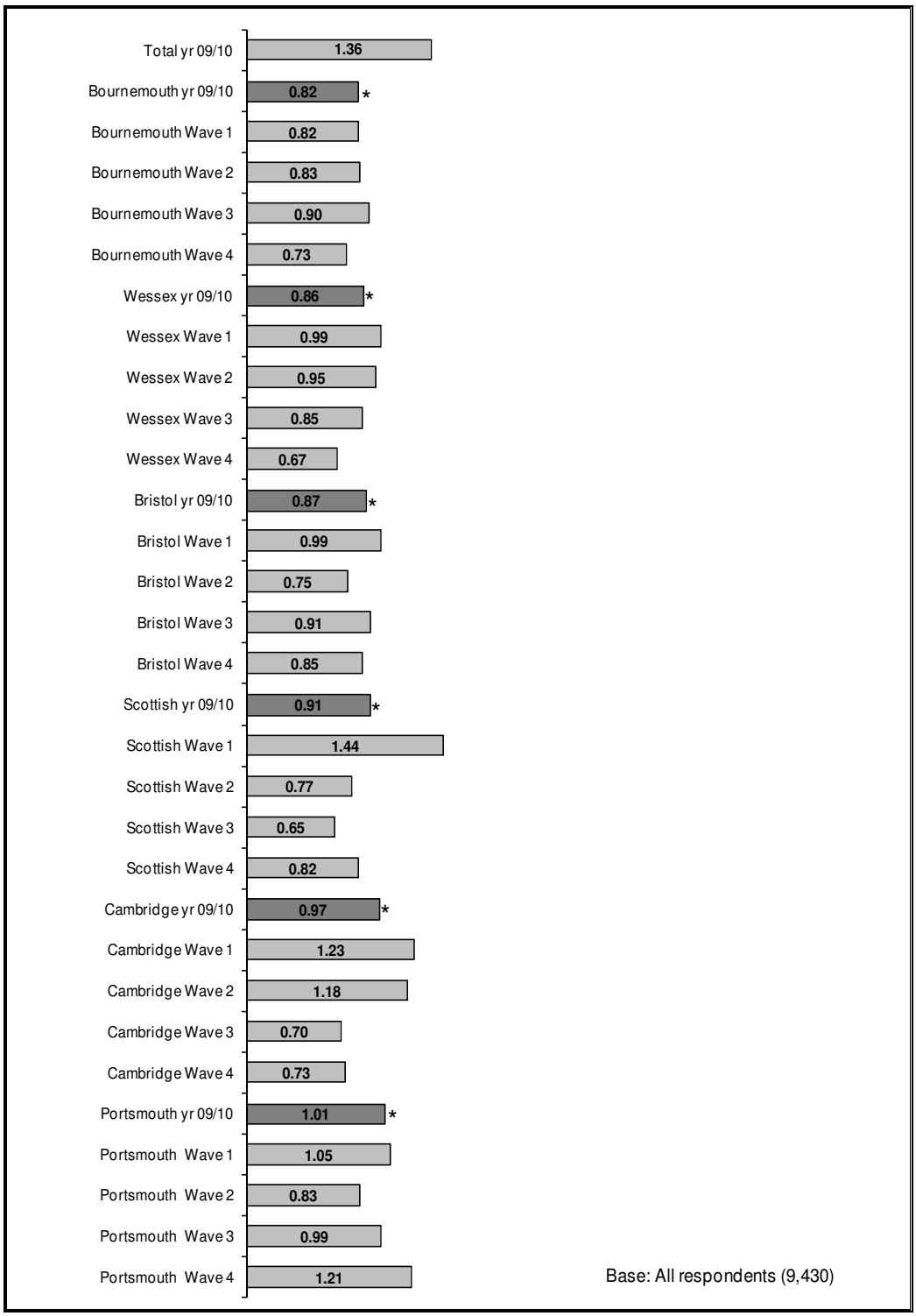
(Note: length of time is shown as whole minutes and fractions of minutes, for example a score of 1.50 would mean one and half minutes not 1 minute and 50 seconds).



Q7 On the call on which you did get through, how long did you have to wait before it was first answered (either by a person or an automated system?) UNPROMPTED

(Note: length of time is shown as whole minutes and fractions of minutes, for example a score of 1.50 would mean one and half minutes not 1 minute and 50 seconds).

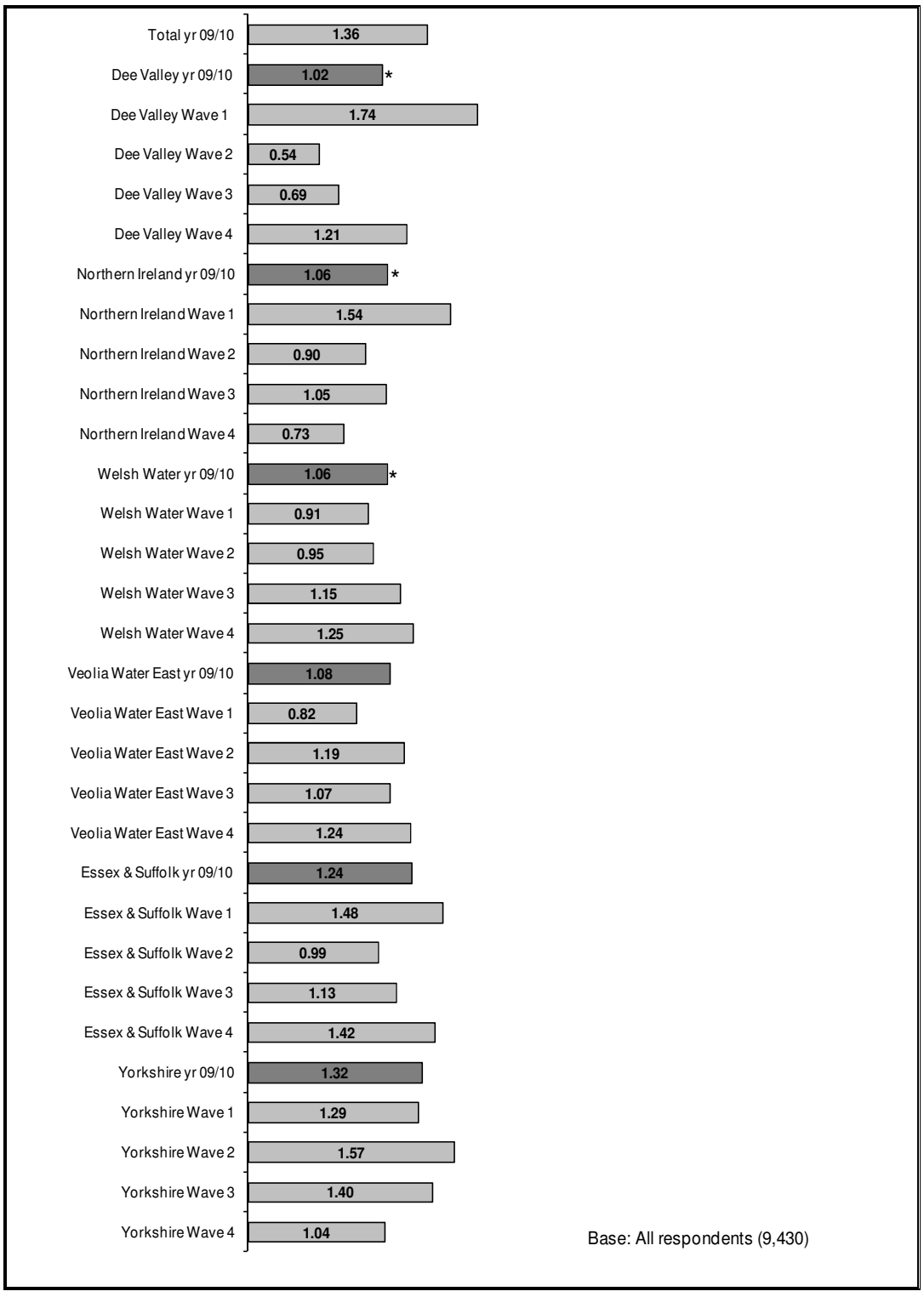
Companies Ranked 1st – 6th



Q7 On the call on which you did get through, how long did you have to wait before it was first answered (either by a person or an automated system?) UNPROMPTED

(Note: length of time is shown as whole minutes and fractions of minutes, for example a score of 1.50 would mean one and half minutes not 1 minute and 50 seconds).

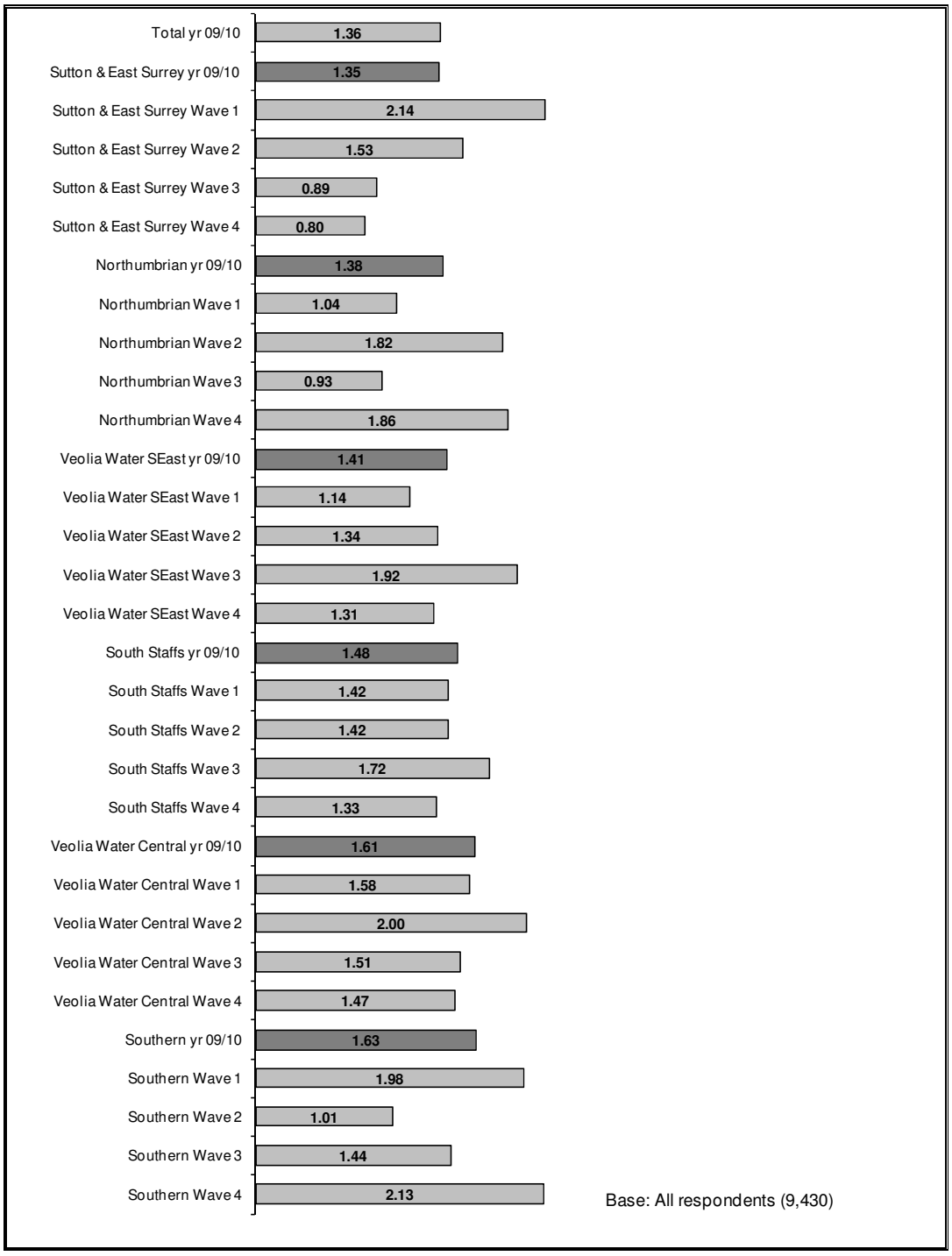
Companies Ranked 7th – 12th



Q7 On the call on which you did get through, how long did you have to wait before it was first answered (either by a person or an automated system?) UNPROMPTED

(Note: length of time is shown as whole minutes and fractions of minutes, for example a score of 1.50 would mean one and half minutes not 1 minute and 50 seconds).

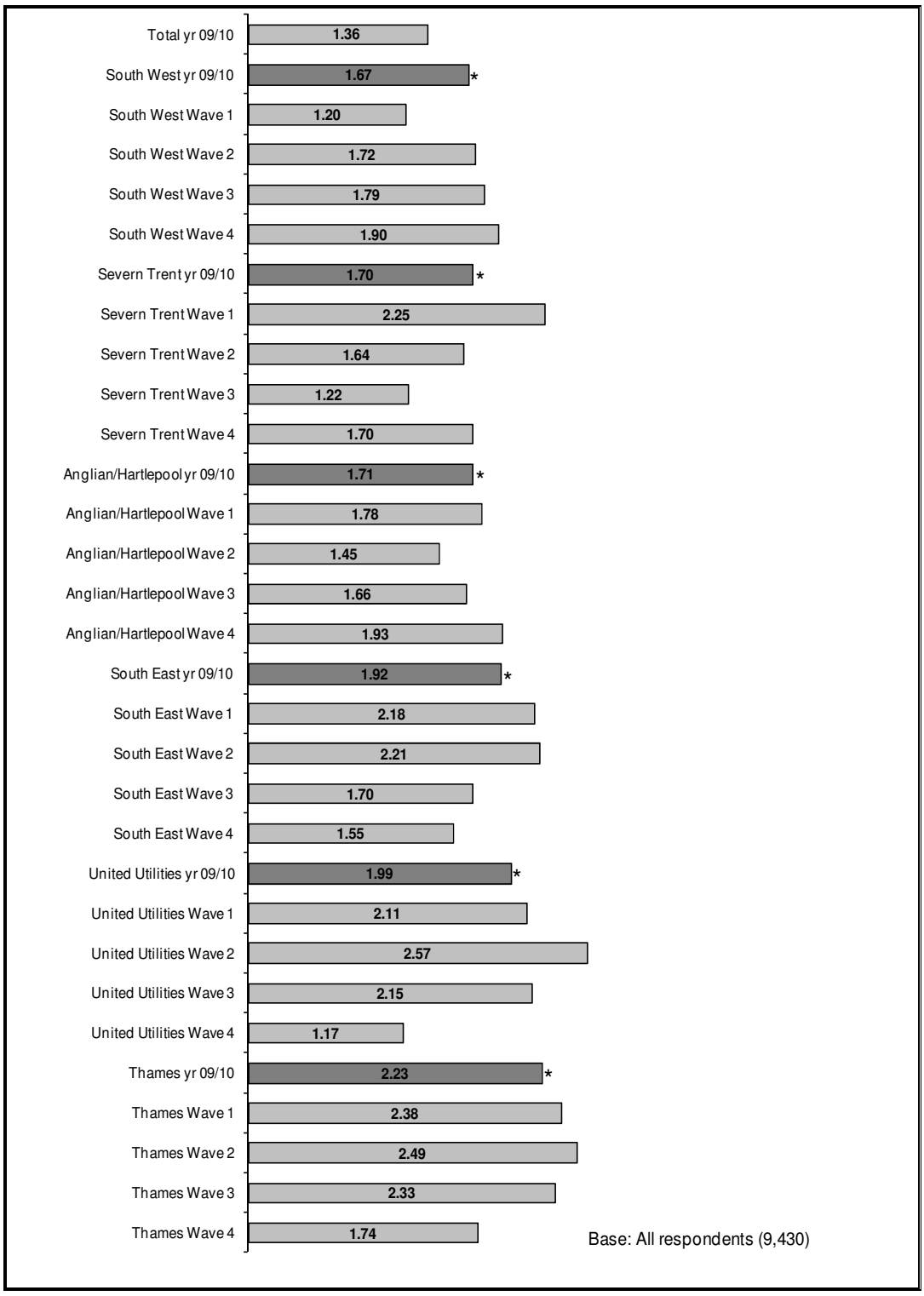
Companies Ranked 13th – 18th



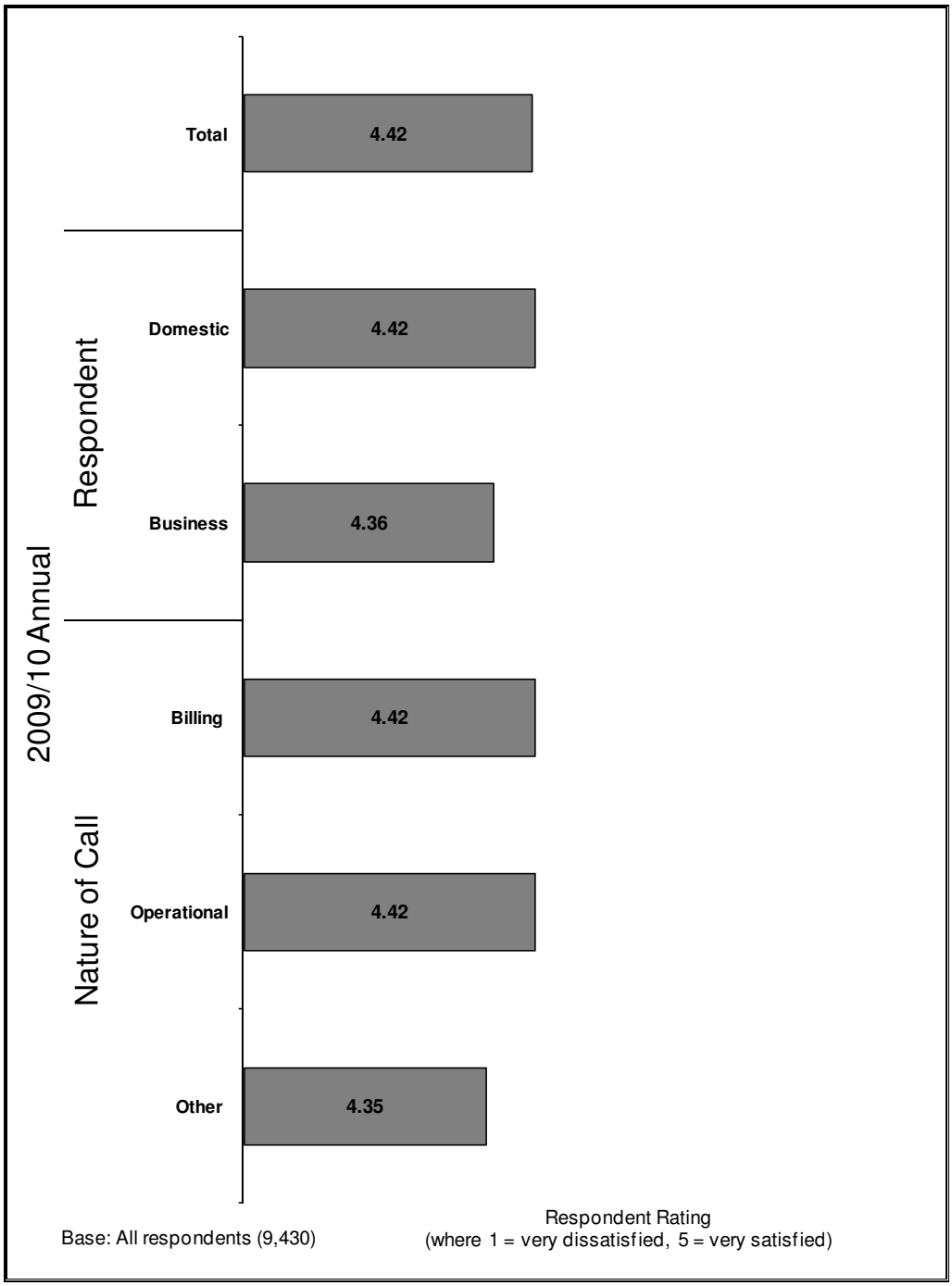
Q7 On the call on which you did get through, how long did you have to wait before it was first answered (either by a person or an automated system?) UNPROMPTED

(Note: length of time is shown as whole minutes and fractions of minutes, for example a score of 1.50 would mean one and half minutes not 1 minute and 50 seconds).

Companies Ranked 19th – 24th

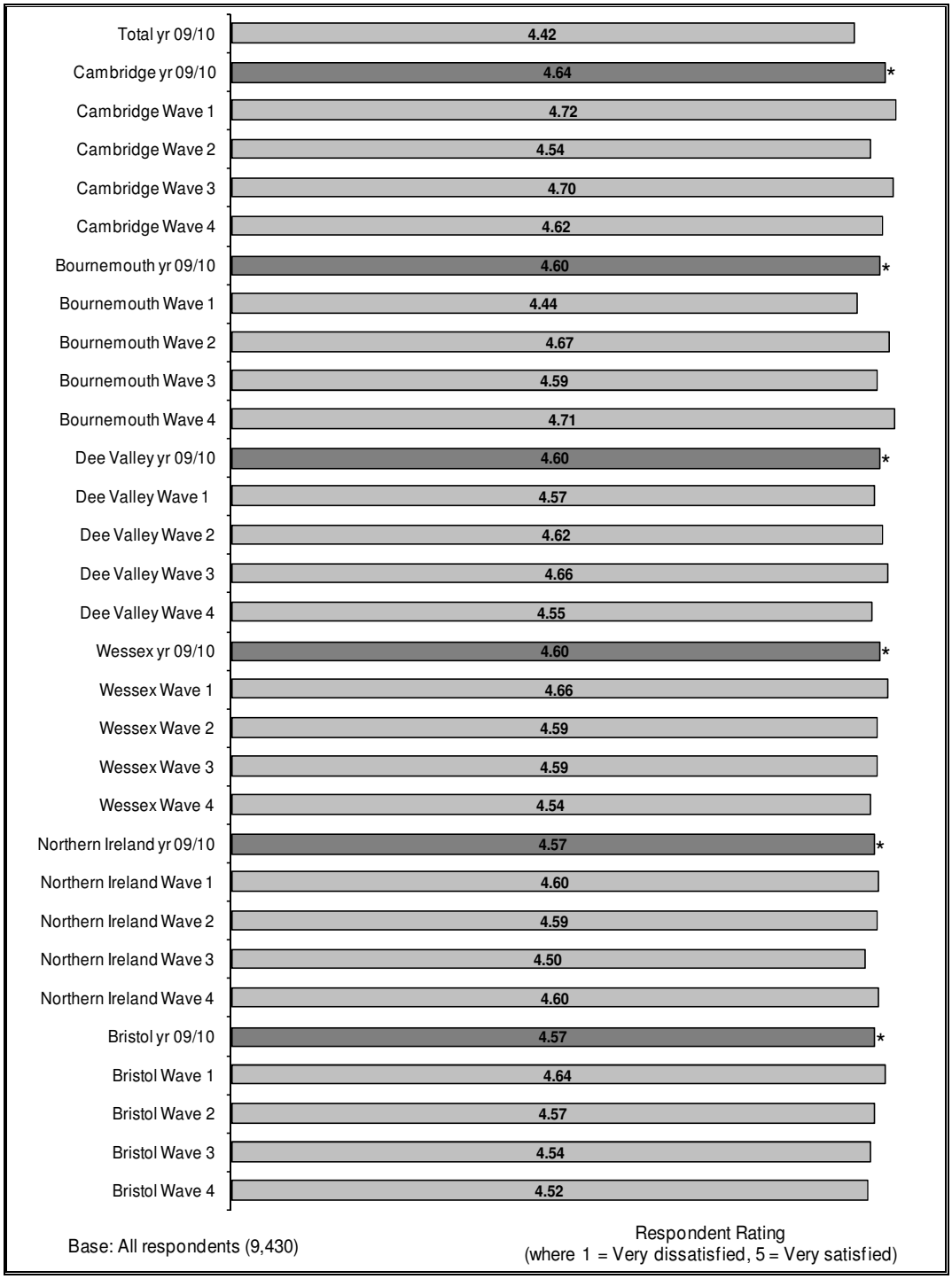


Q8 How satisfied were you with the length of time that you had to wait before your call was answered?



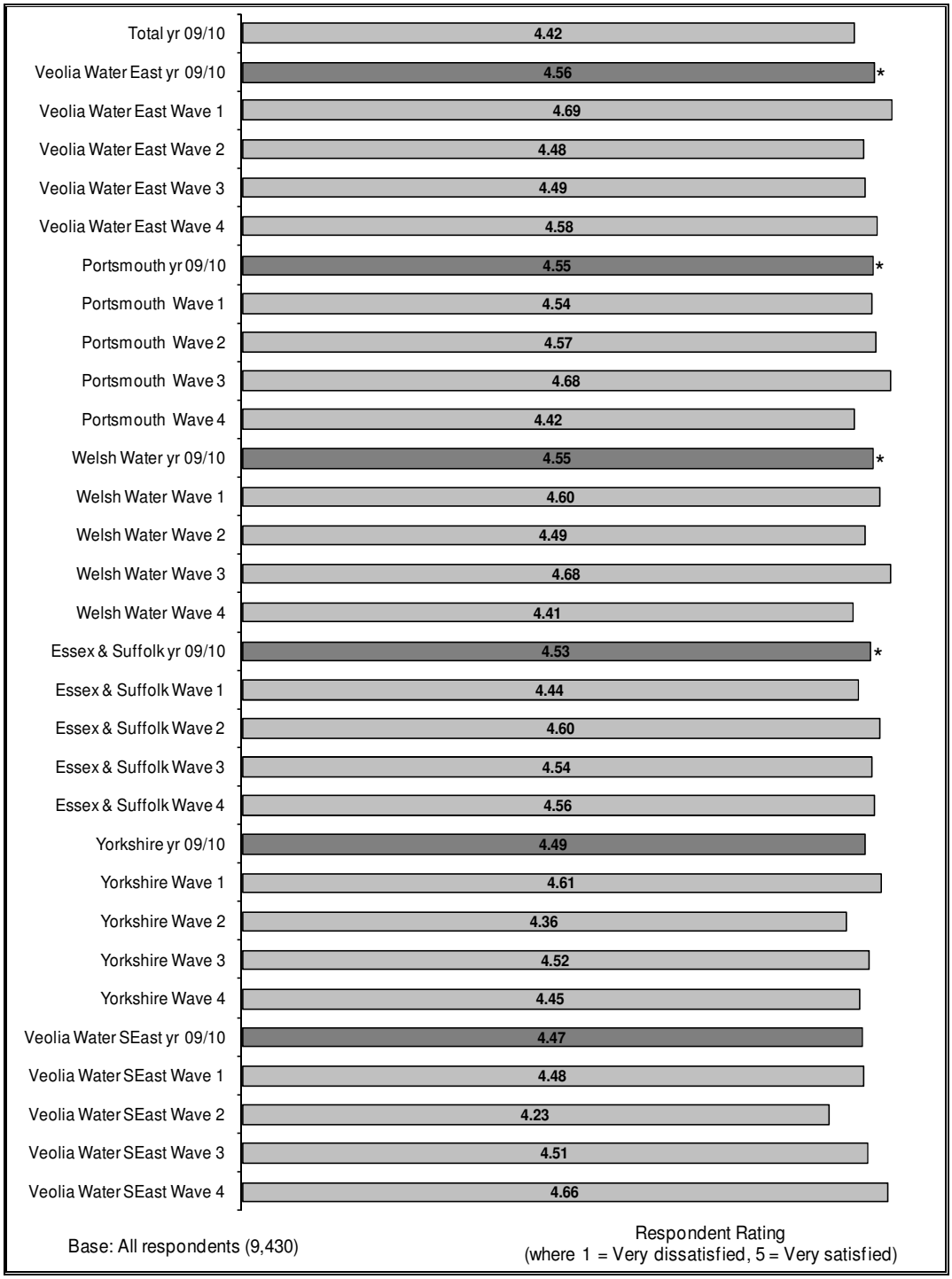
Q8 How satisfied were you with the length of time that you had to wait before your call was answered?

Companies Ranked 1st – 6th



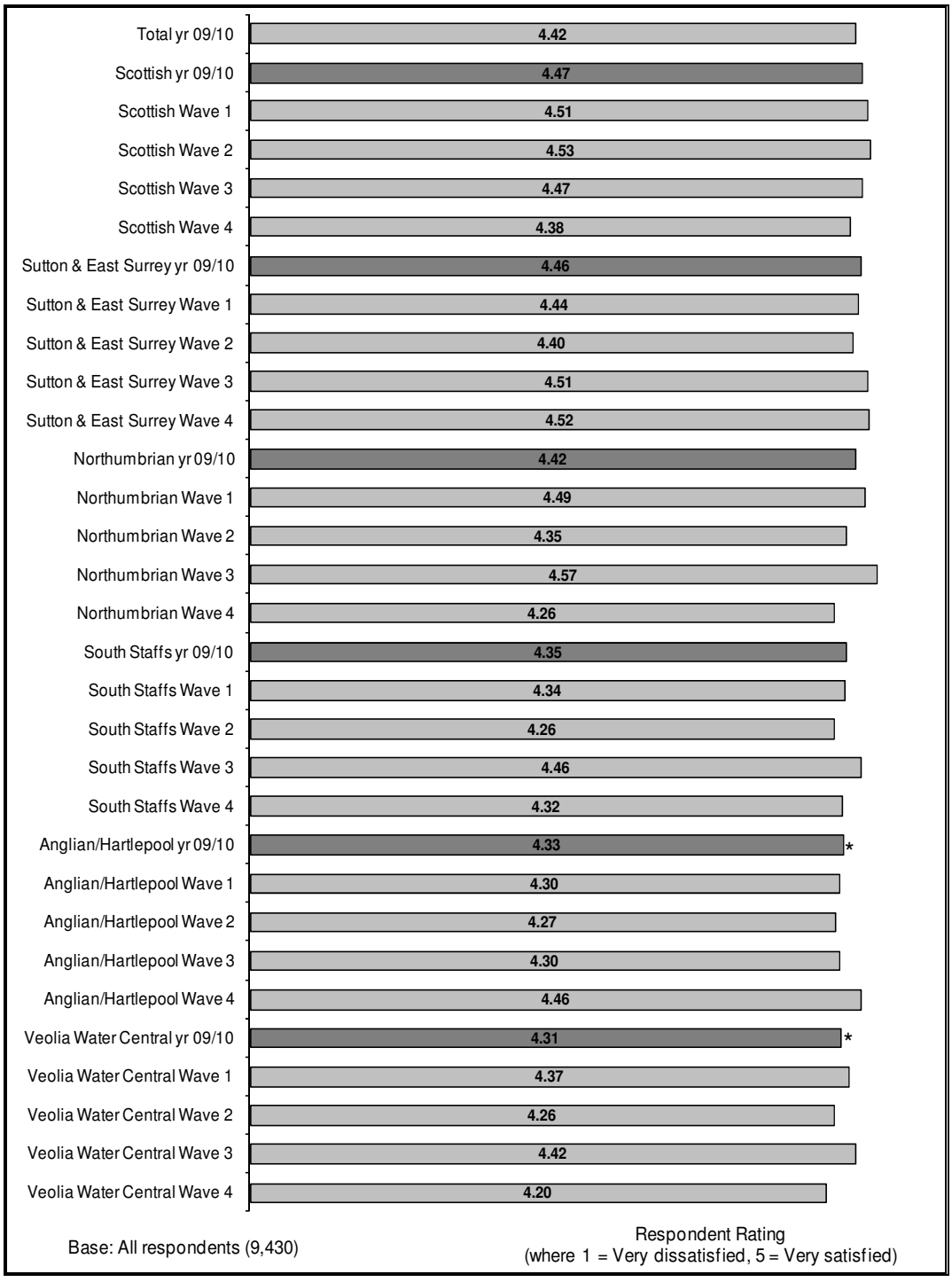
Q8 How satisfied were you with the length of time that you had to wait before your call was answered?

Companies Ranked 7th – 12th



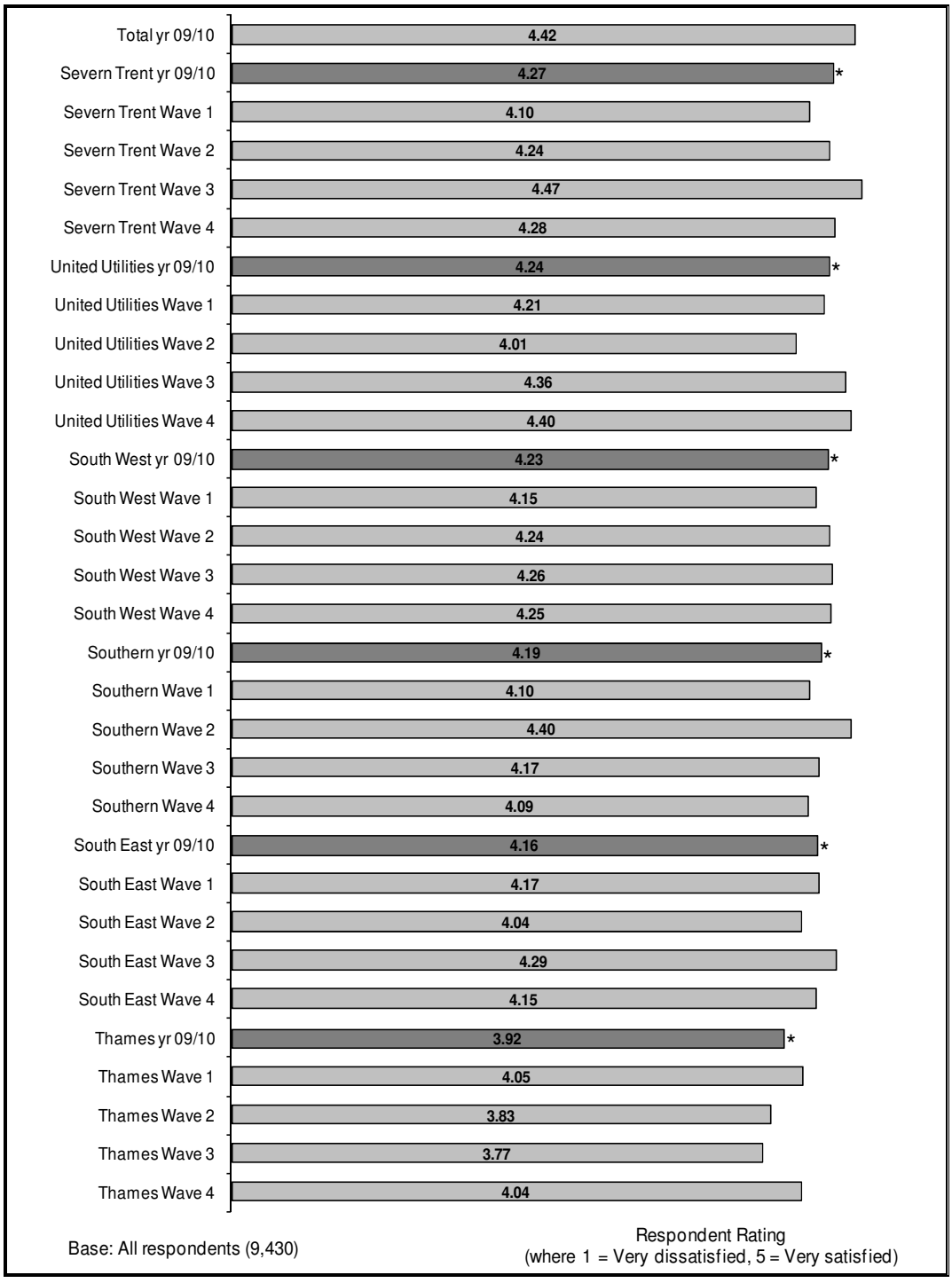
Q8 How satisfied were you with the length of time that you had to wait before your call was answered?

Companies Ranked 13th – 18th

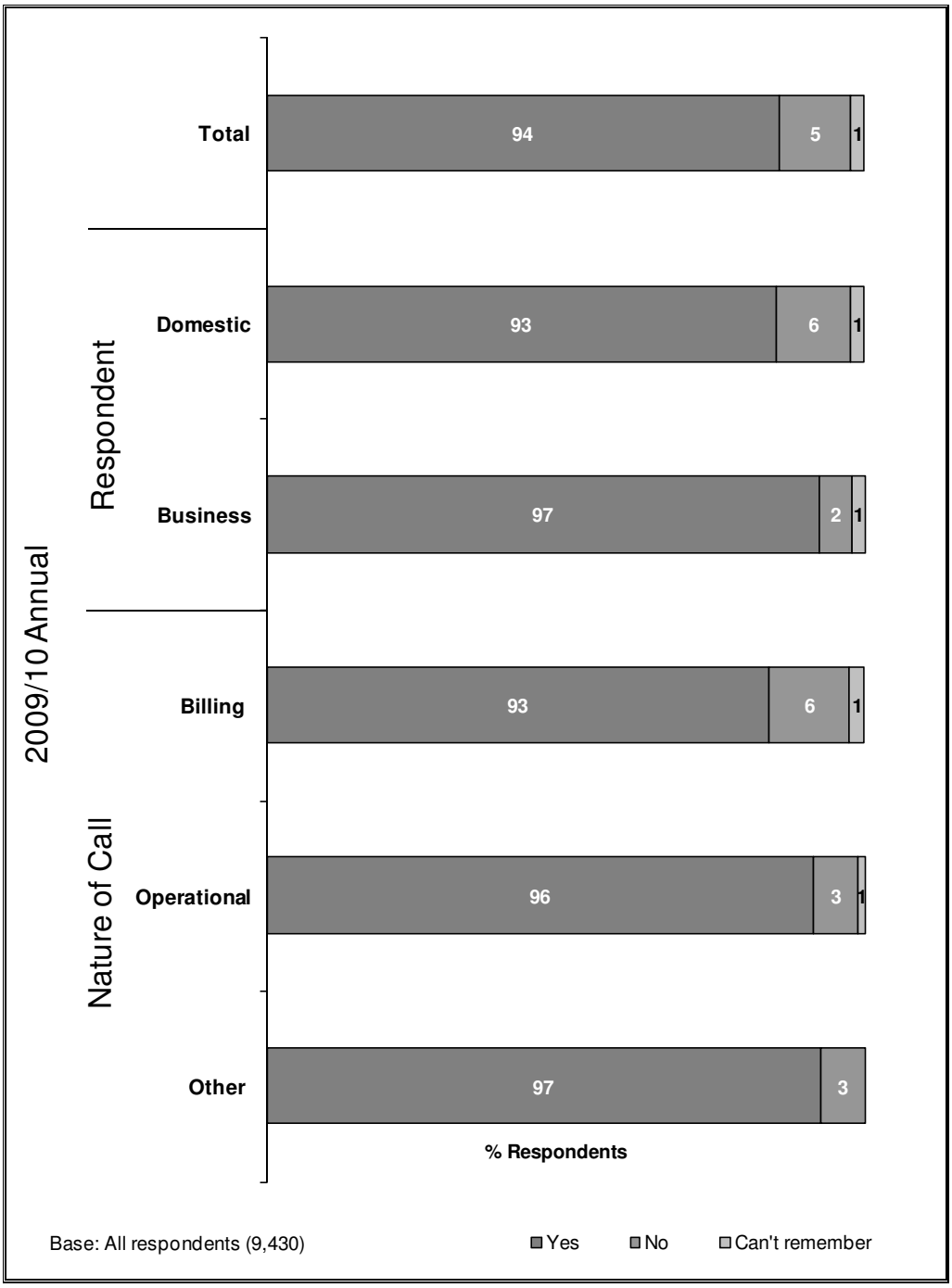


Q8 How satisfied were you with the length of time that you had to wait before your call was answered?

Companies Ranked 19th – 24th

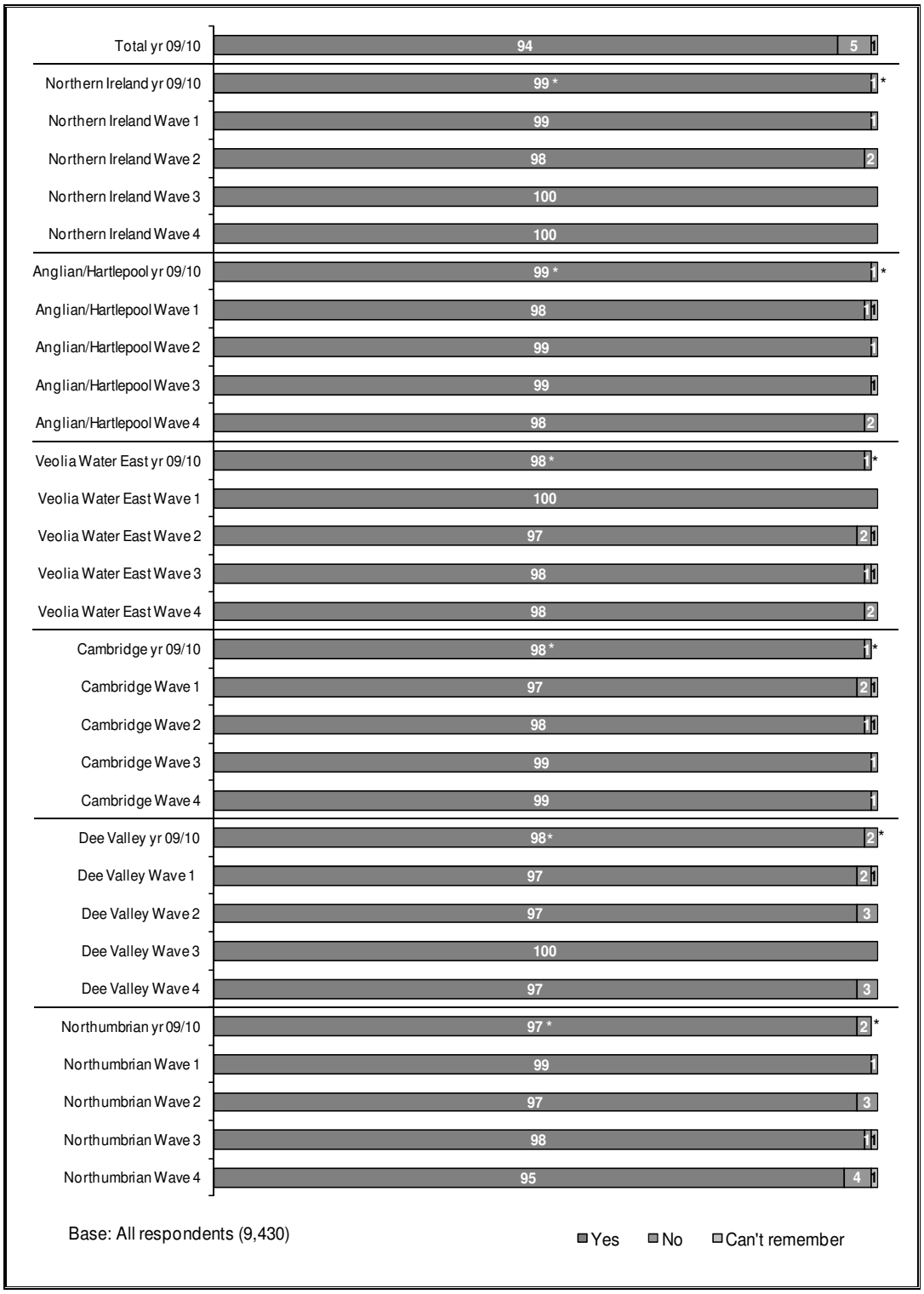


Q9 Did you speak with a person at any time during your call?



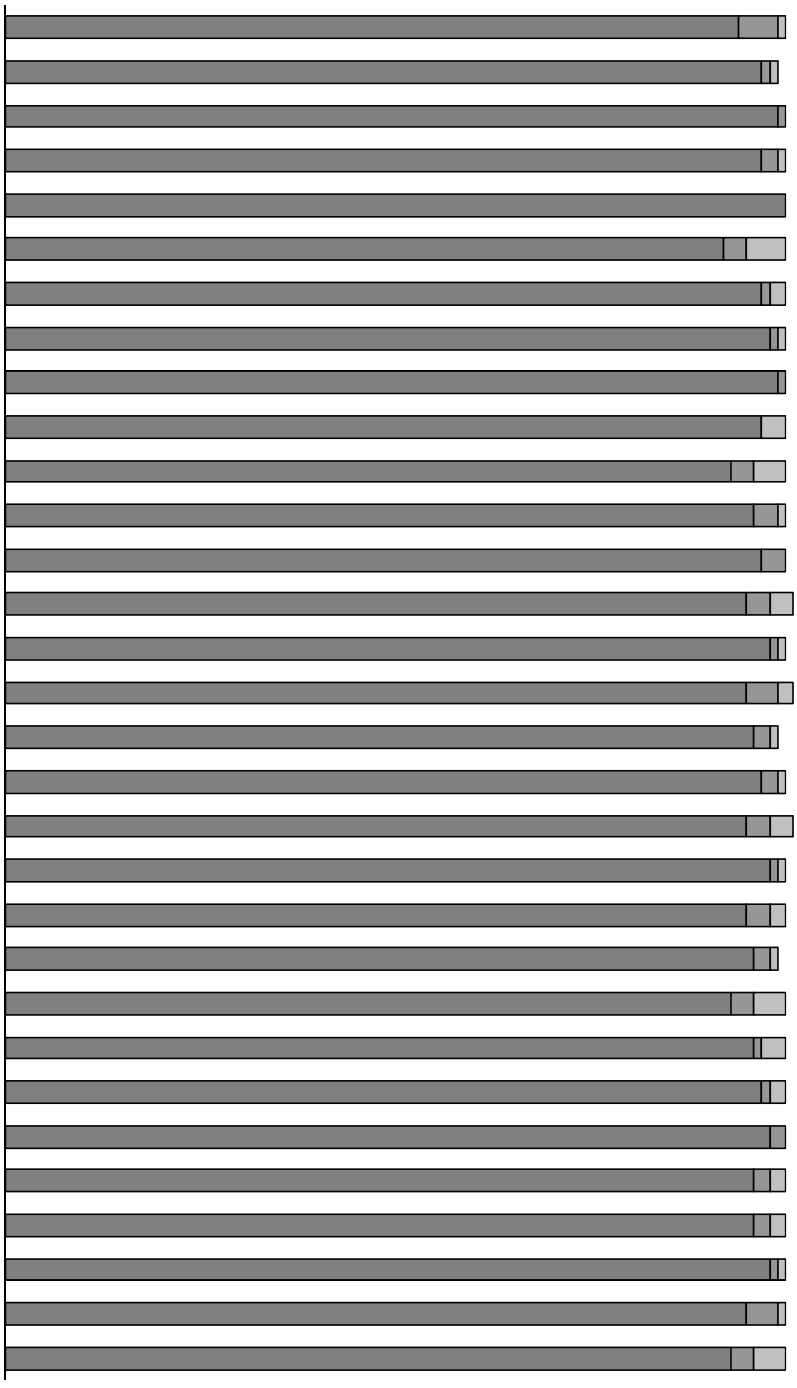
Q9 Did you speak with a person at any time during your call?

Companies Ranked 1st – 6th



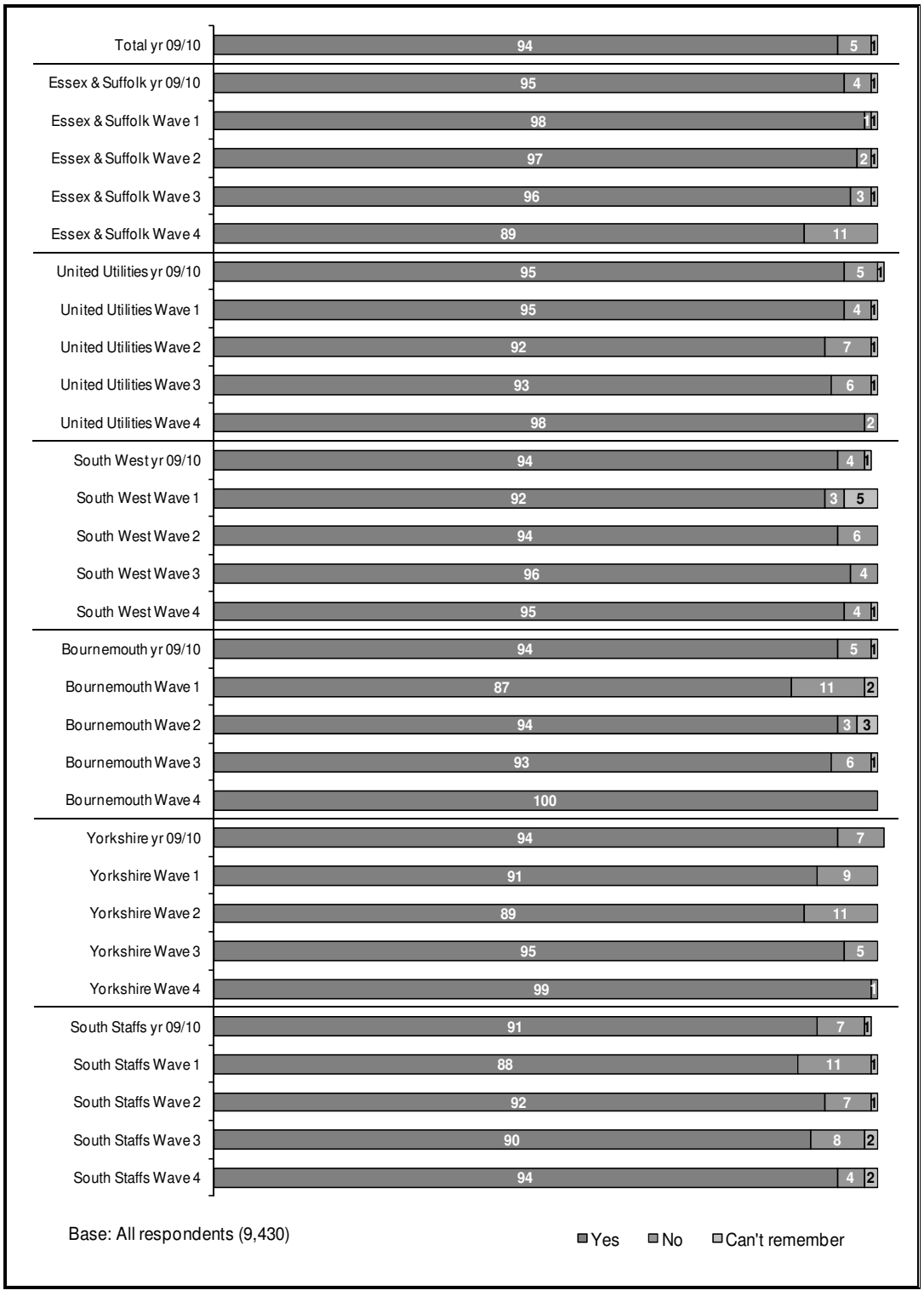
Q9 Did you speak with a person at any time during your call?

Companies Ranked 7th – 12th



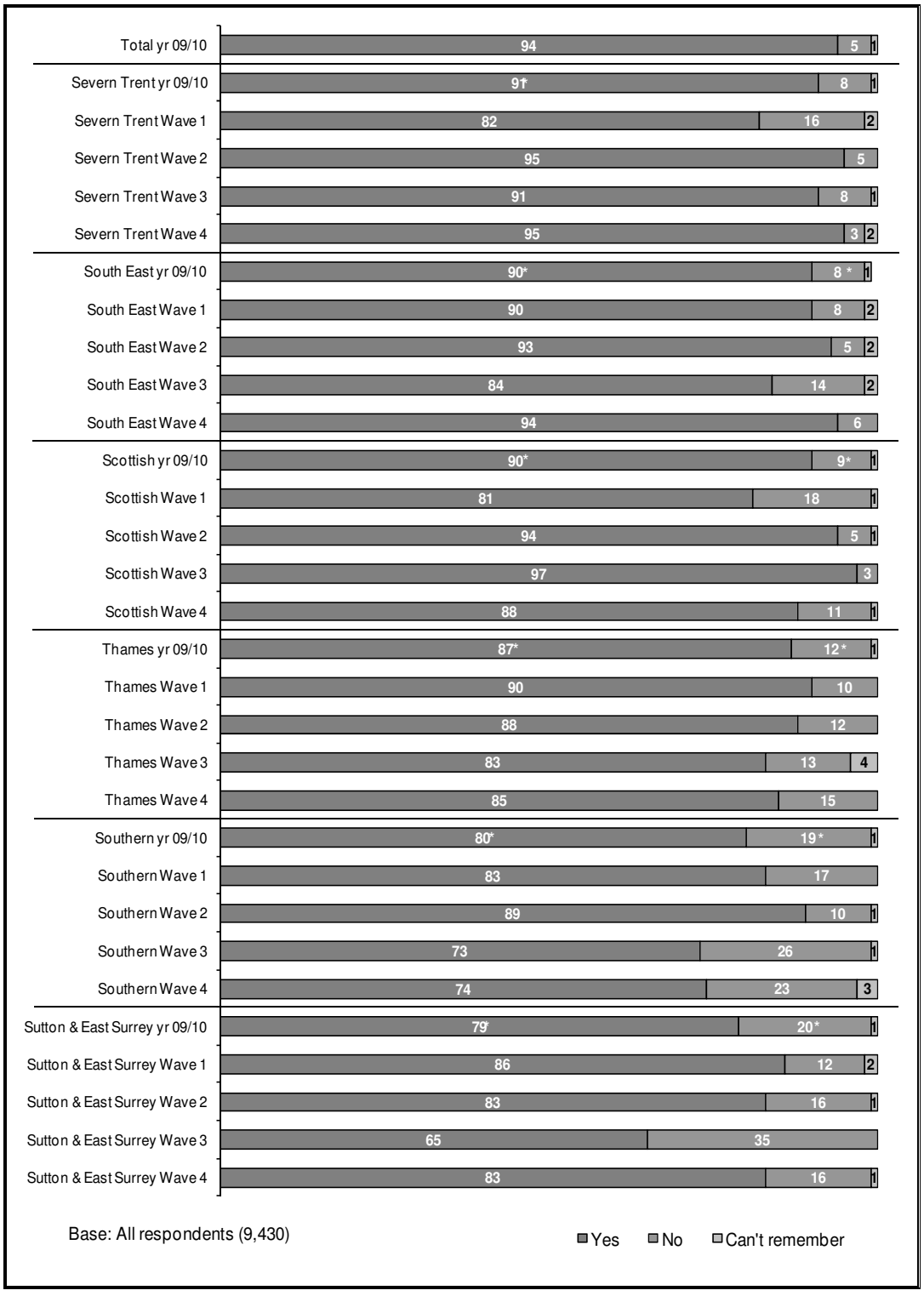
Q9 Did you speak with a person at any time during your call?

Companies Ranked 13th – 18th



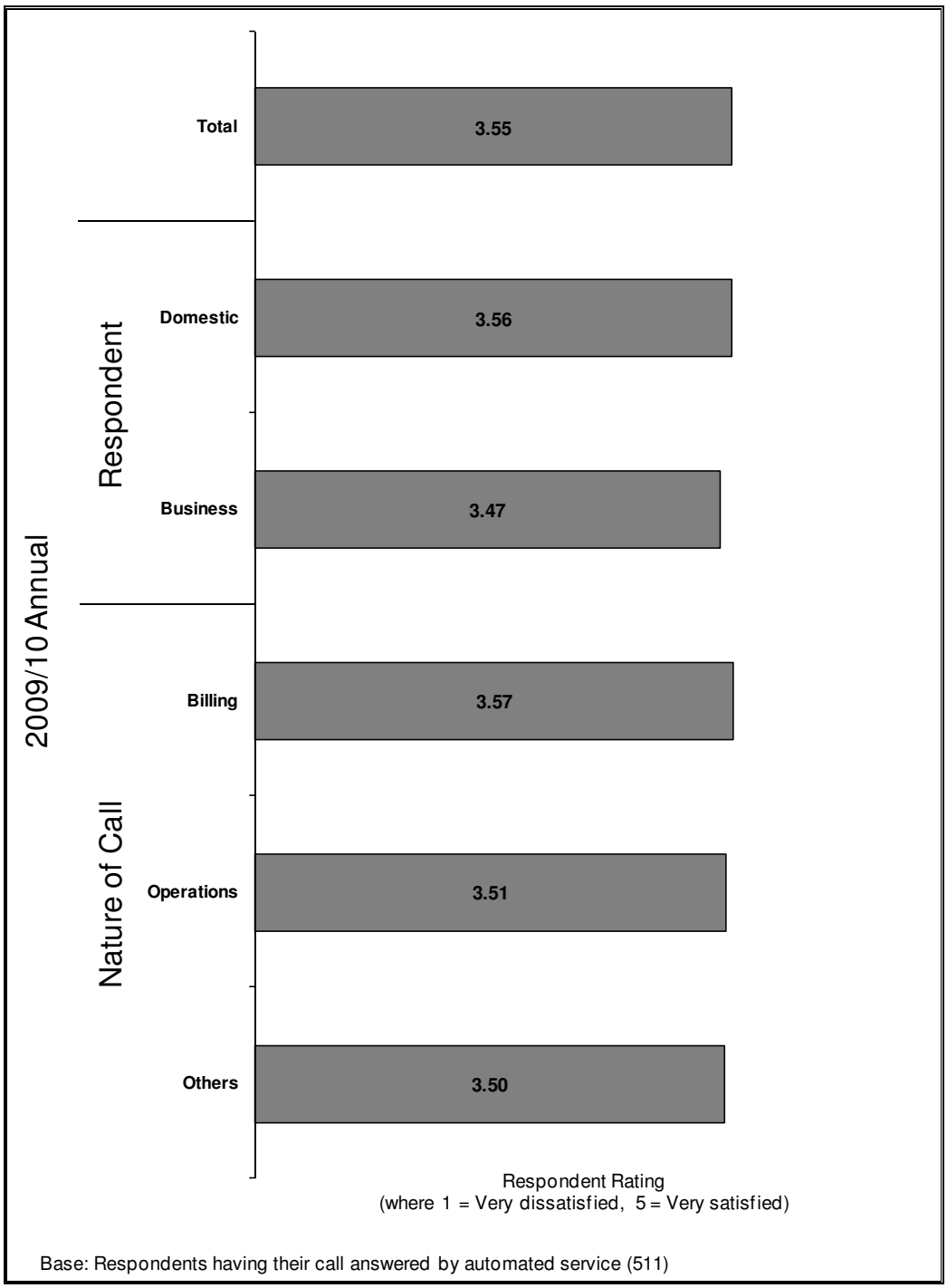
Q9 Did you speak with a person at any time during your call?

Companies Ranked 19th – 24th



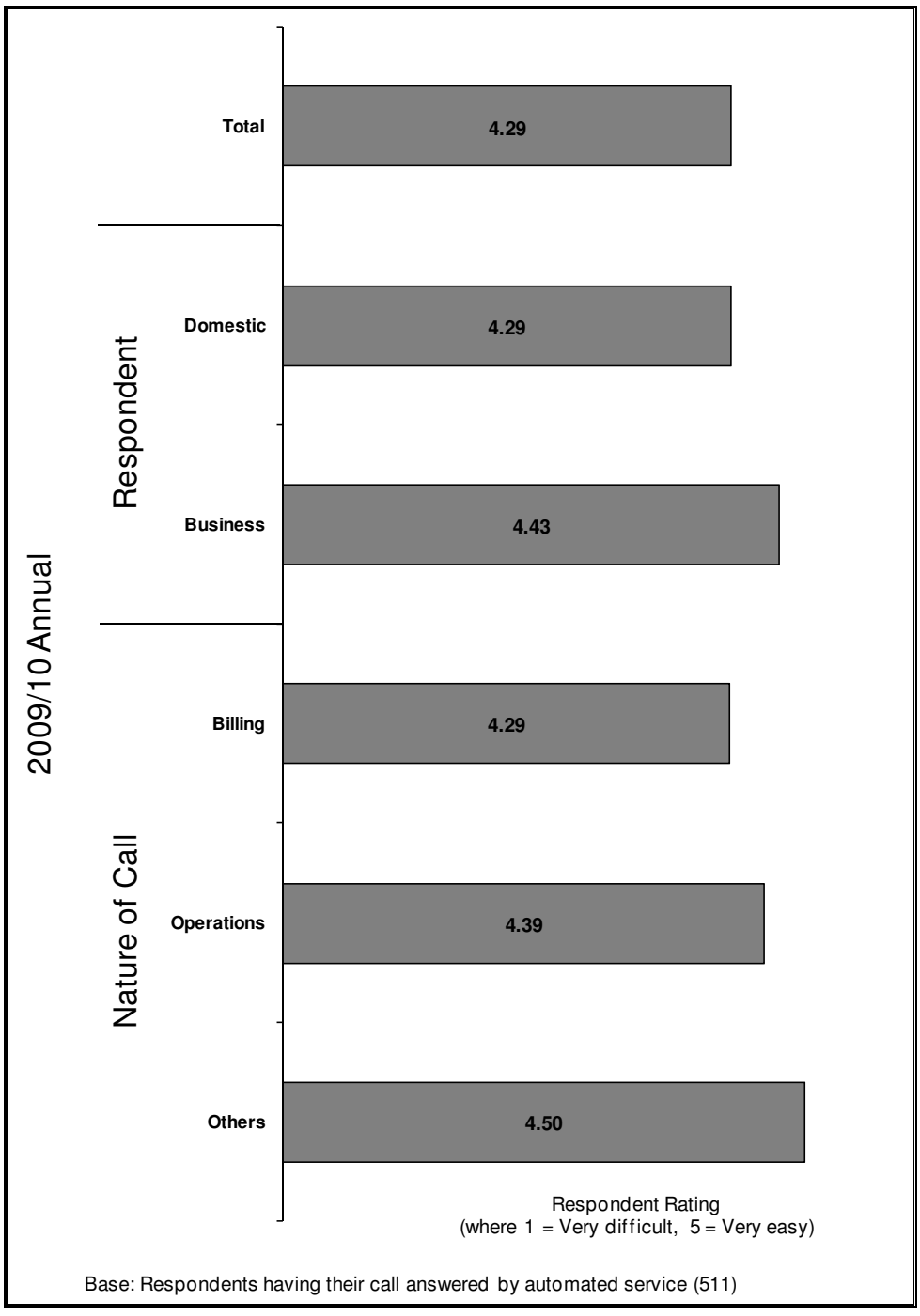
Q10 How satisfied were you with having your call answered by an automated message rather than a person?

Note: Question 10 was asked only of those having their call answered by an automated service, resulting in a small base size (511). As a result, the sample sizes at an individual water company level are extremely low, therefore we have only presented the results at an overall level.



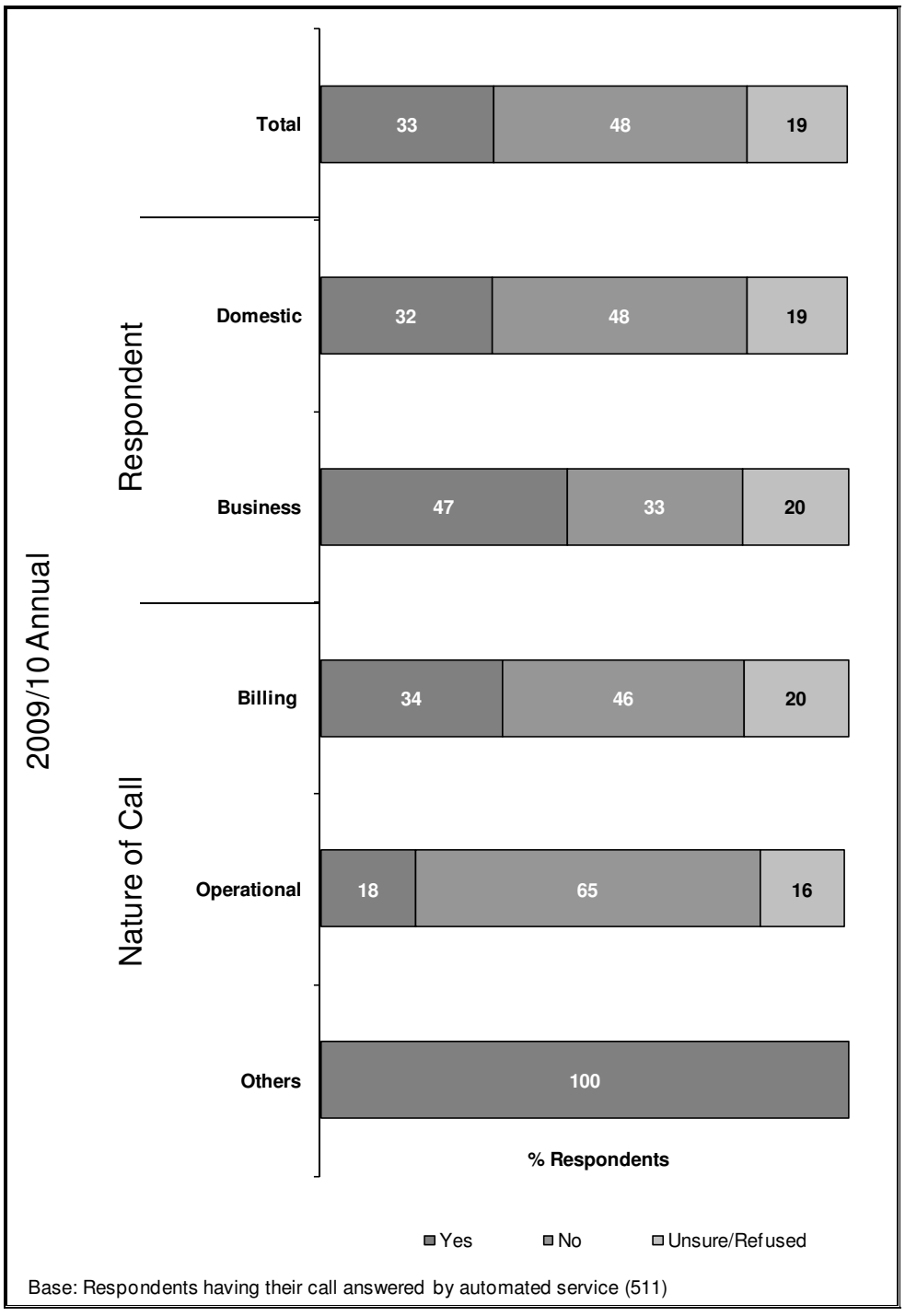
Q11 How easy was the automated system to use? Was it easy, difficult or neither easy nor difficult

Note: Question 11 was asked only of those having their call answered by an automated service, resulting in a small base size (511). As a result, the sample sizes at an individual water company level are extremely low, therefore we have only presented the results at an overall level.



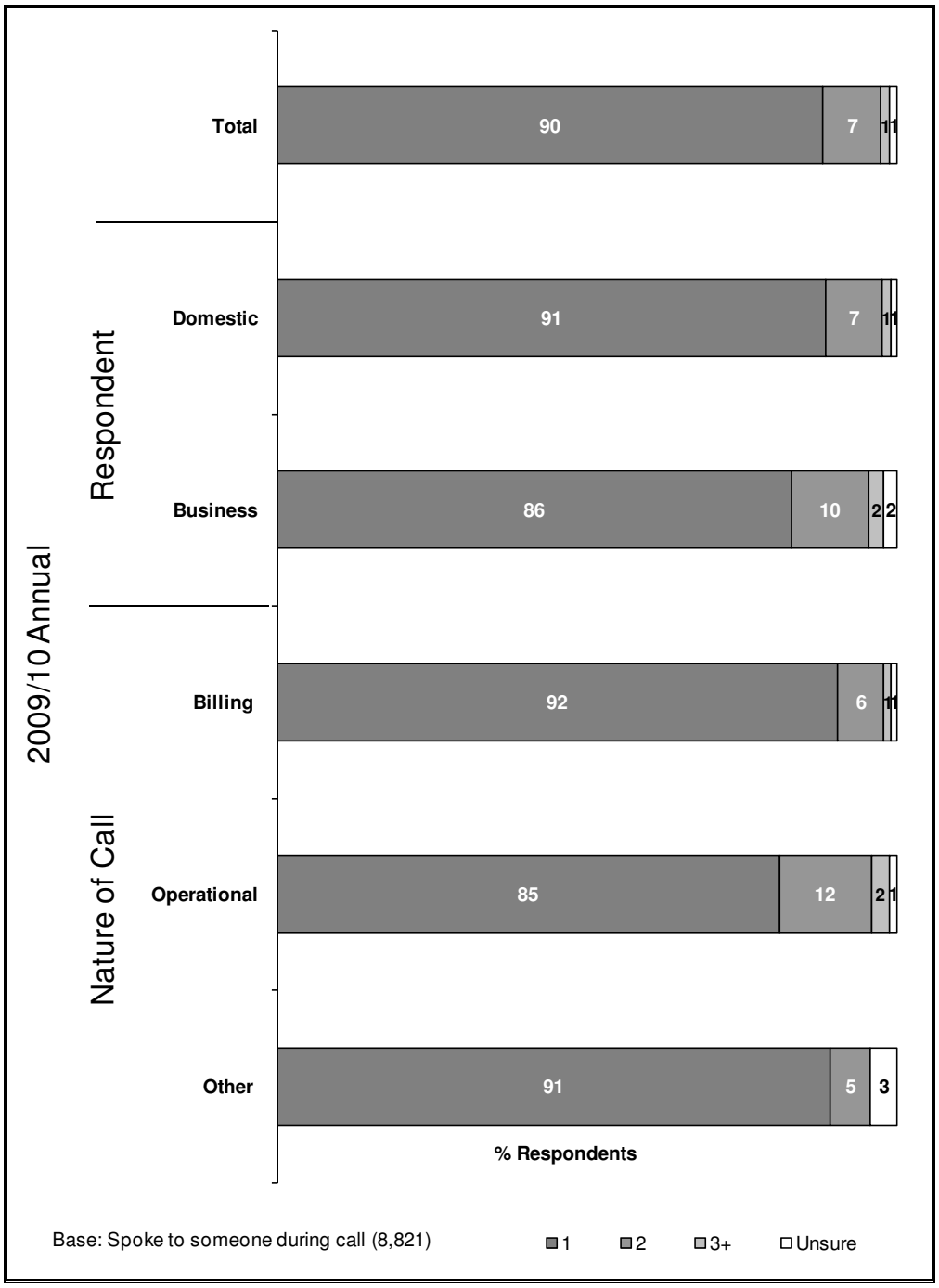
Q12 Were you offered the opportunity to speak to a person if you wanted to?

Note: Question 12 was asked only of those having their call answered by an automated service, resulting in a small base size (511). As a result, the sample sizes at an individual water company level are extremely low, therefore we have only presented the results at an overall level.



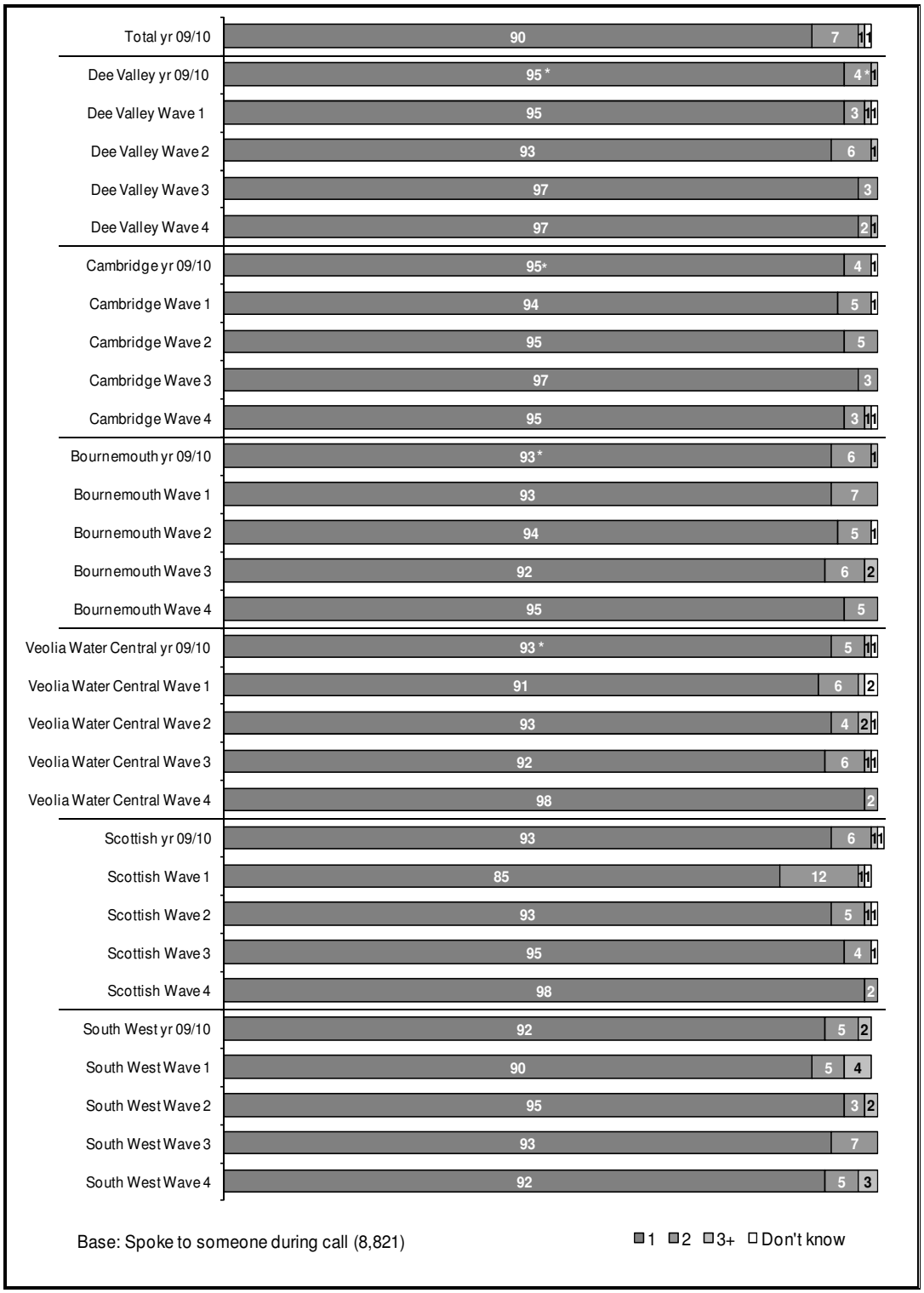
Base: Respondents having their call answered by automated service (511)

Q13 During the course of the call how many people did you speak to?



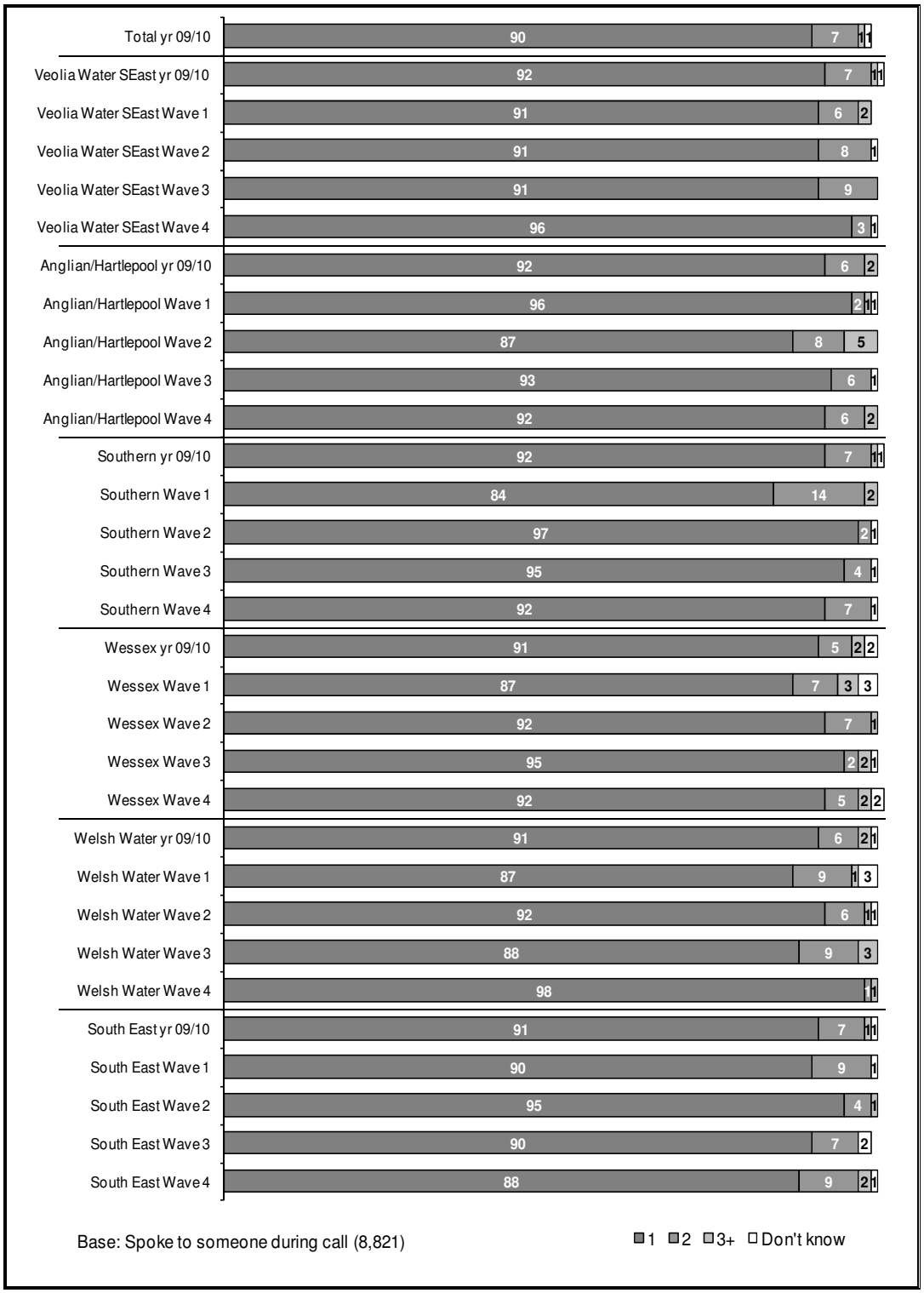
Q13 During the course of the call how many people did you speak to?

Companies Ranked 1st – 6th



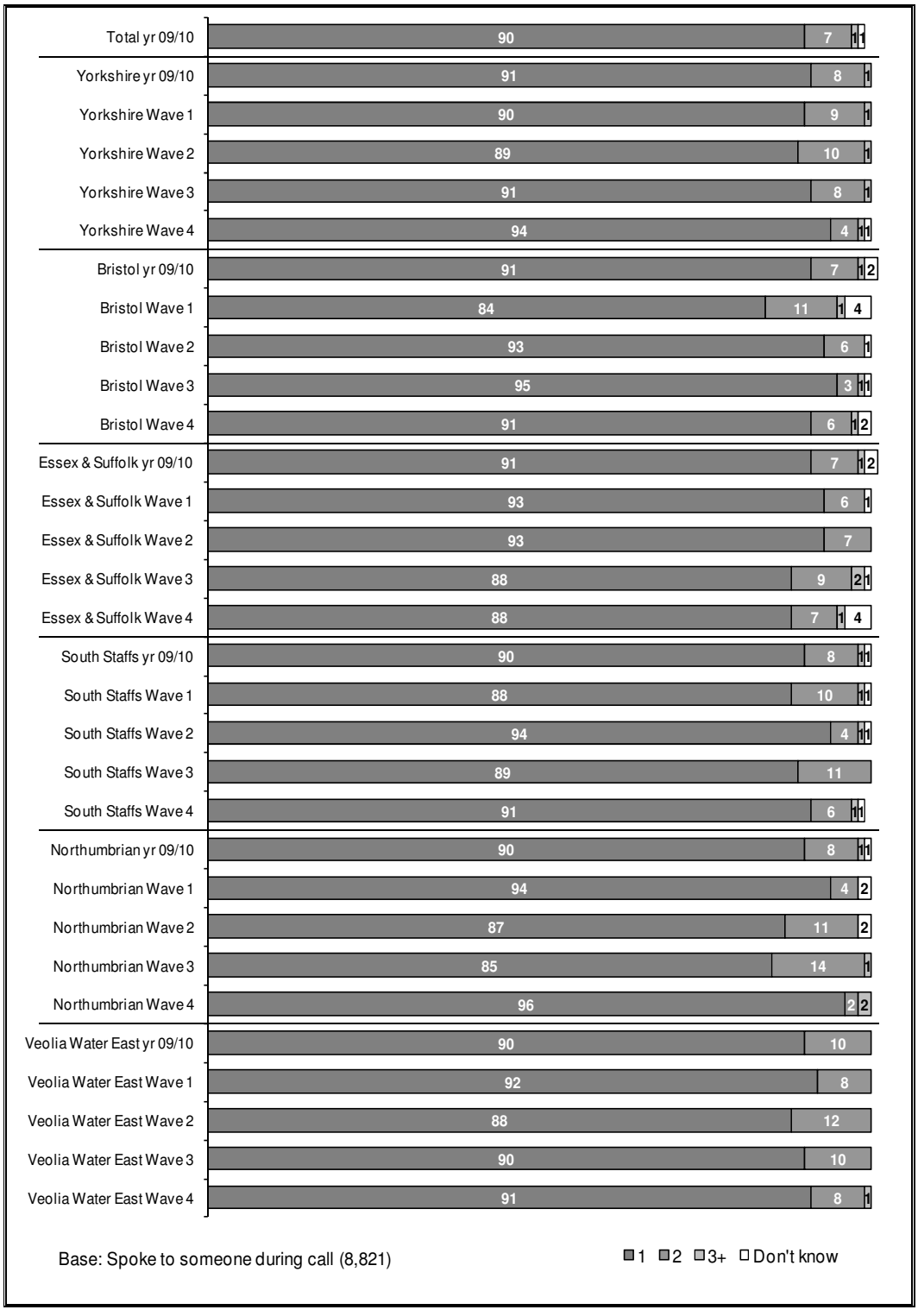
Q13 During the course of the call how many people did you speak to?

Companies Ranked 7th – 12th



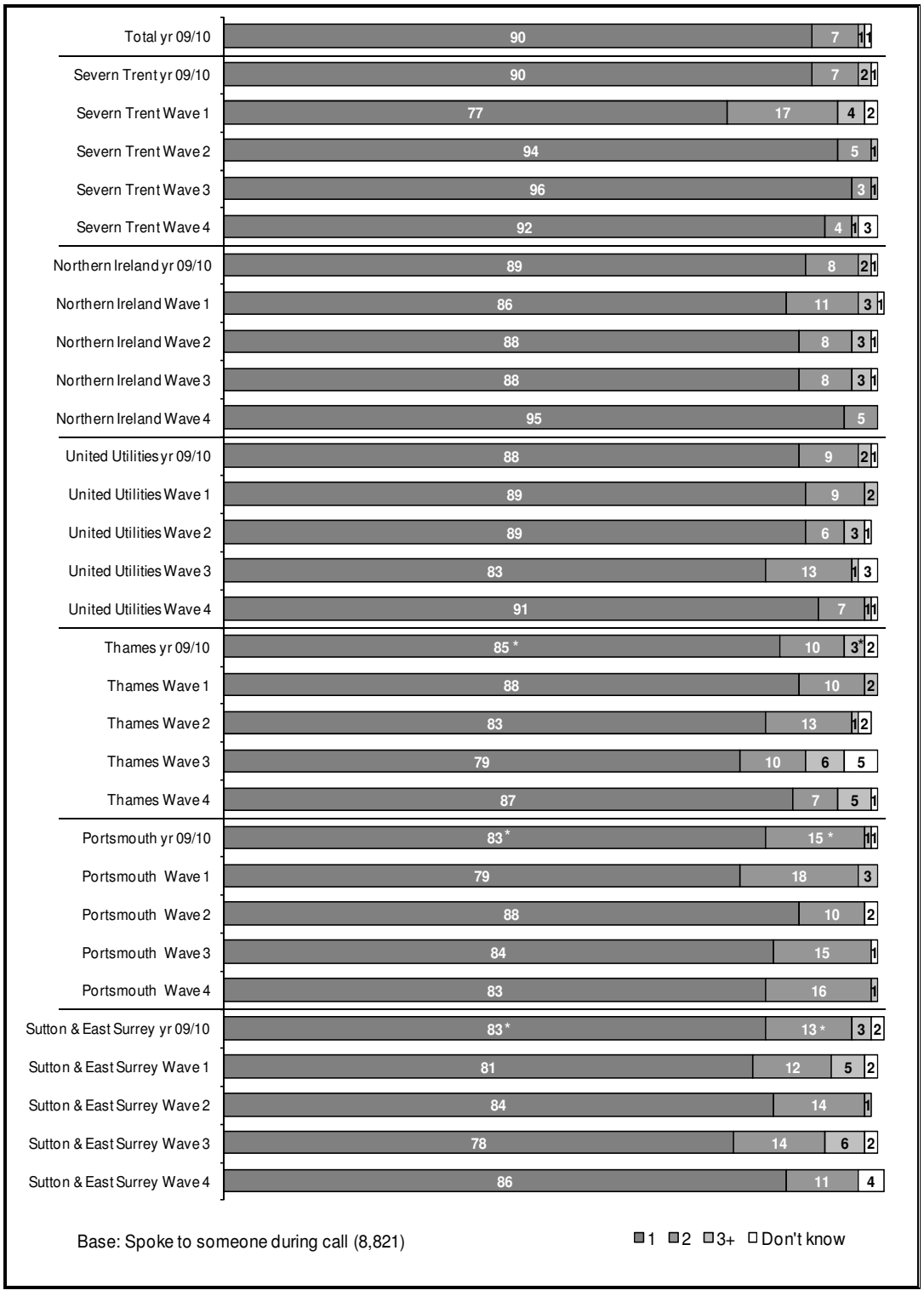
Q13 During the course of the call how many people did you speak to?

Companies Ranked 13th – 18th



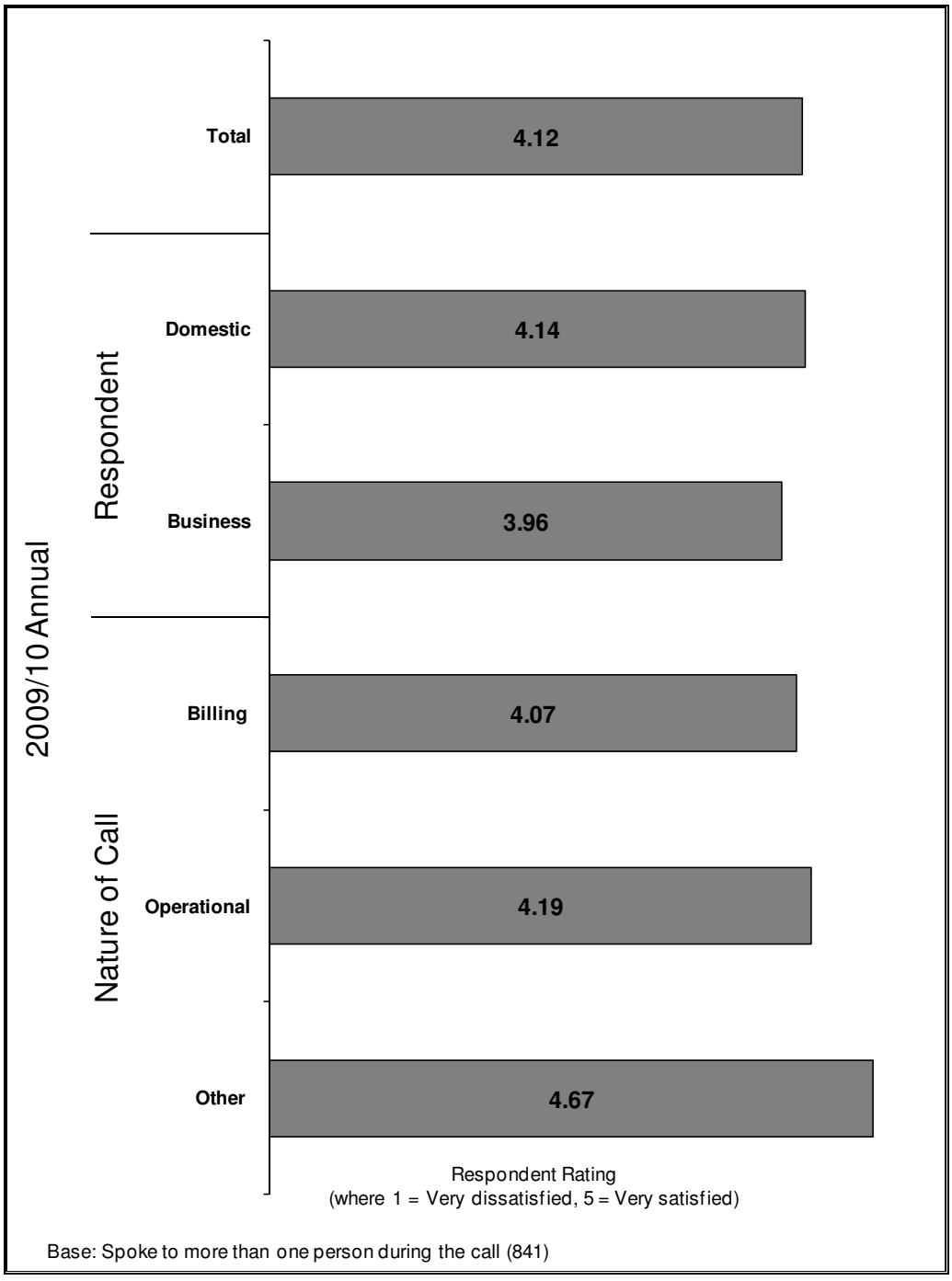
Q13 During the course of the call how many people did you speak to?

Companies Ranked 19th – 24th



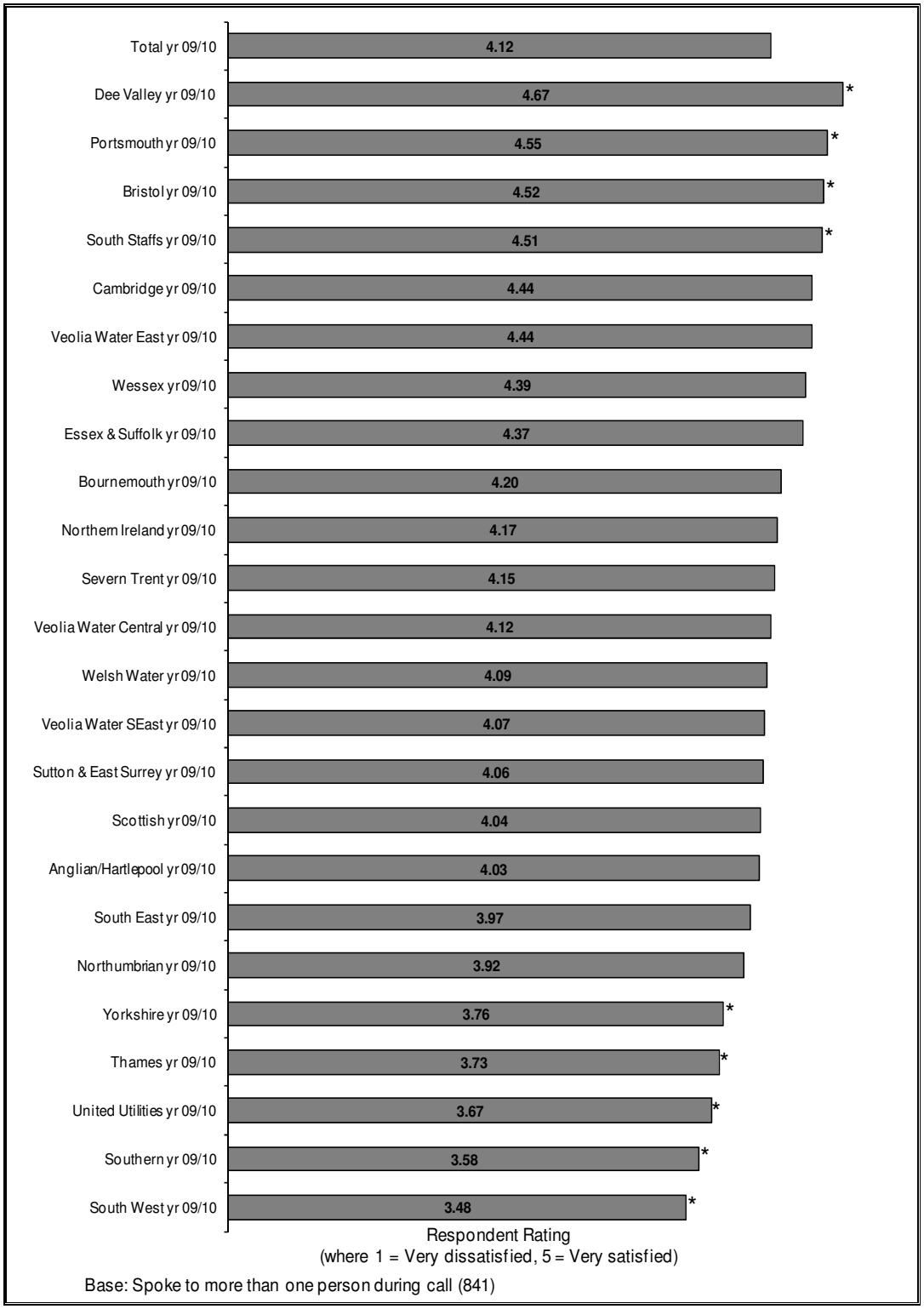
Q14 How satisfied were you with the number of people that you had to speak to?

Note: This question was asked only of those speaking to more than one person (841 respondents).

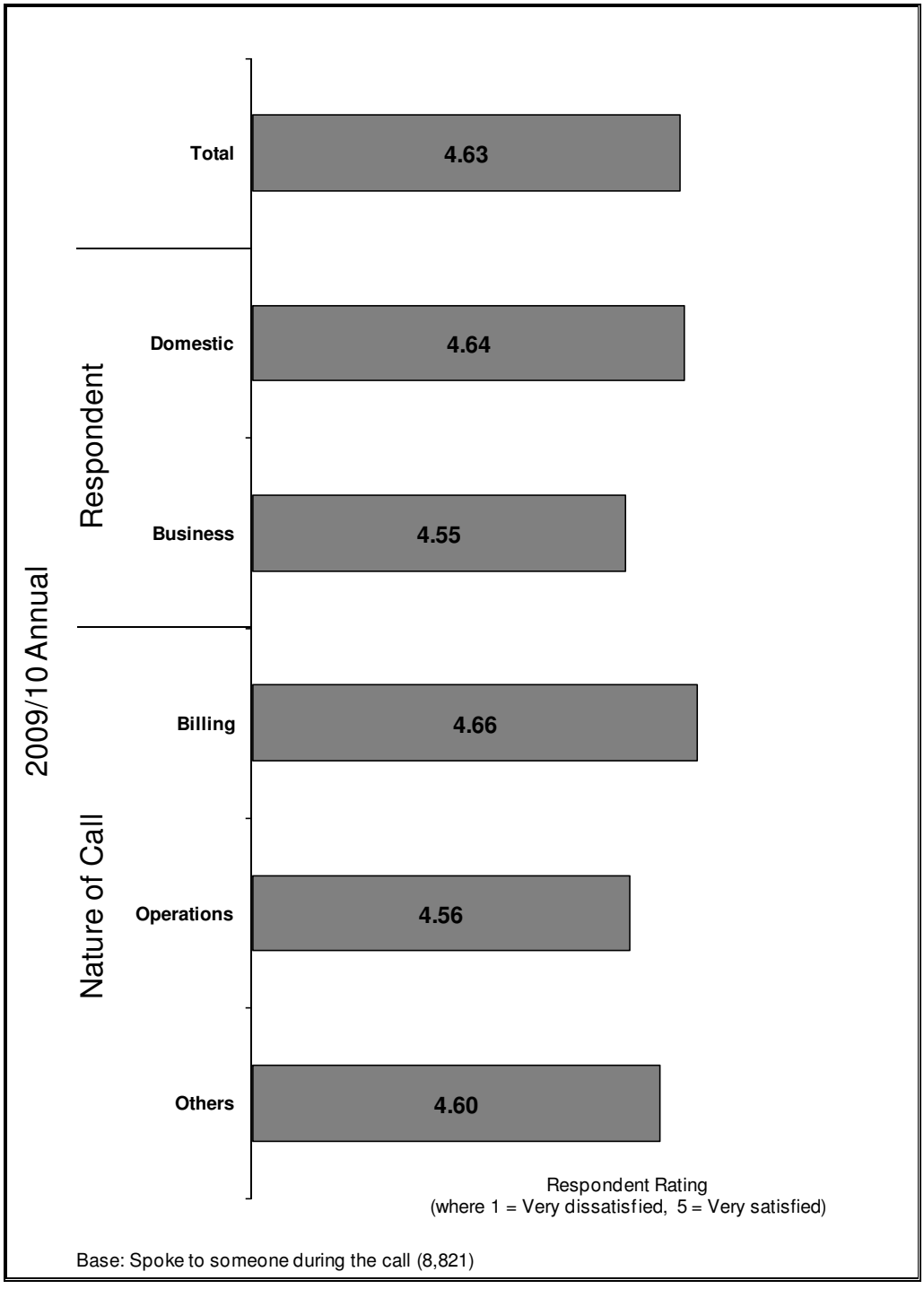


Q14 How satisfied were you with the number of people that you had to speak to?

Note: This question was asked only of those speaking to more than one person (841 respondents).

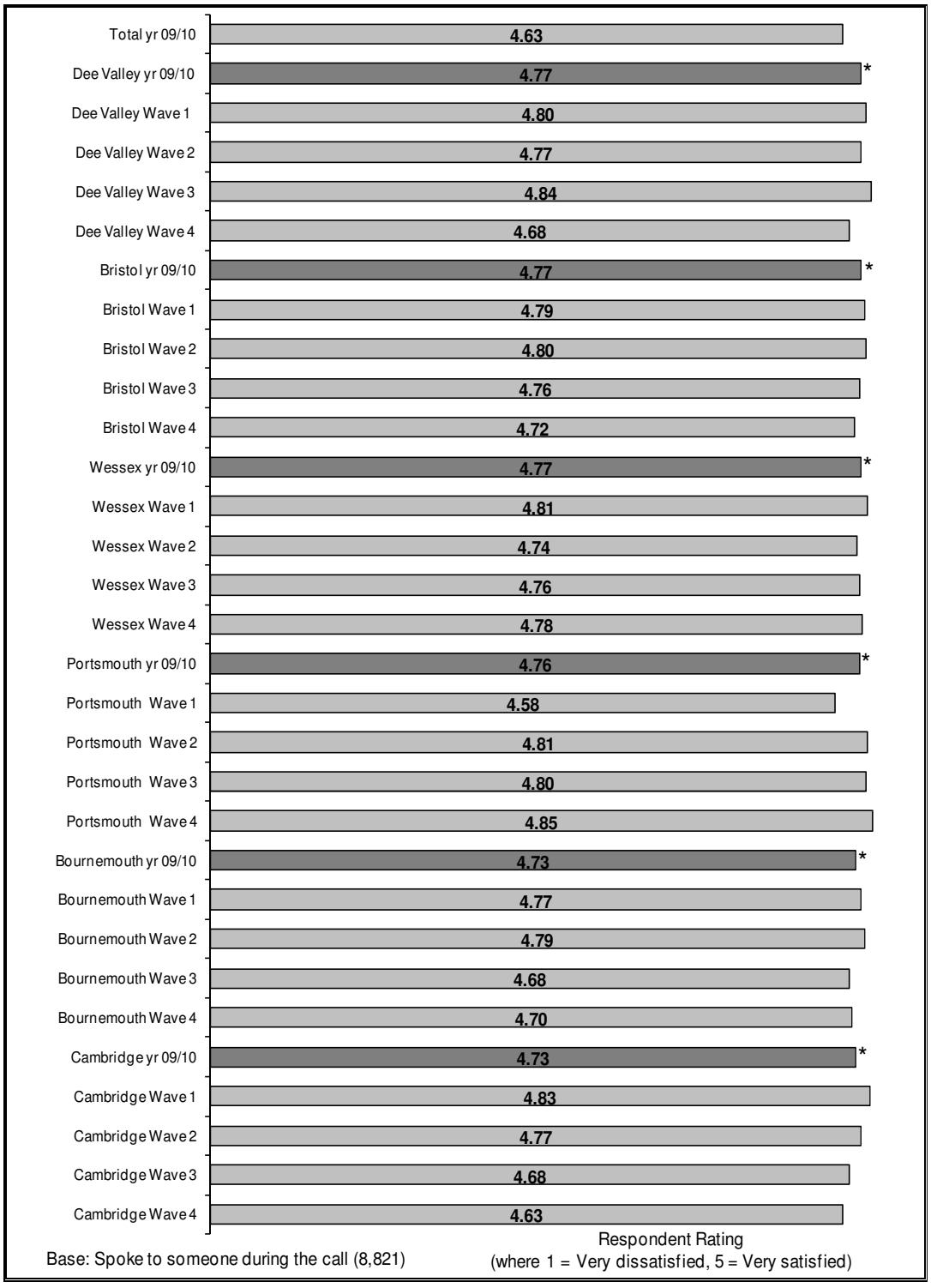


Q15 How satisfied were you that the person (or people) you spoke to understood your reason for calling?



Q15 How satisfied were you that the person (or people) you spoke to understood your reason for calling?

Companies Ranked 1st – 6th



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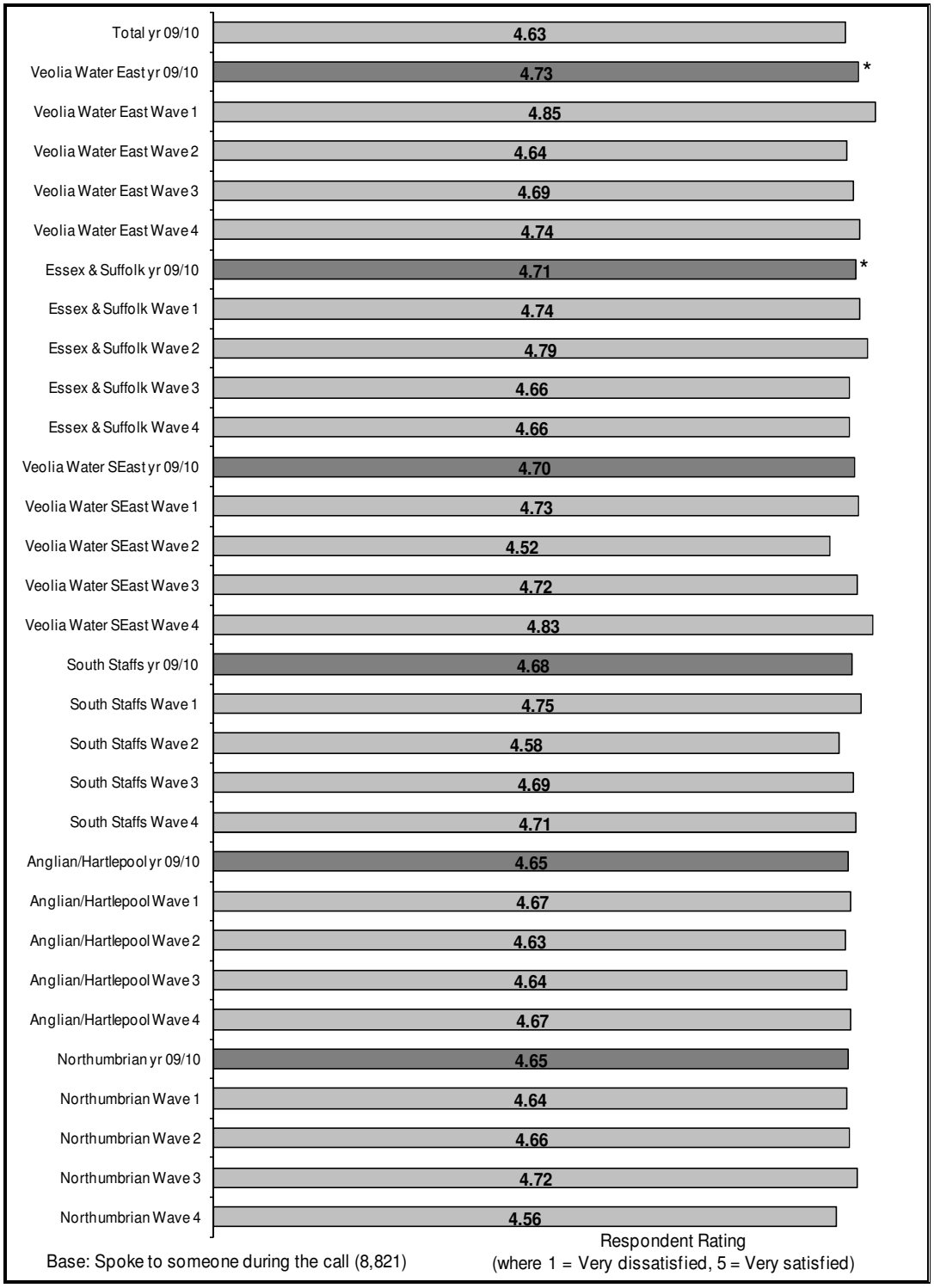

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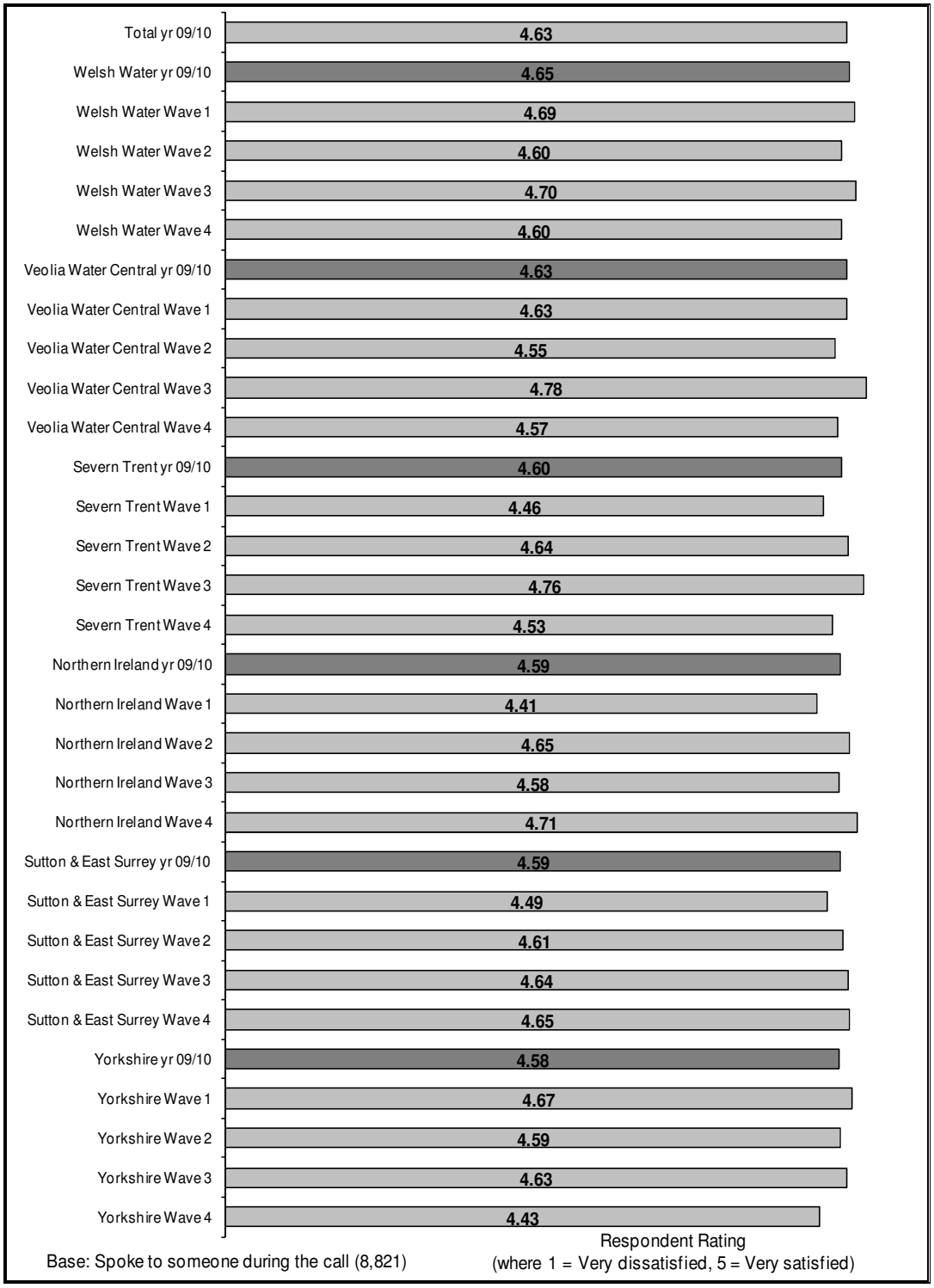

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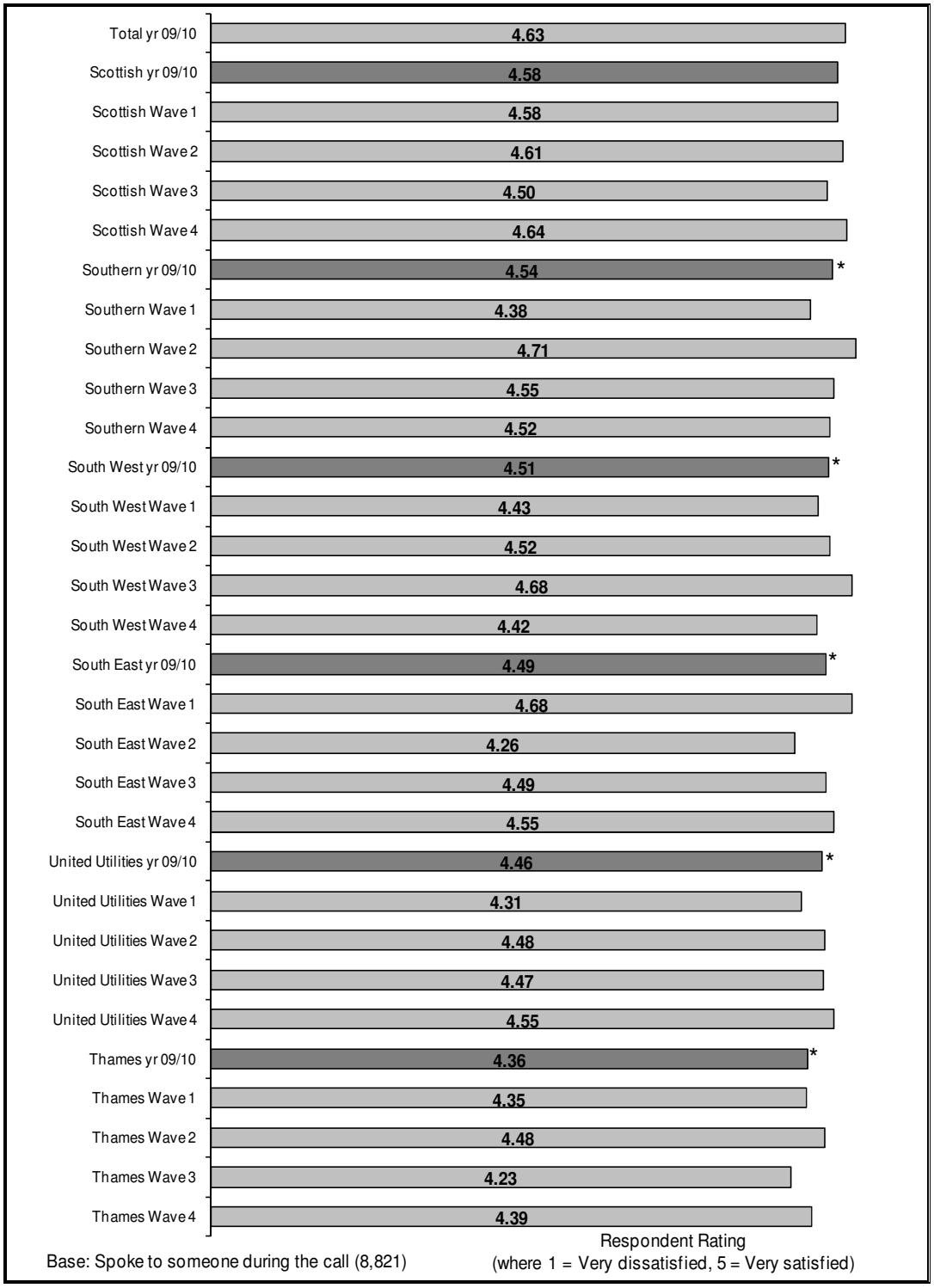
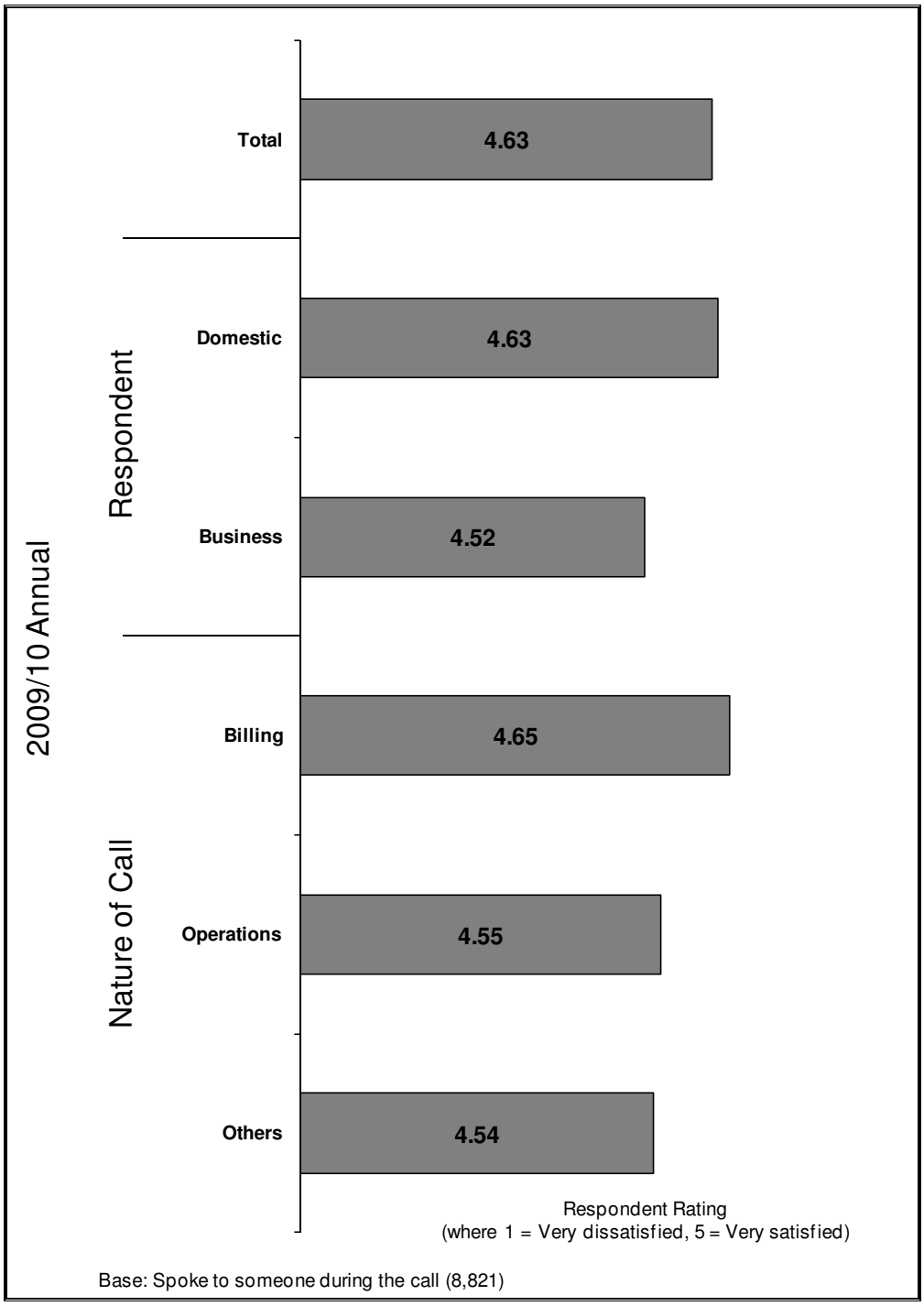
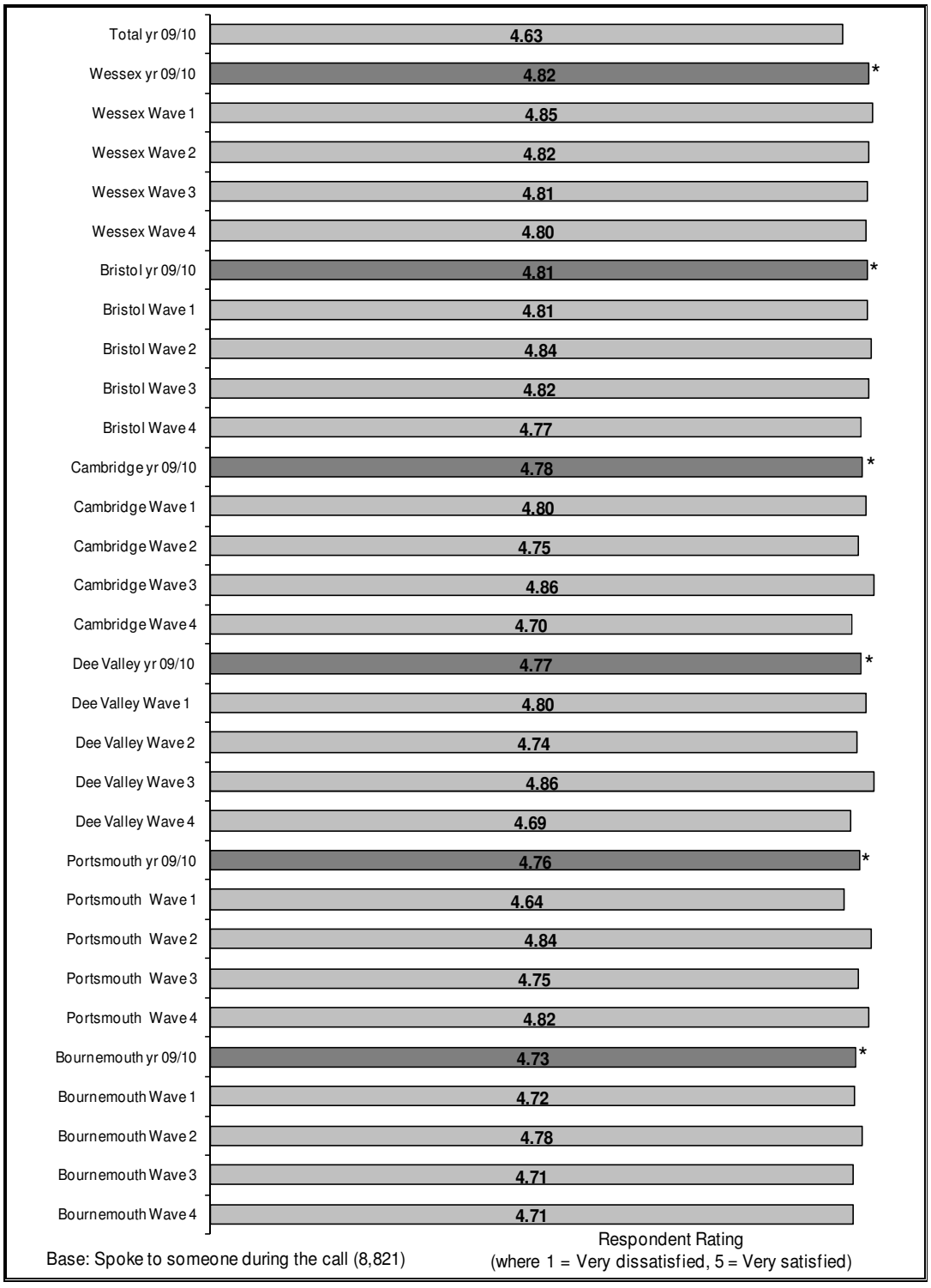


Q16 How satisfied were you with the company's willingness to help?



Q16 How satisfied were you with the company's willingness to help?

Companies Ranked 1st – 6th



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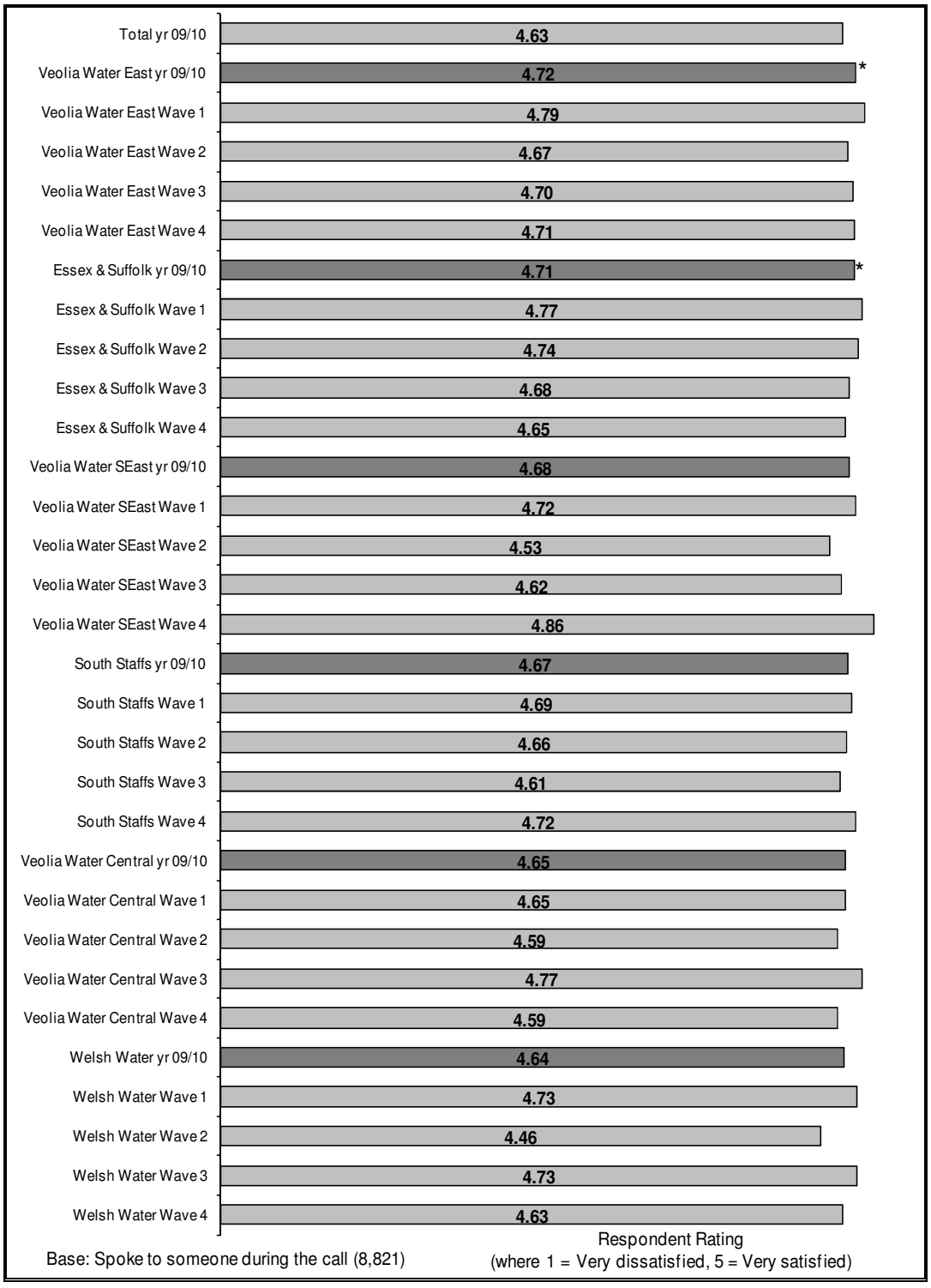
Companies Ranked 7th – 12th



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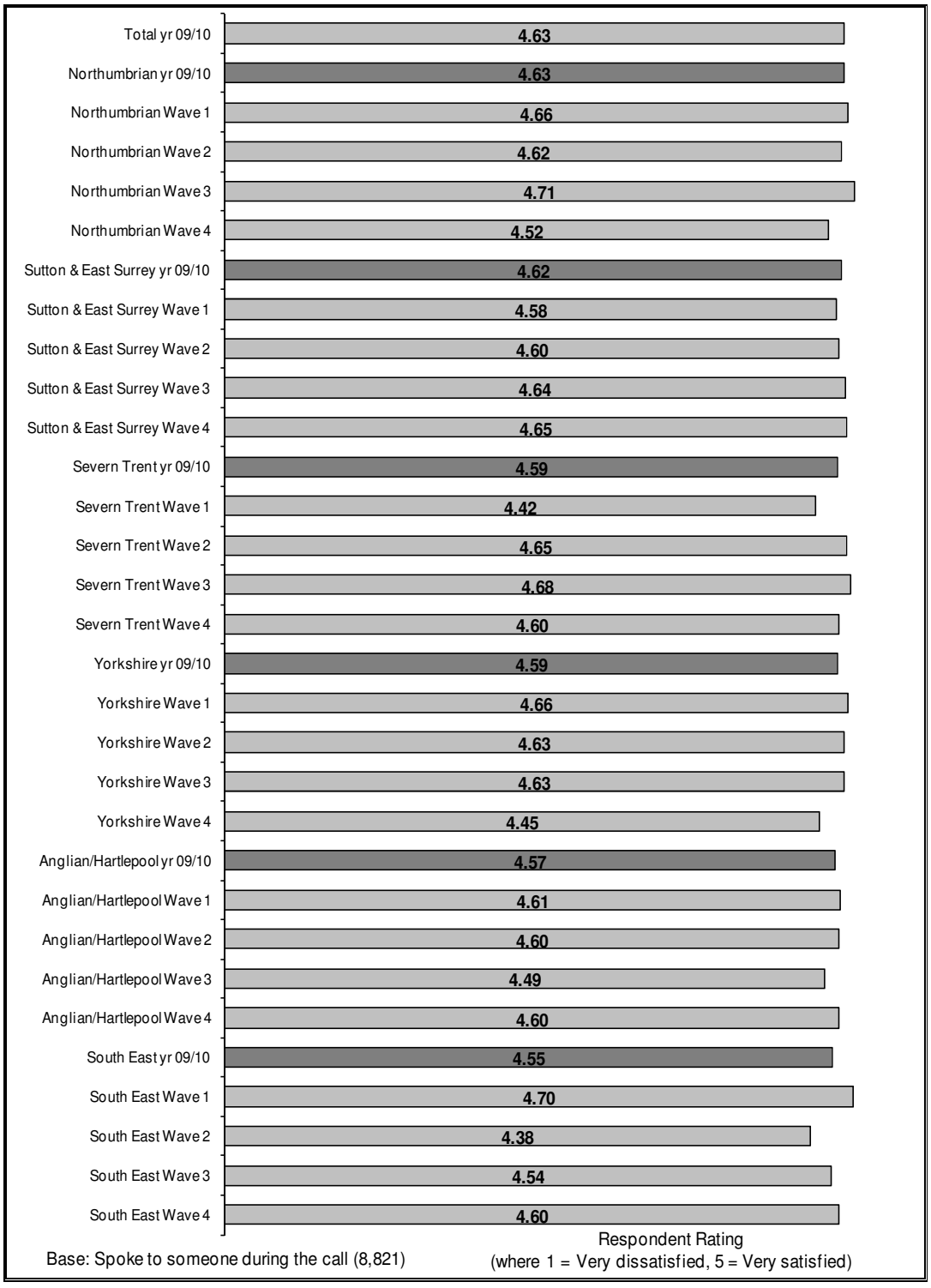

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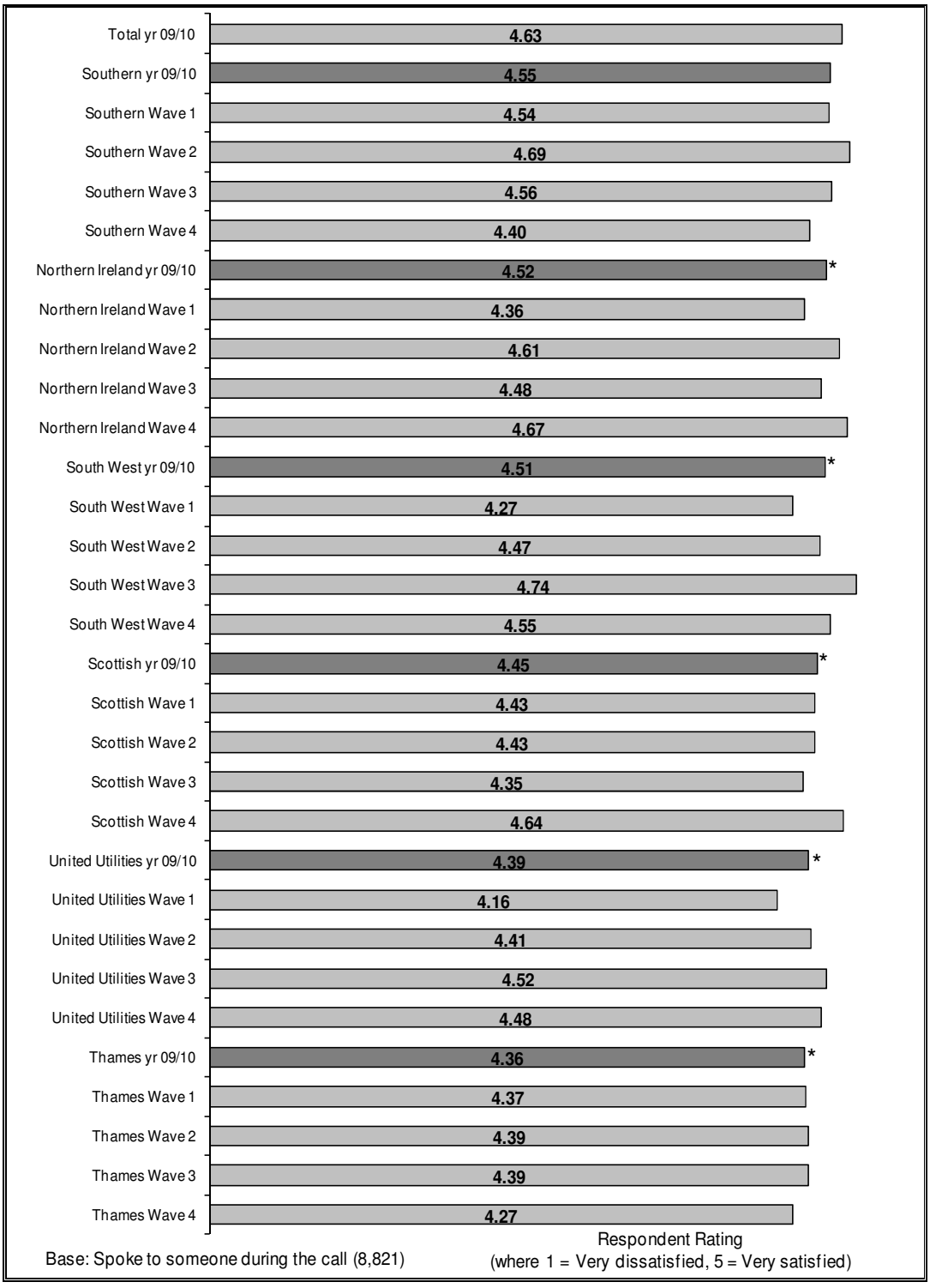
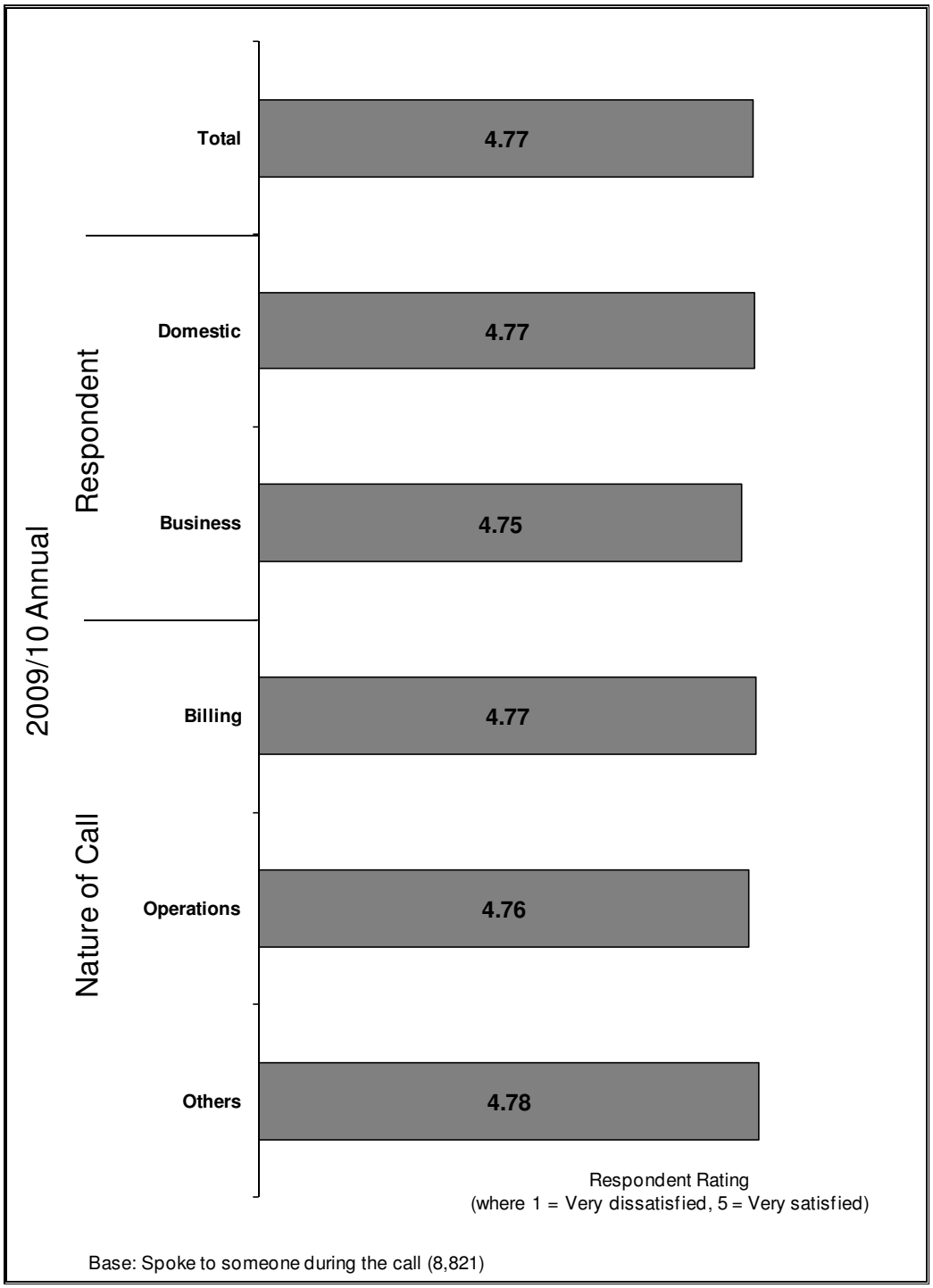


Q17 Overall, how satisfied were you with the politeness of the person (or people) that you spoke to during the call?

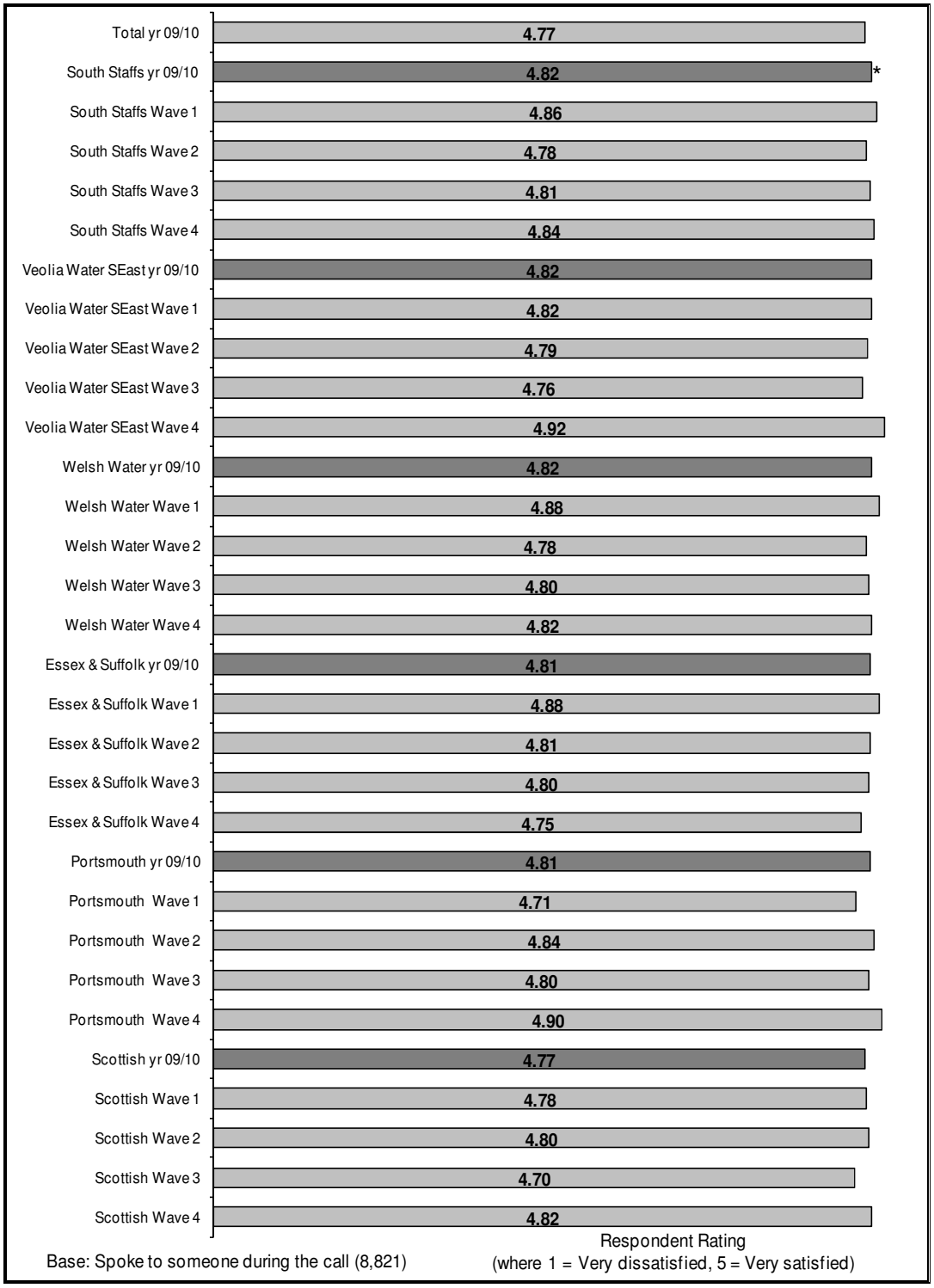


Q17 Overall, how satisfied were you with the politeness of the person (or people) that you spoke to during the call?

Companies Ranked 1st – 6th

Q17 Overall, how satisfied were you with the politeness of the person (or people) that you spoke to during the call?

Companies Ranked 7th – 12th



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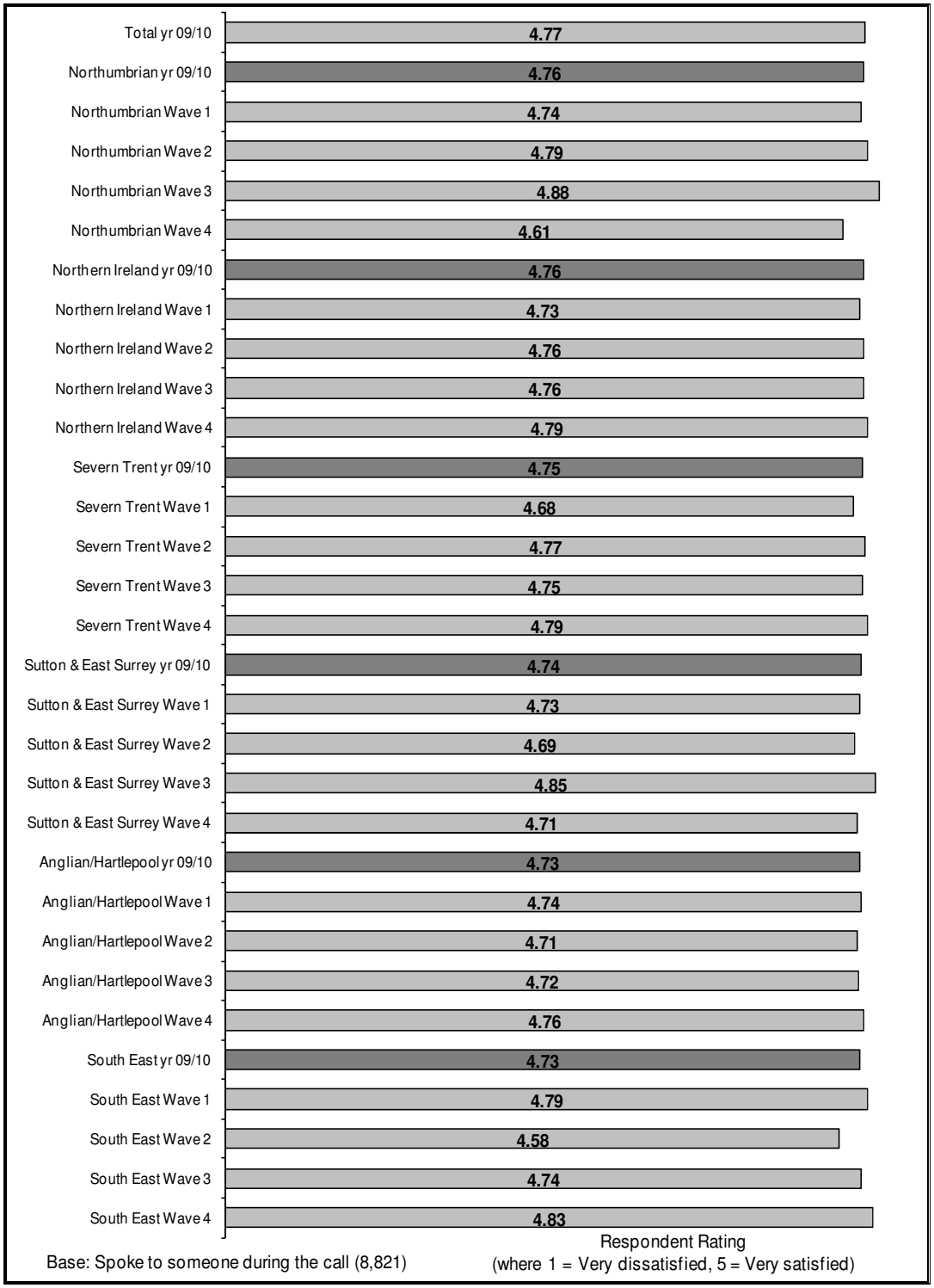
Companies Ranked 13th – 18th



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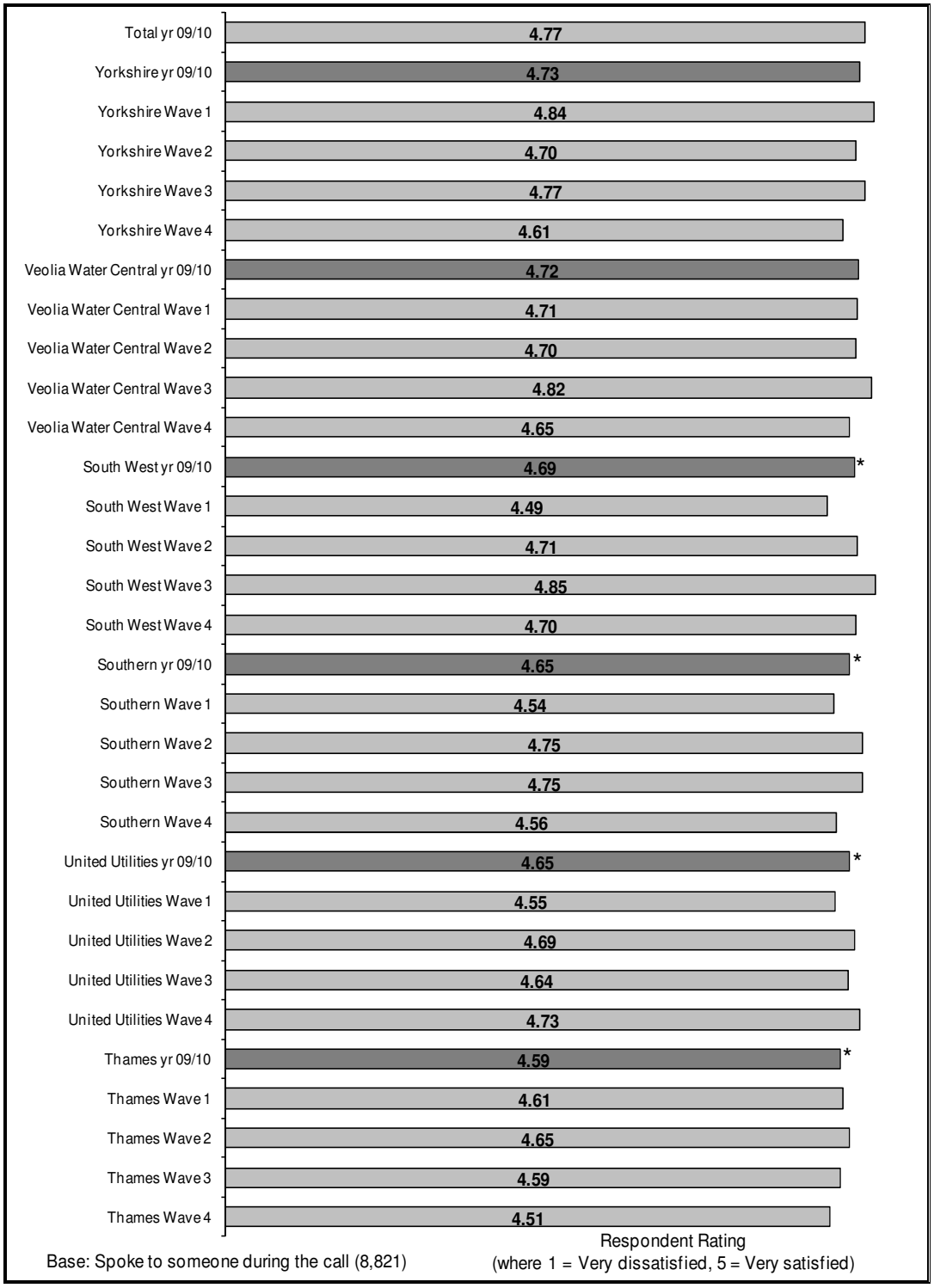
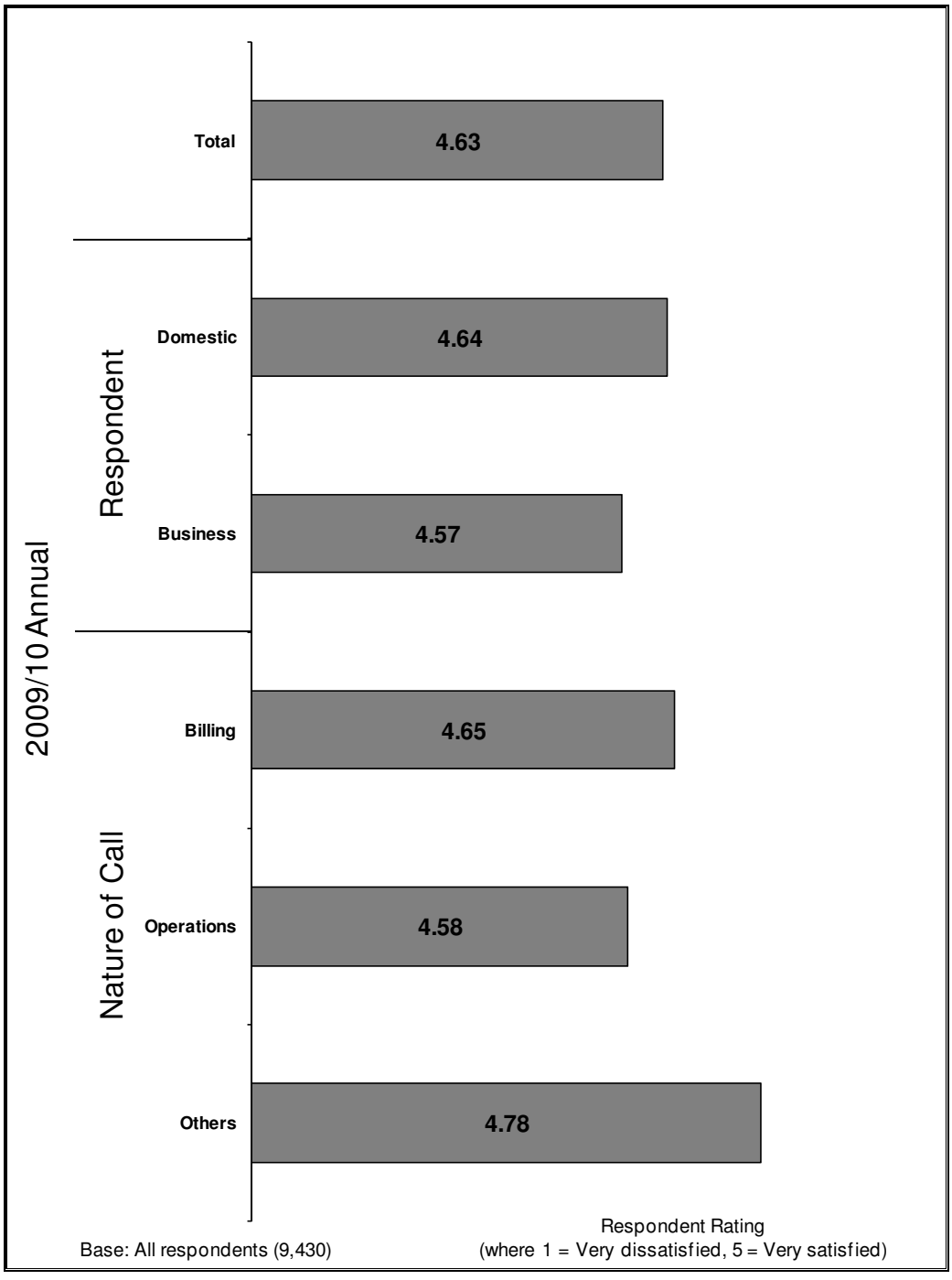
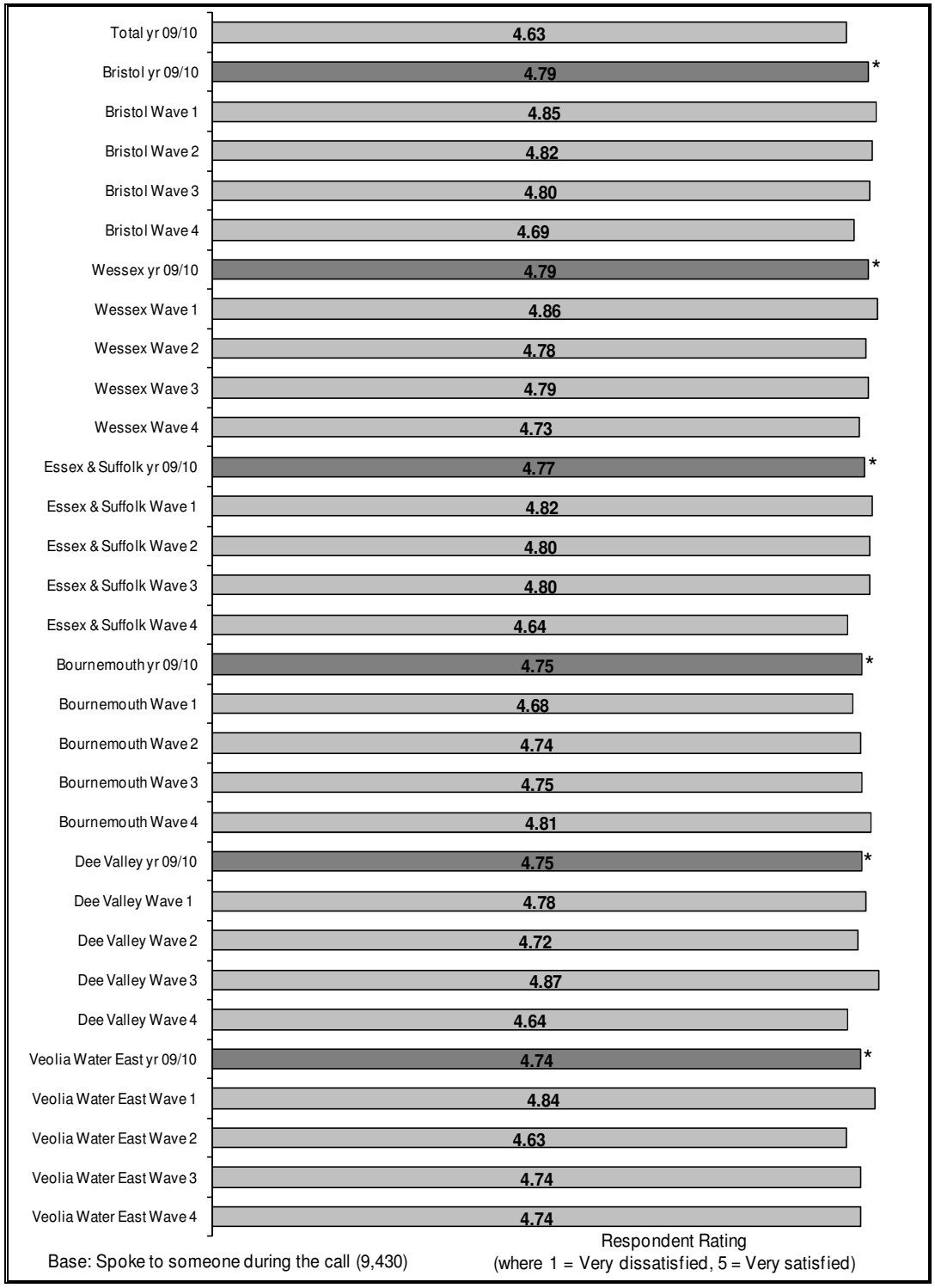


Q18 Overall, how satisfied were you with the manner in which your call was handled?



Q18 Overall, how satisfied were you with the manner in which your call was handled?

Companies Ranked 1st – 6th



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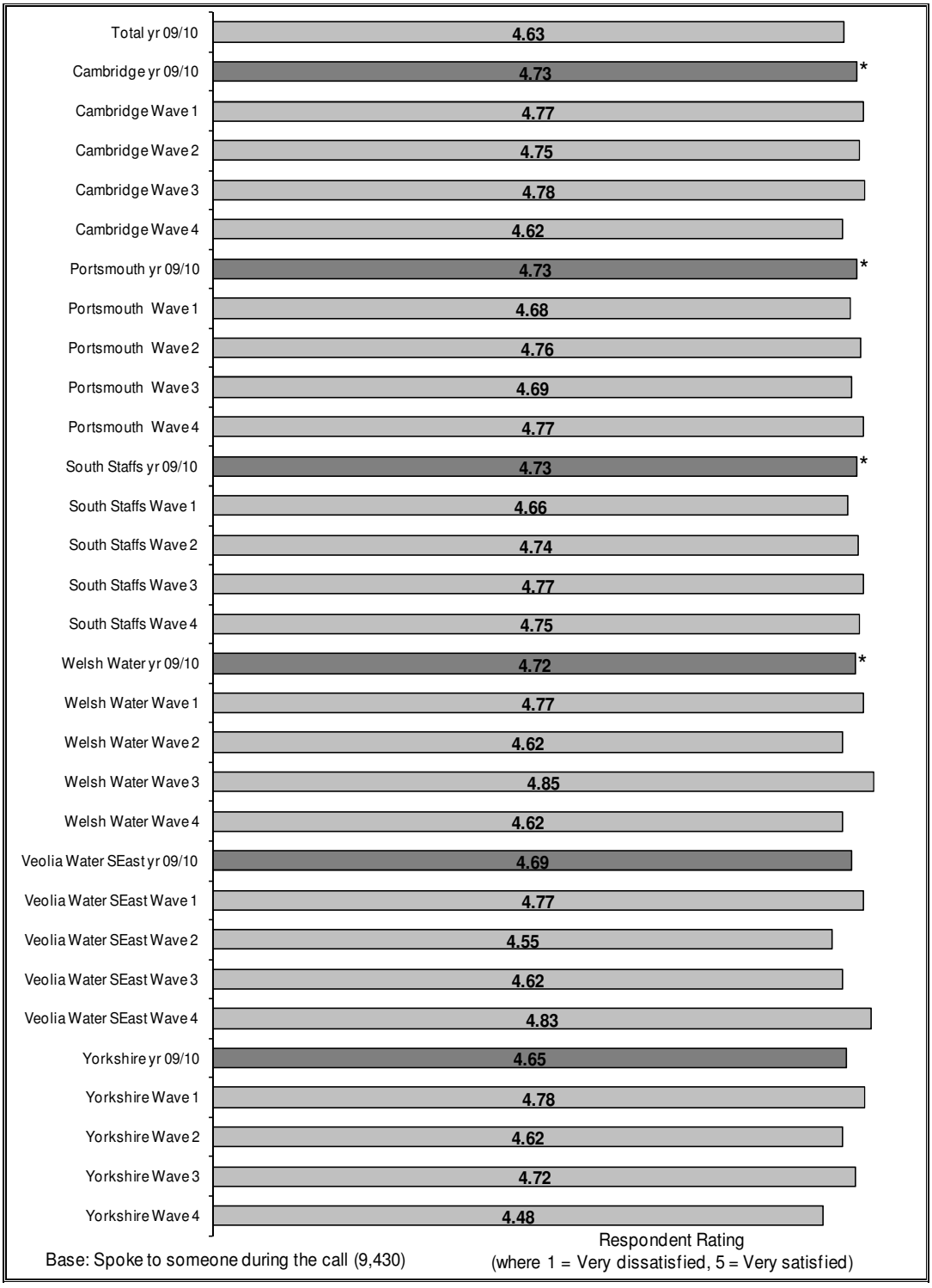

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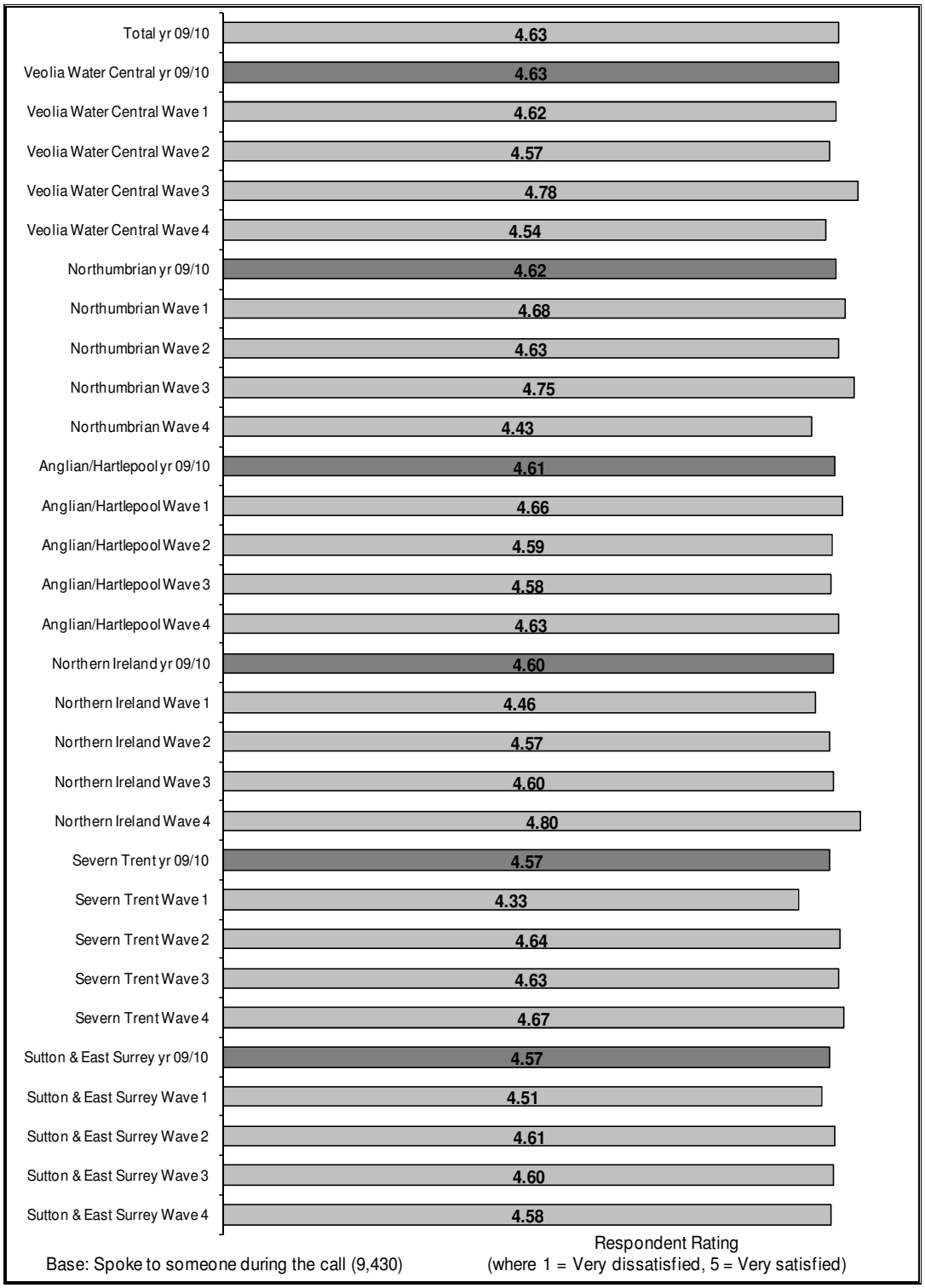

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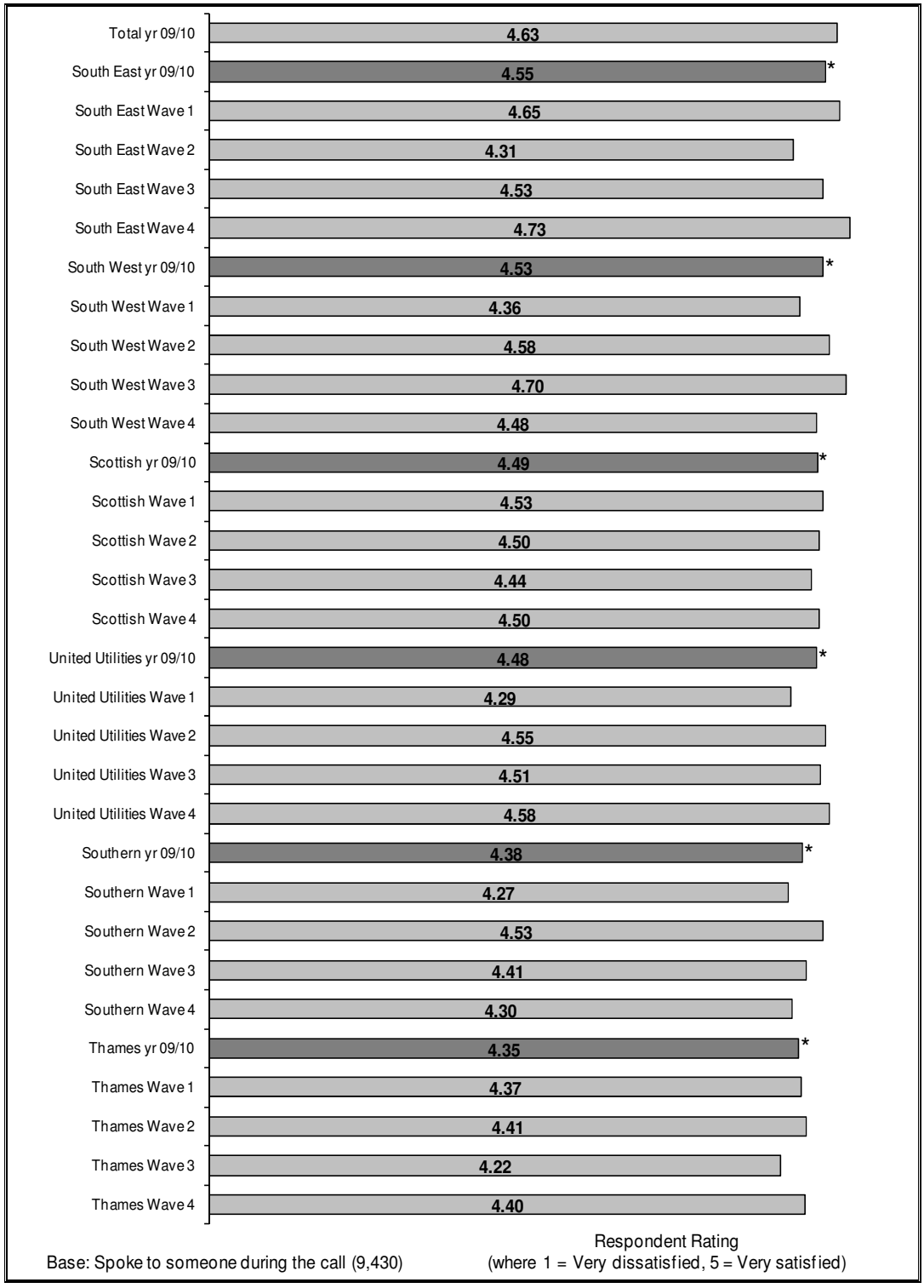
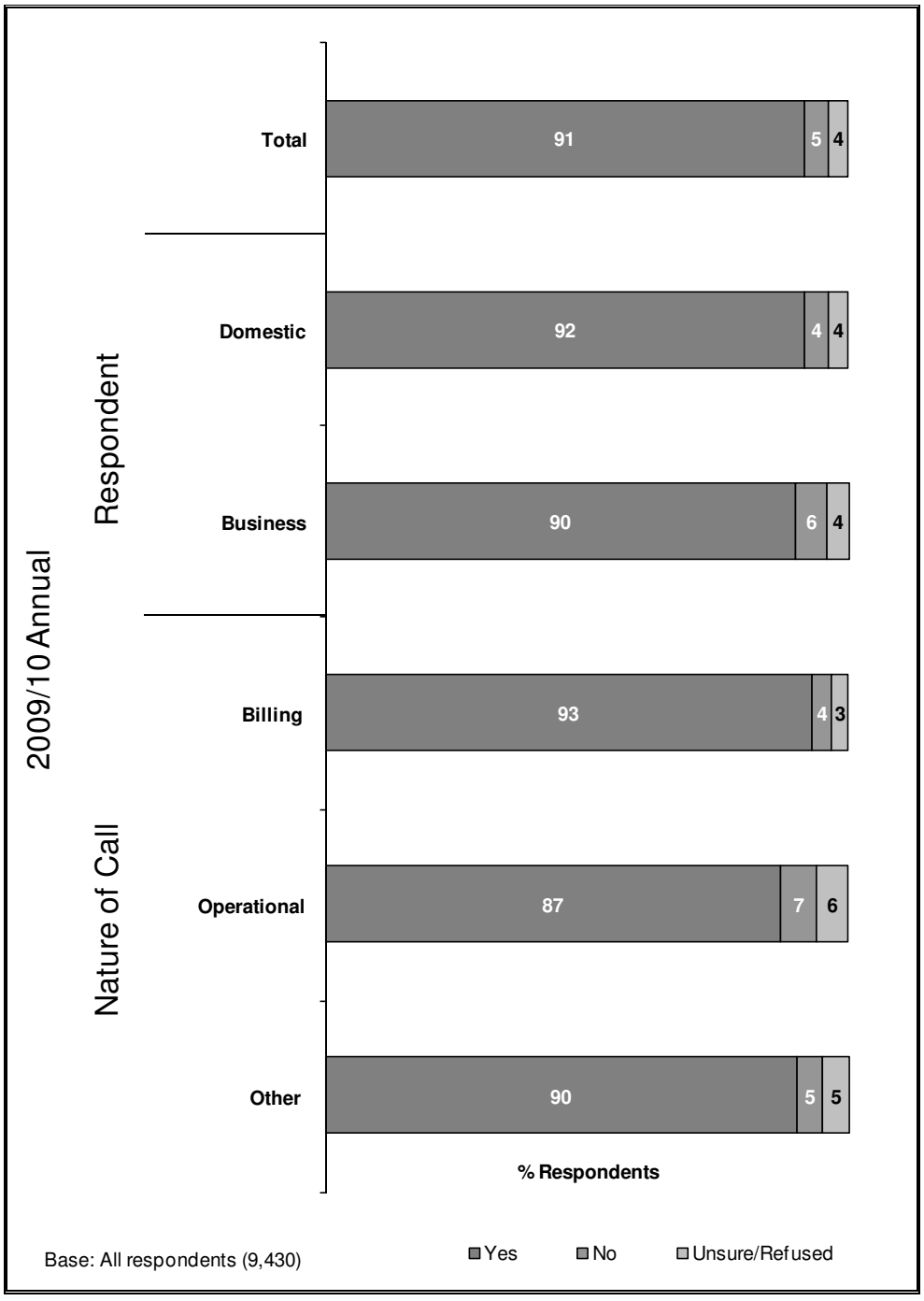
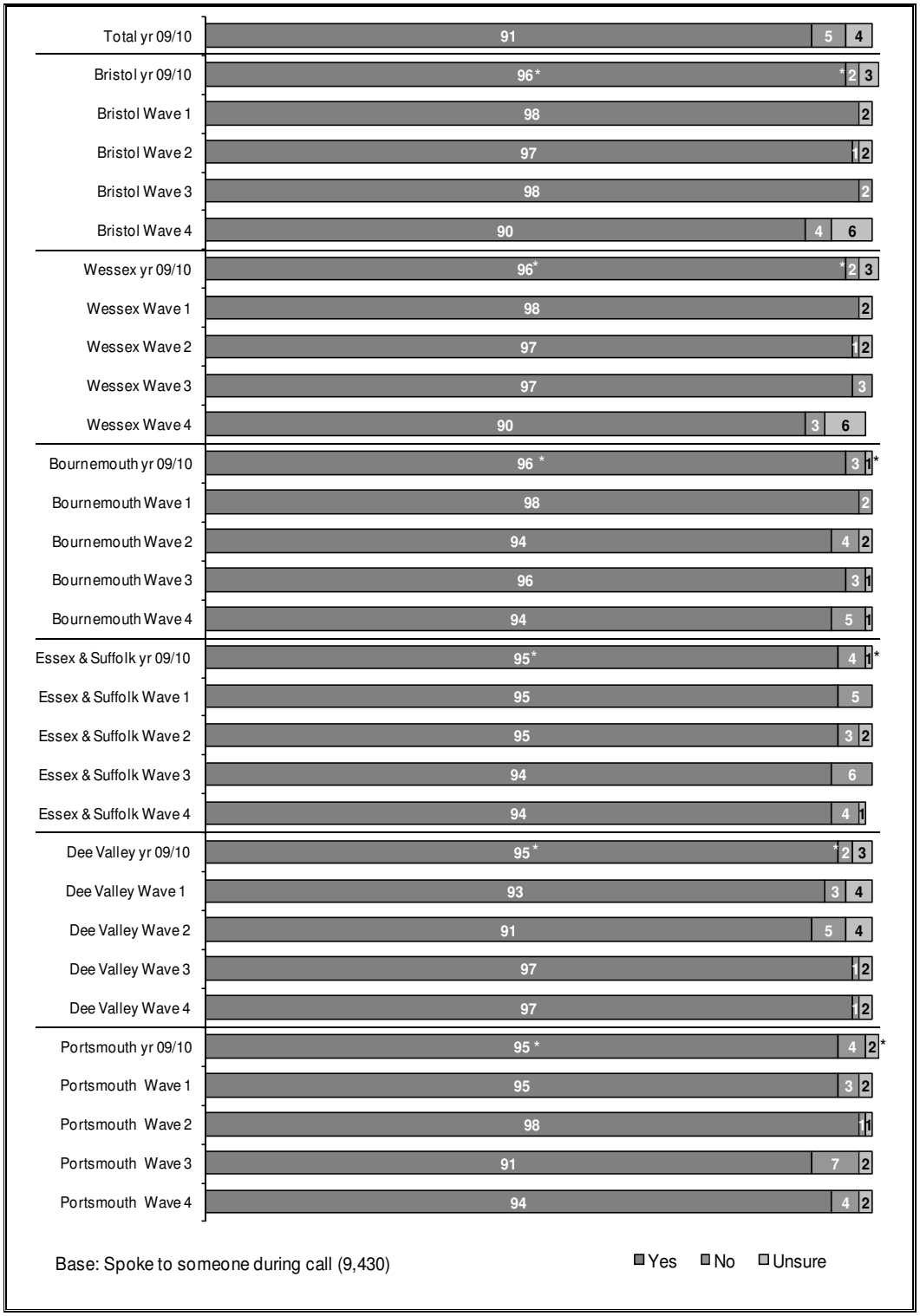


Q20 Immediately on completion of the call, were you left feeling that your call had been/would be dealt with?



Q20 Immediately on completion of the call, were you left feeling that your call had been/would be dealt with?

Companies Ranked 1st – 6th



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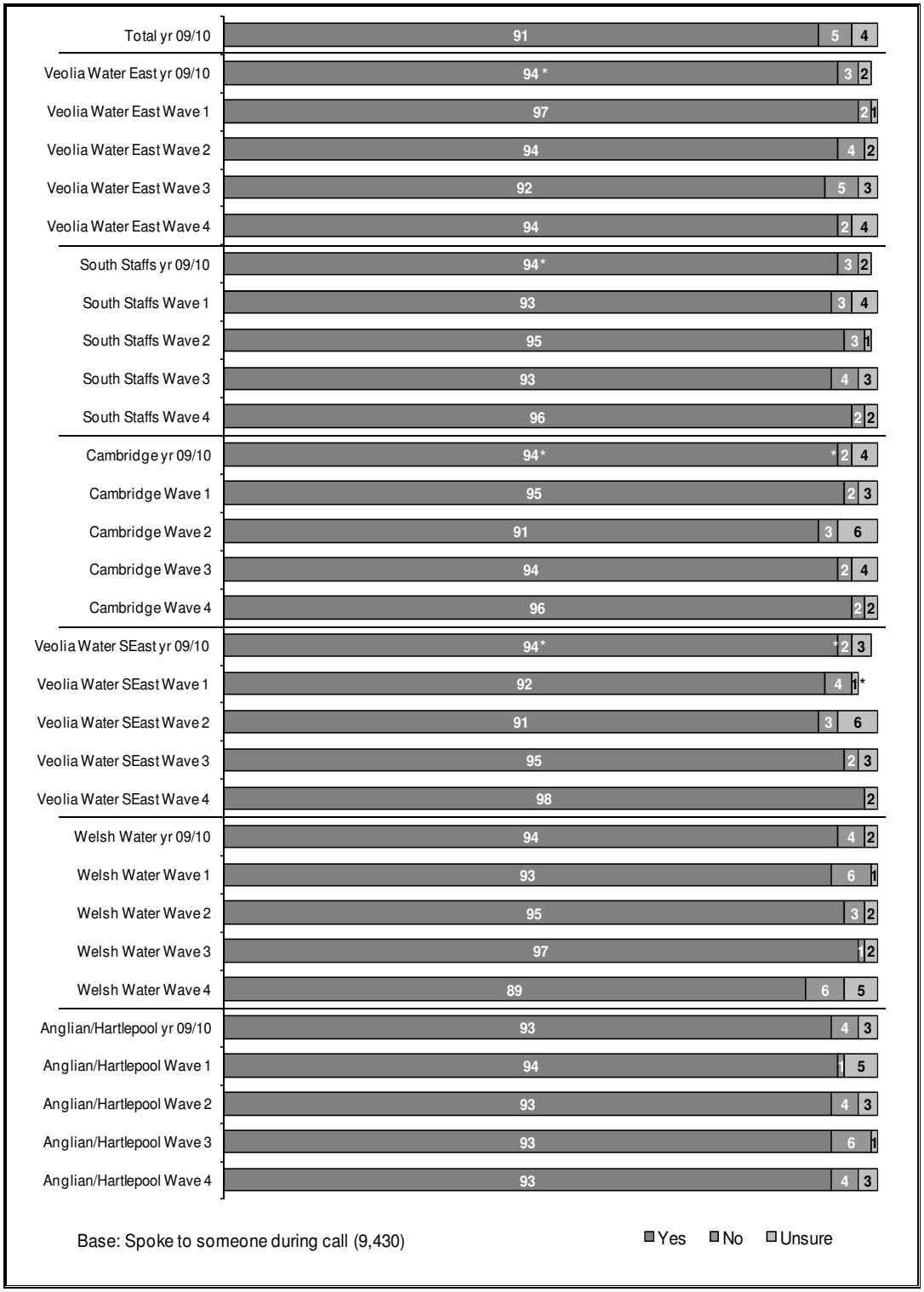

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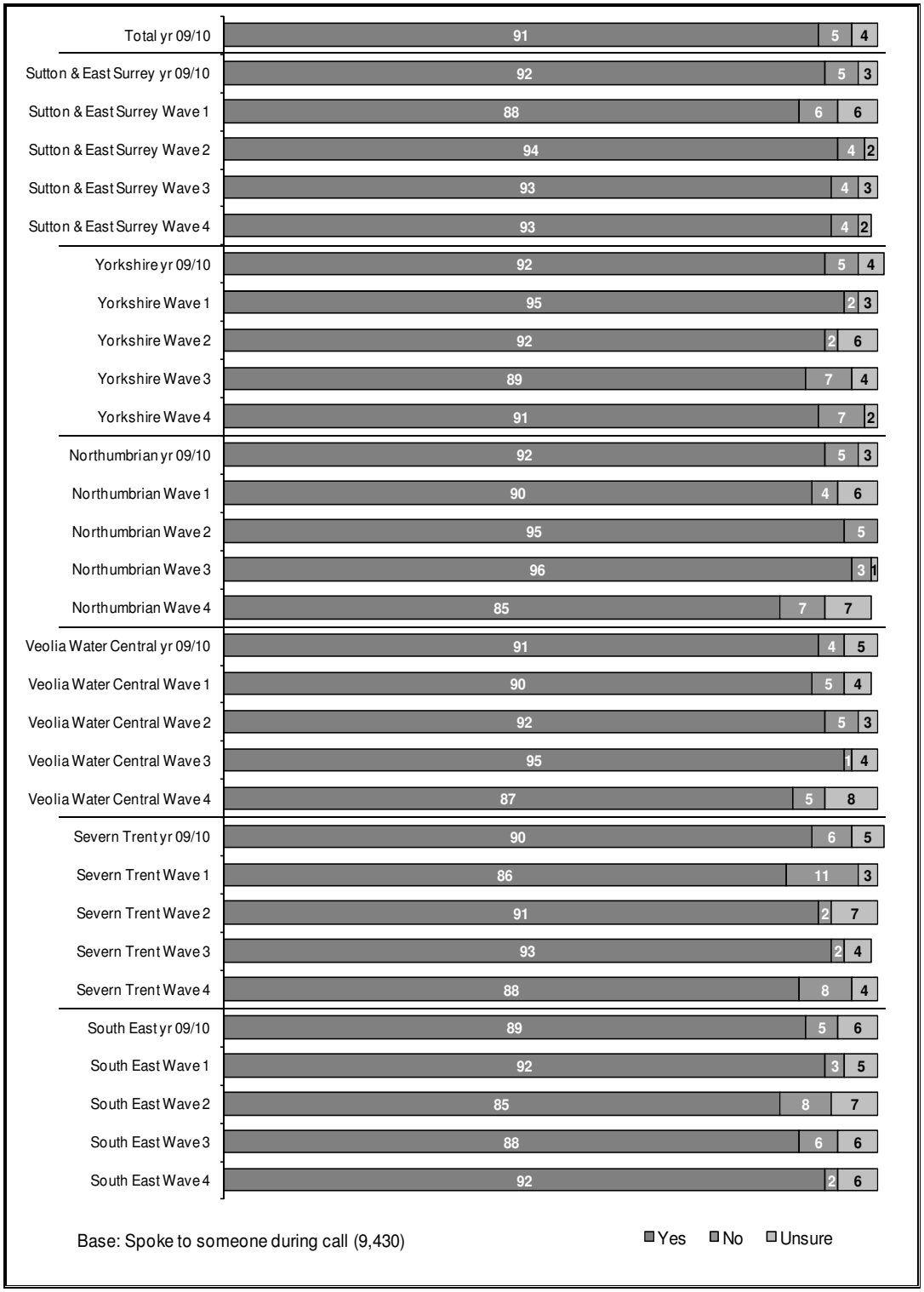

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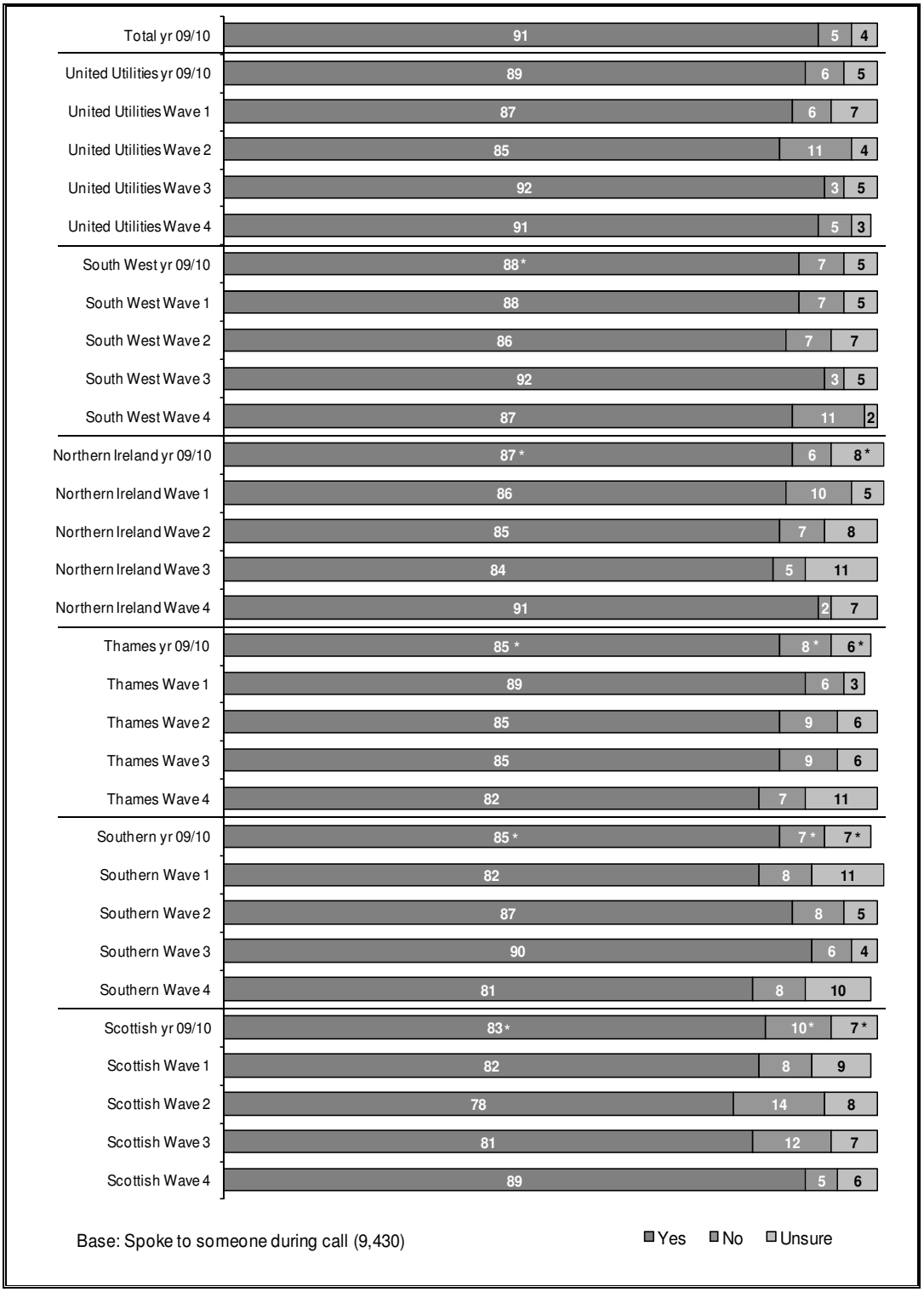
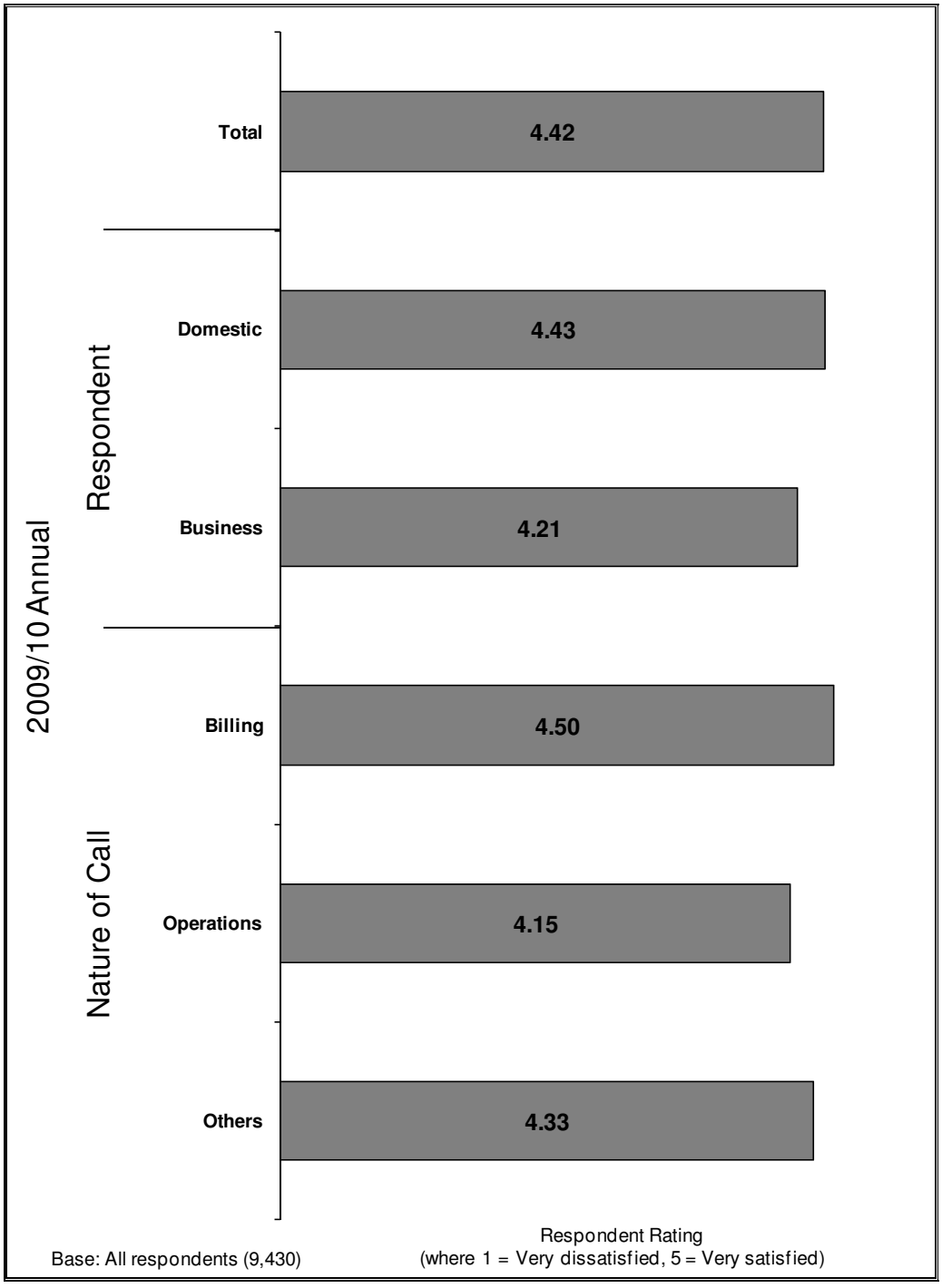
Companies Ranked 19th – 24th



Q21 How satisfied were you with the final resolution of the call, ie the action that was taken as a result of your call?



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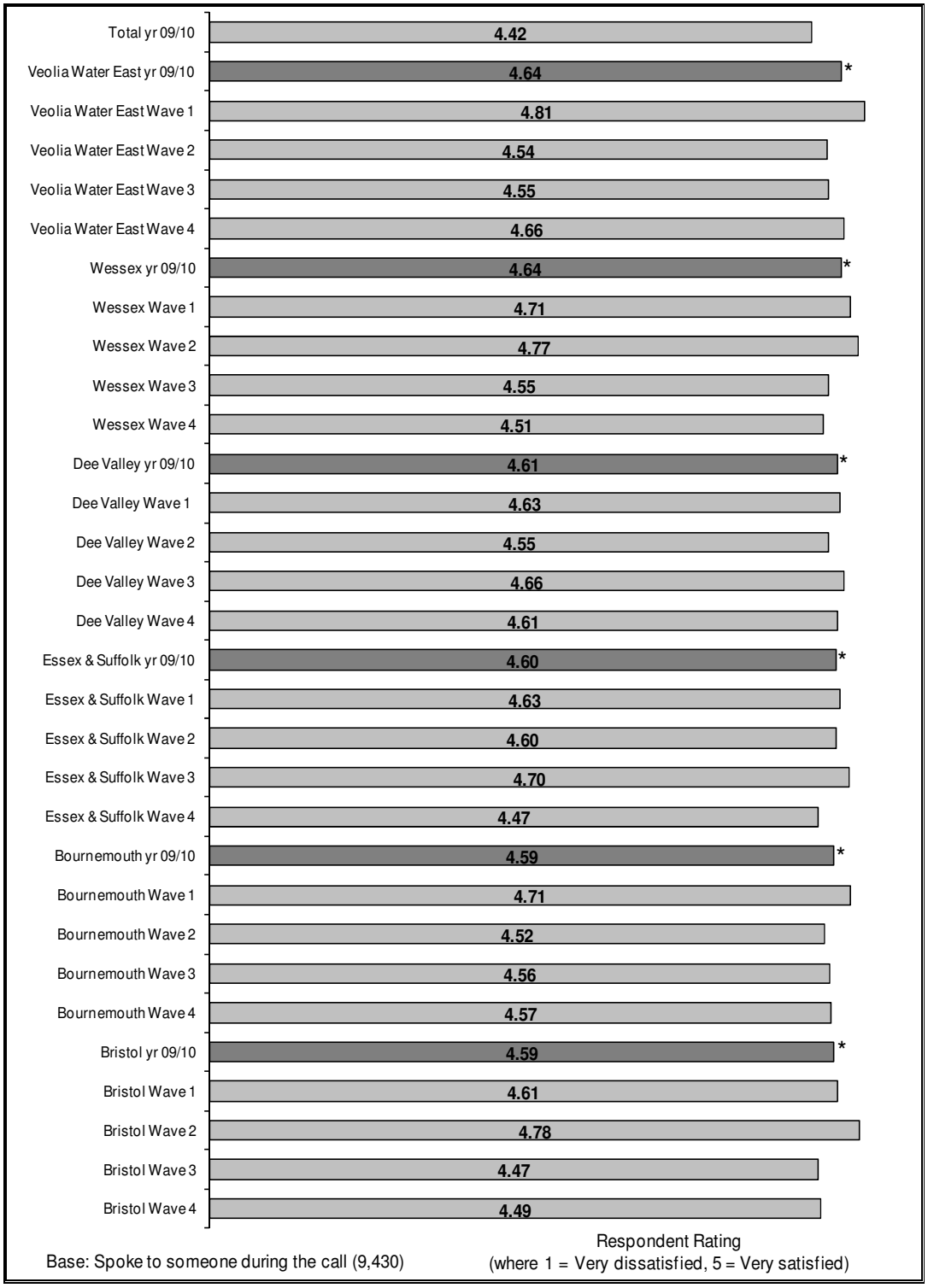
Companies Ranked 1st – 6th



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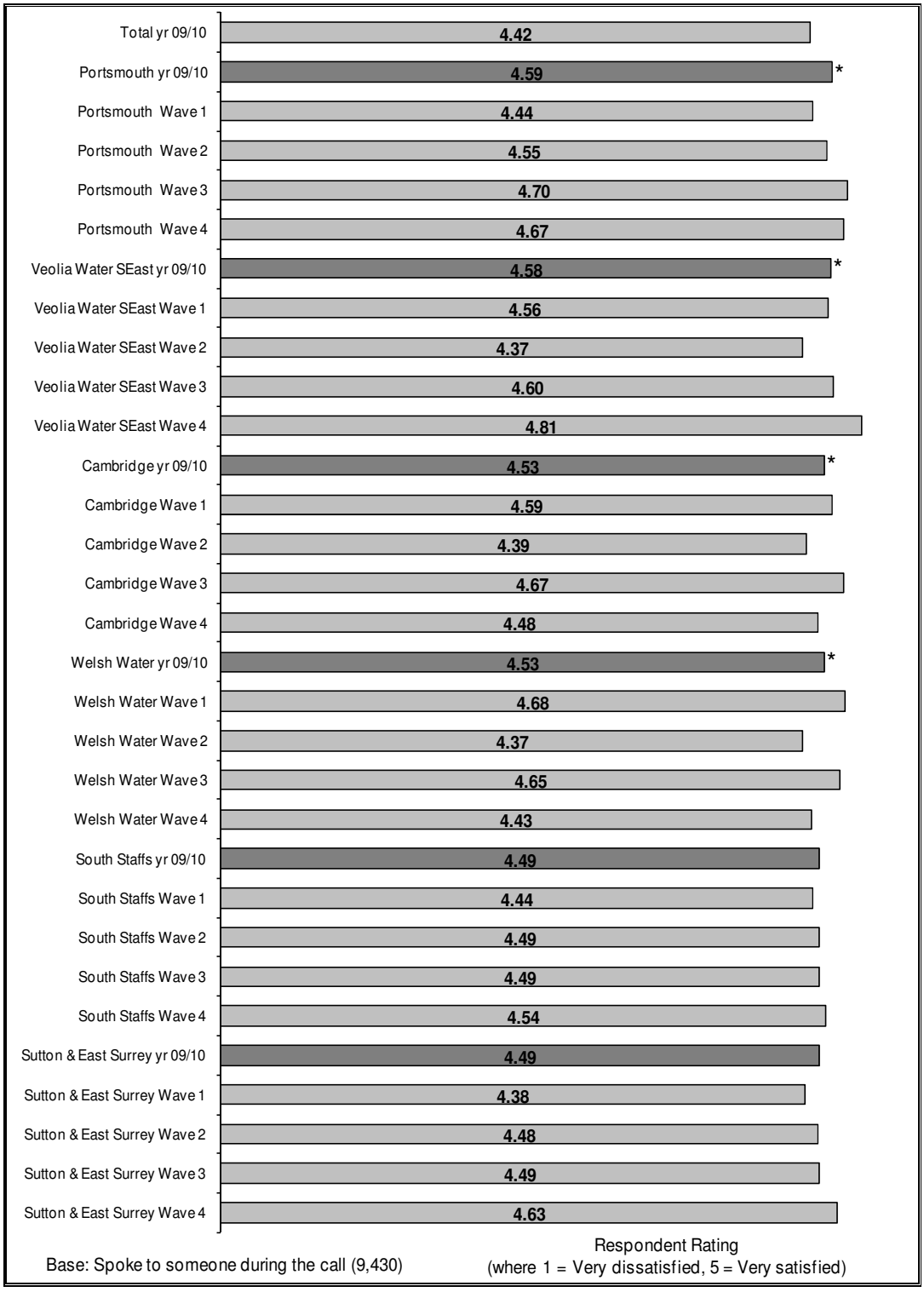

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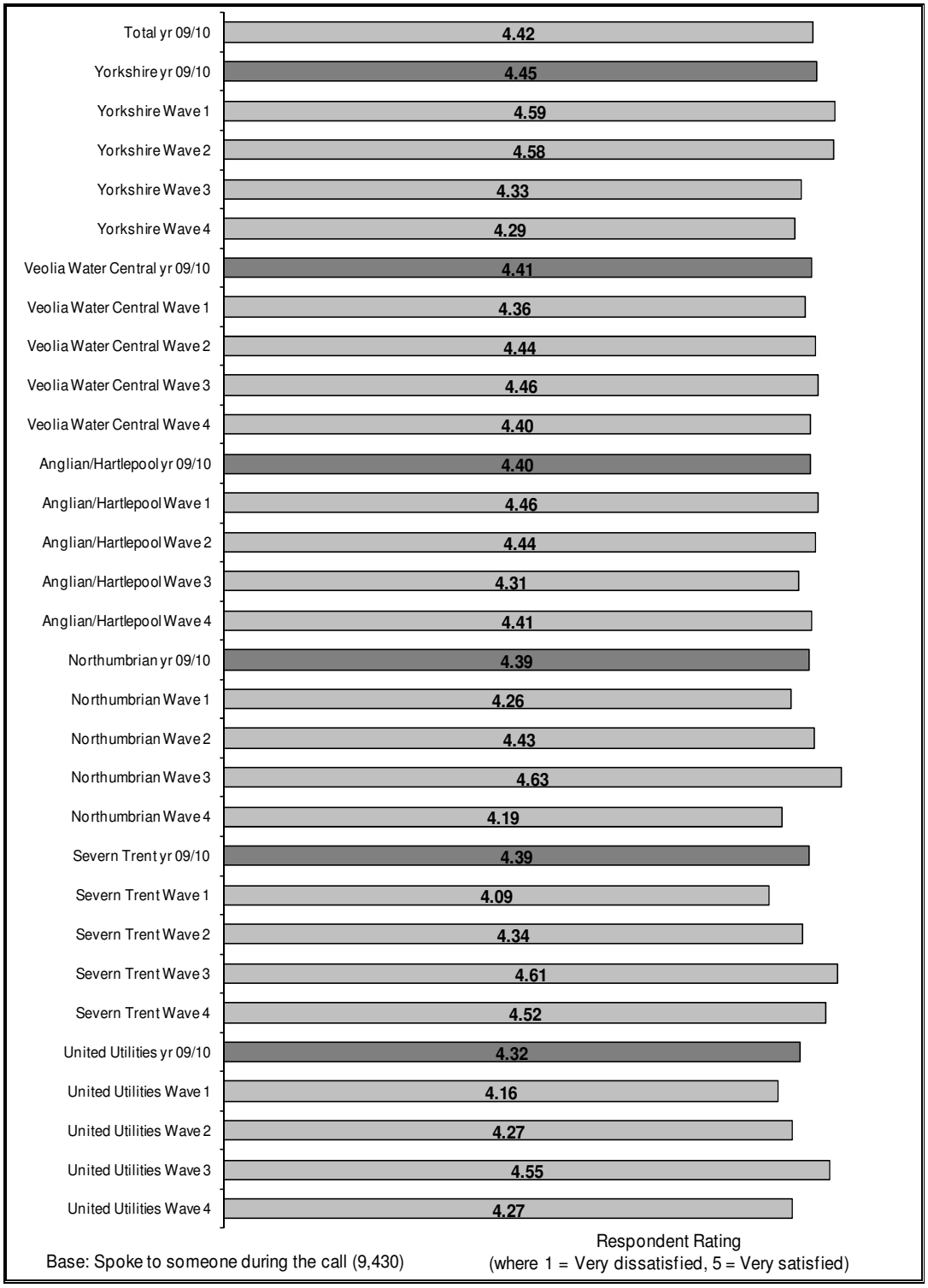

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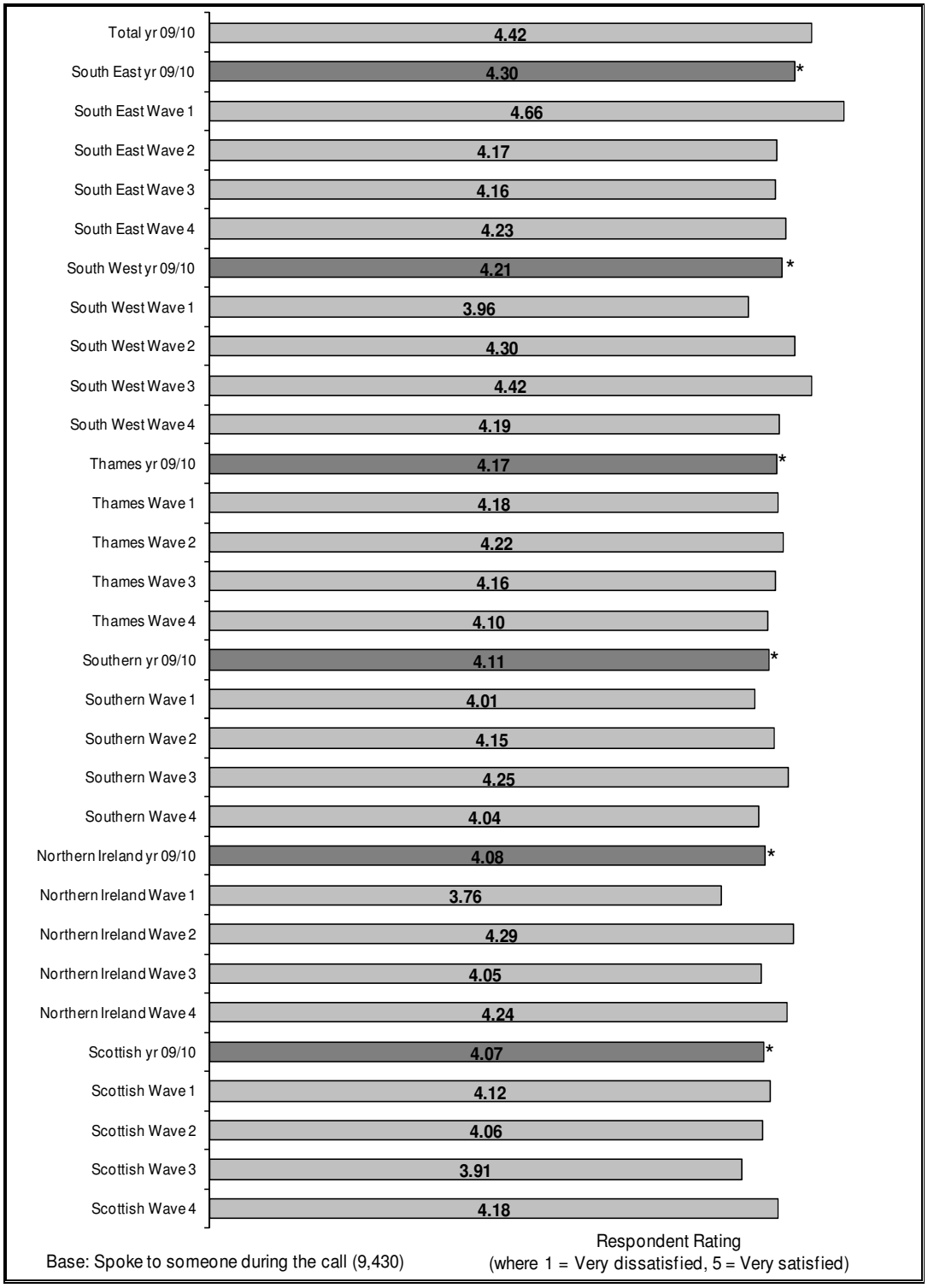
Companies Ranked 19th – 24th



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Contact: Andrea Deeming

McCallum Layton
Research and Marketing Consultants

J1991
March 2010

Checked (initial):

Exec: _____

Field: _____

CUSTOMER TRACKING STUDY

Good morning/afternoon, my name is _____ from McCallum, an independent market research agency, and I'm carrying out research amongst customers who have recently contacted [**insert water company**].

S1 First of all, can I just check, do you or any of your close family work in any of the following industries?

Banking	1	Go To S2
Nursing	2	
Water supply/sewerage	3	T & C
Market Research	4	
Advertising	5	
PR	6	
Retail	7	Go To S2
None of the above	8	

S2 I understand that someone in your [household/organisation] contacted [**insert water company**] recently. Was this yourself?

Yes	1	Go To Q1
No	2	Re-introduce
No and don't know who did	3	T&C

INTERVIEWER: If No, Ask To Be Transferred To Correct Person And Reintroduce. If Not Available Make An Appointment.

Would you be willing to spare about 7 minutes to answer a few questions about the quality of the telephone service you received when you called [insert water company], either now or at a more convenient time? You do not have to answer questions do you not wish to and you can terminate the interview at any point. Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society.

Q1 **INTERVIEWER:** Record date call was made to water company (from sample):

Write In Date: _____

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Q2	**INTERVIEWER:** Record water company (from sample):		
	Anglian	01	
	Bournemouth	02	
	Bristol – Operational	03	
	Bristol & Wessex – Billing	04	
	Cambridge	05	
	Dee Valley	06	
	Essex & Suffolk	07	
	Folkestone & Dover	08	
	Hartlepool	09	
	Mid Kent	10	
	Northumbrian	11	
	Northern Ireland	12	
	Portsmouth	13	
	Severn Trent	14	
	South East	15	
	South Staffs	16	
	South West	17	
	Southern	18	
	Sutton & East Surrey	19	
	Tendring Hundred	20	
	Thames	21	
	Three Valleys	22	
	United Utilities	23	
	Welsh Water	24	
	Wessex – Operational	25	
	Yorkshire	26	
Q3	**INTERVIEWER:** Record whether business or domestic:		
	Business	1	
	Domestic	2	
Q4	Throughout the interview I would like you to think about the call that you made to your water company [**insert water company from Q2**] on [**insert date from Q1**]. Can I begin by asking you what you contacted the water company about on this occasion? **DO NOT READ OUT LIST - SELECT MOST APPROPRIATE**		
	BILLING		
	Moving home or property/change of details	01	
	Leave a meter reading	02	
	Disputing/querying bill/high meter bill/reading	03	
	PAYMENT		
	Payment of bill	04	
	Setting up payment arrangements	05	
	Difficulty paying bill	06	
	WATER SUPPLY		
	Loss of supply	07	
	Loss of pressure	08	
	Leak	09	
	Flood (non sewer)	10	
	DRINKING WATER		
	Water quality complaint/enquiry (eg water smell, appearance or discolouration, bits, taste, softness/hardness)	11	
	SEWERAGE SERVICES		
	Blocked sewer/sewer flooding	12	
	Other (**please specify**) _____	13	
Q5	Did you get through to the company on your first attempt, whether to an automated message or a person?		
	Yes	1	Go To Q7
	No	2	Go To Q6

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Q6	How many times in total did you try to get through?		
	1	1	
	2	2	
	3	3	
	4	4	
	5 or more	5	
	Can't remember	6	
Q7	On the call on which you did get through, how long did you have to wait before it was first answered (either by a person or an automated system)? **DO NOT PROMPT**		
	Please record in minutes ☐ **and/or seconds** ☐		
	Can't remember	X	
Q8	How satisfied were you with the length of time that you had to wait before your call was answered? Were you satisfied, dissatisfied or neither satisfied nor dissatisfied? **UNFOLD SCALE**		
	Very satisfied	1	
	Quite satisfied	2	
	Neither satisfied nor dissatisfied	3	
	Quite dissatisfied	4	
	Very dissatisfied	5	
Q9	Did you speak with a person at **<u>any time</u>** during your call?		
	Yes	1	Go To Q13
	No	2	Go To Q10
Q10	And how satisfied were you with having your call answered by an automated message service rather than a person? **UNFOLD SCALE**		
	Very satisfied	1	
	Quite satisfied	2	
	Neither satisfied nor dissatisfied	3	
	Quite dissatisfied	4	
	Very dissatisfied	5	
Q11	And how easy was the automated system to use? Was it easy, difficult or neither easy nor difficult? **UNFOLD SCALE**		
	Very easy	1	
	Quite easy	2	
	Neither easy nor difficult	3	
	Quite difficult	4	
	Very difficult	5	
Q12	Were you offered the opportunity to speak to a person if you wanted to?		
	Yes	1	Go To
	No	2	Q18
Q13	During the course of this call how many people did you speak to?		
	Please record number of people ☐		
	Interviewer: If answers 2 or more to Q13, proceed to Q14, otherwise go to Q15		
Q14	How satisfied were you with the number of people that you had to speak to? **UNFOLD SCALE**		
	Very satisfied	1	
	Quite satisfied	2	
	Neither satisfied nor dissatisfied	3	
	Quite dissatisfied	4	
	Very dissatisfied	5	

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Q15	How satisfied were you that the person (or people) that you spoke to understood your reason for calling? **UNFOLD SCALE**		
	Very satisfied	1	
	Quite satisfied	2	
	Neither satisfied nor dissatisfied	3	
	Quite dissatisfied	4	
	Very dissatisfied	5	
Q16	Using the same scale, how satisfied were you with their willingness to help? **UNFOLD SCALE**		
	Very satisfied	1	
	Quite satisfied	2	
	Neither satisfied nor dissatisfied	3	
	Quite dissatisfied	4	
	Very dissatisfied	5	
Q17	Overall, how satisfied were you with the politeness of the person (or people) that you spoke to during this call? **UNFOLD SCALE** **INTERVIEWER: If Satisfied With One/Some, But Not With Another/Others, Probe For Overall Satisfaction Across All Spoken To**		
	Very satisfied	1	
	Quite satisfied	2	
	Neither satisfied nor dissatisfied	3	
	Quite dissatisfied	4	
	Very dissatisfied	5	
Q18	**ASK ALL:** Overall, how satisfied were you with the manner in which your call was handled? **UNFOLD SCALE**		
	Very satisfied	1	
	Quite satisfied	2	Go To Q20
	Neither satisfied nor dissatisfied	3	
		---	---
	Quite dissatisfied	4	Go To
	Very dissatisfied	5	Q19
Q19	Why were you [**quite/very dissatisfied**]? **RECORD MAIN REPONSE ONLY** **INTERVIEWER: IF MENTIONS OUTCOME INSTEAD OF MANNER WITH CALL HANDLING, GO BACK TO Q18** _____ _____ _____		
Q20	Immediately on completion of the call, were you left feeling that your call had been/would be dealt with?		
	Yes	1	
	No	2	
	Unsure	3	
Q21	And how satisfied were you with the final resolution of the call, ie the action that was taken as a result of your call? **UNFOLD SCALE**		
	Very satisfied	1	
	Quite satisfied	2	
	Neither satisfied nor dissatisfied	3	
	Quite dissatisfied	4	
	Very dissatisfied	5	

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Q22	Are you willing for us to pass on your details and the answers you have given to your water company in order for them to improve the customer service they provide?		
	Yes	1	Go To Q23
	No	2	T & C
Q23	And would you be happy for your water company to contact you?		
	INTERVIEWER: Reassure Respondent – Would Only Be In Relation To This Issue, Not Selling		
	Yes	1	
	No	2	

Thank you for your help in this research

INTERVIEWER READ OUT:

This research was conducted under the terms of the MRS Code of Conduct and is completely confidential. If you would like to confirm my credentials or those of McCallum Layton please call the MRS free on 0500 396999.

Please may I take a note of your name and where we can contact you for quality control purposes?

Respondent's Name: _____

Telephone (home): (code) _____ (number) _____

Telephone (work): (code) _____ (number) _____

INTERVIEWER DECLARATION:

I declare that I have conducted this interview in accordance with instructions.

Interviewer Signature: _____

Print Name: _____

Date of interview: _____

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