
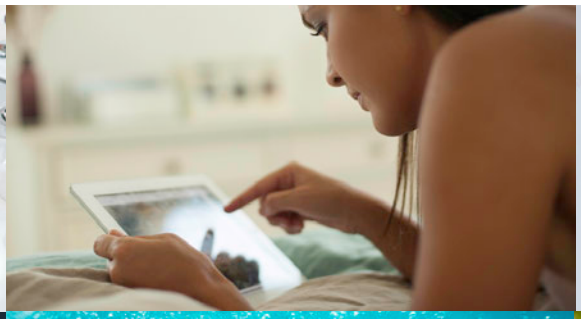



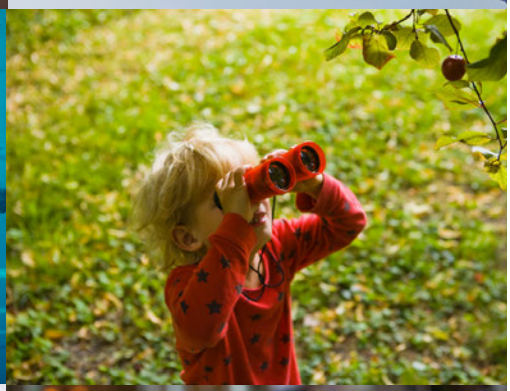


NORTHUMBRIAN WATER *living water* | ESSEX&SUFFOLK WATER *living water*

ANNUAL PERFORMANCE REPORT

2014-15



INTRODUCTION

This document is Northumbrian Water Limited's (NWL's) report on regulatory performance for 2014-15 and the five-year period from 2010-11 to 2014-15 (AMP5). It is a technical document written for Ofwat, other water industry regulators, CCWater and informed customers and stakeholders. It is available to all on our website.

We have also produced a less detailed customer-facing performance review using a customer-friendly web presentation. The availability of the technical document, and the one specifically for customers, means that all should be able to access information on our performance in an appropriate format and level of detail.

We have applied robust management processes and controls to produce the information provided in this report. We have also applied rigorous risk-based, independent assurance to ensure information is reliable. All of this has been overseen by the Board and its Audit Committee.

The Board's Risk and Compliance statement precedes section A which provides details of our approach to governance and assurance for regulatory data. It also provides an update on our Data Integrity Campaign designed to ensure there is an appropriate culture throughout the business in line with our Ethical company value.

A detailed review of our performance for 2014-15 is provided in section B. This is followed in section C by a review of performance for AMP5 against our Price Review 2009 (PR09) Final Determination (FD) regulatory contract. A summary of performance is provided at the beginning of each of these sections.

Our aim in producing this document has been to provide a transparent and reliable account of our performance.

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Section C Delivery of NWL PR09 regulatory outputs

FOREWORD TO THE ANNUAL PERFORMANCE REPORT 2015

HEIDI MOTTRAM, CEO

I am pleased that our planning, hard work and investment in 2014-15 have resulted in service levels that continue to improve and are at the very forefront of industry performance. This brings us even closer to our aim 'to be the national leader in the provision of sustainable water and waste water services'.

- We have improved on our 2013-14 industry-leading performance for interruptions to supply.
- We have maintained our industry-leading sewage treatment 'Look-Up Table' compliance.
- Our leading bathing water quality position has been regained.
- We have reduced the risk of internal sewer flooding for the largest number of properties ever in a single year and made further reductions in pollution incidents.
- Our work to address discoloured water contacts has reduced complaints significantly and met regulatory targets.
- Our Security of Supply Index (SoSI) is 100 for both Northumbrian Water (NW) and Essex & Suffolk Water (ESW) now that the extended Abberton Reservoir is in service.
- We have achieved our leakage targets for the fourth consecutive year.
- We were second of Water and Sewerage Companies for the new qualitative Service Incentive Mechanism (SIM) measure (a result from the recent Ofwat pilots).

Whilst this is an excellent set of outcomes, and we are justifiably proud of what we have achieved, we are not complacent and have plans to make further service improvements in 2015-16.

Now we know how we performed in 2014-15, the last year of the AMP5 period, this allows us to reconcile performance against our PR09 FD regulatory contract. When changes agreed with regulators are taken into account, we have delivered on all of our commitments with only minor variations that are 'trivial' under Ofwat's methodology.

The last year has seen the completion of the PR14 periodic review, which culminated in NWL agreeing the FD published by Ofwat. We listened to our customers so that we could produce a plan that reflected their priorities. Over the period 2015-20, we will improve services across a range of measures, including a further reduction in flooding from sewers. With bills that will reduce slightly in real terms, we believe this package provides excellent value for our customers. Our aim will be to do even better than the minimum regulatory performance commitments wherever this is possible.

I am grateful to the members of our two independent Customer Challenge Groups (known in NWL as Water Forums), who challenged and advised us throughout the periodic review process on behalf of our customers and stakeholders. A number of members are leaving us, for various reasons, and I thank them all for their excellent contributions.

We consider the Forums were a success and plan to continue with them in the future. We want to build on what we have learned and are undertaking a review, in liaison with Forum members and other stakeholders. This will help us design the structure, membership and remit of the Forums going forwards, with the aim of creating the best and most customer-focused process we can achieve.

The opening of the water retail market in 2017 is coming ever closer, when all non-household customers, such as business customers, charities and public bodies, will be able to choose their retail supplier. We are working with Ofwat, Defra, Open Water and Market Operator Services Limited (MOSL) to help bring about the new arrangements whilst working on our own organisational changes to prepare us for market opening. In April 2014, we secured a retail licence to supply business customers and we are looking forward to competing successfully in the market and being the retailer of choice for business customers.

It is pleasing that Ofwat has already started its Water 2020 initiative, looking at the regulatory and market reforms necessary to meet future challenges. It is important this is completed in good time to inform the PR19 methodology. We are fully engaged in the debate and will continue to contribute to the 'market for ideas'.

We fully support Ofwat's transparency and confidence agenda and have ensured the information in this report, which is meant for an Ofwat and informed stakeholder audience, has been subject to stringent governance and assurance, overseen by the Board. We are also publishing a customer-facing annual performance review with its presentation using an innovative web-based approach.

Heidi Mottram
Chief Executive Officer
Northumbrian Water
Essex & Suffolk Water

BOARD-LED ANNUAL PERFORMANCE REPORT

It is extremely important that customers, regulators and other stakeholders have access to robust and transparent information about how Northumbrian Water Limited (NWL or the Company) is performing relative to its regulatory commitments. This Annual Performance Report (APR), which is fully endorsed by the NWL Board, provides this information.

We have a clear commitment to continuous improvement and business excellence. The Company has set clear corporate objectives, which are embedded in the business and are consistent with meeting its obligations. The Board is pleased that this performance review demonstrates the Company's extremely strong performance, meeting regulatory commitments and exceeding them in a number of areas.

We have strong governance, assurance and risk management arrangements in place, which are overseen by the NWL Board of Directors and its Audit and Risk & Compliance Committees. In discharging its duties, the Board has regard to the UK Corporate Governance Code, as appropriate to the sector and the Company's ownership structure. The Board has also put in place a bespoke Board Leadership, Transparency and Governance Code, following the publication by Ofwat of a set of principles for governance.

In endorsing this document, and the Risk and Compliance Statement contained within it, the Board has taken into account its ongoing work to ensure that the company has appropriate processes and internal systems of control.

In terms of specific assurance arrangements for the APR, the Audit Committee reviewed and approved management's proposed approach to assurance. This incorporated a robust, risk-based approach to the assurance of performance data, incorporating review of processes and data by the Internal Audit Department (whose responsibility is to the Board) and audit by external expert technical assurance providers.

A full draft of the APR was circulated to all Board members and comments incorporated into the document. A special meeting of the Audit Committee was held on 23 June 2015 at which audit outcomes and the contents of the APR were discussed in detail. This generated further amendments to the report to aid transparency. The Audit Committee was then able to recommend to the Board that the report be endorsed.

FORMAL STATEMENTS

RISK AND COMPLIANCE STATEMENT BY THE NORTHUMBRIAN WATER LIMITED BOARD

It is confirmed that the members of the Board of Northumbrian Water Limited (NWL or the Company) have endorsed this Risk and Compliance Statement.

The Board confirms that:

- it considers the Company has a full understanding of, and is meeting, its obligations and has taken steps to understand and meet customer expectations;
- it has satisfied itself that the Company has sufficient processes and internal systems of control to fully meet its obligations; and
- the Company has appropriate systems and processes in place to enable it to identify, manage and review its risks.

Note: Obligations in this context relate to those areas where Ofwat is the relevant enforcement authority.

Each NWL Board member has reviewed this document and has had the opportunity to provide comments. The NWL Board has given Heidi Mottram (Chief Executive Officer) and Paul Rew (Senior Independent Non- Executive Director) authority to sign this statement on its behalf.

Heidi Mottram
Chief Executive Officer

Paul Rew
Senior Independent
Non-Executive Director
Date: 15 July 2015

BOARD RISK AND COMPLIANCE STATEMENT: EXPLANATORY NOTES

The Board has confirmed that the Company has ‘sufficient processes and internal systems of control to fully meet the Company’s obligations’ and ‘appropriate systems and processes in place to identify, review and manage its risks’.

The Company has strong systems of internal control and robust processes in place to enable it to identify, evaluate and manage the risks it faces and to ensure that its obligations are met. These systems and processes are embedded in the organisation and are reviewed regularly by the Board. It is important to note, however, that the systems are designed to manage rather than eliminate the risk of non-compliance, and can only provide reasonable and not absolute assurance of compliance. For example, a sound system of internal control can reduce, but not eliminate, the possibility of poor judgement in decision-making, human error or the impact of unforeseeable circumstances or events. The statements as to the sufficiency and appropriateness of the Company’s systems and processes should be interpreted accordingly. We also note that the compliance statement relates to ‘material’ non-compliance or risk of non-compliance. We have reported any instances where our outputs differ materially from PR09 FD requirements.

LICENCE STATEMENTS: CONDITIONS K AND F6A AND SECTION 35A OF THE WATER INDUSTRY ACT 1991

Licence Condition K

The Directors confirm that, as at 31 March 2015, the Company was in compliance with paragraph 3.1 of Condition K of the Instrument of Appointment in that the Appointee had available to it sufficient rights and assets to enable a special administrator to manage the affairs, business and property of the Appointee, should a special administration order be made.

Ofwat Instrument of Appointment – Condition F6A.2A Certificate (financial and management resources to carry out the Regulated Activities)

The Directors of NWL certify that, in their opinion:

- The Appointee will have available to it sufficient financial resources and facilities to enable it to carry out, for at least the next 12 months the Regulated Activities (including the investment programme necessary to fulfil the Appointee's obligations under the Appointment);
- The Appointee will, for at least the next 12 months, have available to it management resources and systems of planning and internal control which are sufficient to enable it to carry out those functions as required by sub-paragraph 6A.1 of Condition F of the Instrument of Appointment; and
- All contracts entered into with any Associated Company include all necessary provisions and requirements concerning the standard of service to be supplied to the Appointee, to ensure that it is able to meet all its obligations as a water and sewerage undertaker.

In providing this certificate, the Directors have taken into account:

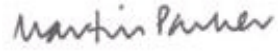
- the Company's Licence, which is in place on a rolling 25 year basis;
- the certainty on wholesale and household retail price controls to March 2020 provided by the PR14 FD by Ofwat, following its acceptance by the Board;
- the financial strength of the Company at the balance sheet date and financial performance which is in line with expectations and reviewed at each Board meeting, most recently in April 2015;
- the key financial ratios over the planning horizon of the Company's one year budget and medium term plan to 2019, as reflected in strong investment grade credit ratings with stable outlook;
- the fact that the Company has arranged £350.0m of five year committed bank facilities as back-up liquidity (maturing in 2019), and that of these £258m remained undrawn at 31 March 2015; and
- the Company's formal risk and governance arrangements which are monitored by the Audit and Risk & Compliance Committees and the Board.

Licence Condition F6A.6

The Directors also confirm that throughout 2014-15 the Appointee has ensured that it, and an Associated Company as issuer of debt on its behalf, has maintained at all times an issuer credit rating which is a strong investment grade rating.

Statement on directors' pay and standards of performance

It is confirmed that a statement on Directors' remuneration and their standards of performance has been published in NWL's Regulatory Accounts, in accordance with Section 35A of the Water Industry Act 1991. The Regulatory Accounts are available on NWL's website or by application.



Martin Parker
Company Secretary

SECTION A

GOVERNANCE AND ASSURANCE

INTRODUCTION

In this section we provide an overview of our governance and assurance arrangements relating to regulatory performance and reporting. These arrangements, together with robust management processes and controls, ensure that we deliver performance in line with, or better than, our regulatory commitments. They also ensure we provide accurate and transparent information that regulators, customers and other stakeholders can rely upon and that engenders trust and confidence.

The arrangements we have put in place are described in the following sections:

A1 Governance overview

A2 Board, Audit and Risk & Compliance Committees' oversight

A3 Ongoing operations

A4 Positive assurances on systems and controls

A5 Processes and internal systems of control to meet obligations

A6 Update on Data Integrity Campaign

A1 GOVERNANCE OVERVIEW

We have strong governance, assurance and risk management arrangements in place, which are overseen by the NWL Board of Directors and its Audit and Risk & Compliance Committees. In discharging its duties, the Board has regard to the UK Corporate Governance Code, as appropriate to the sector and the Company's ownership structure. The Board has also put in place a bespoke Board Leadership, Transparency and Governance Code, following the publication by Ofwat of a set of principles for governance.

We have a clear commitment to continuous improvement and business excellence. The Company has set clear corporate objectives, which are embedded in the business and are consistent with meeting its obligations.

We continue to actively support Ofwat's commitment to risk-based and proportionate regulation. We are committed to maintaining excellent governance and assurance arrangements and the Company and its owners work constructively with Ofwat to develop enhanced governance arrangements in the sector.

Our mature assurance arrangements as described in this section provided the Board with the evidence it needed to sign off the Risk and Compliance Statement for 2014-15 in this document.

A2 BOARD, AUDIT AND RISK & COMPLIANCE COMMITTEES' OVERSIGHT

The Board, Audit and Risk & Compliance Committees' work includes specifying and agreeing objectives, regular scrutiny of performance (e.g. through balanced scorecard and Executive Director reports), regular scrutiny of the corporate risk register, scrutiny of assurance arrangements, agreement of the internal audit plan, review of audit outcomes and review of compliance statement content.

A3 ONGOING OPERATIONS

The following monitoring and control arrangements are in place:

At business management team level

This includes development of objectives, planning to meet obligations and objectives, ensuring sufficient and suitable resources – physical and financial – are applied to meet obligations, scrutiny of performance, management of issues brought to the attention of the Board by internal or external auditors and identification and management of risk.

At department management team level

This includes annual business unit planning to meet business objectives, including regulatory performance requirements and other obligations. There is continuous improvement and performance review/control through our Monitoring, Control and Reporting Systems (MCRS).

By formal management team sub-groups (with management team and executive director membership)

This includes, for example, the Asset Policy Steering Group, which signs off asset management policies and monitors/controls the delivery of investment aspects of the PR09 FD, including serviceability and asset health.

Operational systems and processes

This includes comprehensive systems and processes designed to meet our obligations and objectives with controls in-built.

Policies and guidelines

This includes, for example, water safety plans, service policies and treatment management guidelines aimed at meeting our key obligation to supply wholesome water, including meeting Water Quality Regulations.

Quality systems

Our Integrated Management System (IMS) provides coordinated management of our quality systems. This process is managed by our Health, Safety, Environment and Quality team covering ISO 9001, ISO 14001 and OHASAS 18001. We are also in the final stages of preparation for ISO 55000 accreditation, with audits booked to begin on 16 June 2015.

A4 POSITIVE ASSURANCES ON SYSTEMS AND CONTROLS

A4.1 Quality systems (IMS) audits

Our quality processes are subject to internal audits and external accreditation. There is continuous improvement, including monitoring the resolution of issues identified in audits (corrective actions and improvement actions).

A4.2 Internal audit and external audit

We have an Internal Audit department supported by external professional co-sourcing arrangements with KPMG LLP, reporting directly into the Board's Audit Committee to maintain its independence. Scrutiny of financial areas consists of an internal audit programme plus external audit of our Statutory and Regulatory Accounts by Deloitte LLP, our Financial Auditor. This is a mature and well-tested approach.

Over the last few years, Internal Audit has extended its role further into the scrutiny of non-financial areas. We have developed and implemented a risk-based approach (the higher the risk, the greater the scrutiny) to systems and data audits, which uses a targeted mix of Internal Audit and external Technical Auditor resource on a best-fit basis. The Technical Auditor is always external and is typically used for specialist areas such as leakage and serviceability.

A4.3 Risk register maintenance and review

The Company maintains a strategic risk register and a detailed corporate risk register. The strategic register captures risks that are typically in the future and uncertain, such as potential EU legislation, Government policy changes or unconfirmed regulatory reform.

The detailed corporate risk register captures unmanaged and managed risk of failing our objectives and obligations. It documents the risk owner, management actions in place and is updated and reviewed on a monthly basis by the business management team. Each department now has a nominated Risk Champion.

In 2015 we introduced a revised and enhanced risk management framework which includes, for the first time, discrete departmental risk registers which are managed by the Risk Champions and which are consolidated into the corporate risk register. This approach ensures the risk register is positively and continuously managed at departmental level.

The Risk & Compliance Committee is responsible for over seeing the risk management framework, and giving the Board assurance that risk management is given appropriate consideration. This includes advising the Board on overall risk appetite, tolerance, strategy and any risk exposures, monitoring and reviewing risk assessment processes and keeping the effectiveness of the risk and internal control management systems under review. In addition, this Committee considers business continuity arrangements (also monitored and managed within the company by the Business Continuity Steering Group) and monitors treasury risks and compliance with key financial and operational covenants.

A4.4 Assurance Forum

We have introduced an Assurance Forum led by the Assets and Assurance Director where senior managers review assurance arrangements, ensure there are no gaps in arrangements and drive continuous improvement. The aim is that our assurance arrangements reflect best practice.

A5 PROCESSES AND INTERNAL SYSTEMS OF CONTROL TO MEET OBLIGATIONS

We keep our assurance processes continually under review to ensure they remain appropriate. A key emphasis is on ensuring the Company has sufficient processes and internal systems of control to fully meet its obligations, in addition to demonstrating compliance through actual performance. For the 2011–12 Risk and Compliance Statement we mapped Company processes against our statutory obligations and completed a risk assessment for each.

The assessment against each obligation was assembled in a common format including:

- the responsible member of the management team;
- a formal description of the duty;
- a description of the duty in ‘plain English’;
- details of policies, procedures and responsible departments;
- governance and assurance arrangements;
- risk assessment (including assurance gap assessment); and
- any material performance departures in the report year.

We built on this approach for 2012–13 by reviewing the risk assessments in depth for all ‘medium’ and ‘high’ risk obligations and undertaking audits of the arrangements in place to meet obligations. For 2013-14 we extended this work to cover all ‘low risk’ obligations.

For 2014-15 we have now incorporated the annual review of all obligations (high, medium and low risk) into our business as usual governance and assurance processes.

A6 UPDATE ON DATA INTEGRITY CAMPAIGN

A6.1 Introduction

In 2014 we reported that we had embarked on a programme of actions to further promote an appropriate culture in the business with respect to regulatory data integrity. This initiative is promoting actions and behaviours that are appropriate all the way through the process starting from the source of the data (e.g. customer centre of excellence and water and waste water operatives and contractors) through to senior managers and, ultimately, the Board.

The campaign is progressing well and below we provide an overview and progress to date.

A6.2 Objectives of the campaign

In the first phase of the campaign we endeavoured to raise the profile of data integrity in the minds of those concerned by communicating at every opportunity the keen interest of the Board and Audit Committee in robust data.

In the second phase, we are checking that all concerned in the data 'supply chain' understand their responsibilities and appropriate checks and controls are in place.

The objectives are to:

- check that we have a comprehensive understanding of the process and contributors for each item of data (by mapping data responsibilities, including contractors where relevant);
- communicate the importance of robust data and expected behaviours to all involved in the provision of this data, including to operatives, team leaders and managers;
- review the business as usual assurance (e.g. checks and controls) to identify if there are any material gaps to address; and
- ensure actions are undertaken to address any risks identified.

A6.3 Mapping data responsibilities and risk assessment

Working with data owners and operational managers, we are mapping the route and treatment of the data involved in the monitoring of each performance commitment. We are identifying the teams involved and the processes and procedures in place.

Our aim for the data responsibility mapping, assurance review and risk assessment is that the data owner:

- understands the business areas responsible throughout the entire 'life cycle' of the data;
- is confident that appropriate processes and procedures are in place to manage the data;
- has identified and managed data risks and, where appropriate, included them in the departmental and/or company risk register; and
- is able to risk assess and sign off a data risk and compliance statement based on a sound understanding.

A6.4 Data integrity communication at a detailed level

Our aim for the data integrity communication is that everyone who takes part in regulatory data collection will know:

- what regulatory data they are collecting as they carry out their duties;
- how the data is used and why it is important;
- the importance of accurate data;
- the consequences of misreporting (e.g. penalties or loss of reputation); and
- what they should do if they are not confident about the data in any way.

A6.5 Progress

Mapping and risk assessment of regulatory data processes is well underway. It is planned that this will be complete, any improvements in controls implemented, and all concerned briefed by autumn 2015.

SECTION B

REGULATORY PERFORMANCE 2014-15

INTRODUCTION

In this section we set out our performance for 2014-15 against regulatory targets and in comparison with previous years. Reporting year 2014-15 is the last year of the five-year AMP5 PR09 regulatory contract. Full details of how we have performed over the five years can be found in section C of this report.

We identified a number of 'Outcomes' in our PR14 business plan, based on extensive customer research. While these outcomes do not become the vehicle for formal regulatory reporting until 2015-16, we have already embedded them in the business. Accordingly we have described our performance for 2014-15 in this document under each of these outcome statements.

For continuity we have reported the same KPIs as for previous years and, where this aids understanding, supplemented them with KPIs we will use formally in the future and other useful information.

In this section we provide:

- a summary of performance for 2014-15;
- a table setting out KPI performance for 2014-15 in the context of the 2013-14 outturn position; and
- details of performance under each outcome (see sections B1 to B11).

SUMMARY OF PERFORMANCE 2014-15

We are committed to our aspiration to deliver unrivalled customer service and to be 'the national leader in the provision of sustainable water and waste water services'. We are making excellent progress towards this aim, making further significant improvements to service in 2014-15. When all industry performance is published we believe this will confirm that we have industry-leading performance in a number of areas.

The highlights of our performance in 2014-15 are described below under each outcome.

We provide excellent service and impress our customers

- Although there was a slight dip in performance in 2014-15, our SIM performance score has improved from 72 at the start of the AMP period to 83.72, demonstrating the significant improvements in customer satisfaction we have achieved (based on the SIM measure in place for AMP5).
- During a recent Ofwat trial of the new qualitative SIM measure we were pleased to achieve joint second of all the WASCs.
- In the last three years we have driven a 10% reduction in unwanted contact year on year.
- Customers' overall satisfaction with the service we provide is high, with a net satisfaction score of 88%.
- Our Net Promoter Score has increased from 24% in 2011 to 42% in 2014, ranking us alongside the likes of Apple and Amazon who have excellent reputations for exceeding customer expectations in the service they provide.

Our customers consider the services they receive to be value for money

- Customers' overall satisfaction with value for money is high, with a net satisfaction score of 78%.
- In conjunction with StepChange (our national debt charity partner), we have introduced two special focussed tariffs to help customers having difficulties paying their water bills and other household bills.

We supply clean, clear drinking water that tastes good

- The number of samples passing drinking water quality standards remained very high in 2014 with 99.94% of samples passing for ESW (up on 2013) and 99.95% for NW.
- Our work to reduce discoloured water contacts has reduced complaints significantly and met Drinking Water Inspectorate (DWI) and PR09 FD requirements.
- We aim to reduce the number of water quality compliance failures further, achieving this through a combination of improved water treatment and targeted maintenance of the network.

We provide a reliable and sufficient supply of water

- Our performance with respect to interruptions to supply has improved once again and we expect it to continue to be industry leading when results are published in the summer.
- Between 2010 and 2015 we have reduced the number of properties experiencing poor water pressure by 23% to 231 in 2014-15.
- We have achieved our leakage target in both NW and ESW for the fourth consecutive year.
- Our Security of Supply Index (SOSI) is 100 for both NW and ESW.
- Our enlarged Abberton reservoir has now been filled and secures water supplies for Essex over a 25 year horizon.
- We are investigating the sustainability of groundwater sources in the Berwick and Fowberry resource zone and taking steps to maximise deployable output and manage demand.

We provide a sewerage service that deals effectively with sewage and heavy rainfall

- We have undertaken a major programme of work in AMP5 to address sewer flooding, including work to address 552 properties in 2014-15 alone, a massive effort which exceeded the forecast we provided to Ofwat ahead of the PR14 FD.
- Our excellent performance in 2014-15 means that we have met our obligations with respect to sewer flooding (see section C2.5 for more details).
- We reduced the number of properties in our area flooded internally from sewers for all causes (but excluding severe weather) from 831 properties in 2009-10 to 228 in 2014-15.
- We have also made improvements in repeat sewer flooding, which includes flooding in severe weather, which has improved from 351 instances in 2013-14 to 118 in 2014-15.

We deliver water and sewerage services that meet the needs of current and future generations in a changing world

- All four sub-services have 'stable' serviceability performance for 2014-15.

We help improve the quality of rivers and coastal waters for the benefit of the people, the environment and wildlife

- Our sustained Sewage Treatment Works (STW) compliance performance has been excellent for a number of years and is at the leading edge of industry performance.
- We passed all 'Look-Up Table' permit conditions in 2014 for the seventh consecutive year.
- Only one STW failed its discharge consent, with an Upper Tier failure of one sample.
- Pollution incidents reduced from 133 for 2013 to 90 for 2014, this being our best ever performing year for Ofwat's pollution serviceability measure.
- All of the bathing waters in the NW area achieved the basic 'Mandatory' pass and 31 of the 34 bathing waters (91.2%) met the highest current European water quality standard, known as 'Guideline' - this is the highest pass rate in the country.

We protect and enhance the environment in delivering our services, leading by example

- We will publish a separate environmental report on our website in the autumn.
- Our controllable greenhouse gas emissions reduced in 2014-15.
- We remain on track to deliver our ambition of reducing our GHG emissions by 35% by 2020 against a 2008 baseline.

Our finances are sound, stable and achieve a fair balance between customers and investors

- Looking across all the key financial indicators, we have retained a robust and stable financial position.

PERFORMANCE 2014-15: KEY PERFORMANCE INDICATORS

The table below summarises our performance in 2014-15 and our assessment of its appropriateness against regulatory targets.

OUTCOME	MEASURE AND UNIT	PERFORMANCE LEVEL		COMMENTS	
		2013-14	2014-15		
We provide excellent customer service and impress our customers'; and Our customers consider the services they receive to be value for money	Service incentive mechanism (score)	85.29	83.72	Ofwat qualitative pilot places NWL at 2nd of all the Water and Sewerage Companies	See Section B1
We supply clean clear drinking water that tastes good	Drinking water quality (%) - North East	99.95	99.95	Solid performance but looking to improve further	See Section B4
	Drinking water quality (%) - Essex and Suffolk	99.91	99.94	Improvement on 2013-14 but looking to improve further	
We provide a reliable and sufficient supply of water	Water supply interruptions 3 hours or longer (minutes: seconds per property served)	04:56	03:56	Likely to be industry leading performance	See Section B5
	Leakage (Ml/d) - North East	134.03	136.77	Target met by a significant margin	
	Leakage (Ml/d) - Essex and Suffolk	58.39	60.86	Target met by a significant margin	
	Security of Supply Index (SOSI) - North East	100	100	Best possible score	
	Security of Supply Index (SOSI) - Essex and Suffolk	100	100	Best possible score	
We provide a sewerage service that deals effectively with sewage and heavy rainfall	Repeat internal sewer flooding (number)	351	118	Improvement	See Section B6
We deliver water and sewerage that meets the needs of current and future generations in a changing world	Serviceability water above ground Serviceability water below ground Serviceability sewerage above ground Serviceability sewerage below ground	stable	stable	Stable serviceability across our whole asset base	See Section B7
We help improve the quality of rivers and coastal waters for the benefit of people, the environment and wildlife	Pollution incidents sewerage (category 1-3) (per 10,000km of sewer)	77.59	54.18	Significant improvement	See Section B8
	Serious pollution incidents sewerage (category 1-2) (per 10,000km of sewer)	3.05	1.87	Improvement	
	Discharge permit compliance (%)	99.38	99.37	Sustained excellent performance	
	Satisfactory sludge recycling (%)	100	100	Best possible percentage	
We protect and enhance the environment in delivering our services, leading by example	Greenhouse gas emissions ($KtCO_2e$)	199.7	213.6	Increase of 7% despite reduced energy use. Increase due to grid emissions outside our control	See Section B9
Our finances are sound, stable and achieve a fair balance between customers and investors	Return on Regulatory Capital Value (post tax) (%)	5.3	7.0	We have retained a robust and stable financial position	See Section B10
	Credit rating	BBB+ (stable) Baa1 (stable)	BBB+ (stable) Baa1 (stable)		
	Gearing (%)	61.1	66.7		
	Interest Cover (ACIC post capital charges) (number)	1.9	1.6		

B1 WE PROVIDE EXCELLENT SERVICE AND IMPRESS OUR CUSTOMERS

B1.1 Performance highlights

- We are committed to our aspiration to deliver unrivalled customer service and to be the national leader in the provision of sustainable water and waste water services.
- Although there was a slight dip in performance in 2014-15, our SIM performance score has improved from 72 at the start of the AMP period to 83.72, demonstrating the significant improvements in customer satisfaction we have achieved (based on the SIM measure in place for AMP5).
- During a recent Ofwat trial of the new qualitative SIM measure we were pleased to achieve joint second of all the WASCs.
- In the last three years we have driven a 10% reduction in unwanted contacts year on year.
- Customers' overall satisfaction with the service we provide is high, with a net satisfaction score of 88%.
- Guaranteed Service Standard payments for poor service reduced significantly for the second year in a row.
- Our Net Promoter Score has increased from 24% in 2011 to 42% in 2014.
- We have a well planned and comprehensive strategy to understand our customers' needs so that we can respond to them.
- We have implemented a number of initiatives in 2014-15 that will facilitate further improvements in customer satisfaction,
- These initiatives include the opening of a new state of the art customer contact centre in Lowestoft and introduction of new workforce management tools and field equipment enabling our people to deliver improved customer service.
- We have started our programme to replace our legacy billing, collection and customer service systems, as proposed in our business plan and included in the PR14 FD as an outcome.
- We are in the process of putting in place arrangements to ensure we are ready for the opening of retail competition for non-household customers in 2017.

B1.2 Performance 2014-15

B1.2.1 Measuring customer satisfaction

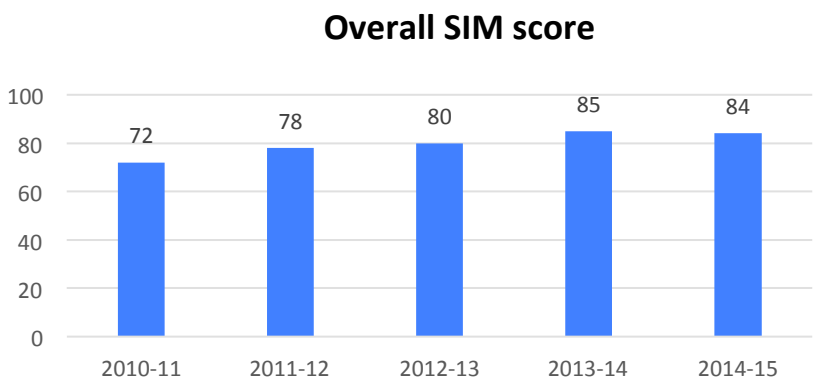
The main indicators of customer satisfaction we have traditionally published are the Service Incentive Mechanism (SIM) and the results of our customer satisfaction tracking survey, as undertaken by an independent research consultant. We also monitor Guaranteed Service Standard payments as an indication of the changing level of non-compliance with these standards.

From 2015-16 we will formally add to these an additional Measure of Success (MoS), the Net Promoter Score (NPS), which we have used internally in recent years. The NPS measures customer advocacy, effectively measuring customer loyalty.

B1.2.2 Service Incentive Mechanism (SIM) performance

Ofwat's SIM measures our customers' experience of dealing with us and provides a good indication of how well we are serving our customers.

After achieving year on year improvements for a number of years, our SIM performance reached 85.29 in 2013-14 and 83.72 in 2014-15. This has been measured using the SIM calculation applied during AMP5 and as used for PR14, on a consistent basis. We have been able to use this measure because we commissioned McCallum Layton to undertake qualitative surveys for us in 2014-15 on the 'old' basis, though this was not required by Ofwat. We do not have other companies' data to compare our performance on a like-for-like basis.



The bar chart shows our success at improving our SIM score in the period 2010-15. The slight dip in performance in 2014-15 was primarily due to a temporary increase in abandoned calls which occurred while we changed our operational processes to become more efficient and effective. Despite this, our complaint volumes continue to drop steadily, and satisfaction with the way we deal with customers' problems is increasing. Our customers and the quality of service we provide them remain central to our thinking and we are confident further improvements will be seen over the coming year.

The SIM measure is changing in the future to focus more attention on the customer experience, from first point of contact to the resolution of the issue. We welcome this change because we believe customers' views of performance are more important than quantitative measures, such as volume of unwanted contacts.

We also support that the new SIM measure surveys all customers who contact the company within a specified period. The extent of customers to be surveyed is now absolutely clear and there is no chance that the approach to choosing the sample can affect the results.

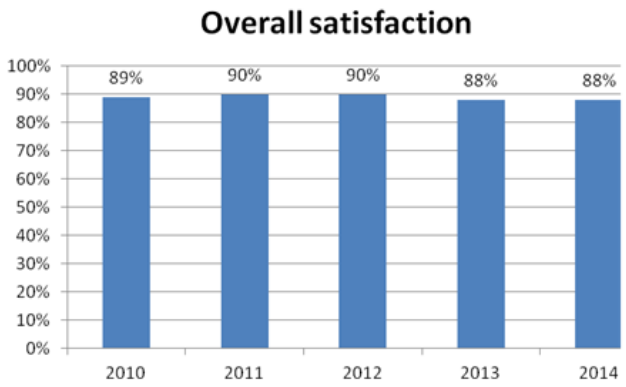
During a recent Ofwat trial of the new SIM qualitative measure we were pleased to achieve joint second of all the WASCs.

SIM continues to include an assessment of unwanted customer contact and our work in getting service right first time has resulted in a further reduction in 2014-15. In the last three years we have seen a 10% reduction, year-on-year, in unwanted contact.

B1.2.3 Customer overall satisfaction with service: tracking research

A high level of customer satisfaction has also been confirmed through our quarterly tracking research, undertaken for us by an independent expert company.

As shown in the bar chart overleaf, we achieved a high companywide net satisfaction score of 88% in 2014-15, the same score as for 2013-14.



B1.2.4 Customer loyalty: Net Promoter Score (NPS)

There is not one single measure that will provide us with the full picture of our customers' satisfaction. So, to benchmark ourselves outside the water industry we have been measuring our (NPS), which measures customer advocacy (the loyalty that exists between us and our customers). We have identified the NPS as a MoS from 2015-16 onwards.

We have seen our score improve significantly, from 24% in 2011 to 42% in 2014. Our results for the first quarter of 2015 show further improvement, with our NPS rising by another 4% to 46%. This ranks us alongside the likes of Apple and Amazon who have excellent reputations for exceeding customer expectations in the service they provide.

B1.2.5 Guaranteed Service Standard (GSS) payments

We seek to provide excellent service. When things occasionally go wrong, the Water Supply and Sewerage Services (Customer Service Standards) Regulations 2008 require companies to provide compensation payments to customers in certain circumstances.

We do whatever we can to minimise service failures and aim to pay promptly should we fail to meet guaranteed standards. GSS payments totalled £601k for 2014-15. This represents a 36% decrease from the 2013-14 figure of £941k, the second year in a row that payments have reduced. The fall is largely due to a reduction in sewer flooding incident payments which reflects the investment we have made as a business to improve our performance in this area of service.

B1.3 Achieving excellence in customer satisfaction

B1.3.1 Ensuring we understand our customers' expectations

To satisfy our customers we need to understand what they want in terms of water and wastewater services, complaint resolution and communications. We establish expectations through extensive engagement with customers. In this way we build up a picture of where service improvements are necessary and the actions that can be taken to increase customer satisfaction in all of our dealings with customers.

We have a planned approach to customer engagement, ensuring the information we gather, both qualitative and quantitative, provides a coherent body of evidence across all of our outcomes, informing both operational and planning requirements. We open up our customer research approach and outcomes to our Water Forums (Customer Challenge Groups) so that we benefit from both challenge and advice from a range of stakeholders. We also discuss research with CCWater and take its comments into account in designing research and interpreting outcomes.

As well as the customer satisfaction tracking research described above, we have also introduced a daily survey and ask circa 10,000 customers each week what they think of our service.

Examples of subject specific customer research we are undertaking in 2014 and 2015 are:

- Customers' relationship with, and expectations of, their waste water service

  This research will provide us with a contemporary and comprehensive understanding of customers' views and requirements of their waste water service.

- Customers' awareness and understanding of the transfer of private drains and sewers

  This research will give us a clear understanding of what our customers' know and their requirements.

- Taste and odour contacts and complaints

  In-depth research into customers' experience and the impact of drinking water tastes and odours, to inform the development of our approach to addressing taste and odour issues.

- Customers' use of bathing waters and their satisfaction with coastal water quality

  An improved understanding of bathing waters use will support the development of customer focussed bathing water improvement plans, giving us an evidence base for making improvements, and an indication of which bathing waters should be prioritised for improvement.

- Customers' experience of pollution in rivers and their expectations

  This will provide an understanding of how customers experience river water quality, their concerns and what they expect of NWL. This will help to influence where we concentrate our investment in the future to the benefit of our customers.

- Customers' expectations and preferences for catchment management

  Understanding the value customers place on catchment management will inform the ambition and scope of our catchment management plans and will help us to target our campaign work appropriately.

All of this work is part of our overall strategy to ensure we have up to date customer views and any gaps in understanding are addressed. It will inform the quantitative research required to inform our PR19 strategy.

B1.3.2 Actions to deliver improvements

Our aim is that our water and waste water services meet customers' expectations so that they do not feel they need to contact us to complain. In this respect, we have improved our performance regarding all of our water and sewerage services over the last five years and almost all of them in 2014-15 (see our performance achievements under the other outcomes). Our plan is to achieve further improvements to service in 2015-16, with our PR14 FD Performance Commitments for that year the minimum we expect to achieve.

To help us to improve service on the ground we have also invested in new workforce management tools and field equipment enabling our people to deliver improved customer service more efficiently.

We are working hard to improve satisfaction when customers need to contact us. To do this we are continuing with our investment in customer service systems and the provision of customer choice in how they wish to contact us. In the last year we have made it easier for customers to pay and access their accounts through our web services. We let customers know when the latest statement is available so that they can keep up to date with their bill and water usage.

We understand that our customers have individual requirements and expectations and want a choice in how they contact us. In the last year we have introduced a web-chat option and we typically see over 800 customers per week choosing to use this service. We are also embarking on the delivery of a new multi-channel contact system which will make it easier for our customers to contact us in a variety of ways.

It is clear that many of our customers still want to contact us by telephone and we have continued to invest in our contact centres with the opening in July 2014 of a new state of the art building in Lowestoft.

Effective communication is critical to customer satisfaction and we are proactive and innovative in how we do this. We use text and voice messaging to keep customers informed of events in their area or to confirm recent transactions. Some 10,000 to 20,000 messages are sent each week on average.

We have commenced a major programme to replace our legacy billing, collection and customer service systems as described in our PR14 business plan and included in the PR14 FD as a named Outcome Delivery Incentive (ODI) outcome.

This programme will include a review of how we deliver services to customers focussing on making the customer journey easier, faster and more efficient.

A programme of business transformation to ensure we are ready for the opening of retail competition for non-household customers in 2017 has also started.

B2 OUR CUSTOMERS CONSIDER THE SERVICES THEY RECEIVE TO BE VALUE FOR MONEY

B2.1 Performance highlights

- The CCWater customer satisfaction report for 2013 showed that their Northumbria region, in which the vast majority of customers receive their service from NWL, had continued to be number one for satisfaction with value for money for water and sewerage services (the 2014 report will not be published until August 2015).
- Customers' overall satisfaction with value for money is high, with a net satisfaction score of 78%.
- With improvements to service and stable bills predicted for 2015-20, we are hopeful that customers' perceptions of the value for money of water and sewerage service will increase.
- In conjunction with StepChange (our national debt charity partner), we have introduced two special tariffs to help customers having difficulties paying their water bills and other household bills.

B2.2 Performance 2014-15

B2.2.1 Measuring customers' satisfaction with value for money

The main indicators that we use to measure our customers' satisfaction with value for money are the results of CCWater's annual survey and those of our independent customer satisfaction tracking survey. We will continue to use these MoS in the future.

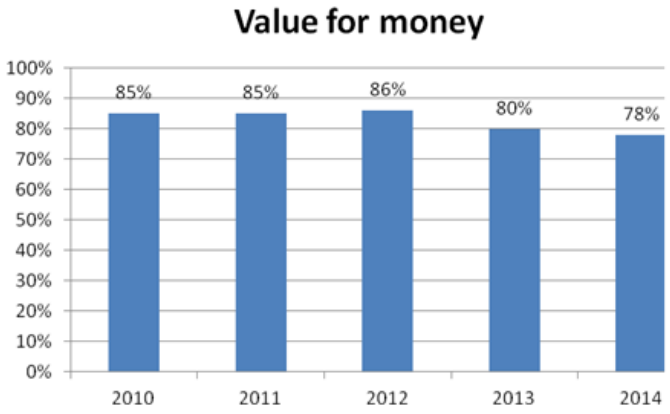
B2.2.2 CCWater's annual survey outcome

The CCWater customer satisfaction report for 2014 has been delayed until August 2015. The results of its survey of water and sewerage customers for 2013 showed that the Northumbria region had continued to be number one for satisfaction with value for money for water and sewerage services.

B2.2.3 Customer satisfaction with value for money: tracking research

A high level of customer satisfaction with value for money has also been confirmed through our quarterly tracking research, undertaken for us by an independent expert company.

Although companywide customer satisfaction with value for money was still high in 2014, this is lower than previously. The economic downturn may have caused customers to reappraise their views of value for money as scores across the sector have also tended to reduce. Net satisfaction was at 78%, as shown in the bar chart below.



B2.3 Value for money – prospects for the future

We want our customers to feel that our services represent value for money. Our plans are to deliver further improvements in water and waste water services in AMP6, above their generally very high existing levels. This will include reducing flooding from sewers further, an area in need of continuing attention. With water and sewerage bills predicted at PR14 not to rise in real terms, these improvements in service should lead to our customers considering that value for money is improving, though there are many factors that can affect the way people think about such a concept.

B2.4 Affordability

Engaging with thousands of customers in the preparation of our business plan has greatly improved our understanding of the pressures customers face paying for all essential services, including their water bills. Any customers, who are having genuine difficulty paying their bills, can benefit from new social affordability measures we have introduced.

We are building on our successful partnership with the national debt charity StepChange. This recognises that water arrears may be a sign of a customers' wider financial problem that the debt charity will be able to help with. The partnership, an industry first, reflects our commitment to understanding the customer's financial situation in the round and working with them to find a sustainable solution.

Two 'SupportPLUS' tariffs have been introduced in partnership with StepChange. The first scheme is designed to enable those customers in most need to be supported to pay their bills by matching their payments to their affordability, as assessed by StepChange.

The second scheme helps customers struggling with significant water bill arrears to get back on their feet. They can address their arrears by committing and adhering to regular, affordable payments.

These schemes not only help those concerned but incentivise customers to get back into the payment habit. Customers who would have not have paid anything towards their water bills will pay something. The schemes are funded by reducing bad debt costs.

B3 WE ARE A COMPANY THAT CUSTOMERS TRUST

B3.1 Performance highlights

- It is extremely important to us that our customers have trust and confidence in us as a company.
- Our NPS score improved significantly, from 24% in 2011 to 42% in 2014, indicating that trust is increasing.
- In the national CCWater customer satisfaction survey for 2013, water and sewerage customers in their Northumbria region were identified as having the highest level of trust with their water and sewerage company (the 2014 report will not be published until August 2015).

B3.2 Performance 2014-15

B3.2.1 Measuring customers' trust

It is extremely important to us that customers have trust and confidence in us as a company. We have adopted stakeholder satisfaction as indicated by the NPS as an indicator of customers' trust (see also B1.2.4). If customers had a lack of trust in us, they would not recommend us to others.

We also take note of survey outcomes conducted by others, such as CCWater.

B3.2.2 Net Promoter Score

As we set out in B1.2.4, we have seen our NPS score improve significantly, from 24% in 2011 to 42% in 2014. Our results for the first quarter of 2015 show further improvement, our NPS rising by a further 4% to 46%. These relatively high scores for NPS demonstrate our customers trust in the company.

B3.2.3 CCWater customer satisfaction report for 2013

The CCWater customer satisfaction survey for 2013 asked customers how much they trusted their water and/or sewerage company on a scale of one to ten (1 = no trust and 10 = complete trust). In this national survey, customers in their Northumbria region, in which the vast majority of customers receive their service from NWL, indicated the highest level of trust with their water and sewerage company at 7.74.

We await with interest the outcome of the corresponding 2014 CCWater survey, which will be published in August 2015.

B4 WE SUPPLY CLEAN, CLEAR DRINKING WATER THAT TASTES GOOD

B4.1 Performance highlights

- Our strategy for drinking water quality remains focused on both public health and consumer confidence.
- The number of samples passing drinking water quality standards remained very high in 2014 with 99.94% of samples passing for ESW and 99.95% for NW.
- This is a significant improvement in the ESW region whilst maintaining an excellent level of compliance in the NW area.
- The number of tests failing strict quality standards reduced companywide from 171 in 2013 to 108 in 2014 (a tiny proportion of the c 128,000 tests undertaken annually).
- Our proactive catchment management approach is leading to reduced risk of pesticides entering drinking water sources.
- The microbiological performance at our treatment works and service reservoirs is very high, and in 2014 our performance improved with only 13 failures recorded from 49,711 samples taken during the year – our aim is to improve further.
- Our work to reduce discoloured water contacts has reduced complaints significantly and met PR09 FD requirements.
- We continue our work to comply with the new standard for lead in drinking water and reduce the risk to public health, which will include the recruitment of a lead liaison officer to work with vulnerable groups.
- In future we aim to reduce the number of water quality compliance failures further, achieving this through a combination of improved water treatment and targeted maintenance of the network.

B4.2 Performance 2014-15

B4.2.1 Measuring drinking water quality

Our strategy for drinking water quality remains focused on both public health and consumer confidence. We are committed to the supply of water which is healthy, clean and tastes good whilst continuing our delivery of schemes aimed at minimising discolouration contacts.

The DWI regulates drinking water quality and its reports on water companies' performance can be found at the following link:

http://dwi.defra.gov.uk/about/annual-report/index.htm

Our aim is to achieve 100% compliance with all statutory drinking water quality standards.

As part of our planning arrangements and performance monitoring framework, we have also chosen a number of MoS for this outcome as follows:

- Overall compliance with drinking water standards
- Discoloured water complaints
- Satisfaction with the taste and odour of drinking water

On the following pages we report on all material aspects of our performance with respect to drinking water quality in 2014.

B4.2.2 Overall compliance with drinking water standards

Overview

The number of samples passing drinking water quality standards remained very high in 2014 with 99.94% of samples passing for ESW and 99.95% for NW. This represents a significant improvement in the ESW region whilst maintaining a solid level of compliance in the NW area.

In total we carried out 127,805 tests companywide at customer taps in 2014 and only 108 failed our strict quality standards. This compares to the total of 171 failures seen in 2013. Only 69 of the 108 failures contributed directly to our Overall Drinking Water Quality performance.

The improvement seen in ESW was mainly due to better pesticide management in our catchments, although taste and odour failures gained more prominence and had the greatest impact on performance during the year. In NW, overall performance was stable. We observed an increase in the number of chemical failures recorded; the number of iron failures also increased compared to those seen in 2013.

The new tighter lead standard of 10ug/l came into force on 25 December 2013 and this has had a direct impact on performance in both regions. It is important to note that the levels of pesticide, iron and lead recorded are extremely small and do not pose a risk to public health.

Drinking Water Quality Compliance	2013	2014
NW	99.95%	99.95%
ESW	99.91%	99.94%

Pesticides in raw water

Many of the pesticides which reach our raw water abstraction points cannot be treated to levels that would pass quality standards. To solve this we work with farmers and other land managers to reduce or stop pesticides entering the rivers supplying our treatment works. This is called ‘catchment management’ and includes delivering direct advice to farmers and working in partnership with Defra’s Catchment Sensitive Farming initiative. This approach also delivers associated benefits for wildlife and fish.

We had formal agreements (undertakings) with the DWI regarding 11 water treatment works relating to the pesticides metaldehyde or clopyralid. These commitments have now been carried forward into revised agreements with DWI for another five years. A number of our catchments have also been designated Safeguarded Zones by the Environment Agency (EA) and we will be carrying out prioritised activities in these areas to try and minimise risk to source waters. This will include bio-bed studies at individual farmyards. This overall package of work towards pesticide management is recognised by the EA as part of its National Environment Programme (NEP).

Our catchment management approach is expected to deliver long term sustainable benefits. However in the short term, metaldehyde (slug pellets) continue to represent a big risk to drinking water quality, particularly in the Essex region. To help mitigate this impact, we have extended our catchment activities to include proactive abstraction management to help protect water resources.

We employ a fast turnaround method for detection of metaldehyde in raw waters which allows us to avoid significant peaks in the pesticide by managing when we take water from the rivers. A decision matrix has been developed alongside this work to determine when to take water into storage and so minimise the risk of accumulation within our reservoirs. The number of metaldehyde failures has subsequently been reduced from 94 in 2013 to 10 in 2014, and there is strong evidence to suggest that the ongoing risk is being managed into 2015.

Microbiological performance at treatment works and service reservoirs

The microbiological performance at our treatment works and service reservoirs is very high, and in 2014 our performance improved with only 13 failures recorded from 49,711 samples taken during the year. This is our best annual performance and represents continual improvement in this area. However, it is our aim to prevent these failures occurring at all and we have developed robust action plans to help us meet this ambitious target.

Treatment works

The number of treatment works with microbiological failures in the final (treated) water improved in 2014 with only six recorded, three of which were at one site during a single event. Inspection and maintenance regimes on our treated water tanks, process units and sample points continues to be sustained at an

enhanced level to manage the risk of failure and, where appropriate, treatment was enhanced to increase the effectiveness of disinfection.

We have carried out extensive filter media investigations to determine whether our rapid gravity filters are performing optimally, and we are using computational fluid dynamic modelling to help understand the hydraulics in our chlorine contact tanks. In addition, we have identified a number of sites which require enhancements to comply with our own internal effective disinfection policy, and have agreed schemes with DWI to install Ultra Violet disinfection at an extended number of sites by 2020, as well as pH (acidity) correction and chlorine contact tank modifications to help further improve our microbiological performance.

Service reservoirs

Service reservoir microbiological performance significantly improved in 2014 with every site achieving the required 95% annual compliance to satisfy drinking water standards. Only seven failures were recorded across the 300+ tanks within the North East, Essex and Suffolk. This equals our best ever performance and the achievement underlines the effectiveness of the enhanced inspection and cleaning regime implemented in 2009, with all service reservoirs now inspected on either a three or five year frequency.

B4.2.3 Iron compliance and discoloured drinking water

NW region

In NW, the level of iron in drinking water can sometimes exceed the required standard due, in part, to the characteristics of the network and the water. The number of failures recorded in 2014 increased compared to the previous year with 20 failures recorded compared to nine. A contributory factor towards this deterioration was the loss of final water pH correction facilities at Horsley Water Treatment Works (WTW) in Tyneside for a period while pH correction facilities were replaced; this caused the water to become aggressive for a number of months and affected some of our cast iron mains. Nevertheless, the overall serviceability of the water network remained stable for 2014.

We have delivered a number of schemes to replace iron water mains to help increase iron compliance across the NW operating area, some of which were a regulatory commitment (under Regulation 28). In addition, we've made flushing smaller distribution mains a priority as this removes sediment and ensures it doesn't cause iron problems or discoloured water incidents, and changed our flushing method to improve effectiveness.

Discoloured water has been a particular problem for some of our NW customers, caused by build-up of iron and manganese in the network over many years. When the sediment is disturbed, for example by a burst water main, this can cause discoloured water at the tap.

Since 2005 we have had an ongoing programme of work in place with DWI to reduce the number of discoloured water contacts received from consumers. The work consists of a combination of large diameter trunk main cleansing followed by local network flushing, and we are currently working within the Newcastle and Gateshead areas. The existing agreement was to reduce contacts to less than 4,000 per annum in the North East by March 2016, although due to unforeseeable delays around weather, difficult working conditions and planning requirements, the legal commitment was revised in consultation with DWI.

Work is progressing well with the revised scheme which will continue until 2017, and so far over 160km of large diameter mains have been cleaned. By the end of 2014, the number of discoloured water contacts received by NW was less than 4,000, which is a substantial reduction to the 14,000 contacts received in 2005 when the programme of work commenced. This means we have already exceeded the expectations of the current undertaking some two years before all cleaning works have been delivered, and also provided significant improvement in service to our customers. Further details of our performance against PR09 FD requirements is provided in section C1.1.

The current success of this programme is due to it being part of an integrated strategy for discolouration which contains a number of key activities and ongoing innovations. This includes unidirectional district metering area (DMA) flushing, the introduction of pipeline management to condition our higher risk large diameter mains, and the development of two training centres for operations in 2015 to help minimise the impact of valving activities on sensitive mains.

Between 2015-2020, we will also be installing or improving manganese removal at five of our water treatment works to help protect the network from future sediment build; this will improve network operability

and help us reliably achieve new tighter internal standards, all of which has been agreed with DWI as part of a new undertaking.

ESW region

ESW has excellent compliance on iron levels in water and low levels of discolouration. This is partly due to the different characteristics of the water sources used in the South East of England. As such this region only recorded 374 discoloured water contacts during 2014.

B4.2.4 Meeting the new standard for lead in drinking water

In anticipation of changes to the lead standard, we carried out lead communication pipe replacements in 11 hot spot District Metered Area (DMAs) during the period 2010-15 where the risk of lead exposure was deemed to be high. This work was captured within an undertaking agreed with DWI and the Inspectorate has formally received evidence of scheme completion.

We continue to see lead as a critical part of our water quality programme and we intend to improve the stability of water leaving our treatment works during the period 2015-2020 to ensure lead control measures, such as adding phosphate, are fully effective. In addition, we have identified a further three DMAs which have shown a high risk of failure to meet the lead standard and, therefore, we will be initiating communication pipe replacement schemes in all three.

We are also currently in the process of recruiting a lead liaison officer to help facilitate communication with external agencies and customers on lead matters and help promote awareness and identify opportunities for lead replacement schemes in our operational areas. The purpose of this new role is to focus on vulnerable groups with respect to lead, and so ensure we are fully focused on public health. Our integrated package of work for lead has been captured by DWI under a Regulation 28 commitment.

B4.2.5 Taste and odour of drinking water

The taste and odour of our tap water is central to our customers' experience of the service we provide and is considered important by our customers. We have undertaken a number of initiatives to improve satisfaction, including improvements in treatment and in communication.

We are currently undertaking research with our customers and with internal service teams to examine their experiences of taste and odour issues. This research is not limited to those who have contacted us about taste and odour but is also engaging with a wider sample of customers to help us better understand the service we provide and how it can be improved.

We will use this research to identify improvements we can make to increase satisfaction with the taste and odour of our drinking water. For example, we will look to improve how we explain potential reasons for taste and odour issues to our customers, increase the support we provide online and through improved technician visits. We hope that these initiatives, amongst others, will reduce the number of contacts we receive from customers who are apparently not satisfied with the taste and odour of their tap water, allowing us to do even better than our performance commitment in this area of service.

B5 WE PROVIDE A RELIABLE AND SUFFICIENT SUPPLY OF WATER

B5.1 Highlights

- Our performance with respect to interruptions to supply has improved once again and we expect it to continue to be industry-leading when results are published in the summer.
- Between 2010 - 2015 we have reduced the number of properties experiencing poor water pressure by 23% to 231
- For the fourth consecutive year we have achieved our leakage target in both NW and ESW.
- Our SoSI is 100 for both NW and ESW.
- Our enlarged Abberton reservoir has now been filled and secures water supplies for Essex over a 25 year horizon.
- We are investigating the sustainability of groundwater sources in the Berwick and Fowberry resource zone and taking steps to maximise deployable output and manage demand.
- The number of optant meters installed in the NW and ESW regions was close to forecast.
- The number of selective meters installed on change of ownership in Essex again fell short of the number forecast as the secondary housing market is still far weaker than when the forecasts were made.
- Over AMP5 our water efficiency programme has achieved significantly more savings than required by our regulatory target.

B5.2 Performance 2014-15

B5.2.1 Measuring water supply reliability and sufficiency

To measure our performance we monitor:

- interruptions to supply;
- properties affected by poor water pressure;
- leakage; and
- security of supply through the SoSI.

Progress with metering and water efficiency measures are also important factors. We describe below our performance in these areas.

B5.2.2 Interruptions to supply

We record the amount of time we interrupt customers' water supply for planned maintenance or an incident such as a burst water main. We know that continuity of water supplies is important to our customers and we have made fantastic reductions in supply interruptions in recent years. We have done this through the provision of alternative temporary supplies and improved operational practices.

Our performance has improved once again in 2014-15 with an average interruption time (greater than 3 hours) of only 3 minutes and 56 seconds per property served. This is better than last year's performance of 4 minutes and 56 seconds. Only 242 of the 1.98 million properties we supply experienced longer unplanned interruptions of over 12 hours in 2014-15. We believe we will remain industry-leading in this area by a substantial margin when results are published in the summer.

Interruptions to supply > 3hrs (minutes and seconds per property)	
2013-14	2014-15
4:56	3:56

Our aim is to improve our performance further for the benefit of our customers and to maintain our industry-leading position.

B5.2.3 Pressure

Between 2010 - 2015 we have reduced the number of properties experiencing poor water pressure by 23%, seeing a net reduction of 69 properties to 231. We have consistently operated near our lower serviceability reference level by dealing with properties that fail the pressure standard either within the year they are identified or through longer term planning of investment. This has usually involved the installation of short lengths of additional pipe work, small pumping stations or reconfigurations of the network.

B5.2.4 Leakage

For the fourth consecutive year we have achieved our leakage target in both NW and ESW. In both areas the winter was harsher than that experienced in the previous two years. Periods of icy weather caused the rate of leakage to increase, but our early proactive interventions ensured leakage was successfully controlled.

In NW we achieved 136.77Ml/d, which is significantly below the target of 141Ml/d and in ESW we achieved 60.86Ml/d, again significantly below the target of 66Ml/d.

B5.2.5 Security of supply (SoSI)

Security of Supply Index

The SoSI is a measure of how resilient we are against periods of drought in ensuring we are able to meet our customer's demands for a reliable and sufficient supply of water. The SoSI for both of our regions was 100, the highest level achievable.

Abberton reservoir

This year saw the enlarged Abberton reservoir completely filled with water for the first time ever. This achievement was the climax of over 20 years work to promote the Abberton project and complete the construction. It secures water supplies to Essex for a 25 year horizon.

Security of supply in the Berwick and Fowberry water resource zone

Water supplies to the vast majority of our customers in the NW region are supported by Kielder Reservoir, which has significant surplus capacity, and so water resources are sufficient. We also have a separate small water resource zone in the north of this region (the Berwick and Fowberry water resource zone) served only by groundwater sources. There is some concern that the groundwater resource sufficiency may not be sustainable in the longer term and may also be under threat from nitrates from farming.

We have a number of actions in progress to establish the long term reliable capacity of the ground water source, understand the threat from nitrates, ensure our assets can make use of the full available capacity and maximise water efficiency. These are described briefly below.

Resource sustainability investigations

Our NEP for AMP6 includes an investigation into the sustainability of water resources in the Berwick and Fowberry water resource zone. In preparation for this we are in the process of monitoring groundwater levels at all of our wells and boreholes, drilling more groundwater level monitoring boreholes (particularly in the Murton and Thornton area) and taking regular gauge board river level readings.

This information will feed into the AMP6 NEP investigation for which a scoping report is currently being prepared. Once agreed with the EA, it will form the basis of the investigation which will form our AMP6 NEP obligation.

A new hydrogeologist started with the company on 26 May 2015 and the main part of the role will be to work on this important project.

Nitrate investigation

There is an increasing nitrate trend in the fell sandstone groundwater from which our Berwick and Fowberry boreholes draw water. Modelling will be undertaken during 2015 to establish when the nitrate drinking water standard would potentially be exceeded. Additionally, an assessment of whether a sudden breakthrough could occur will also be undertaken.

We have also agreed to joint fund a project with the EA and Newcastle University starting in April 2016. This will look to quantify nitrate leaching under current land management practices and to establish what mitigation measures could be implemented.

Maintaining deployable output

The deployable output of some sources in the Berwick and Fowberry water resource zone is currently constrained by groundwater turbidity. A programme of borehole rehabilitation is progressing to resolve this issue, within operational constraints. Additionally, new treatment works are currently being designed to treat groundwater from the Murton and Fowberry boreholes.

A previous abstraction licence variation was due to have expired in March 2015 which would have resulted in the Fowberry annual licensed quantity reverting back to a lower constraining quantity. However, an environmental appraisal report was prepared and submitted with a new licence variation application. The licence variation was issued in December 2014.

Maximising water efficiency in the Berwick water resource zone: Every Drop Counts

We are employing enhanced water efficiency measures to ensure that the demand for water is managed efficiently over the whole of the Berwick and Fowberry water resource zone. Last year, we devised our 'Every Drop Counts' initiative, incorporating our first 'whole town' water conservation campaign.

Key aspects of the campaign are as follows.

- Marketing Campaign

  Our approach to marketing water efficiency has traditionally involved using direct mailshot to promote home water audits achieving varying levels of participation. To help build relationships with customers, increase uptake and deliver lower water demand, we developed a broader approach that used a combination of information and community based marketing.

  This included an advertising campaign that ran across local radio stations and local press to educate customers about the benefits of saving water and encourage customers across Glendale to visit our website to request a free home water audit.

  We also worked in partnership with the Glendale Gateway Trust to employ two residents as community champions. The champions engaged with customers and use their personal relationship to influence participation in the water saving programmes.

- Education Programme

  Educating the future generation about the impact of their water use was an important aspect of the campaign. With this is mind, we launched the campaign at the Children's Countryside Day held in Wooler, north Northumberland.

  We also worked with a local youth film group and local film maker to create a film about the Every Drop Count programme, which was screened during the Berwick Film Festival in September 2014.

- Water audit programme

  Over 1,800 domestic customers and 100 small medium size businesses were offered an opportunity to have an NWL technician to attend their property to carry out a water efficiency audit, including residents with a spring fed private water supply. Evidence suggests that the combination of information and community based social marketing helped to achieve a 27% uptake and saved an estimated 35,000 l/d.

This year the campaign continues and will target Berwick upon Tweed from May 2015. We plan to offer a further 1800 home water audits to domestic customers and up to 50 audits to small medium sized businesses in Berwick upon Tweed. Domestic customers will receive advice regarding applying for a water meter or what to do if they are struggling to pay their bill.

Metering

We have continued to offer water meters companywide, free of charge, to those requesting them and selectively metering properties in Essex on change of occupier. All new properties must be metered. The number of optant meters installed in NW, Essex and Suffolk was close to forecast numbers. The number of selective meters installed fell short of the number forecast as the secondary housing market is still far weaker than when the forecasts were made five years ago.

Promoting water efficiency

We have continued with our vigorous promotion of water efficiency in both the ESW and NW areas and have achieved water savings equivalent to 1.8Ml/d for 2014-15. We have comfortably exceeded the cumulative AMP5 target of 9.3Ml/d by reaching total water savings of 12.5 Ml/d.

In both areas this year we trialed a ‘Whole Town Approach’ where most of our water efficiency programmes were simultaneously carried out in Brentwood, Essex and Wooler in Northumberland. In both locations the higher generated level of customer awareness led to greater water savings than carrying out single projects in a number of different locations.

Our work on water efficiency has again been recognised with awards for our H2eco project winning at the UK Water Efficiencies awards, our Saltersgill Allotment Project won the Landscape & Gardening Award and four further projects were runners up at the Awards.

B6 WE PROVIDE A SEWERAGE SERVICE THAT DEALS EFFECTIVELY WITH SEWAGE AND HEAVY RAINFALL

B6.1 Highlights

- We acknowledged the need to improve our performance with respect to sewer flooding.
- We have undertaken a major programme of work in AMP5 to address sewer flooding.
- This included work to address 552 properties in 2014-15, a massive effort which exceeded the forecast we provided to Ofwat ahead of the PR14 FD.
- Our excellent performance in 2014-15 means that we have met our AMP5 obligations with respect to sewer flooding (see section C2.5 for more details).
- We reduced the number of properties in our area flooded internally from sewers for all causes (but excluding severe weather) from 831 properties in 2009-10 to 228 in 2014-15.
- We have also made improvements in repeat sewer flooding, which includes flooding in severe weather, which has improved from 351 instances in 2013-14 to 118 in 2014-15.
- We aim to deliver more improvements in AMP6 working in partnership and using innovative sustainable solutions wherever possible.

B6.2 Performance 2014-15

B6.2.1 Measuring sewer flooding performance

We have measured our sewer flooding performance in 2014-15, as experienced by our customers, with reference to:

- the number of properties flooding internally from all causes;
- the number of properties subject to repeat flooding (which includes severe weather); and
- our success in removing properties from the sewer flooding (DG5) register.

Our performance against these measures is described below. Further information regarding our performance in addressing property flooding and removing them from the DG5 register over AMP5 can be found in section C2.5. Our sewerage infrastructure serviceability performance is covered in section C3.4.

B6.2.2 Properties flooding in 2014-15

Internal sewer flooding is one of the worst service failures that our customers can experience. It can happen when sewers become blocked or broken. It may also occur when rainfall is so heavy that there is more water than the sewers are designed to transport and they become ‘overloaded’. In both instances, sewage escapes from our network and may find its way into our customers’ homes or properties.

At the beginning of AMP5 we recognised that our performance with respect to sewer flooding was unacceptable. We set out our plans to reduce the risk of internal sewer flooding and made a significant step change in performance in 2010-11.

We reduced the number of properties in our area flooded internally from sewers for all causes (but excluding severe weather) from 831 properties in 2009-10 to 392 in 2010-11. With the exception of 2012-13 (an exceptionally stormy and wet year), we continued to reduce the number of properties experiencing internal sewer flooding, with 228 properties flooding in 2014-15.

Our repeat sewer flooding measure, which includes sewer flooding in severe weather, has also improved over time. Our performance in 2014-15 was 118 instances of repeat flooding. This is a marked improvement from 351 instances in 2013-14 and a huge reduction from the 1,196 instances experienced in 2012-13 when our region was affected by a number of unprecedented and heavy rainfall summer storms.

Whilst this improvement in performance is excellent, it is important to note that this is a volatile measure that can be influenced in any year by the extent of wet weather and intense storms. However, our work is gradually making our sewerage system more resilient to the extremes of weather.

Last year we self-assessed our performance for the repeat sewer flooding measure as an 'amber traffic light' as we had missed our target of 269. Our substantial improvement in performance in 2014-15 results in our assessing our performance as a 'green traffic light'.

Repeat sewer flooding is an area where we are committed to improving our performance and as such we have included this as a MoS in our business plan. To reflect the volatility associated with the MoS, we will measure performance on a three year rolling average and have set our performance commitment at 20% better than the performance when our business plan was submitted.

B6.2.3 Actions to address sewer flooding

Numbers of properties flooding internally that we have addressed in AMP5

Reducing sewer flooding is one of our highest priorities. We are delivering a comprehensive programme, investing significantly more than assumed in our PR09 regulatory contract to reduce the risk of sewer flooding for our customers. We have also improved operational processes as well as increasing operational activity.

Historically, we have delivered improvements works to about 150 properties per year. In 2014-15 work was carried out to realise benefit to 552 properties. Our focused and results driven approach to delivering this scale of construction work in a single year brings the total number of properties where we have reduced the risk of flooding from our sewers to 1,142 properties since April 2010. We have also provided property level protection (mitigation) measures (for example flood doors, air brick covers and non-return valves) to 1,044 properties since April 2010.

Now that final 2014-15 performance is known, we can confirm that we have met our PR09 regulatory commitments for sewer flooding. Further details are provided in section C2.5 of this report.

Delivering innovative, sustainable solutions in liaison with our partners

Whilst the majority of our improvement works have been conventional up-sizing of the network and/or the provision of additional storage, during 2014-15 we have also delivered a number of more innovative and sustainable solutions to reduce flood risk. Much of this work has been carried out in partnership with other agencies. For example, our Sustainable Drainage (SuDs) for Schools initiative where we have worked with the Wildfowl and Wetlands Trust to introduce sustainable flood risk reduction solutions at a number of local schools.

Our innovative approach to partnership working has led to the formation of the Northumbria Integrated Drainage Partnership (NIDP). This partnership between our company, all 13 Lead Local Flood Authorities (LLFAs) in our region and the EA has developed an agreed proactive approach and implemented a regional risk based prioritisation methodology to identify integrated drainage issues. In 2014-15, we commenced jointly funded studies in 18 areas and are now already 'on site' in three of those delivering sustainable solutions. This is bringing greater benefits to our customers and the environment, through efficient delivery and risk reduction.

To improve customer service and complete work faster, we set up an improvement project in 2013 to review the customer experience for sewer flooding. During 2014, we implemented several changes to our operational processes and recruited additional resources to enable this. This has enabled us to greatly improve the service we provide to our customers following a sewer flooding incident; including accelerating the subsequent investigation process and providing property level protection measures for customers whilst feasibility studies and design work is carried out.

To reduce the risk from blockages, we have increased sewer lining (to address tree root intrusion), sewer cleansing and sewer inspections. We have also introduced bacillius bacteria (fat eating bugs) to some areas of the network where we have known fat, oil and grease issues.

Our 'Love Your Drain' campaign, spearheaded by the campaign character, Dwaine Pipe, continues to inform customers about the causes of blockages and what can be disposed of down the toilet and sink. Working together with our customers has had a real impact on reducing the number of unnecessary sewer blockages caused by material such as baby wipes, fats, oils and grease. In particular, our innovative work with schools and food outlets is helping to change customer behaviour.

B7 WE DELIVER WATER AND SEWERAGE SERVICES THAT MEET THE NEEDS OF CURRENT AND FUTURE GENERATIONS IN A CHANGING WORLD

B7.1 Performance highlights

- This outcome will be measured using our new Asset Health approach from 2016.
- For this the last year of AMP5, we have continued to use Ofwat's serviceability measures.
- All sub-services have 'stable' serviceability performance for 2014-15.
- Further details can be found in section C.3

B7.2 Performance 2014-15

B7.2.1 Measuring performance

We deliver service to current and future customers through our vast asset base. This asset base must be maintained and enhanced so that it can deal with emerging challenges (such as climate change and population growth) and continue to meet the needs of current and future customers.

We set out in our PR14 business plan an innovative Asset Health approach using baskets of measures that help us to understand if the asset base is being properly maintained over time. As well as appropriate service related measures this also includes lead indicators of asset condition (water mains bursts and sewer collapses).

We will monitor our performance with respect to Asset Health starting in 2016. In the meantime, serviceability is the current version of Asset Health and we set out our serviceability performance, in summary, below.

B7.2.2 Serviceability performance

Servicability performance is judged for four sub-sevices: water infrastructure, water non-infrastructure, sewerage infrastructure and sewerage non-infrastructure. Each sub-service can have possible performance of stable, marginal, deteriorating or improving. Our performance for each sub-service and each year of AMP5 is shown in the table below.

Sub-service	2010-11	2011-12	2012-13	2013-14	2014-15
Water infrastructure	Stable	Stable	Stable	Stable	Stable
Water non-infrastructure	Stable	Stable	Stable	Stable	Stable
Sewerage infrastructure	Marginal	Marginal	Marginal	Stable	Stable
Sewerage non-infrastructure	Stable	Stable	Stable	Stable	Stable

B8 WE HELP IMPROVE THE QUALITY OF RIVERS AND COASTAL WATERS FOR THE BENEFIT OF PEOPLE, THE ENVIRONMENT AND WILDLIFE

B8.1 Performance highlights

- Our Sewage Treatment Works (STW) compliance performance has been excellent for a number of years.
- We passed all 'Look-Up Table' permit conditions for the seventh consecutive year, which represents industry-leading performance.
- Only one STW failed its discharge consent, with an Upper Tier failure of one sample.
- Pollution incidents (including transferred adopted assets and water-related assets) reduced from 133 for 2013 to 90 for 2014, this being our best ever performing year for Ofwat's pollution serviceability measure.
- All of the bathing waters in the NW area achieved the basic 'Mandatory' pass and 31 of the 34 bathing waters (91.2%) met the highest current European water quality standard, known as 'Guideline'. This is the highest pass rate in the country, meaning our bathing waters are some of the cleanest in the United Kingdom.
- We are working to ensure all of our discharges are consistent with the 'Sufficient' requirement of the revised Bathing Water Directive, as a minimum, though many will meet higher classifications.

B8.2 Performance 2014-15

B8.2.1 Measuring performance

Our MoS for this outcome are:

- Sewage treatment works discharge compliance;
- Pollution incidents (category 3); and
- Bathing Water Quality compliance.

We report on performance against these measures below and also provide an update on progress with additional NEP outputs for AMP5.

Further details of our delivery against the NEP in AMP5 and serviceability performance can be found in sections C2.3 and C3.5 respectively.

B8.2.2 STW compliance

Each of our significant STWs has a numerical discharge consent standard designed by the EA to protect the environment.

In 2014 the EA's report on our STW performance identified only one failed works for NW. This refers to a single sample which breached the Upper Tier level for Biological Oxygen Demand in the permit following a sustained period of heavy rainfall in February; the works complied for the rest of the year. All the other STWs successfully complied with the terms of their permits for the year. We passed all 'Look-Up Table' permit conditions for the seventh consecutive year. We believe this sustained very high level of performance to be industry-leading.

We are continuing to improve the way we monitor the discharges coming from our STWs, with increased on-line instrumentation and early warning trigger management so that we can resolve problems before there is an impact on the water environment.

Investment plans during 2015-2020, as agreed with the EA in the new NEP, will reduce the amount of phosphorus being discharged at some of our STWs and will allow us to continue our contribution to improving river water quality in the north east.

B8.2.3 Pollution incidents

We have been taking actions to improve our performance with respect to pollution incidents. As a result, in 2014, there was a further reduction in the total number of pollution incidents (including transferred adopted assets and water-related assets) from 133 for 2013 to 90 for 2014. It was our best ever performing year against Ofwat's pollution serviceability measure.

Of the 87 category 3 incidents, 3 of these were water incidents, all in NW. The number of more serious pollution incidents fell from 5 in 2013 to 3 in 2014.

To improve our performance, we continue to invest in sewer level monitoring (SLM) technology and trend analysis to aid prediction of where pollution incidents are likely to occur and to detect and resolve problems at a warning level before they cause an overflow. Over 85% of our Combined Sewer Outfalls (CSOs) are now monitored.

For 222 cases in 2014, operators were alerted and attended site to clear a problem before there was any overflow. By 2017, we aim to have nearly all of our CSOs monitored and to have developed a business intelligence system that will improve our capability to predict where problems are likely to happen.

Our work in 2014 also included a significant programme of replacement of deteriorating assets.

We also added to the initiatives introduced in previous years with the concept of Water Rangers. This initiative encourages members of the public to get involved as Water Rangers to make regular observations on a watercourse and alert us to any unusual discharge into it; we can then respond to investigate and resolve the issue. This supplements our sewer level monitoring by providing extra visual checks.

This has been a great success and we now have 42 Water Rangers patrolling pre-planned designated rights of way near areas vulnerable to pollution. This number is made up of 22 Rangers who patrol their routes once a week and 20 who patrol them on a fortnightly basis.

B8.2.4 Bathing waters

Our bathing waters are some of the cleanest in the country. In 2014, all of the bathing waters in the NW area achieved the basic 'Mandatory' pass and 31 of the 34 bathing waters (91.2%) met the highest European water quality standard, known as 'Guideline'. This is the highest pass rate in the United Kingdom.

Two schemes at Seaham and Saltburn to further improve bathing water quality will be completed in 2015 to meet the revised Bathing Water Directive. We are also investigating in AMP6 to identify what we can do to further improve water quality at ten bathing waters towards more Good and Excellent beaches under the revised Bathing Water Directive.

B8.2.5 Update on changes to the 2010-2015 NEP

River quality schemes

A scheme was included in the 2010-15 NEP investment programme to improve the discharge to the watercourse from Sedgeletch STW. Further improvements at this works are now also required during 2015-20 to reduce the discharge of phosphorous. It has, therefore, been agreed with the EA to combine the schemes, carrying out feasibility in 2014-15 to allow construction in 2015-20.

The 2015-20 (AMP6) NEP also includes three other schemes for the removal of phosphorous at Barkershaugh, Chester-le-Street, and Chilton & Windlestone STWs. The EA requested that these schemes be completed early if possible. We completed the work for Barkershaugh and Chester-le-Street in 2014 and Chilton & Windlestone was finished in May 2015.

Bathing water quality schemes

We have worked in partnership with the EA and Redcar & Cleveland Borough Council towards improving bathing water quality at Saltburn. We are delivering an improvement scheme in the Saltburn catchment that meets our commitments under the NEP that is due to be completed in autumn 2015.

Improvement work has also been brought forward at Seaham to make improvements for the Seaham Beach and Seaham Hall bathing waters.

The water quality at Newbiggin North continued to be ‘Good’ in 2014 and no further improvements are thought necessary.

Spittal bathing water at Berwick upon Tweed (classified as ‘Poor’ under the revised Bathing Water Directive) has been the subject of further discussions and it is believed it is likely to be de-designated.

B9 WE PROTECT AND ENHANCE THE ENVIRONMENT IN DELIVERING OUR SERVICES, LEADING BY EXAMPLE

B9.1 Highlights

- We will publish in the autumn a separate customer-facing review containing details of how we have protected and enhanced the environment as we went about our daily activities.
- We reduced greenhouse gas emissions (GHG) under our control in 2014-15.
- Our overall greenhouse gas emissions increased by 7% due to an increase of 11% in the emissions factor for grid electricity, which was outside of our control.
- We remain on track to deliver our ambition of reducing our GHG emissions by 35% by 2020 against a 2008 baseline.

B9.2 Performance 2014-15

B9.2.1 Measuring performance

Each year we will produce a report on how we have enhanced the environment in delivering our services, as part of our customer-facing performance review published on our website.

We also set out below our performance with respect to greenhouse gas emissions.

B9.2.2 Environment report

We will publish a separate environmental report on our website in the autumn.

This will be reviewed by our Water Forums (Customer Challenge Groups).

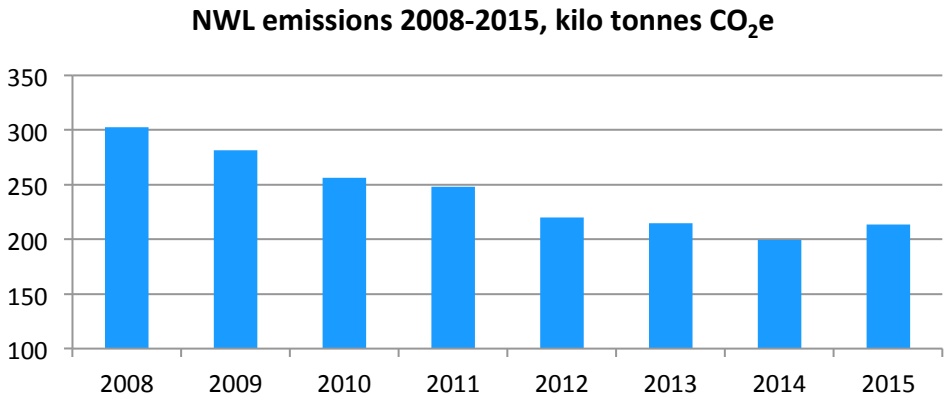
B9.2.3 Greenhouse gas emissions

The water industry is a large user of energy and it is important that we play our part in helping to reduce greenhouse gasses. Doing so is a key component of our outcome to protect and enhance the environment in delivering our services.

Our emissions can be considered in terms of those we can control and those we have no influence over. In terms of the emissions under our control, by our efforts we reduced these by four kilo tonnes (CO_2e) from 2013-14 to 2014-15.

While we can control the amount of grid electricity we use, we cannot control the emissions factor, which is influenced by the mix of types of generation feeding the grid. The emissions factor rose by 11% over the year resulting in our reported emissions being 17 kilo tonnes higher than they otherwise would have been (if the factor had remained constant).

The net result of controllable emissions falling and emissions outside of our control increasing is that, overall, emissions rose by 7% to 213.6 kilo tonnes in 2014-15. This increase is the first time this has happened since we began regularly reporting emissions in a consistent way beginning in 2008. Emissions over the 2008 to 2015 period are shown on the bar chart overleaf.



Note: 2020 emissions target is 150 kilo tonnes (CO_2e)

The bar chart above shows how our emissions have reduced since we established our carbon management plan in 2009. This had the aim of reducing our GHG emissions by 35% by 2020 against a 2008 baseline, which would mean that total emissions would fall by 50% if government expectations on grid emissions reduction were met.

Emissions are currently down by 30% compared to the 2008 baseline, meaning that we have almost achieved our 2020 ambition. Our industry-leading ambition goes beyond government targets for emission reductions and we are delivering on that objective.

Our aim of reducing emmissions is supported by award winning innovation. In 2013, for the first year ever, our award winning Advanced Anaerobic Digestion (AAD) plants treated 100% of our sewage sludge to produce biogas for energy generation and class A biosolids for agricultural reuse. This achievement was recognised in April 2014, when our leading performance in sustainable development led to the award of the Queen's Award for Enterprise (sustainable development), for the second time in our history.

We continue to innovate in this area and in December 2014 commissioned plant at Howdon WWTW to clean and transform the biogas to biomethane for direct injection to the gas grid, the largest installation of this type in the country.

B10 OUR FINANCES ARE SOUND, STABLE AND ACHIEVE A FAIR BALANCE BETWEEN CUSTOMERS AND INVESTORS

B10.1 Highlights

- Looking across all the key financial indicators, we have retained a robust and stable financial position.

B10.2 Financial performance

B10.2.1 Introduction

Looking across all the key financial indicators, including return on Regulatory Capital Value (RCV), credit ratings, gearing and interest cover, the Company retains a robust and stable financial position. This is important because the Company needs to maintain this stability in order to continue to deliver excellent water and sewerage services for customers into the future. It is also hugely important because providing water services requires a significant financial investment (over £1bn for ESW and NW in the five years 2010–2015) and we need to be able to attract available funding at low rates so that customer bills can be kept as low as possible.

Further details are provided below.

B10.2.2 Return on investment

Our RCV was £3,915m at 31 March 2015. The RCV started at £3,883m at 31 March 2014 and was increased by £35m due to inflation (0.9%) with a £3m reduction due to net capital expenditure (capital expenditure less capital charges).

The post tax return was 7.0% compared to 5.3% in 2013-14. This was above the return of 4.9% assumed in the PR09 FD (the 4.9% is lower than the headline cost of capital assumption of 5.1% because of revenue adjustments). The higher actual return in 2014-15 is primarily due to the current taxation credit in the year, related to the impact of adjustments made in respect of prior period capital allowances claims agreed with HMRC.

B10.2.3 Credit rating and securing finance

Credit ratings are independent assessments of company financial risk. Stable strong investment grade ratings are very important as lower credit ratings will lead to higher borrowing costs and limit future access to borrowing. Our credit ratings remain at BBB+ (Standard & Poor's and Fitch) and Baa1 (Moody's) all with a "stable" outlook. This means the Company is in a robust and stable financial position and retains the capability to deliver its financial obligations.

In April 2014 we drew the second £50m tranche of a loan facility with the European Investment Bank (EIB), and we are in preliminary discussions with the EIB regarding the provision of further investment funding over the next five year period. In December 2014, we renewed our committed five year bank facilities, to maintain general liquidity, with a total value of £350m maturing in 2019.

B10.2.4 Gearing

Gearing measures the level of debt a company has relative to its total value (measured by the RCV). The Company's gearing increased to 66.7% due to the timing of dividend payments being amended following a change in the Company's statutory accounting reference date, with the payment budgeted for April 2015 advanced by one month and paid in March 2015. This does not change the underlying dividend policy, and does not change the total dividend planned to be paid to shareholders in the calendar year to 31 December 2015. The gearing remains consistent with our strong investment grade rating.

B10.2.5 Interest cover

Interest cover is a measure of how comfortably a company can afford its interest charges. Adjusted Cash Interest Cover (post maintenance charges) in 2014-15 was 1.6 times, a reduction from 1.9 times in the previous year, but remaining comfortably above investment grade thresholds.

B11 OUR WORKPLACES ARE HEALTHY AND SAFE

OUR PEOPLE ARE TALENTED, COMMITTED AND INSPIRED TO DELIVER GREAT SERVICES TO CUSTOMERS

OUR PEOPLE ACT IN LINE WITH OUR VALUES

WE ARE SEEN AS A GREAT PLACE TO WORK

B11.1 Introduction

The outcomes covered by this section are 'enabling' outcomes rather than outcomes for customers or the environment. Nevertheless, they are central to our ability to deliver outcomes for customers and we provide an overview of our progress in these areas below.

B11.2 Our workplaces are healthy and safe

We take the Health & Safety (H&S) of our employees and contractors very seriously. Our performance is continuing to improve. Based on the comparable data available and on insights from contacts across the sector, we believe that we continue to be one of the leading water and sewerage companies in terms of its H&S performance. We remain determined to improve further.

We have continued to make significant improvements to our H&S management processes during 2014 to improve the management of information. The Board agreed 16 measures to monitor H&S performance in 2014, comprising eight leading and eight lagging performance indicators.

Our 2014 internal targets were set to target achieving industry-leading performance in all measures. This required challenging ourselves to achieve improvements ranging from 16% to 50% on our 2013 performance.

All leading and lagging measures are presented below with the indicators, associated targets, their year-end performance and details of the actions that have been taken to achieve continuous improvements toward leading status. Trends for the four most frequently measures used to benchmark NWL's performance with other WASCs and a breakdown of accidents by type can also be found.

We were pleased to be awarded the 'Commended in the Water Industry Sector Award' for Occupational Health and Safety by the Royal Society for the Prevention of Accidents (RoSPA) in 2014. These competitive sector awards recognise organisations that have demonstrated the best health and safety management and performance within specific industry sectors.

B11.3 People related outcomes

In 2014-15 we continued to invest in our 3,000 people and our commitment was recognised externally. Business in the Community (BITC) reaccredited our 'Big Tick' for Employee Engagement and Wellbeing, and in the BITC diversity benchmarking programme we achieved 'Gold' in Opportunity Now (gender diversity) and 'Silver' in Race for Opportunity (ethnic diversity). We retained our '1 Star' rating in the Sunday Times Best Companies Survey and. through joint working with our Employee Relations Forum, a major change programme has been shortlisted in the regional CIPD (Chartered Institute of Personnel and Development) awards. Nationally we have taken a lead role with the Energy and Efficiency Industrial Partnership via EU Skills to work across the industry to develop new Trailblazer apprenticeship standards and developed approaches to promote the sector as an attractive employer for future generations.

SECTION C

DELIVERY OF NWL FD09 REGULATORY OUTPUTS

INTRODUCTION

This section sets out our position in relation to performance against the PR09 FD regulatory contract. The contract was set out in terms of a substantial number of outputs/activities to be delivered in AMP5. In every case we have achieved the intended outcome. In the interests of transparency we have provided a detailed reconciliation in this section to confirm that we have delivered the required outputs.

We welcome the move to Outcome-based regulation in the future, when such detailed activity/output reconciliations will not be required.

We have rigorous processes for monitoring and taking action to ensure our obligations and regulatory outputs are delivered. We have decided to present detailed information in this format so that Ofwat can form a comprehensive view of our delivery record. This necessarily exposes a number of relatively small variances for which we have assessed triviality.

The information is provided in the following sections:

C1 Wholesale water tables

C1.1 PR09 FD Table 2.1.3 - exceptional item outputs
C1.2 PR09 FD Table 2.2.1a - supply demand outputs
C1.3 PR09 FD Table 2.2.1b - infrastructure enhancement projects
C1.4 PR09 FD Table 2.3.2 - drinking water service quality enhancement outputs
C1.5 PR09 FD Table 2.5.1b - enhanced service level outputs
C1.6 PR09 FD Table 2.5.3 - resilience enhanced service level outputs

C2 Wholesale waste water tables

C2.1 PR09 FD Table 2.1.3 - exceptional item outputs
C2.2 PR09 FD Table 2.2.2 - sewerage supply demand annual outputs
C2.3 PR09 FD Table 2.4.2 - sewerage service quality enhancement outputs
C2.4 PR09 FD Table 2.4.3 - sludge treatment 2010-15 outputs and activities
C2.5 PR09 FD Table 2.5.2a - sewer flooding outputs
C2.6 PR09 FD Table 2.5.2b - other ESL service outputs

C3 Serviceability performance

C3.1 Introduction
C3.2 Water infrastructure
C3.3 Water non-infrastructure
C3.4 Sewerage infrastructure
C3.5 Sewerage non-infrastructure

Appendix 1 Letters of support from the EA

In sections C1 and C2, narrative is provided describing the delivery of the outputs against those required in the tables in NWL's PR09 FD Supplementary Report. At the end of each table narrative, the relevant Ofwat table is reproduced showing details of actual performance. In the few instances where outputs have been delayed, we provide the dates when they will be delivered. This information is provided to confirm delivery of the company's PR09 FD outputs.

The process we have followed in providing this information has been to identify the PR09 FD expectations, assess the outputs/performance achieved, identify any differences and then assess the triviality of these.

We have assessed our triviality thresholds and conducted triviality tests in line with Ofwat's rules. Based on water service income in 2012-13 of £429.9m, the 2% triviality threshold is £8.598m (2012-13 prices). Based on sewerage service income in 2012-13 of £300.2m, the 2% triviality threshold is £6.004m (2012-13 prices).

In assessing the triviality of undelivered outputs, in the calculation we have used allowed costs in the PR09 FD, on a pre-efficiency basis.

In section C3 we provide details of our serviceability performance over AMP5 for each sub-service.

SUMMARY

The final numbers provided in this section are consistent with the information we provided in our PR14 submissions on which the PR14 FD was based. This includes the forecasts we provided to Ofwat on 14 August 2014 for the full year 2014-15 (see section 3 of our document: 'Actions arising from Ofwat/NWL meeting 18 July 2014).

Final numbers reported in this section vary slightly from those forecasts we submitted in our PR14 submissions but the position is close to that predicted. The exception is for sewer flooding where we did significantly better than forecast in terms of the numbers of outputs delivered (properties addressed) in 2014-15.

The evidence we have provided demonstrates that, with only minor exceptions, we have achieved all of our outputs included in the PR09 FD for NWL. This includes 'Stable' serviceability for all sub-services.

Had the information regarding our final 'better than forecast' 2014-15 sewer flooding performance have been available at the time of finalising the PR14 FD, then no logging down or shortfalling adjustment would have been made at that time in this respect.

We have completed Ofwat's 2009 Price Review Legacy Blind Year model using the final outputs from the Revenue Correction Mechanism (RCM) and Capital Investment Scheme (CIS) models. Based on Ofwat's proposals in its recent consultation on the PR14 reconciliation rulebook, the model outputs confirm there are no material changes that require adjustment at PR19 for either service.

C1 WHOLESALE WATER TABLES

C1.1 Ofwat Supplementary Report - Table 2.1.3 – exceptional item outputs (water)

C1.1.1 Introduction

Ofwat Supplementary Report Table 2.1.3, which can be found at the end of this section, contains water and sewerage outputs. We describe below our progress on the following water outputs:

- trunk mains cleaning; and
- revenue meter replacement.

Progress on Wholesale Waste Water outputs are provided in Section C2.1, table 2.1.3.

C1.1.2 Acceptability of Water to consumers programme (trunk mains cleaning)

Original requirements and changes

The Acceptability of Water programme in our PR09 business plan and PR09FD, consisted of 165km of trunk main cleaning, 24.3 km of distribution mains rehabilitation and 1,355km of mains flushing. This was also agreed with the DWI and translated into a legal undertaking (NNE 2715).

The aim of this Undertaking was to achieve a target reduction of discoloured water contacts from 5,000 pa to 4,000 pa by March 2016 in the NW area only.

Following a detailed feasibility study a revised undertaking was agreed with the DWI with a revised end date of March 2017 for cleaning works and March 2018 for achievement of the 4,000 contact target (ref: NNE 3379).

Progress

We delivered a total of 166km of trunk mains cleaning against the PR09 FD target of 165km to the end of 2014-15.

No work has so far been undertaken on the relatively short length of distribution mains rehabilitation. This will be delivered in AMP6 (please note that no funding was requested in our December 2013 business plan for this).

Flushing of the mains has been programmed to follow trunk mains cleaning on an effective ‘source to tap approach’. We flushed a total of 737km to the end of 2014-15. The remainder will be flushed progressively in AMP6.

Even though the additional physical work will not be delivered until March 2017, we delivered the reduction to 4,000 discoloured water complaints by the end of 2014-15. The 2014-15 outturn was 3,884 contacts.

We examined the cost implications of the changes in AMP5 (what we have delivered compared to the PR09 FD requirement). The cost difference, based on allowed costs before efficiency, is less than the triviality threshold (the net reduction is approx £3.3m).

C1.1.3 Revenue meter replacement

The aim of the revenue meter replacement programme was to replace meters when they failed or when over 15 years old. The start of the programme was initially delayed as we built a robust and efficient process. This reduced the need to recruit significantly more administration staff to deal with the updated meter information and also ensured that we delivered the programme as efficiently as possible. We trained our field based staff in the technology and also introduced more flexible working arrangements to minimise the impact on customers. Planned replacements were undertaken using the following approach:

- We took the opportunity to replace meters that met the age requirements as part of our meter reading cycle. That is, when a meter reader visited a property with an old meter it was replaced as part of the visit. Each meter reader was targeted with replacing, on average, 3 meters per day via this efficient delivery mechanism;
- We had technicians, both direct labour and contractors, solely focused on delivering the more technical small meter replacements. These individuals could replace around 10 meters per day or 50 meters per week; and
- We had dedicated crews working on replacing the greater than 40mm diameter meters, and a dedicated project manager assigned to support the replacing of the largest (greater than 75mm diameter) meters.

Whilst we reported in October 2014 that we were forecasting to have replaced 80,000 meters in the 5 year period to 31 March 2015, we actually replaced 71,464 meters. In certain areas some of the oldest stock of meters proved more technically challenging to replace than anticipated. Some meters had initially been installed directly to pipe work underground without a boundary box, others were situated in very narrow boundary boxes that needed specialist equipment to change. This has slowed down the pace of replacements.

We are now in the process of reassessing the programme timings to deliver revenue meter replacements as part of an overall reprioritisation of the asset maintenance programme for AMP6.

We note that the difference in cost between the number included in the PR09 FD and the number that was actually achieved in AMP5 (approx. £4.8m) is less than the triviality threshold for the water service.

Ofwat Supplementary Report - Table 2.1.3 – exceptional item outputs

Ref[1]	Description	Activity output during 2010-15	Service standard output	FD Completion Date	Completion date achieved or anticipated	Actual AMP5 output
	Water infrastructure					
10162	DM – Trunk mains cleaning: SZ06 Tyneside AMP5	165km cleaned.	1000 reduction in nr. of customer discolouration contacts.	31/03/15	31/03/15	166km
		24.3km renewed.		31/03/15	31/03/17	0km
		1,355km flushed		31/03/15	31/03/17	736.6km
10164	Feasibility studies: SZ14 & SZ15 AMP5			31/03/15	31/03/13	Studies completed
	Water Non-infrastructure					
10362 & 10363	Revenue meter replacement AMP5 N &S	107,984 household and commercial meters renewed	NA	31/03/15	Under consideration (see narrative)	71,464

1 Scheme names, references and FD completion dates are from the C5 projects database.

C1.2 Ofwat Supplementary Report - Table 2.2.1a - supply demand outputs

C1.2.1 Introduction

Ofwat Supplementary Report Table 2.2.1a, which can be found at the end of this section, contains the following supply demand outputs:

- SoSI;
- Leakage;
- Supply demand enhancements;
- Efficiency; and
- Optional meter installations.

We describe below our progress on these outputs.

C1.2.2 SoSI

Our Security of Supply Index (SOSI) is now 100 in both our NW and ESW areas following the completion of the project to increase capacity of our Abberton reservoir in 2013.

C1.2.3 Leakage

Apart from the 2010-11 year in NW, we have consistently achieved leakage levels lower than our regulatory targets during the AMP5 period. Leakage in NW has reduced from 157.8 Ml/d in 2010 to 136.77Ml/d in 2015. For ESW, leakage levels remain amongst the lowest in the industry, reducing from 65.1Ml/d in 2010 to 60.86Ml/d in 2015. In both areas, we are delivering leakage performance that is below the Sustainable Economic Level of Leakage.

C1.2.4 Supply demand enhancements

The reduction in the demand side enhancements (Ml/d) achieved in the ESW area is a result of the activity in the housing market being much lower than anticipated. This has resulted in a lower number of selective meter installations (on change of occupier) and, therefore, a lower water saving.

C1.2.5 Water efficiency

We have provided figures for water efficiency for the combined area. These indicate that we have exceeded our target overall.

C1.2.6 Optional and selective meter installations

We delivered over 7% more optional meter installations than included in the PR09 FD. Selective meter installations in ESW are lower than forecast, as indicated in Table 2.2.1a below.

The value of the reduction in selective meters (approx £7.1m in 2012-13 prices) is below the triviality threshold for the water service.

Ofwat Supplementary Report - Table 2.2.1a - supply demand outputs

Service Indicator Northern Operating Area (NW)		2010/11	2011/12	2012/13	2013/14	2014/15	Totals
SoSI[1] – dry year annual average	FD output	100	100	100	100	100	-
	Actual	100	100	100	100	100	-
SoSI[1] – critical/ peak conditions	FD output	100	100	100	100	100	-
	Actual	100	100	100	100	100	-
Supply demand enhancements	FD output	0	0	0	0	0	0
	Actual	0	0	0	0	0	0
Total leakage (Ml/d)[2]	Target	150	150	150	150	150	-
	Actual	157.8	129.5	136.0	135.0	136.8	-
SELWE (Ml/d)[3]	FD output	0.0	0.0	0.0	0.0	0.0	0.0
	Actual	0.0	0.0	0.0	0.0	0.0	0.0

Service Indicator Southern Operating Area (ESW)		2010/11	2011/12	2012/13	2013/14	2014/15	Totals
SoSI[1] – dry year annual average	FD output	87	78	75	71	100	-
	Actual	82	85	97	100	100	-
SoSI[1] – critical/ peak conditions	FD output	87	78	75	71	100	-
	Actual	82	85	97	100	100	-
Supply demand enhancements Supply side – dry year annual average (Ml/d)	FD output	0	0	0	0	55	55
	Actual	0	0	0	32	32	64
Supply demand enhancements Demand side enhancements[6] - dry year annual average (Ml/d)	FD output	2.2	0.9	0.8	0.8	0.7	5.3
	Actual	0.20	0.18	0.16	0.15	0.15	0.84
Total - dry year annual average (Ml/d)	FD output	2.2	0.9	0.8	0.8	0.7	60.3
	Actual	0.20	0.18	0.16	0.15	0.15	0.84
Total leakage (Ml/d)[2]	Target	66	66	66	66	66	-
	Actual	65.1	59.1	53.9	59.3	60.9	-
SELWE (Ml/d)[3]	FD output	0.0	0.0	0.0	0.0	0.0	0.0
	Actual	0.0	0.0	0.0	0.0	0.0	0.0

Service Indicator Combined Operating Area		2010/11	2011/12	2012/13	2013/14	2014/15	Totals
Properties connected to the water main (000's)	FD output	12.03	14.19	18.44	21.48	22.82	88.96
	Actual	8.178	8.813	8.498	9.997	12.090	47.576
Optional meters (000's)	FD output	20.10	20.10	20.10	20.10	20.10	100.50
	Actual	18.570	22.426	23.678	23.369	19.178	107.221
Selective meters (000's)	FD output	11.70	11.20	10.95	10.70	10.20	54.75
	Actual	5.600	5.308	4.573	4.338	4.406	24.258
Base service water efficiency target (Ml/d)	FD output	1.86	1.86	1.86	1.86	1.86	9.30
	Actual	3.48	2.70	2.52	2.03	1.80	12.53

C1.3 Ofwat Supplementary Report - Table 2.2.1b - infrastructure enhancement projects

C1.3.1 Introduction

Ofwat Supplementary Report Table 2.2.1b which can be found at the end of this section, contains infrastructure enhancement projects. We describe below our progress on these outputs.

C1.3.2 Infrastructure enhancement projects

We delivered almost all the schemes required by the end of March 2015 with just one scheme due to complete in 2015-16. We have made some essential changes to the original programme as it is demand and growth led. Some schemes have been postponed and some added. The outputs delivered reflected changing circumstances and contributed to achieving stable serviceability.

The schemes in table 2.2.1b are associated with improvements to either address DG2 pressure problems or to maintain security of supply. Some are influenced by developer activity and ultimately by the performance of the housing market. Therefore, the need for a number of these schemes did not arise in AMP5 and these have been postponed until they are needed.

We identified other schemes where unanticipated growth or demand had occurred and made some additions to the programme. However, it should be noted that, with the changes made, we still maintained the associated serviceability targets.

Of the twenty five original DG2 and security of supply schemes identified for delivery in AMP5 we have delivered eight of these schemes. Seventeen schemes have been deferred as the expected levels of growth in those areas has not occurred as forecast. Between 2010 and 2015 we identified a further twelve schemes that were needed to remove customers from the risk of DG2 or security of supply. We have delivered ten of these schemes and deferred the remaining two.

For AMP5 we estimated that we would need to address a total of 32,120 properties at risk of DG2 or security of supply issues due to growth. By March 2015 we delivered schemes that have removed risk for over 99,500 properties.

Ofwat Supplementary Report - Table 2.2.1b - infrastructure enhancement projects

Ref[1]	Description	FD Completion Date	Completion date achieved or anticipated
10197	DM - New Water Mains North SP AMP5	31/03/15	31/03/15
10214	DM - New Water Mains South SP AMP5	31/03/15	31/03/15
12434	DM - Ingleby Barwick DG2 failures	31/03/15	Scheme not now required
12436	DM - Harrowgate Farm DG2	31/03/14	Scheme not now required
12438	DM - Bankfields DG2 failures	31/03/13	Scheme not now required
12439	DM - Folly Top DG2	31/03/14	Scheme not now required
12451	DM - DG2 Longframlington Village	31/03/11	Scheme not now required
12454	DM - Justice Bank WPS	31/03/13	Scheme not now required
5554	Other IM - Dupl Chelmsford to Langford Effluent Pipe	31/03/14	31/07/15
6596	DM - Southwold Reinforcement	31/03/11	17/12/12
6599	DM - Benhall Green to Snape Reinforcement	31/03/11	29/02/12
6601	DM - Heveningham to Cratfield Reinforcement	31/03/12	31/12/12
6788	Other - Ashingdon Heights – Booster	31/03/15	Scheme not now required
7030	DM - Lound to Sidegate Road	31/03/15	Scheme not now required
7186	Other - Lound to Gorleston transfer	31/03/15	Partial scheme completed
7199	DM - Pakefield tower to Kessingland duplication	31/03/13	31/03/13
7209	DM - Melbourne link main	31/03/11	Scheme not now required
7346	DM - Northern Trunk Main Eglingham to Wandylaw	31/03/15	Scheme not now required
7413	DM - Westgate Road Newcastle	31/03/13	31/03/12
7414	Other - Kenton booster	31/03/14	25/01/12
7421	Other - Drovers House WBS	31/03/14	31/03/12
7423	Other - Fishburn WBS	31/03/14	31/03/12
802	DM - Strikes Roundabout Stokesley	31/03/12	Scheme not now required
817	Other - Hardwick WPS	31/03/13	Scheme not now required
932	DM - DG2 - Sadberge - Longnewton 12 properties	31/03/15	Scheme not now required
7492	DM – Wynyard Booster Station	31/03/14	Scheme not now required
6604	DM – Oulton Booster to Dunston site	31/03/15	Scheme not now required
7207	DM – Mendlesham Green Reinforcement	31/03/14	Scheme not now required

1 Scheme names, references and completion dates are from the C5 projects database.

Additional infrastructure enhancement projects

Description – additional schemes	Completion date achieved or anticipated
Tranwell BS Refurb	31/03/14
DG2 Whittington Hill PS	01/06/11
Nilston Rigg PS	31/03/14
Holy Island WBS. Pump Supply only (Through SP)	31/03/14
Thornley Booster	31/03/15
Coombe Hill Pontac DG2	31/03/11
DG2 Springhill Shwd	31/03/12
DG2 Jubilee Shildon	31/03/12
Lowestoft Harbour Xing	Scheme not now required
21 Gwood Longstomp Duplication	Scheme not now required
Central Park Dagenham	28/02/13
Hindon and Woodland	31/03/15

C1.4 Ofwat Supplementary Report - Table 2.3.2 - drinking water service quality enhancement outputs

C1.4.1 Introduction

Ofwat Supplementary Report Table 2.3.2 (see the table at the end of this narrative for details) contains drinking water requirements, Security and Emergency Measures Direction (SEMD) and Environmental obligations (investigations and implementation of solutions). We describe below our progress on these outputs.

C1.4.2 Drinking water quality

Rickinghall borehole replacement

At Rickinghall, the agreed output, a new borehole, has been delivered. This scheme was required to resolve water quality non-compliance with the nickel standard.

Following the work undertaken, whilst we are compliant with the nickel standard, the nickel concentration in the new borehole is still some cause for concern. We are in discussions with DWI regarding the implementation of further improvement options and have plans agreed with them. This includes investigating offsite locations for an additional new bore. No further funding has been requested for the work in AMP6.

Regional lead CP pipe replacement

The PR09 FD required some 40,000 lead pipes to be replaced of which 39,763 were delivered in AMP5.

C1.4.3 SEMD security

We are required to provide six monthly updates on progress with security investment to Defra. We are currently reporting satisfactory progress. The designated site upgrade and service reservoir protection projects are complete. The key re-suiting project is at an advanced stage with 2,584 of 2,628 sites completed, work is well underway in the remaining areas although we have experienced minor delays. The value of the variance is well below the triviality threshold.

C1.4.4 Environmental obligations – investigations and implementation of solutions

We completed our environmental investigations ahead of schedule. The investigations at the River Stour helped to support our proposals for further works in AMP6. The Coquet investigations confirmed that no further company actions were required.

Ofwat Supplementary Report - Table 2.3.2 - drinking water service quality enhancement outputs

Ref[1]	Description	FD Completion Date	Completion date achieved or anticipated
	Drinking Water quality		
10238	Rickinghall borehole replacement (South)	31/12/14	09/03/12
10241	Catchment studies and pilot trials – pesticides (South)	31/03/15	31/03/15
10158 N&S	Regional lead CP pipe replacement (North & South)	31/03/15	31/03/15
5372	Discolouration alleviation scheme SZ07 carryover (North)	31/03/15	31/03/15
	SEMD security		
10077 N&S	Abloy key re-suiting (North & South)	31/03/15	31/07/15
10078 N&S	Designated sites (North & South)	31/03/15	31/03/15
10081 N&S	Groundwater borehole advice note (North & South)	31/03/15	31/12/15
10083 N&S	Water UK / Defra standard (North & South)	31/03/15	31/03/15
12298 N&S	Additional protection of service reservoirs to AN/8A (North & South)	31/03/15	31/07/15
	Environmental obligations – investigations & implementation of solutions		
ANGEARSA1	River Stour at Cattawade investigation – NEP (South)	01/03/15	31/12/12
5NWNOR002	Coquet Estuary investigation & options appraisal (North)	01/03/15	31/03/13

1 Project reference is from the C5 projects database.

C1.5 Ofwat Supplementary Report - Table 2.5.1b - enhanced service level outputs

C1.5.1 Introduction

Ofwat Supplementary Report Table 2.5.1b contains a project to understand the causes and solutions of taste and odour problems and a target for cumulative reduction in taste and odour complaints. We describe below our progress on these outputs.

C1.5.2 Project to understand the causes and solutions of taste and odour problems

A project to understand the issues of taste and odour problems has been completed resulting in a number of actions and progress in reducing the number of complaints (see C1.5.3 below).

C1.5.3 Target for cumulative reduction in taste and odour complaints

The target was to reduce complaints by 100 over the AMP5 period. A total of 1,789 complaints were received in 2009 and 1,394 in 2014. We have therefore exceeded this requirement with an overall reduction of 395 over that period.

C1.6 Ofwat Supplementary Report - Table 2.5.3 - resilience enhanced service level outputs

C1.6.1 Introduction

Ofwat Supplementary Report Table 2.5.3 (see the table at the end of this narrative for details) contains a project to address the risk of saline intrusion at Alder Carr.

C1.6.2 Full protection of supply to 2,850 properties from impacts of failure at Alder Carr

We delivered the service standard output in AMP5, with the new duplicate main allowing sufficient flows to all of the affected properties at times of potential failure at Alder Carr.

The new 11.1km duplicate main from Shadingfield to Alder Carr was completed in June 2014, later than originally planned. The work was completed under difficult conditions at times as the route crossed a flood plain during heavy rain, required detailed archaeological investigations throughout its length and also sensitive environmental management of great crested newts.

Ofwat Supplementary Report - Table 2.5.3 - resilience enhanced service level outputs

Ref[1]	Description	Activity output during 2010-15	Service standard output	FD Completion Date	Completion date achieved or anticipated
	Resilience scheme				
7450	Address the risk of saline intrusion at Alder Carr	Supply from Barsham treatment works to Southwold Alder Carr treated water reservoir via part duplicated treated water main	Full protection of supply to 2,850 properties from impacts of failure at Alder Carr.	01/03/13	30/06/14

1 Project reference is from the C5 projects database.

C2 WHOLESALE WASTE WATER TABLES

C2.1 Ofwat Supplementary Report - Table 2.1.3 - exceptional item outputs

C2.1.1 Introduction

Ofwat Supplementary Report Table 2.1.3 contains a waste water project to provide an advanced digestion scheme at Howdon Sludge Treatment Centre (STC) to reduce opex by £4.1m by 2014-15. We describe below our progress on this output.

C2.1.2 Opex savings £4.1m/year by 2014-15

Howdon STC was delivered early and has achieved annual opex savings in line with those forecast (see table 2.4.3 in section C2.4 for further details).

Ofwat Supplementary Report - Table 2.1.3 - exceptional item outputs

Ref[1]	Description	Activity output during 2010-15	Service standard output	FD Completion Date	Completion date achieved or anticipated	AMP5 output
	Sewerage infrastructure - NONE					
	Sewerage Non-infrastructure					
2234	Howdon STC – advanced anaerobic digestion	Provision of advanced digestion – scheme to provide new process facilities	Opex savings £4.1m pa by 2014-15.	31/03/15	30/11/12	

1 Scheme names, references and FD completion dates are from the C5 projects database.

C2.2 Ofwat Supplementary Report - Table 2.2.2 - sewerage supply demand annual outputs

C2.2.1 Introduction

Ofwat Supplementary Report Table 2.2.2 (see the table at the end of this narrative for details) contains sewerage supply demand annual outputs. We describe below our progress on these outputs.

C2.2.2 Sewerage supply demand annual outputs

Growth has been less than expected and this has affected a number of outputs. The number of properties connected is less than expected due primarily to the performance of the associated housing market. Similarly the need for the supply demand enhancements at a number of treatment works has not materialised resulting in schemes being delayed or postponed. The outputs delivered reflected changing circumstances and contributed to achieving strong compliance performance and stable serviceability.

Of the 14 schemes listed, six have been completed (Bellingham, Consett, Morpeth, New Moors, Otterburn and Barton).

Five schemes (with a total increase in population equivalent of 1,815) are not required at present as the anticipated growth has not occurred and three (Washington, Tudoe Mill and Crookhall) are being carried over into AMP6 because growth has been slower than assumed at PR09. Work at Crookhall has started and it is forecast for completion by 31 March 2016. The contract for Tudhoe Mill has been let and it is due for completion by 30 June 2016.

At Washington STW, we are currently meeting our consent standards. The need for capacity enhancements will be assessed and prioritised during AMP6.

Even with the above reduced programme we have still fulfilled all of our statutory duties and met our FD09 obligations; we have:

- allowed connection to the sewerage system for all new development;
- maintained the minimum flood protection design standard for the sewerage system of 1:30 and reduced the number of properties at risk of internal sewer flooding;
- maintained stable serviceability for sewerage infrastructure and non-infrastructure assets;
- achieved 100% look up table compliance at our sewage treatment works; and
- worked with the EA to ensure that, despite some growth, our intermittent discharges remain compliant with their consents.

We have calculated the value of the reduction in the programme (approx £1.6m) and it is less than the triviality threshold.

Ofwat Supplementary Report - Table 2.2.2 - sewerage supply demand annual outputs

Service Indicator		2010/11	2011/12	2012/13	2013/14	2014/15	Total
Properties connected to mains sewerage (000s)	FD output	6.760	9.320	11.610	12.520	12.770	52.980
	Actual	5.596	6.311	6.335	6.110	7.246	31.598
Minimum flood protection design standard for the sewerage system	FD output	1:30	1:30	1:30	1:30	1:30	1:30
	Actual	1:30	1:30	1:30	1:30	1:30	1:30
STW treatment capacity enhancements. At works with previous capacity < 1,500 PE (PE-000s)	FD output	0.523	0.000	0.000	0.303	0.164	0.990
	Actual	0.000	0.523	0.000	0.000	0.253	0.776
STW treatment capacity enhancements. At works with previous capacity 1,500 -10,000 PE (PE-000s)	FD output	0.000	0.000	0.000	0.734	0.000	0.734
	Actual	0.000	0.000	0.000	0.000	0.000	0.000
STW treatment capacity enhancements. At works with previous capacity > 10,000 PE (PE-000s)	FD output	6.957	0.000	6.961	0.000	2.054	15.972
	Actual	0.000	6.957	0.000	0.000	1.732	8.689

STW Capacity Enhancements	FD Completion Date	STW Size band	Proposed increase in PE of STW (000)	Completion date achieved or anticipated
Defined Schemes				
Bellingham	2010/11	<1500	0.502	20/02/12
Consett	2010/11	>10000	6.957	15/12/11
Haltwhistle	2013/14	1,500 - 10,000	0.399	Not required at present
Morpeth	2012/13	>10000	1.732	01/03/15
New Moors	2013/14	<1500	0.126	31/03/15
Otterburn	2010/11	<1500	0.021	15/07/11
Washington	2012/13	>10000	4.025	31/03/20
Defined Contingent Schemes				
Boulmer	2014/15	<1500	0.096	Not required at present
Cassop	2014/15	<1500	0.068	Not required at present
Tudoe Mill	2014/15	>10000	2.054	30/06/16
Amble	2012/13	>10000	1.204	Not required at present
Bardon Mill	2013/14	<1500	0.048	Not required at present
Barton	2013/14	<1500	0.129	30/04/15
Crookhall	2013/14	1,500 - 10,000	0.335	30/03/16

C2.3 Ofwat Supplementary Report - Table 2.4.2 - sewerage service quality enhancement outputs

C2.3.1 Introduction

Ofwat Supplementary Report Table 2.4.2 (see the table at the end of this narrative for details) contains sewerage service quality enhancement outputs.

C2.3.2 Sewerage service quality enhancement outputs

Out of the 24 sewerage quality schemes included in the PR09 FD, 20 have been completed and four were not required.

We also brought forward investment into 2014-15 for three additional AMP6 phosphorous removal schemes. Also, two AMP6 bathing water schemes (Saltburn and Seaham) were brought forward and are due for completion in 2015-16.

The two S101a schemes included in the programme were not been pursued by the householders involved. One additional S101a scheme (Chathill) was delivered.

We agreed changes to the original programme with the EA and in particular those schemes removed or added. This has included identifying the best value programme of interventions to meet our output requirements.

In the PR14 FD (Table AA3.10), Ofwat made logging down adjustments for the Newbiggin STW bathing water scheme and the Sedgeletch STW (Flow1) scheme, with which we agreed.

Thus, in the text below, we have simply explained and confirmed the non delivery of these schemes, along with details of brought forward schemes from AMP6 to AMP5 (bathing water schemes at Seaham and Saltburn and three phosphorous removal schemes (Barkershaugh, Chester-le –Street and Windlestone STW).

Changes to bathing water schemes

A base quality scheme was included in the AMP5 programme to improve the bathing water quality at Newbiggin North beach to meet the revised Bathing Water Directive (rBWD) 'Sufficient' standard (scheme ref 4NW240101). In September 2007, a breakwater was constructed by the local authority for flood/coastal defence purposes and 500,000 tonnes of sand imported to recharge the beach. The performance at Newbiggin North has since improved significantly so that recent performance against the rBWD is now forecast as 'Excellent' (2014). The EA agreed that the proposed NWL investment was therefore no longer required (see confirmation letter from EA in Appendix 1).

The AMP6 NEP programme includes schemes to improve bathing water quality at Seaham and Saltburn. These schemes are required to meet the rBWD 'Sufficient' standard and have a completion date of March 2016. With a scheme start date in AMP6, this date was not achievable. The EA therefore requested that this work be brought forward and it is now being delivered (see letter of support from EA in Appendix 1). The additional expenditure in 2014-15 was approx. £2m.

Changes to NEP water quality schemes

Sedgeletch STW

The AMP5 regulatory output for Sedgeletch STW was to meet a flow quality driver (Flow1) (scheme ref 5NW450801). The original proposal consisted of transferring the flows. However, this would have significantly reduced the flow in the receiving watercourse and had a detrimental impact on ecology. We therefore worked with the EA to find a more sustainable method of treatment. Further improvements at Sedgeletch STW are also required in AMP6 under a 'no deterioration' driver for phosphorous. It was acknowledged that this would make all, or the majority of, the AMP5 work abortive. We therefore agreed with the EA to combine the schemes, carrying out feasibility and design in AMP5 and construction in AMP6.

A comprehensive feasibility study has since been undertaken for Sedgeletch and the results presented to the EA. The study concluded that a proposed sustainable co-treatment with mine water in a reed bed solution was not feasible. Also, significantly more stringent phosphorus removal performance, to levels tighter than 0.5 mg/l, would be required to bring about an improvement in Water Framework Directive (WFD) status. The EA subsequently confirmed that 1mg/l phosphorus AMP6 (No Deterioration) requirement will apply from April 2018.

As the AMP5 ammonia limit (Flow 1) was an intrinsic element of a proposed reed bed consideration (which the study concluded to be infeasible), the EA agreed that this output was not required to be delivered by March 2015 as stated in the original AMP5 NEP. The 3mg/l ammonia limit will not be included in any AMP6 revision and will be revisited during the AMP7 planning phase along with any future phosporous requirement pending the outcome of the phosphorous trial work. The AMP6 scheme is now limited to identifying what is required to maintain the excellent quality effluent currently being discharged from Sedgeletch STW.

Phosphorous removal schemes

The AMP6 NEP also includes three other schemes for the removal of phosphorous at Barkershaugh, Chester-le-Street, and Chilton & Windlestone STWs. We are delivering these schemes early as the EA requested that they are completed in AMP5 due to threat of action from the European Commission.

We delivered Barkershaugh and Chester-le-Street in 2014-15 and Chilton & Windlestone was completed in May 2015. The total additional expenditure in 2014-15 is approx. £2.5m.

The letters of support provided by the EA in relation to these changes are provided in Appendix 1.

Ofwat Supplementary Report - Table 2.4.2 - sewerage service quality enhancement outputs

Ref[1]	Description	FD Completion Date	Completion date achieved or anticipated
	AMP5 Continous Discharges		
9366	Belford STW (Flow1 driver)	31/03/13	30/04/15
10256	Barton STW (Flow1 driver)	31/03/15	30/04/15
12160	Bowburn STW (PHS3 driver – investigation)	31/08/11	24/12/12
12157	Brasside STW (PHS3 driver – investigation)	31/03/11	12/10/12
12158	Consett STW (PHS3 driver – investigation)	30/06/12	12/10/12
12159	Crookhall STW (PHS3 driver – investigation)	31/08/11	12/10/12
10258	Esh Winning STW (Flow1 driver)	31/03/15	31/03/15
8365	Hustledown STW (Flow 1 & ?? drivers)	31/03/13	21/12/12
8348	New Moors STW (Flow1 driver)	31/03/14	31/03/15
12162	Sacriston STW (PHS3 driver – investigation)	31/08/11	12/10/12
10260	Sedgletch STW disposal route ((Flow1 driver)	31/03/15	Not required see comment below
12163	Sedgletch STW (PHS3 driver – investigation)	31/03/11	12/10/12
9295	Thropton & Snitter STW (Flow1 driver)	31/03/14	30/05/11
10633	River Don (Freshwater Fish driver –investigation)	31/12/12	30/07/12
	AMP6 Continous Discharges (brought forward)		
	Barkershaugh (P removal) AMP6 scheme	Scheme added to programme	15/10/14
	Chester-le-Street (P removal) AMP6 scheme	Scheme added to programme	15/10/14
	Chilton and Windlestone (P removal) AMP6 scheme	Scheme added to programme	08/05/15
	AMP5 other obligations		
10077	Abloy key resuiting (SEMD driver)	31/03/15	28/08/16
	Completion of previous AMP projects		
10257	Craster STW	31/03/12	17/06/11
	AMP5 Intermittent Discharges		
10278	Blyth South (Bathing Water driver - B1)	31/03/12	31/03/13
10274	Newbiggin North (Bathing Water driver - B1)	31/03/12	Not required see comment below
10280	Spittal (Bathing Water driver - B1)	31/03/11	27/01/12

Table continued overleaf

Table 2.4.2 continued

10281	Saltburn (Bathing Water driver - rB3)	31/03/12	17/05/13
10282	Tynemouth Cullercoats (Bathing Water driver – rB3)	31/03/12	17/05/12
12093	Seaham ((Bathing Water driver – rB3)	31/03/12	14/01/13
	AMP6 Intermittent Discharges (brought forward)		
	Saltburn (Bathing Water driver - rB1) AMP6 scheme	N/A	23/10/15
	Seaham ((Bathing Water driver – rB1) AMP6 scheme	N/A	20/06/15
	AMP5 other obligations		
10332	S101A First time sewerage Allenheads	31/03/11	Scheme no longer required
10333	S101A First time sewerage Hawthorn, Castle Morpeth[5]	31/03/13	Scheme no longer required
	S101a first time sewerage Chathill	Scheme added to programme	30/04/14

1 Project reference is from the C5 projects database.

C2.4 Ofwat Supplementary Report - Table 2.4.3 - sludge treatment 2010-15 outputs and activities

C2.4.1 Introduction

Ofwat Supplementary Report Table 2.4.3 (see the table at the end of this narrative for details) contains outputs for operational savings and energy generation.

C2.4.2 Sludge treatment 2010-15 outputs and activities

The introduction of the two Advanced Anaerobic Digestion (AAD) assets at Bran Sands and Howdon has allowed us to make significant savings in net expenditure in terms of power (generated power is nearly all used on site), renewable energy income and sludge disposal.

The energy generated is in line with the predicted figures and includes both heat and electricity outputs.

Ofwat Supplementary Report - Table 2.4.3 - sludge treatment 2010-15 outputs and activities

Ref[1]	Description	Activity output during 2010-15	Service standard output	FD Completion Date	2010/11	2011/12	2012/13	2013/14	2014/15
	Sludge disposed of unsatisfactorily (%)		0		0	0	0	0	0
2234	Howdon STC – advanced anaerobic digestion	Provision of advanced digestion – scheme to provide new process facilities		31/03/15		Completed 30/11/12			
	Operational expenditure savings resulting from AMP5 sludge capital expenditure (£m/yr by 2014/15)		Opex savings £4.1m pa by 2014-15.		N/A	N/A	1.8	3.7	4.4
	Operational expenditure savings resulting from AMP4 sludge capital expenditure (£m/yr by 2010/11)		Opex savings £4.7m pa by 2010-11.		6.0	6.0	6.0	6.0	6.0
	Energy generated from sewage sludge processing (GWh/yr)		71		39.0	50.8	59.1	110.4	95

1 Scheme names, references and completion dates are from the C5 projects database.

C2.5 Ofwat Supplementary Report - Table 2.5.2a - sewer flooding outputs

Ofwat Supplementary Report Table 2.5.2a (see the table at the end of this narrative for details) contains sewer flooding outputs.

C2.5.1 Overall DG5 programme outputs AMP5 2010-2015

Changes in outputs post PR09 FD

The original DG5 business plan output proposals and PR09 FD outputs were based on the principle that schemes would be delivered to remove all cost beneficial (CB) properties on the 1 in 10 and 2 in 10 DG5 registers as at 1 April 2010 (estimated as 659) together with all CB additions in the first four years of AMP5 up to 31 March 2014 (476). This added to make 1,135 the assumed total number of outputs in the PR09 FD. The total net reduction in properties on the internal DG5 registers assumed in the PR09 FD was 435.

The number of properties on the register at 1 April 2010 was subsequently amended to 489 (416 being CB) after final year 2009-10 were known and taking into account completion of outstanding investigations in the first year of AMP5. This reduction meant that the original FD target reduction in the 2010 register number (435) was not possible to achieve and the equivalent reduction target was 192.

The changes to the programme were discussed with Ofwat at a meeting on 20 September 2011 and subsequently at our annual sewer flooding and serviceability review meetings.

Number of properties addressed

Although there were less properties on the register in 2010 (after the adjustments explained above) than assumed in the FD, more properties than assumed flooded during 2010-15 (i.e. there were more CB additions to the register). This increased the number of outputs to be addressed to meet our commitments.

In AMP5, we delivered 1,142 outputs in total, all of these associated with properties that have actually flooded internally. This included outputs associated with two sustainable solution pilot schemes (details in C2.5.2 below). Thus, we have successfully delivered more outputs than included in the PR09 FD (1,135) and met our regulatory commitment in this respect.

In our Draft Determination representation (section C5 – reconciling 2010-15 performance), submitted to Ofwat in July 2014, we included a forecast total of 527 outputs for the remaining DG5 programme for 2014-15 thus acknowledging that some outputs were at risk of non-delivery. This forecast was reflected in the PR14 FD.

However, we were successful in delivering 552 outputs in 2014-15. This is significantly higher than we forecast and demonstrates both our commitment to fulfilling our regulatory contract and the robustness of our programme and project management processes.

It has required a flexible approach to the delivery of the programme with changes to our investment processes and a considerable gearing up of resources. This was all achieved while also delivering an improvement in customer satisfaction. Feedback scores from customers impacted by planned improvement works to reduce flood risk improved from 82% to 90% satisfaction.

Removal of properties from the DG5 register

All but a small number of CB properties (20) arising before 31 March 2014 were removed from the DG5 registers by 31 March 2015. The table below shows the projects associated with these 20 properties, where delivery is planned to be completed after March 2015, and the reasons for the delay. The reasons for delay reflect the extent of partnership working, third party involvement and customer liaison required in the delivery of such a programme. All of this work is in the delivery phase and will be completed in summer 2015. The associated cost is trivial.

Table - Summary of DG5 project outputs outstanding at March 2015

Project	No. DG5 outputs	Comment	Planned completion date
Whitburn Bents Road	2	Delay to allow solution development to take account of Whitburn Bathing Water project	30/06/15
Long Acre , Houghton	6	Delay from land issues and need to align with EA drainage issue	13/08/15
Plessey Crescent/ Marden Crescent	4	Delay to allow incorporation of surface water management partnership project with local authority	24/07/15
Central Exchange	6	Delay due to unchartered services encountered	30/05/15
Kenilworth Hotel	1	Delay in installation of electricity supply	30/06/15
Front Street, Perkinsville	1	Delay to allow more accurate flow monitoring to be completed	02/10/15
Total	20		

The table below shows a comparison of PR09 FD and actual sewer flooding outputs.

Ofwat Supplementary Report - Table 2.5.2a - sewer flooding outputs

Sewer flooding -2010-15 outputs	FD output target	Actual
Required net reduction in properties on the internal 2 in 10 and 1 in 10 registers (from PR09 FD)	435	N/A
Revised net reduction following adjusted AMP5 DG5 starting point	192*	226
Number of internal hydraulic capacity flooding problems to be mitigated (from PR09 FD)	221	1,044
Total number of internal hydraulic (2 in 10 and 1 in 10) flooding problems to be solved by capital expenditure (from PR09 FD)	1,135	1,142

*This number was not included in the FD. It has been derived in the same way but with the revised starting point of 489.

Changes since the PR14 FD

The PR14 FD (Table AA3.10) logging down for 50 sewer flooding outputs that were no longer required and shortfalling for a further 79 outputs.

Had the information regarding our final 'better than forecast' 2014-15 sewer flooding performance been available at the time of finalising the PR14 FD, then no logging down or shortfalling adjustment would have been made at that time in this respect.

Ofwat's recent PR14 rulebook consultation proposed a materiality level for any 2014-15 blind year outputs adjustments. Assuming this is the final policy, the adjustment to reverse the PR14 FD logging down and shortfalling for sewer flooding, in the light of actual performance in 2014-15, would be below materiality.

C2.5.2 Flooding pilot studies

Four projects were selected in 2012 and agreed with Ofwat as pilot studies that would increase learning in terms of the design and delivery of sustainable solutions in conjunction with other partners.

The table below shows the outputs from the original four pilot study projects.

Table – Original pilot study projects

Pilot study	Properties on DG5 register	Properties included in output summary	Comment
Princes Road	61	61	Construction well progressed
Nuns Moor	6	0	Properties remain NCB
Belmont	0	0	Construction substantially complete
Great Ayton	8	8	Awaiting landowner / developer decision to proceed
Total	75	69	

Each project had unique learning opportunities specific to the local area. There were three key lessons that emerged that assisted in the resolution of the issues, these being:

i) The complexities of multiple partner issues require time and flexibility to resolve the uncertainties of resources, budgeting and prioritisation;
ii) A strong and sensitive customer engagement process is required to support both customer understanding of issues and the delivery of property level interventions; and
iii) Good quality feasibility studies are required to support partner discussions and demonstrate benefits to the community.

Princes Road, Brunton Park Pilot (construction well progressed)

This is an exciting partnership project involving diversion of a river to achieve reduction in flood risk from the sewerage system and the river. This was a complex project in terms of identification of the flooding mechanisms, available solutions, partnership interrelationships and local land tenancy arrangements with the council.

It required substantial work to get all parties into alignment on the solution. Because of this essential preparatory work, construction did not commence on site until October 2014 and has since been delayed due to ground conditions.

The project has confirmed:

- the financial complexities of multiple partner projects;
- the need for clear risk allocation between partners; and
- the need for wider aspects of local issues to be considered.

A quote from our independent external technical auditors (Atkins) was:

"The Company confirmed that construction started in October 2014 as planned. However issues with poor ground conditions slowed construction of the Ouseburn diversion channel, and diversion into the new channel is not now anticipated until mid-March 2016."

This project is well progressed and, in line with the guidance provided by Ofwat relating to pilots, we have claimed these as outputs.

Roseberry Crescent ,Great Ayton Pilot (awaiting landowner /developer decision)

This project is well developed but the timing of the delivery of the project is dependent on a decision to commit to development from the landowner and is out of the company's hands.

The project has confirmed:

- the need for a flexible timescale for such projects ;
- the need for improving the understanding of developers / landowners of the benefits of and responsibilities for SUDS; and
- the benefit of a united approach from the respective flood risk managers.

A quote from our independent external technical auditors (Atkins) was:

"It appears that the Company has been in continuing contact with the landowners and their agents since 2010 and that the reasons for the delay to this scheme are not a result of the Company's actions or inactions, always accepting the need for the scheme costs to be kept as low as is practicable."

C2.5.3 Further sustainable solutions

Based on the success of the pilot projects, we have continued to expand the number of projects that include sustainable solutions and partnership working. Those completed in 2014-15 are shown in the table below. We have incorporated the lessons learnt from the pilot projects and consider that sustainable solutions are now becoming part of our business as usual processes for resolving hydraulic incapacity in the sewer network.

Table - Further sustainable projects fully completed in 2014-15

Project	Properties on DG5 register	Properties included in output summary	Comment	Solution
Megstone Avenue	2	2	Complete	Suds depression
Shelley Drive	8	8	Complete	Swales for surface water removal
The Hollow	55	55	Complete	Interception of land drainage and use of local ponds
Gibside View	4	4	Complete	Suds depression basin
Naylor/Noel Avenue	20	20	Complete	Highway drainage removal
Wuppertal Court	13	13	Complete	Detention basin
Total	102	102		

C2.6 Ofwat Supplementary Report - Table 2.5.2b - other Enhanced Service Level (ESL) service outputs

C2.6.1 Introduction

Ofwat Supplementary Report Table 2.5.2a (below) contains sewage treatment works odour control schemes.

C2.6.2 Other ESL service outputs

The study for the Berwick scheme was completed but other changes introduced at the site significantly reduced odour problems and no further work was required.

The odour control equipment requirements from the Cramlington study were installed during 2014-15.

Ref[1]	Description	Activity output during 2010-15	Service standard output	FD Completion Date	Completion date achieved or anticipated
	ST alleviation schemes				
8364	Berwick	Odour control modifications	Avoid nuisance from odour	01/03/13	01/03/13
8363	Cramlington	Odour control modifications	Avoid nuisance from odour	31/03/13	30/11/14

1 Project reference is from the C5 projects database.

C3 SERVICEABILITY PERFORMANCE

C3.1 Introduction

Our serviceability performance for each of the four sub-services for AMP5 is described in this section.

Our performance in the last few months of 2014-15 has been in line with the forecast made during the PR14 process. As such our performance assessment is unchanged from our PR14 submissions and as assumed in the PR14 FD.

We have assessed the serviceability for each sub-service using the Ofwat serviceability toolkit. Each indicator has been compared to upper and lower limits and the reference levels which were agreed at PR09.

Our serviceability performance for 2010-15 is as shown in the table below

Sub-service	2010-11	2011-12	2012-13	2013-14	2014-15
Water infrastructure	Stable	Stable	Stable	Stable	Stable
Water non-infrastructure	Stable	Stable	Stable	Stable	Stable
Sewerage infrastructure	Marginal	Marginal	Marginal	Stable	Stable
Sewerage non-infrastructure	Stable	Stable	Stable	Stable	Stable

C3.2 Water infrastructure serviceability

C3.2.1 Summary

This sub-service was assessed as ‘Marginal’ by Ofwat for 2009-10, reflecting performance for the DG3 (Interruptions to supply greater than 12 hours) indicator, all other indicators being ‘Stable’.

We use Serviceability Action Plans (SAPs) to achieve a step change in performance where service has deteriorated, is judged to be at risk of deterioration or where we are looking to introduce improvements in response to customers views. Between 2010 and 2015 we have completed SAPs for our DG3 Interruptions to supply >12 hours performance.

Interruptions to supply > 12 hours performance improved significantly between 2010 and 2015. This was primarily driven by operational changes implemented from 2010-11. Since 2011 performance has stabilised and has been consistently towards the lower control limit since 2012.

Our assessment for this indicator is that it moved from ‘Marginal’ to ‘Stable’ during 2011-12 and this improvement in serviceability has been maintained since 2012.

Performance against all indicators is shown in the following table.

Serviceability indicator	2010-11	2011-12	2012-13	2013-14	2014-15
Mains Bursts	Stable	Stable	Stable	Stable	Stable
DG2 Water pressure	Stable	Stable	Stable	Stable	Stable
DG3 Interruptions to supply >12hrs	Marginal	Stable	Stable	Stable	Stable
Iron non- compliance (%)	Stable	Stable	Stable	Stable	Stable
Discolouration contacts (nr/1,000 population)	Stable	Stable	Stable	Stable	Stable
Distribution Index TIM (%)	Stable	Stable	Stable	Stable	Stable
Overall assessment	Stable	Stable	Stable	Stable	Stable

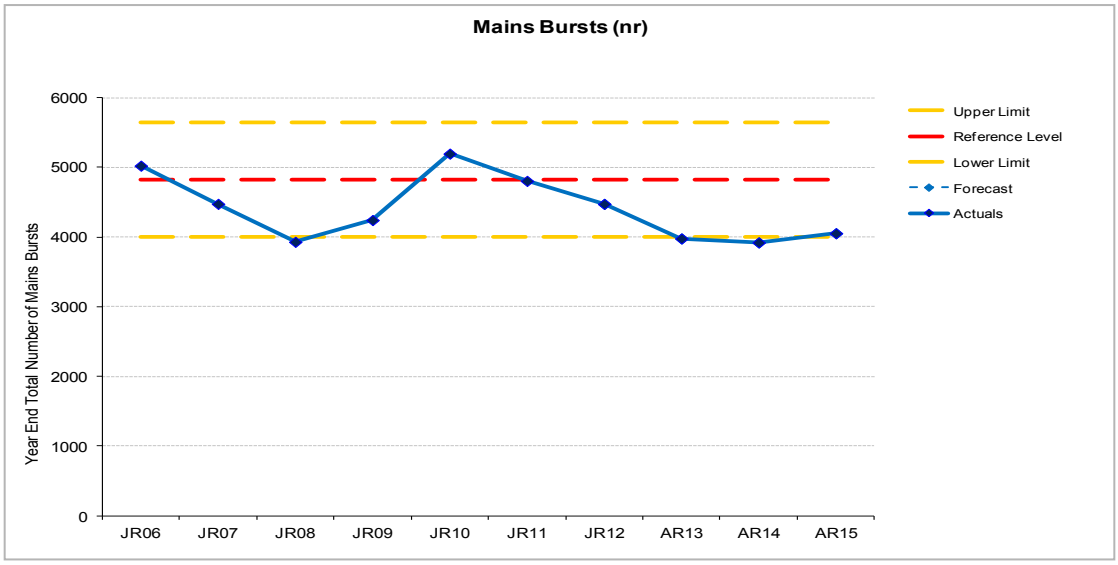
With the six indicators showing stable or improved performance in all years except 2010-11, we assess this sub-service as 'Stable'.

C3.2.2 Mains bursts

With performance for 2014-15 at 4,053 bursts, this indicator remains 'Stable'. We have continued to effectively manage the number of burst mains since 2010.

We invest in mains renewal schemes to ensure we maintain the structural integrity of our water mains for current, and future, customers. Our programme allows for the uncertainties that weather can have on our mains burst rates year to year. We use a model to help us identify the optimal programme of intervention (replacement of water mains) over a 25 year horizon, in order to maintain our current burst performance.

During 2010-15, we will have replaced 530km of mains. Ongoing improvements in 'rehabilitation targeting' have enabled us to reduce the length of main to be replaced in some areas whilst securing the required service benefits. We are now using asset information at a street level to identify the lengths of main which need to be replaced in the current year and those with a longer asset life. These targeted interventions have maintained a stable burst rate and our approach also supports improved performance for interruptions to supply and leakage.



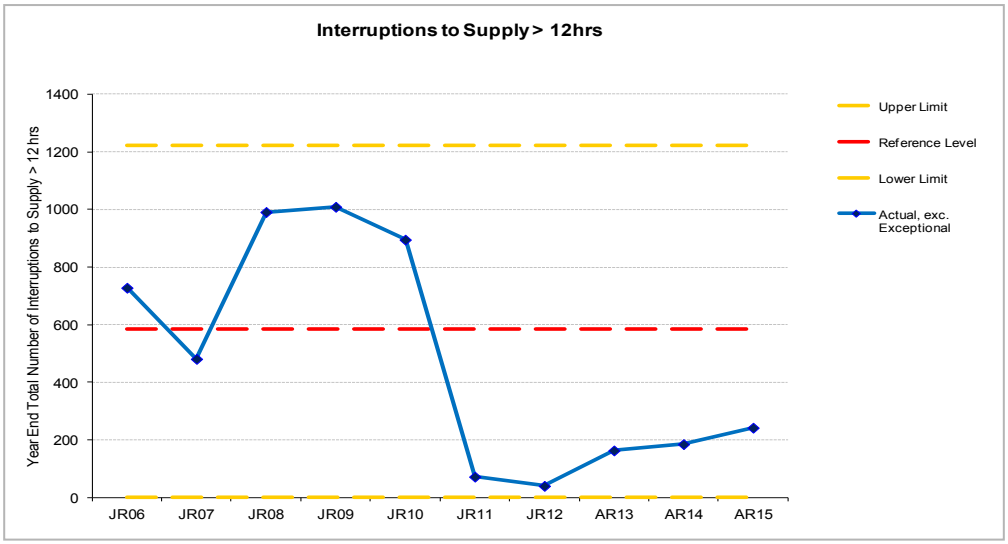
C3.2.3 DG3 interruptions to supply >12 hours

Performance for 2014-15 shows 242 properties experienced an interruption to their supply lasting more than 12 hours. This equates to a very small percentage (0.001%) of all the properties we supply. Performance for this serviceability indicator has remained 'Stable'.

We were assessed as 'Marginal' for this indicator during 2010-11. An average of 820 properties per annum experienced an interruption to supply greater than 12 hours between 2005 and 2010. During 2010 we introduced changes in our operational practice, developing a SAP to reduce interruption to supply events.

This delivered the significant improvement in performance seen during 2010-11 meaning our indicator moved to 'Stable' in 2011-12. Changes implemented have included an increase in real-time information by installing additional network monitors and telemetry, sophisticated trigger alarms to highlight when an area of the network is not behaving as it should – giving us advanced notice of a potential interruption to supply and fundamental changes in our operational response, shifting our focus to that of maintaining the customers' water supply rather than the specific repair or planned activity.

These changes are now embedded into our business as usual activity and we have consistently delivered performance below our reference level since 2011, as shown in the graph below. Since 2010 we have reduced the number of properties expected to experience an interruption greater than 12 hours to an average of only 140 properties per annum, demonstrating our significant and sustained improvement in performance for this indicator.



C3.2.4 Discolouration

With a performance of 0.89 contacts per 1,000 population in 2014, serviceability performance for this indicator remains 'Stable'.

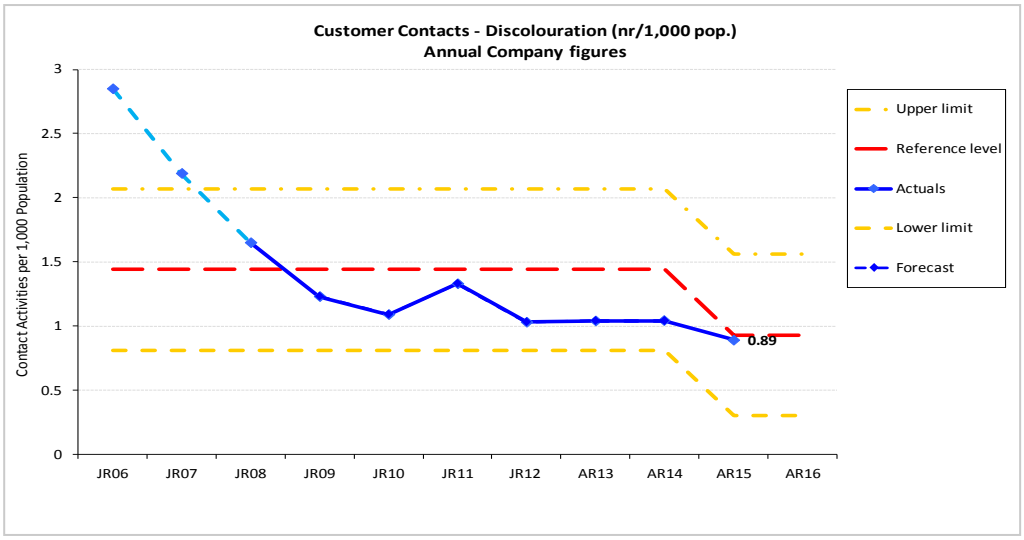
Minimising discoloured water contacts and supplying customers with clear water remains a critical element of our water quality strategy and we are constantly looking at measures we can take to improve our performance further.

We started 2010 with a performance of 1.09 contacts per 1,000 population which equated to 4,944 discolouration contacts being received from our customers. Aligned to our DWI undertaking (NNE 3379) we had a serviceability target of 0.93 contacts per 1,000 population to be achieved by 2015.

Work to remove sediment from prioritised strategic mains systems in NW, in line with plans agreed with the DWI, continues to deliver significant benefits to our customers. This work is still being delivered in Newcastle and Gateshead and will continue into 2016. We also implemented a Discolouration SAP in 2014. The plan was developed due to a levelling -off in the rate of contact reduction between 2012 and 2014 and the stretching 2014 target of 0.93 contacts per 1,000 population.

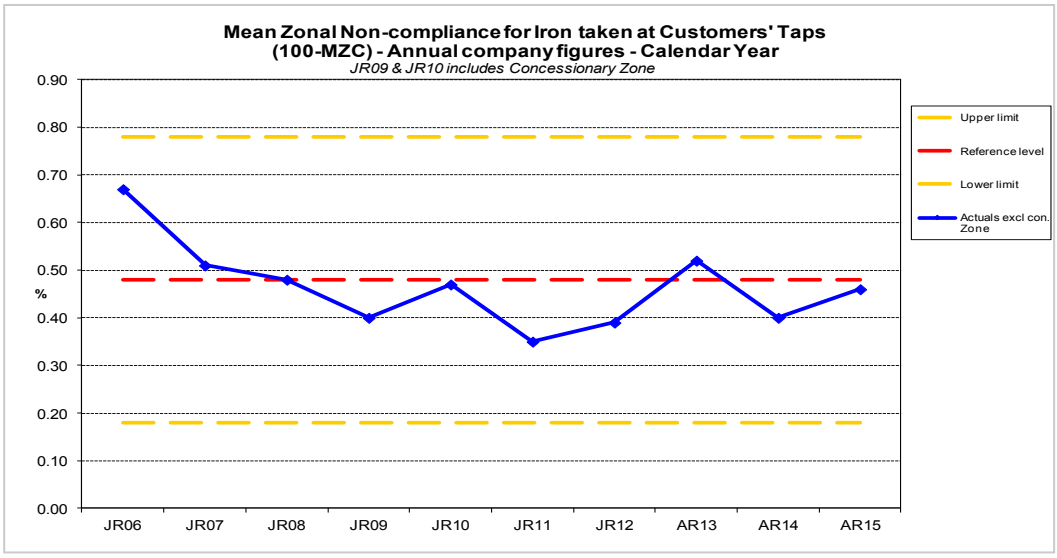
The SAP covers our planned activities between 2014 and 2016 and includes improved operational practices and increased competency levels from those who operate our water networks. The SAP actions have supported the mains cleaning activity by delivering a step change improvement in our performance during 2014. This is predominantly due to a programme of DMA flushing in NW using the UDF (unidirectional flushing) technique. In total we will have flushed 269, or 19% of NW DMAs between April 2014 and March 2015. A program of DMA flushing, using the UDF approach will now become a planned maintenance activity for controlling discolouration contact generation in the future.

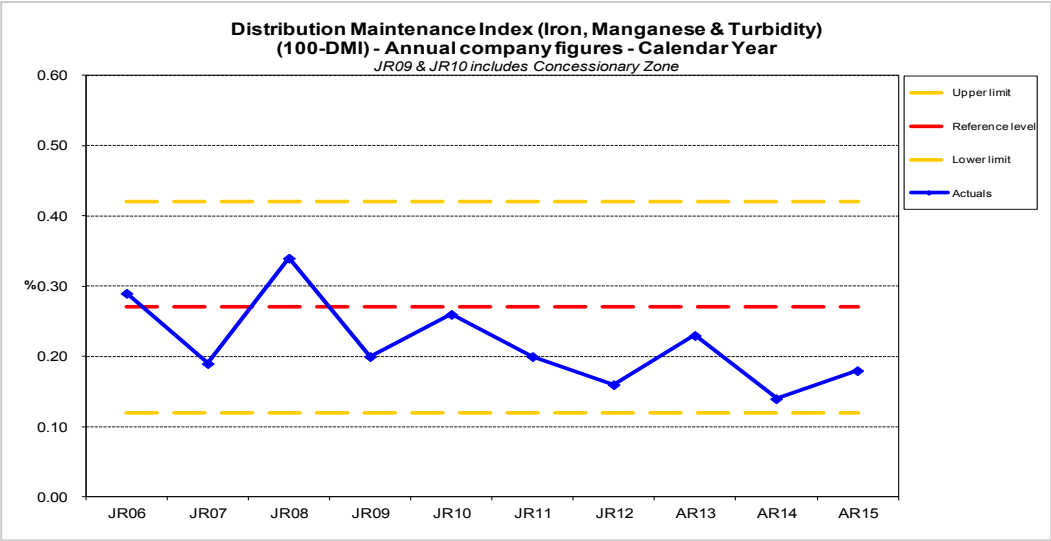
The result of our activity in this area between 2010 and 2014 has resulted in achievement of our serviceability targets with a performance of 0.89 contacts per 1,000 population in 2014. This is equivalent to 3,884 discolouration contacts and means we are seeing nearly 1,100 fewer contacts from customers than in 2010, a 21% reduction.

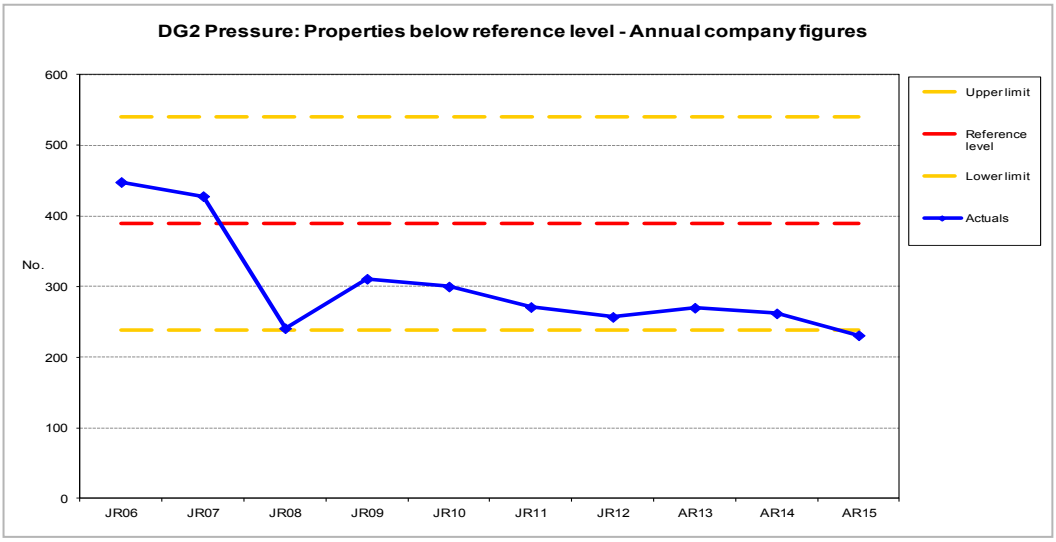


C3.2.5 Other water infrastructure indicators

The following graphs demonstrate that our performance against all other water infrastructure serviceability indicators have remained 'Stable' between 2010 and 2015 with performance consistently at or below reference level.




Distribution Maintenance Index (Iron, Manganese & Turbidity)
(100-DMI) - Annual company figures - Calendar Year
JR09 & JR10 includes Concessionary Zone
0.60
0.50
0.40
%0.30
0.20
0.10
0.00
JR06
JR07
JR08
JR09
JR10
JR11
JR12
AR13
AR14
AR15
Upper limit
Reference level
Lower limit
Actuals


DG2 Pressure: Properties below reference level - Annual company figures
600
500
400
No.
300
200
100
0
JR06
JR07
JR08
JR09
JR10
JR11
JR12
AR13
AR14
AR15
Upper limit
Reference level
Lower limit
Actuals

C3.3 Water non-infrastructure serviceability

C3.3.1 Summary

We have continued to maintain 'Stable' serviceability for the water non-infrastructure sub-service between 2010 and 2015 as shown in the table below.

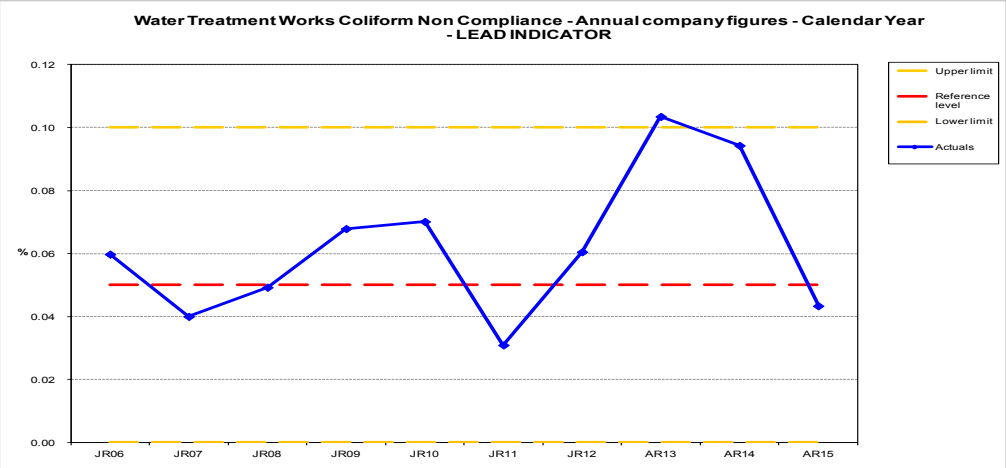
Serviceability indicator	2010-11	2011-12	2012-13	2013-14	2014-15
WTW Coliform non-compliance	Stable	Stable	Stable	Stable	Stable
Service Reservoir Non-compliance >5%	Stable	Stable	Stable	Stable	Stable
Turbidity 95%ile	Stable	Stable	Stable	Stable	Stable
Enforcement Notices (Microbiological)	Stable	Stable	Stable	Stable	Stable
Unplanned Maintenance	Stable	Stable	Stable	Stable	Stable
Overall assessment	Stable	Stable	Stable	Stable	Stable

C3.3.2 WTW coliform compliance

With 2014 performance, at 0.04, below the reference level, performance for this serviceability indicator remains 'Stable'.

Water treatment works coliform compliance between 2010 and 2015 has oscillated around the reference level. Following the increase in failures reported in 2012 we implemented a SAP to address this. Inspection and maintenance regimes on treated water tanks, process units and sample points were sustained at an enhanced level to manage the risk of failure and, where appropriate, the effectiveness of disinfection treatment was improved. This included the installation of ultra violet disinfection at three groundwater sites during 2012-13 to eliminate the risk of coliform failures at these sites.

Since 2012-13 performance has been maintained below the upper reference level and our 2014 performance, at 0.04 is has now returned to below the reference level.

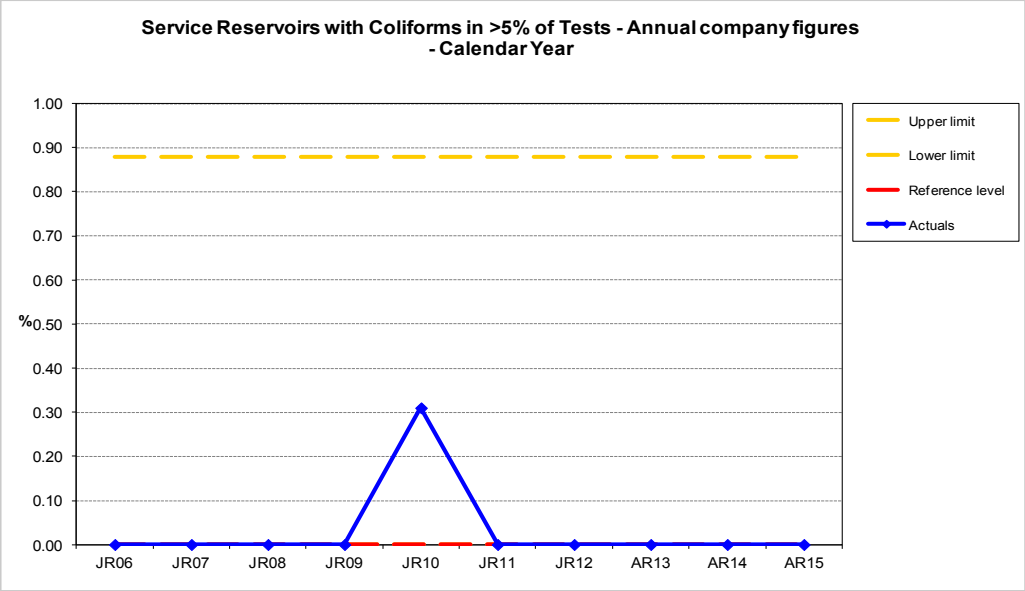


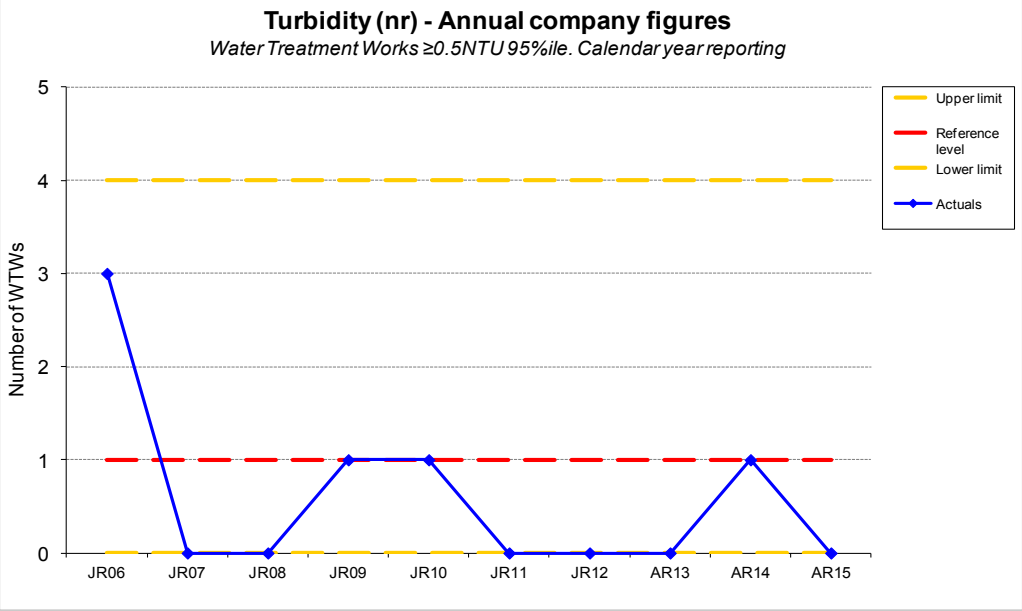
C3.3.3 Other water non-infrastructure indicators

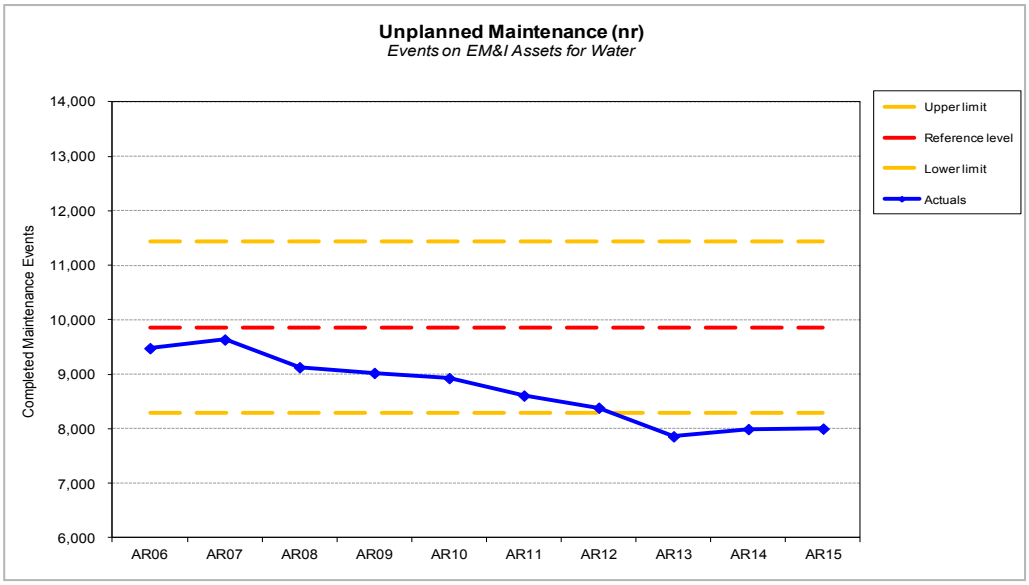
The graphs below demonstrate that our performance against all other water non-infrastructure serviceability indicators remains 'Stable'.

Service reservoir microbiological performance has remained stable. Every site achieved the required 95% annual serviceability compliance to satisfy drinking water standards between 2010 and 2015.

We continue with the inspection, maintenance and cleaning regime we implemented in 2009, with all service reservoirs now inspected on either a three or five year cycle, based on risk.






Unplanned Maintenance (nr)
Events on EM&I Assets for Water
Completed Maintenance Events
14,000
13,000
12,000
11,000
10,000
9,000
8,000
7,000
6,000
AR06
AR07
AR08
AR09
AR10
AR11
AR12
AR13
AR14
AR15
Upper limit
Reference level
Lower limit
Actuals

C3.4 Sewerage infrastructure serviceability

C3.4.1 Summary

Our performance against all of the sewerage infrastructure serviceability indicators is shown in the table below.

Serviceability Indicator	2010-11	2011-12	2012-13	2013-14	2014-15
Sewer collapses	Stable	Stable	Stable	Stable	Stable
Pollution incidents	Improving	Improving	Stable	Stable	Stable
Sewer flooding (Overloaded sewers)	Stable	Stable	Stable	Stable	Stable
Sewer Flooding (Other Causes)	Deteriorating	Deteriorating	Marginal	Marginal	Stable
Sewer blockages	Stable	Stable	Stable	Stable	Stable
Equipment failures	Stable	Stable	Stable	Stable	Stable
Overall assessment	Marginal	Marginal	Marginal	Stable	Stable

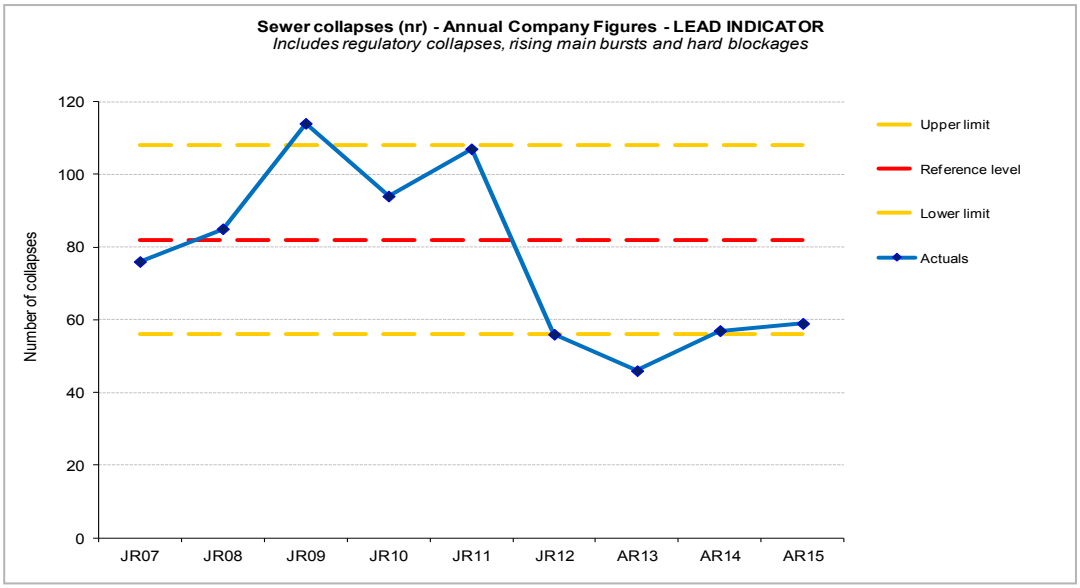
With all six serviceability indicators at 'Stable' we assess our sewerage infrastructure sub-service for 2014-15 to be 'Stable'.

During 2010-15 we have either completed or are undertaking SAPs for the following indicators; Collapses, Rising Mains Bursts, Managing Other Causes Flooding and Managing Network Flows.

C3.4.2 Sewer collapses

Our sewer collapses performance is excellent, with the number of collapses consistently below the lower regulatory control limit for the last four years. Performance for this serviceability indicator remains 'Stable'.

The implementation of our SAP in 2010-11 has successfully reversed the increase in gravity sewer collapses securing 'Stable' serviceability for this element of our collapses measure. To address the spike in rising main bursts in 2010-11 we implemented a SAP in 2011-12 to tackle separately the number of rising main bursts and support ongoing overall 'Stable' performance relating to sewer collapses. The SAP for managing the number of rising main bursts resulted in another significant improvement to our collapses performance which returned to more satisfactory levels.



C3.4.3 Sewer flooding indicators

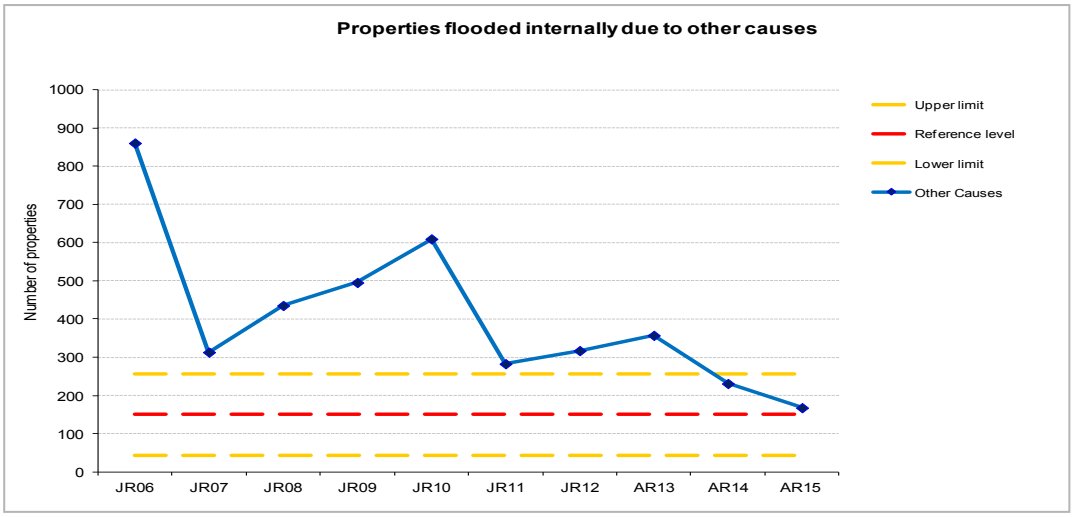
We assess the performance for these indicators as 'Stable'.

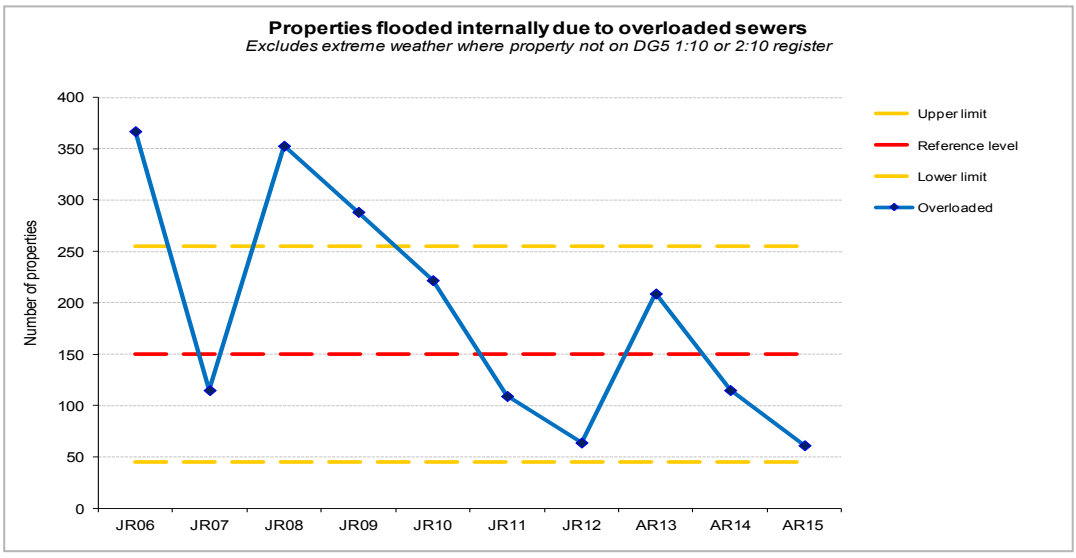
The graphs demonstrate that our performance against the two sewer flooding indicators has further improved in 2014-15. This is in line with the predictions we made as part of the PR14 process. The number of flooded properties caused by overloaded sewers is significantly below the reference level, and whilst 'other causes' flooding is slightly above the reference level the trend is improving.

We have significantly increased activities under our SAPs to reduce the risk of flooding from overloaded sewers and other causes, such as:

- undertaking pilot studies, which involve the identification and delivery of more innovative sustainable solutions to reduce flood risk caused by overloaded sewers;
- investing to mitigate risks at 1,044 properties affected by, or at future risk of flooding; significantly more than the 221 properties assumed in our regulatory contract;
- increasing the amount of sewer lining in order to address tree root intrusion;
- significantly increasing the amount of sewer cleansing and inspection to reduce the risk from blockages; and
- increasing the amount of educational initiatives; through our 'Love Your Drain' campaign.

During 2013 and 2014, we reviewed and then implemented several changes to our operational processes, recruiting additional resources to enable this. We have greatly improved the service we provide our customers following a sewer flooding incident; including accelerating the subsequent investigation process and any consequential actions to eliminate or reduce the risk of subsequent incidents.





C3.4.4 Other Sewerage infrastructure serviceability indicators

Performance for all other wastewater infrastructure serviceability indicators remains ‘Stable’.

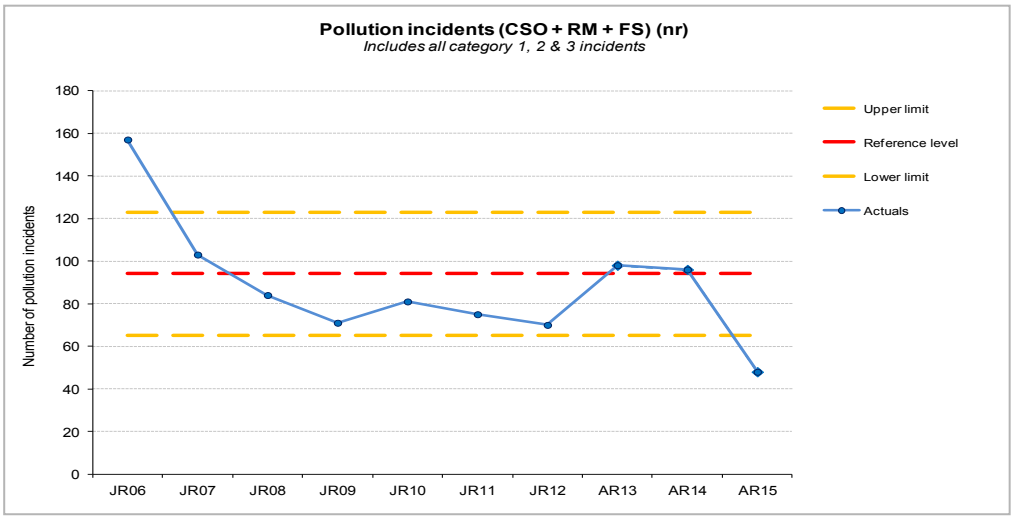
The graphs below show our performance with regard to pollution incidents, sewer blockages and equipment failure.

Pollution performance in 2010-15 has remained at or below the reference level of 94 and in 2014 we recorded our best year for pollution serviceability performance with 45 incidents.

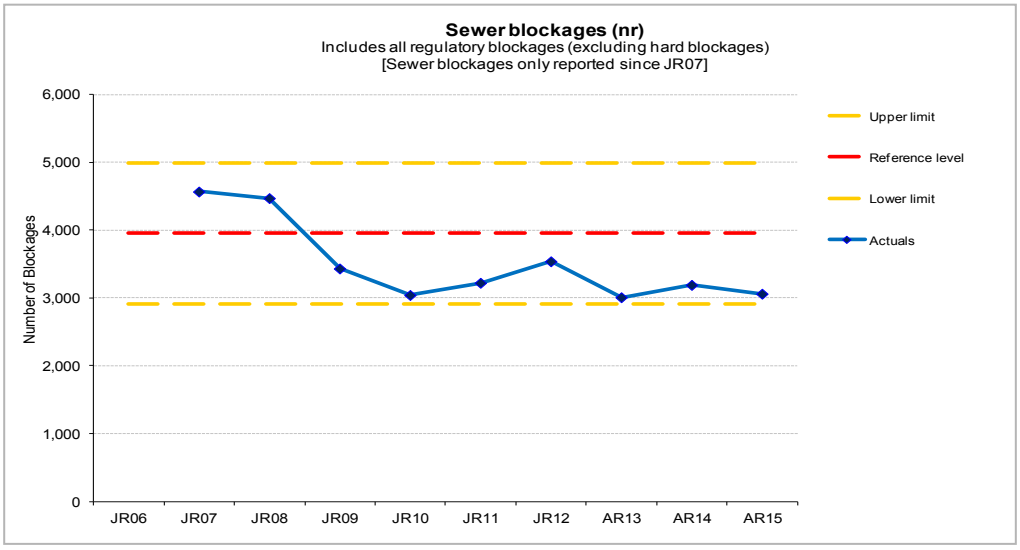
We have now installed sewer level monitoring (SLM) to over 85% of our CSOs to detect and resolve problems before an overflow happens. We aim to have 100% coverage of our discharge locations by 2020. We are continually improving the use of SLM data, such as in trend analysis, resulting in fewer pollution incidents from our CSOs. Between 2012 and 2014 we avoided 726 spills from SLM early warning alerts and trend analysis.

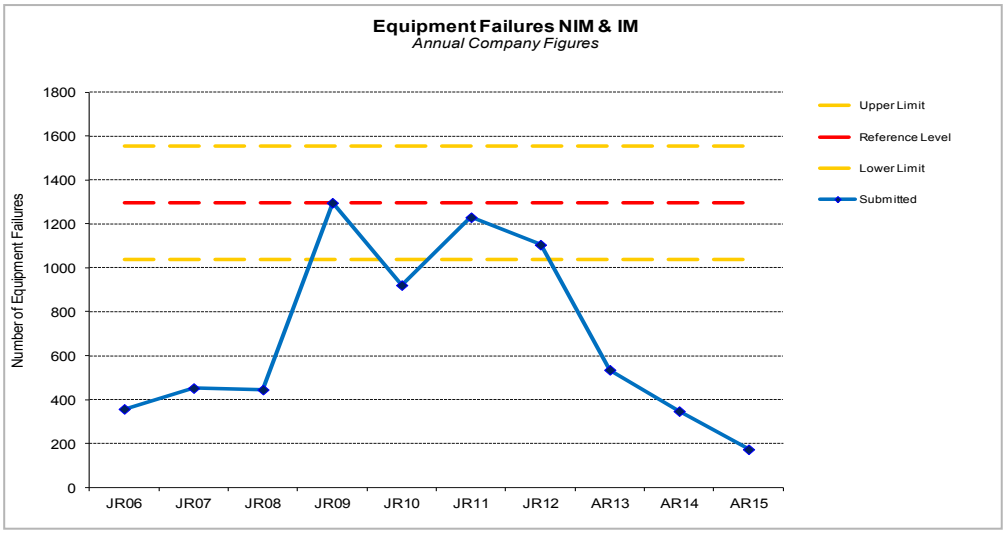
Further activities were introduced to reduce serviceability pollution incidents, such as:

- our 'Water Rangers' scheme, which involves volunteers patrolling predetermined routes next to watercourses in their local community. They report potential issues to us that can be resolved as soon as possible;
- a new pollution management information system to improve the quality and accessibility of our pollution data;
- proactive investigations of the CSOs that spill most frequently have found and fixed causes, such as tree roots and siltation; and
- continued development of a risk based approach to foul sewer pollution incidents.



Our award winning 'Love your Drain' campaign, spearheaded by our mascot Dwaine Pipe, has continued to help us deliver a sustainable reduction in flooding from blockages caused by misuse of the sewer network. Our sewer blockage performance has remained below our serviceability reference level throughout 2010-15.





C3.5 Sewerage non-infrastructure serviceability

C3.5.1 Summary

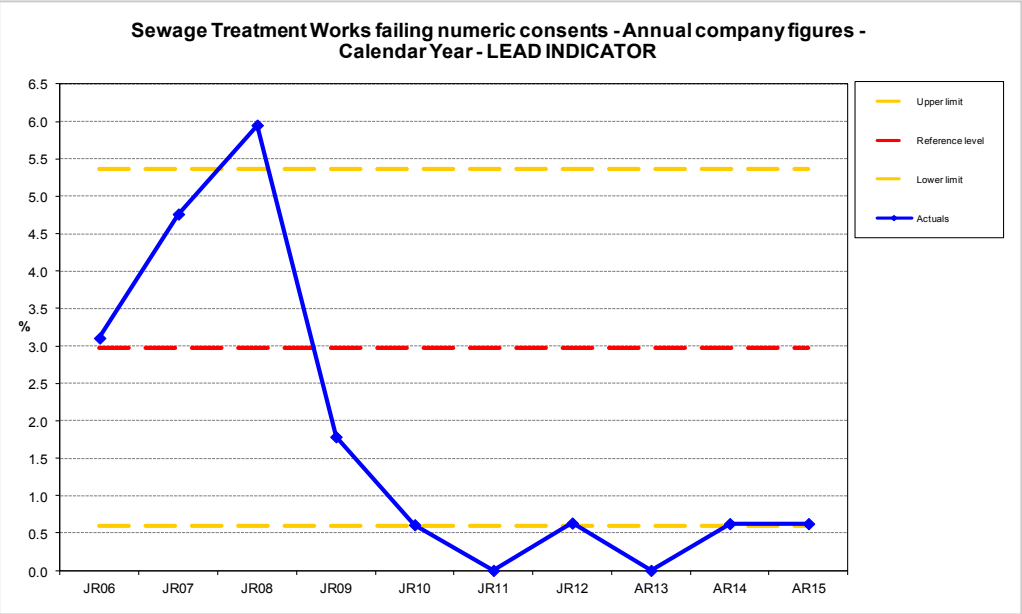
We assess that we have continued to maintain 'Stable' serviceability for the sewerage non-infrastructure sub-service as shown in the table below.

Serviceability Indicator	2010-11	2011-12	2012-13	2013-14	2014-15
No. of sewage treatment works non compliant	Stable	Stable	Stable	Stable	Stable
Populationulation equivalent failing LUT consents	Stable	Stable	Stable	Stable	Stable
Unplanned maintenance	Stable	Stable	Stable	Stable	Stable
Overall assessment	Stable	Stable	Stable	Stable	Stable

C3.5.2 Performance of sewage treatment works

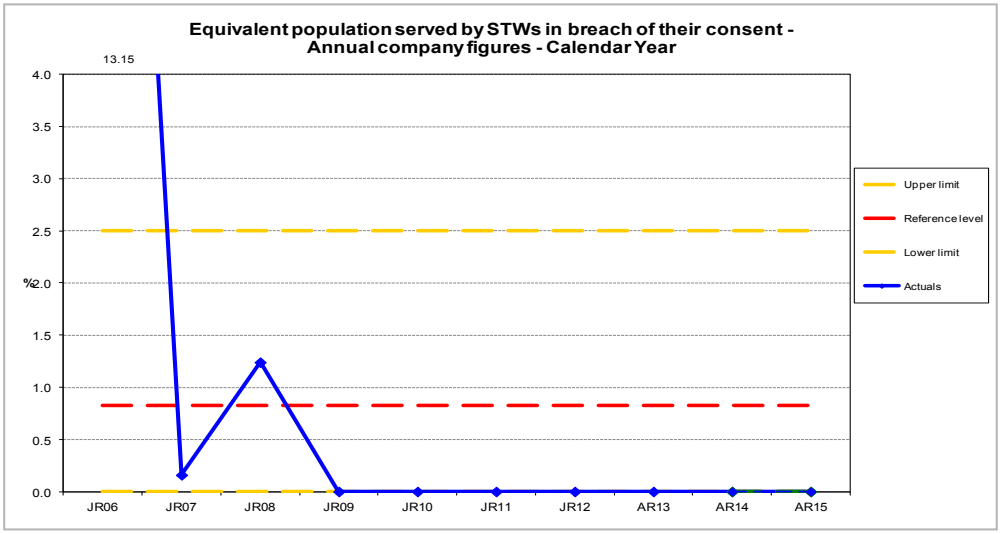
We have maintained excellent compliance performance with discharge consents throughout the five-year period and we assess serviceability performance for this indicator as 'Stable'.

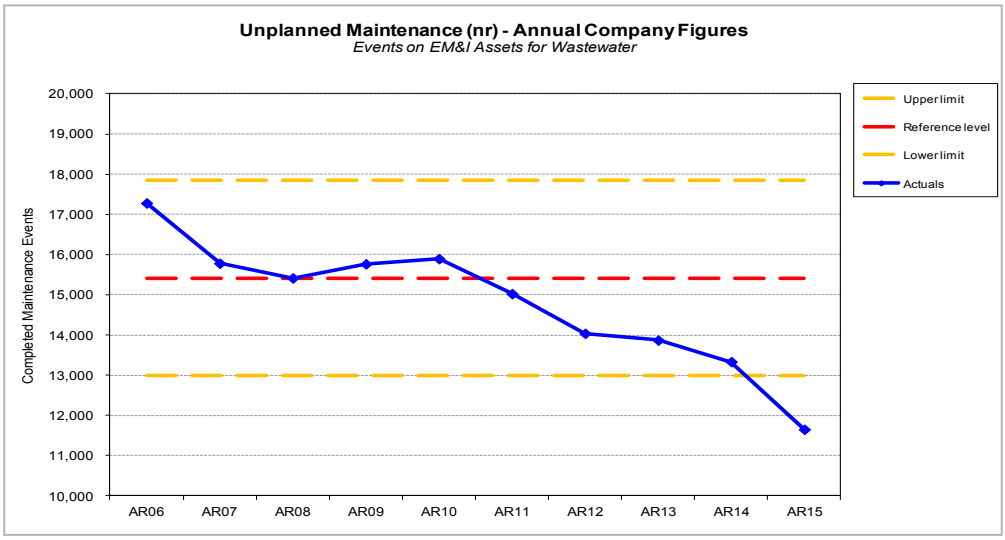
Our sewage treatment works performance remains better than the reference level for the seventh consecutive year. This change was initiated by the successful implementation of our SAP in 2008 and was then maintained as 'business as usual'. Maintaining such performance will rely on maintaining our focus on operation, intervention and trigger management. This includes a system of automated alarms which identify and escalate adverse performance trends in sub-indicators instigating corrective action.



C3.5.3 Other sewerage non-infrastructure indicators

The graphs below demonstrate that our performance against all other sewerage non-infrastructure serviceability indicators remains 'Stable'.





C3 APPENDIX 1 – LETTERS OF SUPPORT FROM THE EA

creating a better place

Environment Agency

Ken Oswald
Northumbrian Water Group
Abbey Road
Pity Me
Durham
DH1 5FJ

Our ref:

Your ref:

Date: 28 April 2014

Dear Ken

I write in response to your request for written confirmation of a belated requirement to deliver a number of statutory environment schemes within the current AMP period. I understand this is required as additional evidence to support your PR14 business plan resubmission to OFWAT.

In late 2013, the Environment Agency identified a number of NWL wastewater treatment works with population equivalents over 10,000 discharging to waters designated as sensitive areas (eutrophic) under the Urban Wastewater Treatment Directive. To meet Directive requirements, we require additional treatment of effluents from these treatment works, namely Chester-le-street, Barkers Haugh and Chilton & Windleston, to deliver discharges not exceeding 2mg/l phosphorus. To avoid the risk of European infraction we strongly recommend that the necessary improvements are carried out as soon as possible, with completion required within the current AMP period.

Additionally, current bathing water quality at Saltburn and Seaham designated bathing waters is less that that required under the revised Bathing Waters Directive. We understand from investigations conducted during AMP 5 that several Northumbrian Water assets have been identified as contributing to compromised water quality at these locations. Assets requiring improvement have been included in the PR14 National Environment Programme (NEP) with early 2016 completion dates (Year 1 schemes). To ensure the necessary engineering works are completed by this date, we support the need to initiate feasibility studies within the current AMP period.

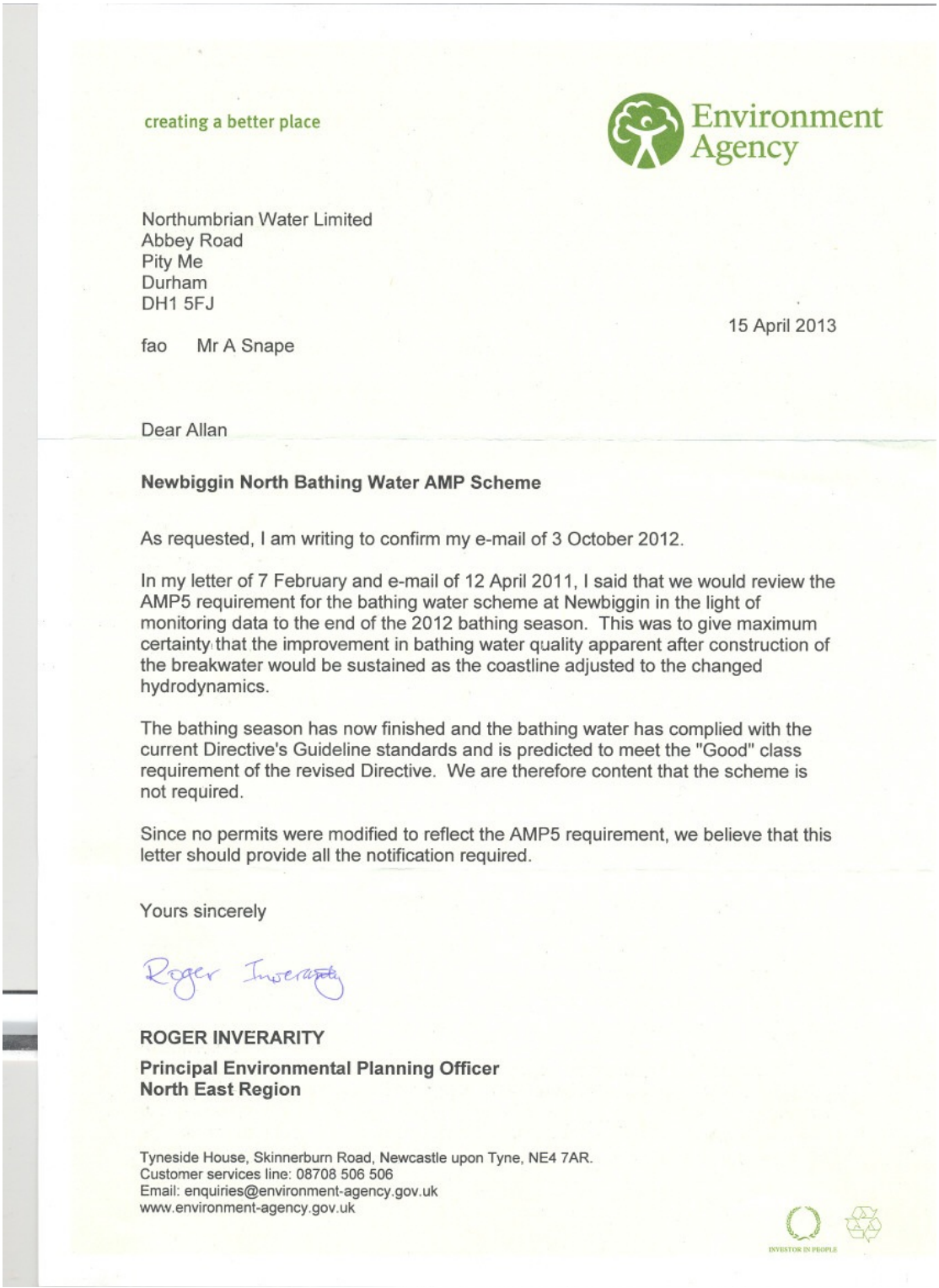
If OFWAT require any further information relating to these schemes, I am happy for them to make contact me directly by phone on 07789 033480 or via email at leonore.frear@environment-agency.gov.uk

Yours sincerely

L Frear

Leonore Frear
PR14 Coordinator
National River Basin Management Service
Environment Agency
www.environment-agency.gov.uk

Tyneside House, Skinnerburn Road, Newcastle Business Park, Newcastle upon Tyne, NE4 7AR.
Customer services line: 03708 506 506
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk



creating a better place

Environment Agency

Northumbrian Water Limited
Abbey Road
Pity Me
Durham
DH1 5FJ

15 April 2013

fao Mr A Snape

Dear Allan

Newbiggin North Bathing Water AMP Scheme

As requested, I am writing to confirm my e-mail of 3 October 2012.

In my letter of 7 February and e-mail of 12 April 2011, I said that we would review the AMP5 requirement for the bathing water scheme at Newbiggin in the light of monitoring data to the end of the 2012 bathing season. This was to give maximum certainty that the improvement in bathing water quality apparent after construction of the breakwater would be sustained as the coastline adjusted to the changed hydrodynamics.

The bathing season has now finished and the bathing water has complied with the current Directive's Guideline standards and is predicted to meet the "Good" class requirement of the revised Directive. We are therefore content that the scheme is not required.

Since no permits were modified to reflect the AMP5 requirement, we believe that this letter should provide all the notification required.

Yours sincerely

Roger Inverarity

ROGER INVERARITY

Principal Environmental Planning Officer
North East Region

Tyneside House, Skinnerburn Road, Newcastle upon Tyne, NE4 7AR.
Customer services line: 08708 506 506
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

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creating a better place

Environment Agency

Northumbrian Water Limited
Abbey Road
Pity Me
Durham
DH1 5FJ

10 June 2013

fao Mr J MacLean

Dear James

SEDGELETCH STW AMP Scheme

As requested, I am writing to confirm the Environment Agency position regarding Sedgeletch Sewage Treatment Works (STW).

We have reviewed the current AMP 5 requirement to divert the STW effluent flow to the Wear estuary and confirm that this solution is not the best environmental option. Greater ecological benefits will be gained by retaining improved STW effluent in the Lumley Park Burn. The company should look towards a sustainable treatment option that will enhance the quality of the effluent while continuing the current treatment process. We support the proposal to investigate the potential for reed bed treatment of the effluent, some of the neighbouring Moors and Herrington Burn flows and potentially some or all of the Lumley Sixth minewater flow.

We support the proposal to go through change protocol to transfer the AMP5 scheme into AMP6 and combine the flow and WFD phase 5 quality drivers. The feasibility work would be conducted in the current AMP period with design and construction occurring during AMP 6.

The current AMP5 permit will need to be modified to reflect these changes.

Yours sincerely

NICK DIGGLE

Principal Environmental Planning Officer
North East Region

Tyneside House, Skinnerburn Road, Newcastle upon Tyne, NE4 7AR.
Customer services line: 08708 506 506
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

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Northumbrian Water Limited
Northumbria House
Abbey Road
Pity Me
Durham
DH1 5FG

www.nwl.co.uk | www.eswater.co.uk