

Independent review of serviceability assessments -

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This report is for the attention of the directors of the Water Services Regulation Authority (Ofwat) only. The work we have undertaken is private and confidential, and we do not accept or assume responsibility to any other party for our work, for the report or for the opinions we have formed. Unless stated otherwise, all matters and issues referred to in our report arise from our work reviewing working papers supporting the serviceability assessments for the 2014 Final Determination. Our report should not be used or relied upon for any other purpose or by any third party.

Independent review of serviceability assessments

Executive Summary

We have reviewed the information provided by Ofwat independently and impartially informed by our experience.

From the information provided, against the Ofwat criteria and in accordance with the Ofwat methodology, the basis of developing the serviceability assessments and the consequent decisions on whether to impose shortfalls appear appropriate. Ofwat have applied its methodology in a manner that is consistent across companies and sub-services. From the documents we have reviewed the decision making process on events that should be included within, or excluded from, the assessment has been fairly and consistently applied.

We have identified a number of instances where judgements are finely balanced and suggested that Ofwat should satisfy itself of the basis of those decision in the light of the latest information whilst recognising that SMC's assurance review takes into account data and information supplied up to 13th November 2014. We do not comment on Ofwat's decisions after, or review of further information received since, that date.

1 Introduction

1.1 Scope and purpose

This review requires SMC to use our knowledge to assess the logic and reasoning for the shortfalls assumed in the PR14 Final Determination to be published on 12 December. SMC are to consider and confirm, or otherwise, that against the Ofwat criteria and in accordance with the Ofwat methodology, the basis of defining the serviceability position and any consequent decision to impose a shortfall appears appropriate and has been identified in a manner that is consistent between companies.

Ofwat have provided comprehensive information packs for the companies. In general these comprised:

- Revised business plan text with relevant serviceability elements
- Serviceability indicators charts on company performance
- Draft Determination (DD) representations
- Ofwat queries raised and company responses
- Recommendation tracker for Final Determination (FD)
- Calculation of serviceability shortfall where applicable.

The details of the Draft Determination representations were abridged so that only details of the company response to serviceability issues were provided to SMC. The company evidence came from two main sources – the Draft Determination evidence and evidence presented in company responses to Ofwat data requests. This was particularly relevant for situations where performance failures had taken place in the current year.

At the outset the study focused on the raw data on serviceability, the FD09 performance parameters and the Ofwat decision. This was then followed by reviewing company responses and supporting evidence on any particular failing performance indicators. An independent view of the strength of the company evidence was formed and considered in conjunction with the Ofwat assessment to define SMC's view of the appropriate action. The detailed results of this process are shown in Appendix 2.

1.1 Structure of report

The report is structured as follows:

- 1 Introduction
- 2 Objectives
- 3 Approach and methodology
- 4 Skills and experience of the project team
- 5 Background
- 6 Findings.

2 Objectives

2.1 Overall aims

Ofwat has applied shortfalls to companies judged to have one or more sub-service that has not achieved a stable serviceability assessment and requires a level of independent scrutiny and assurance of its processes, assumptions and systems for reaching its serviceability assessments for companies within the context of the 2014 Periodic Review.

The review covers the over-riding principles and processes followed to give assurance that the judgements align with key principles and that those principles are as published at PR09 and specifically in the information letter PR09/38.

The overall aim of the project is to provide SMC's opinion as to whether the documented principles have been appropriately applied and whether the judgements are consistent with those principles. The opinions in this paper reported to the Ofwat Board are supported by appendices recording the work we have undertaken and the basis for our opinions.

2.2 Specific objectives

The project terms of reference define the scope and set out the key tasks which should be achieved:

- Assess whether Ofwat has followed its methodology to assess each company's serviceability based on the four descriptors 'improving', 'stable', 'marginal' and 'deteriorating' (by reviewing statements in PR09/38 and technical appendix A3 - wholesale water and wastewater).
- Assess whether the serviceability assessments, including the judgements about exceptional events on which the assessments rely, have been consistently applied and reliably reflect the underlying data. Consideration should be given to whether Ofwat has:
 - assessed trends in performance through the AMP5 period (by inspection of graphs and commentary provided by Ofwat)
 - applied consistent decisions and judgements to the treatment of exclusions such as exceptional weather and events that are outside company control (by reviewing Ofwat decisions on information provided in company submissions)
 - taken account of the evidence provided by companies to justify each company's own serviceability assessment where it differs from Ofwat's (by reviewing Ofwat's assessment of information provided in company submissions).
- Comment on the consistency and applicability of the exclusions across the companies, (by classifying into types (causes) of exclusion event and discussing the principles by which such events are outside management control).
- Provide assurance to Ofwat Board with regard to serviceability judgements for Final Determinations (by discussing individual company decisions and providing a horizontal overview of the key decisions and exclusions).

2.3 Limitations on scope

There are a number of significant areas that are outside the scope of this focussed review. During the work and through discussions in advance with Ofwat we identified the following.

Limitations to the scope of the review.

The review follows the process Ofwat has set itself, it does not cover:

- the methodology itself and how it was arrived at
- the process for calculating the shortfall, or the calculation itself.

Companies have made representations on the draft determinations, and it may be helpful to clarify that this review does not cover the following assessments, which we understand have been the main focus of those representations:

- the basket of serviceability indicators
- a lead-indicator
- each company's serviceability assessment at the sub-service level.

We have not been asked to make judgements, or check Ofwat assessments, about:

- the achievement or otherwise of enhanced service levels
- consistency with previous Periodic Reviews
- the distinction between "asset serviceability" and "customer serviceability"
- events that may, or may not, be reflective of the underlying asset serviceability
- events that have been recorded on a basis that differs from how they were recorded in the period when control limits and reference levels were set
- whether a better performing company, with tighter control limits, may have been more heavily penalised for the same level of departure from its control limits than a poorer performing one
- the serviceability assessment (if any) at the industry level or movement from the previous determination.

We have accepted data provided to us by Ofwat and have not been required to trace data back to source.

3 Approach and methodology

To meet the project aims identified above it is essential that any conclusions and observations made are evidence based. The first stage of the project was to undertake a detailed review of the documents supplied by Ofwat.

As suggested in the terms of reference we stratified the project into the following four tasks.

- review statements in PR09/38 and technical appendix A3 - wholesale water and wastewater
- sample inspection of performance indicator graphs provided by Ofwat
- review Ofwat decisions on information provided in company submissions
- review Ofwat's assessment of the information that was provided in company submissions to support the assessment.

Brief comments are provided on the types of exclusion event and the principles by which such events are considered outside management control.

Our report is based on our understanding of Ofwat's methodology. In forming our conclusions we have reviewed the following documents in addition to the company specific information packs provided by Ofwat:

- Draft price control determination notice: technical appendix A3 wholesale water and wastewater
- PR09/38: serviceability outputs for PR09 final determinations
- Future water and sewerage charges 2010-15: final determinations

3.1 Project management

The project began in October 2014 with a requirement to issue a draft report by 4 November, a final draft by 20 November and a final report by 25 November.

4 Skills and experience of the project team

The day to day project management was carried out by the lead consultant, Graham Kemp, who has worked with SMC on asset management review projects as well as in his previous roles with a water and sewerage undertaker.

Graham Kemp

Graham is highly experienced in the water industry having spent over 38 years in the industry, 33 of these with a major water and sewerage undertaker. He was a member of numerous Steering Groups for UKWIR contracts including the development of the Capital Maintenance Common Framework, the development of the AMPAP approach and latterly the development of techniques for assessing maintenance needs of long lived assets.

He was a member of a steering group for Sewer Rehabilitation Manual version 5 with WRc. He has represented Water UK on BSI committee B504 – Water Supply and acted as convener of CEN Technical Committee 164 – Water Supply.

Client manager

Ben Haywood Smith acted as client manager, liaising with Ofwat on overall timescales, costs and deliverables, and ensuring the project is delivered on time, to budget and to specification. Ben is Managing Director of Strategic Management Consultants Ltd.

Ben Haywood Smith

Ben was the named Ofwat Reporter for Anglian Water for the period October 2005-2010 covering the price setting process in 2009 (PR09). He fulfilled the same role for seven years, covering both PR99 and PR04, for Yorkshire Water. He led a multidisciplinary team of senior staff to review regulatory returns to Ofwat, with responsibility for the overall planning to achieve objectives to time and within budget and present key findings at Board level. As the team had no prior history in the role, with them, he developed the process to be followed for the review and for reporting on the performance of Yorkshire Water. He combines a high degree of commercial awareness and substantial experience of financing the delivery of capital investment in the water industry.

5 Background

During the 2009 periodic review, and within the 2009 Final Determinations, it was made clear that companies assessed as less than stable must achieve stable serviceability in 2011-12. Failure to achieve and maintain stable serviceability within the AMP5 period (2010-15) would lead to a shortfalling process at the 2014 periodic review. This would take the form of a reduction in the allowable regulatory capital value (RCV).

Companies have an obligation to maintain their asset systems so that they are capable of maintaining the flow of services to consumers now and for the longer term. Ofwat monitors serviceability indicators for each of the four sub-services. It assesses trends in the indicators to determine serviceability according to four categories: improving, stable, marginal and deteriorating.

Companies must monitor, manage and maintain assets so that the serviceability indicators remain within a set range of control limits around a central reference level. A marginal assessment means Ofwat has some concerns that serviceability trends are moving in the wrong direction.

Customers must not pay for outputs that companies have not delivered. If companies are unable to demonstrate that they have maintained stable serviceability or achieved stable serviceability again after a marginal or deteriorating assessment in 2009, Ofwat applies the shortfalling process. A company is at risk of a shortfall adjustment (also referred to by Ofwat as an intervention) if Ofwat assesses serviceability as less than stable for 2011-12 or any subsequent year.

At the Draft Determination, as a result of individual indicator failures, Ofwat proposed shortfalling six WaSC's (against 11 sub-services) and two WoC's (two sub-services). In terms of the sub-services considered for shortfall, five were for sewerage infrastructure, six for water infrastructure and one each for water and sewerage non-infrastructure.

Following company representations on the Draft Determination further review has been undertaken by Ofwat. As at the time of our initial review, using information up to the 31st October, the position proposed for the Final Determination was for shortfalling at five WASC's (for eight sub-services) and two WOC's (two sub-services). In terms of the sub-services, four are for sewerage infrastructure, four for water infrastructure and one each for water and sewerage non-infrastructure.

The position proposed, again as a result of individual indicator failures, for the Final Determination as at the 13th November is for four WASC's to be shortfalled through seven sub-services and three WOC's to be shortfalled against three sub-services. In terms of the sub-services now considered for shortfall, three are for sewerage infrastructure, five for water infrastructure and one each for water and sewerage non-infrastructure. Subsequent assessments have not been reviewed.

At the time of our review this was an evolving process and Ofwat undertook further assessments as required in response to specific queries and internal discussions. At this stage of the Periodic Review process the judgements were finely balanced and inevitably involve some element of subjectivity. SMC's assurance review takes into account data and information supplied up to 13th November 2014.

6 Findings

6.1 Consistency

SMC confirms that, against the Ofwat criteria and in accordance with the Ofwat methodology, the basis of the shortfalls assessments appear appropriate and have been identified in a manner that is consistent across companies.

SMC consider that Ofwat has consistently applied its defined methodology to allocate serviceability assessments to sub-services. The assessments have been reliably and methodically undertaken. Any issues where SMC differ in the assessments or the process application are as the result of finely balanced subjective judgements. These exceptions are considered further below.

We have identified a small number of instances where judgements are finely balanced and the information available to SMC suggests that a different decision may be justified. In these cases we have suggested that Ofwat revisit the basis of the original decision and take into account any further information on performance parameters. Ofwat should satisfy itself of the basis of those decisions in the light of the latest information. Only information available to the 13th November 2014 has been taken into account in developing this report.

The evidence within company submissions is often of a high quality and focuses on linking exceptional events with performance failures / indicators. Where this is the case a judgement on the validity of excluding the performance failure can be readily made. In a number of company submissions the evidence is variable, in some cases the analysis is not focussed on the key performance issue or fails to link events convincingly to performance failures. In these cases the judgement as to whether to exclude performance failures is more subjective. From the documents we have reviewed the decision making process in relation to exceptions has been fairly and consistently applied.

The tabulated results of the Ofwat serviceability assessment for each company and the intent to impose a shortfall at the Final Determination are presented in Tables 1 and 2 in Appendix 1 together with the tabulated results of the SMC assurance review.

The detailed results of the review of the documentation and assessments provided for each company are shown in Appendix 2.

6.2 Exceptions report – company specific findings

This section covers each of the companies where shortfalls have been proposed. We do not comment on Ofwat's decisions after, or review of further information received since, 13 November.

Anglian Water

- In the original assessment Ofwat did not propose a shortfall against any of the sub-services. Company responses on current performance show recent breaches of the upper control limits for "interruptions to supply greater than 12 hrs" in 2014 together with failures in 2011/12 and SMC considered that Ofwat should revisit their decision not to shortfall against the water infrastructure sub-service.
- This further review has been undertaken and Ofwat have indicated that *"The company has had two breaches of the upper control limit in 2011-12 and 2014-15. Performance in 2012-13 and 2013-14 is near the reference level. Performance in 2013-14 was stable as*

required by the FD09 output commitments; hence no shortfall is to be applied at the final determination. However, 2014-15 performance is at risk of a marginal assessment and potential shortfall. This will be reviewed again in 2015 and a shortfall applied if performance is not considered stable”.

- SMC now agree that the decision to not impose a shortfall at this time is appropriate.

Dwr Cymru

- Ofwat have indicated their intent to shortfall the water infrastructure sub-service against the “interruptions to supply greater than 12 hrs” performance indicator. There have been a number of significant failures and although the company have provided evidence to explain the performance failure it is not compelling, other than in the case of a landslip which caused a pipe fracture. We agree that serviceability is not stable against this indicator and a shortfall should be applied.

Northumbrian Water

- Ofwat indicated their intent to impose a shortfall against the sewerage infrastructure sub-service at the Draft Determination stage due to the failure to meet the control limits for flooding-other causes. Evidence provided by the company in respect of action plans for root cutting programmes and fat management initiatives to stabilise performance have allowed the original Ofwat decision to be changed. A shortfall is not now proposed for the Final Determination and SMC agree that this is consistent with the evidence reviewed.

Southern Water

- At the Draft Determination Ofwat proposed to shortfall the company against the water infrastructure, sewerage infrastructure and sewerage non-infrastructure sub-services. For the water infrastructure sub-service the key issue was the supply interruption measure. Following a review of company evidence on the events leading to failure it was apparent that an event on the Isle of Wight should be excluded from consideration. A number of supplementary supply systems intended to provide resilience had been overcome by severe weather conditions. SMC agree with Ofwat’s conclusions on this issue.
- At the initial review Ofwat indicated their intent to impose a shortfall against the sewerage infrastructure sub-service due to a failure to meet the flooding – other causes measure. At that time SMC considered that there was sufficient weight of evidence to provide some mitigation against the failure due to the impact of prolonged periods of wet weather on groundwater levels and the consequent impact on sewer base flows but have since been able to review the detailed evidence. SMC have now concluded that the evidence presented is not sufficiently robust to support the company case for a wet weather exclusion for flooding other causes and concur that the Ofwat assessment is consistent with the evidence reviewed. Further details on these conclusions are presented in Appendix 2.
- In the case of the sewerage non-infrastructure sub-service Ofwat have indicated their intent to impose a shortfall. The numbers of failures against the “percentage of failing works” has been mitigated by the position on iron consent standards and this is now deemed to be acceptable. In respect of the percentage of “p.e at failing works” Ofwat have concluded that the evidence is not sufficiently compelling over the third party impacts on consent failure and intend to impose a shortfall. SMC agree with this approach.

Severn Trent Water

- At the time of this report Ofwat indicated their intent to impose shortfalls against the water infrastructure, water non-infrastructure and sewerage infrastructure sub-services. The company have indicated their acceptance of the performance failures but the determination on the extent of the financial penalty has yet to be concluded. SMC agree with the serviceability position defined by Ofwat for these sub-services.
- SMC are aware that after 13 November Ofwat reviewed responses to additional queries and reviewed the shortfalls; this activity is outside the assurance work undertaken by SMC.

South West Water

- Ofwat did not propose any shortfalls at the Draft Determination but further review on the sewerage infrastructure sub-service has indicated that a shortfall may be appropriate due to the pollution incidents measure and flooding – other causes indicator. In the case of the flooding indicator, the company have produced evidence on the impact of the extreme wet weather in 2012/13 which has allowed a number of events to be excluded and for performance to be within the control limits. In the case of the pollution event category, Ofwat undertook to implement a further review and revisit their decision on this measure.
- This further review has indicated the influence of severe weather on the pollution event performance and as a result has allowed a number of events to be discounted, thus bringing adjusted performance within the control boundaries, and that a shortfall should not be imposed. SMC agree that the result of this additional review is consistent with the evidence reviewed.

Thames Water

- Ofwat indicated their intent to impose shortfalls against the water infrastructure and sewerage infrastructure sub-services at the Draft Determination. Evidence provided by the company in respect of the interruption to supply indicator has allowed some exclusions and a prediction of current performance has brought this indicator back within control limits. Ofwat do not intend to propose a shortfall for this sub-service at the Final Determination and SMC agree that this is consistent with the evidence reviewed.
- For the sewerage infrastructure sub-service, the flooding – other causes and pollution events are failing indicators. The company have acknowledged their performance failure in this sub-service and the extent of the shortfall is a subject of discussion with Ofwat. SMC agree that Ofwat's decision to impose a shortfall against this sub-service is consistent with the evidence reviewed.

Yorkshire Water

- At the Draft Determination Ofwat proposed that a shortfall against the sewerage infrastructure sub-service be imposed due to the failure to meet the performance indicator for sewer blockages. The company have provided evidence on the impact of the transfer of private drains and sewers in October 2011 on this measure. This has now allowed the performance assessment to be revised such that a shortfall is not now proposed. SMC agree with Ofwat's revised assessment.

Bristol Water

- Ofwat have indicated their intent to impose a shortfall against the water infrastructure sub-service due to failure to meet the interruption to supply measure. There have been a number of significant failure events, including two very large events in 2014, and the company has provided details of these events. They contend that they were outside management control but Ofwat do not find the evidence compelling. SMC agree with Ofwat's approach and that the decision to shortfall is consistent with the evidence reviewed.

Dee Valley Water

- At the initial stages of this review Ofwat did not indicate their intent to shortfall against the water infrastructure sub-service. However there have been failures against the discolouration customer contact and Turbidity, Iron and Manganese (TIM) measures and SMC considered that there may be a case for shortfalling against this sub-service. There are indications that these failures are due to manganese within the raw water supply and manganese deposits in the trunk main system around Wrexham. There are associated issues of logging up claims and DWI undertakings which complicate the decision, but Ofwat undertook to revisit their original assessment.
- Ofwat have undertaken a further review of the information and have now indicated "A shortfall on discolouration contacts has been proposed for the final determination". SMC agree that this revised action is consistent with the evidence reviewed.

South East Water

- At the Draft Determination Ofwat indicated their intent to impose a shortfall against the water infrastructure sub-service due to the failure to meet the supply interruption measure. The company has provided evidence on the events causing failure of this measure and contend that many of them were outside management control. Ofwat do not find the evidence compelling and SMC agree with this assessment and with Ofwat's conclusions that a shortfall is consistent with the evidence reviewed.

South Staffs – Cambridge

- Ofwat originally indicated that they did not intend to impose a shortfall against any of the sub-services. However SMC considered that Ofwat should revisit the details of the supply interruption measure to ascertain whether there was a case for shortfall. The review has now been undertaken by Ofwat and confirms that a shortfall is not appropriate and re-examination of the data by SMC confirms that position.

6.3 Exceptions report – general themes

From our review there are two particular areas where there are common themes in performance failure that may warrant review for the use and development of measures, if required, for AMP6.

Supply interruptions

We think it is appropriate to express concern about the reliance on the measure for properties affected by supply interruptions lasting longer than 12 hours. Ofwat may wish to consider whether and to what extent the volatility inherent in this measure can be taken into account.

The supply interruptions measure is a key indicator, especially for a number of companies which have failed to meet the performance requirements. It is a highly volatile measure

and can be heavily impacted by single events affecting a large number of properties. Supply interruptions can be prolonged where access is difficult or it takes time to implement safe construction techniques. It is also clear that for some companies the Reference Levels set at PR09 were unlikely to be achieved during normal operations, as appears to have been the case for Dwr Cymru.

It may therefore be of benefit for AMP6 to undertake a further review of this measure and its application across the industry. In terms of asset performance, we are conscious that there is a difference between a number of supply failures >12 hrs, each affecting relatively few properties, and a single event affecting the same number of properties in aggregate. Both report the same performance within the current reporting parameters but they are indicative of differing levels of underlying asset health. Simply reporting the number of events and their associated property numbers within this measure might add to its validity.

An issue at some companies relates to the length of time taken to recharge systems following extended pipeline repair times. In these cases there may be some further benefit from reassessing the quantity of treated water storage and for the development of inter-zone transfer links to enhance system resilience. This should form part of the ongoing network management operational process.

Flooding other causes

A number of companies have had a challenge in meeting performance parameters for the “flooding – other causes” indicator. The extremes of wet weather during 2012/13 and 2013/14 have led to high ground water tables, saturated soil profiles and consequently high base flows in the sewer network.

In these cases a relatively low intensity rainfall event can then cause flooding and be attributed to “flooding – other causes” as it does not meet the severe weather exclusion condition for “flooding – overloaded sewers”. This area may be worthy of further consideration for the development of performance criteria and their subsequent assessment. Conversely it can be argued that high levels of infiltration into a sewer network are indicative of underlying poor asset condition and these aspects would need to be taken into account in any reassessment of the performance indicator.

We acknowledge that this is a complex area which was the subject of a joint study¹ in 2013. We recommend that consideration be given by Ofwat and the companies to the evidence base that might reasonably be judged sufficient to demonstrate that infiltration in sewers at particular locations is outside management control and that companies have applied the framework principles to manage their responsibilities.

¹ “Drainage Strategy Framework for water and sewerage companies to prepare Drainage Strategies: Good practice guidance” (May 2013) commissioned by the Environment Agency and Ofwat

Appendix 1: company specific assessments

Table 1: Water and sewerage companies: shortfalling assessments at Draft and Final Determinations

WASC's	Sub Service	Ofwat DD	Ofwat FD	SMC FD	Comment
COMPANY					
Anglian - ANH	WI	Not Shortfalled	Not Shortfalled	Consistent following further review	Recent results on interruptions to supply > 12 hrs show failures of UCL Ofwat to review decision. Ofwat have now undertaken a further review. Decision not to shortfall; 2014/15 position to be reviewed. Potential exists for shortfall dependence on actual 2014/15 performance. SMC concur with this assessment.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
	SI	Not Shortfalled	Not Shortfalled	Consistent	
	SNI	Not Shortfalled	Not Shortfalled	Consistent	
Dwr Cymru - WSH	WI	Potential Shortfall	Potential Shortfall	Consistent	Shortfall against interruption to supply. Persistent significant failures. Representations not compelling.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
	SI	Not Shortfalled	Not Shortfalled	Consistent	
	SNI	Not Shortfalled	Not Shortfalled	Consistent	
Northumbrian - NES	WI	Not Shortfalled	Not Shortfalled	Consistent	Effective representation on FoC. Ofwat do not intend to shortfall at FD.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
	SI	Potential Shortfall	Not Shortfalled	Consistent	
	SNI	Not Shortfalled	Not Shortfalled	Consistent	
Southern - SRN	WI	Potential Shortfall	Not Shortfalled	Consistent	Effective representation on supply interruptions. P.e of failing works outside parameters after exclusions. Pollution events to be further reviewed by Ofwat. Flooding other causes resulting in shortfall. Pollution event review now OK. Flooding other causes further reviewed by Ofwat and SMC Agree a shortfall is appropriate.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
	SI	Potential Shortfall	Potential Shortfall	Consistent following further review	
	SNI	Potential Shortfall	Potential Shortfall	Consistent	
Severn Trent - SVT	WI	Potential Shortfall	Potential Shortfall	Consistent	Company accept performance position of failures in three sub-services (if not the extent of shortfall). Assessments after 13
	WNI	Potential Shortfall	Potential Shortfall	Consistent	

WASC's	Sub Service	Ofwat DD	Ofwat FD	SMC FD	Comment
	SI	Potential Shortfall	Potential Shortfall	Consistent	November not reviewed.
	SNI	Not Shortfalled	Not Shortfalled	Consistent	
South West - SWT	WI	Not Shortfalled	Not Shortfalled	Consistent	Position on pollution events being reconsidered by Ofwat with further evidence. Additional Ofwat review indicates impact of severe weather and influence on pollution performance. Able to exclude events. SMC agree with revised approach.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
	SI	Not Shortfalled	Not Shortfalled	Consistent following further review	
	SNI	Not Shortfalled	Not shortfalled	Consistent	
Thames - TMS	WI	Potential Shortfall	Not shortfalled	Consistent	Company accept performance shortfall in SI. Magnitude subject of discussion. Effective representation against supply interruptions in WI.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
	SI	Potential Shortfall	Potential Shortfall	Consistent	
	SNI	Not Shortfalled	Not shortfalled	Consistent	
Wessex - WSX	WI	Not Shortfalled	Not Shortfalled	Consistent	Performance fine in all sub-services.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
	SI	Not shortfalled	Not shortfalled	Consistent	
	SNI	Not shortfalled	Not shortfalled	Consistent	
United Utilities - NWT	WI	Not Shortfalled	Not Shortfalled	Consistent	Performance fine in all sub-services. Some potential emerging issues on WTW coliforms for AMP6.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
	SI	Not shortfalled	Not shortfalled	Consistent	
	SNI	Not shortfalled	Not shortfalled	Consistent	
Yorkshire - YKY	WI	Not Shortfalled	Not Shortfalled	Consistent	Effective representations on blockage levels following private sewer transfer
	WNI	Not shortfalled	Not Shortfalled	Consistent	
	SI	Potential shortfall	Not shortfalled	Consistent	
	SNI	Not shortfalled	Not shortfalled	Consistent	

Table 2: Water only companies: shortfaling assessments at Draft and Final Determinations

WOC's	Sub Service	Ofwat DD	Ofwat FD	SMC FD	Comment
COMPANY					
Affinity - AFW	WI	Not Shortfalled	Not Shortfalled	Consistent	Consistent with Ofwat view of performance
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
Bristol - BRL	WI	Potential Shortfall	Potential Shortfall	Consistent	Representation on DG3 not compelling. Very significant recent failure against supply interruptions measure.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
Dee Valley - DVW	WI	Not Shortfalled	Potential Shortfall	Consistent following further review	Failure on discolouration contacts and TIM measures and relationship with logging up to be further considered DWI/Ofwat Ofwat have undertaken further review and now propose a shortfall at FD against WI.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
Portsmouth - PRT	WI	Not Shortfalled	Not Shortfalled	Consistent	Consistent with Ofwat view of performance
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
Sembcorp Bournemouth - SBW	WI	Not Shortfalled	Not Shortfalled	Consistent	Consistent with Ofwat view of performance
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
Sutton and East Surrey - SES	WI	Not Shortfalled	Not Shortfalled	Consistent	Further information from Ofwat and reviewed 14/11/14. No issues.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
South East - SEW	WI	Potential Shortfall	Potential Shortfall	Consistent	DG3 representations not considered as compelling by Ofwat and SMC concur.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	
South Staffs Cam - SSC	WI	Not Shortfalled	Not Shortfalled	Consistent following further review	Ofwat to further review supply interruption performance . Ofwat undertaken further review on supply interruption performance. UCL breach in 12/13 but then below RL. Considered stable but with 2014/15 actual to be reviewed.
	WNI	Not Shortfalled	Not Shortfalled	Consistent	

WOC's	Sub Service	Ofwat DD	Ofwat FD	SMC FD	Comment
South Staffs - SST	WI	Not Shortfalled	Not Shortfalled	Consistent	Consistent with Ofwat view of performance
	WNI	Not Shortfalled	Not Shortfalled	Consistent	

Appendix 2: company specific assessments

6.4 Water and Sewerage Companies

Anglian Water – ANH

Water Infrastructure – WI

The burst mains indicator significantly exceeded the UCL for the first two years of AMP5 but has since recovered to lie between the RL and UCL for the subsequent three years (with predicted performance in 2014/15). The Ofwat documentation indicates that the company has provided evidence on the impact of the severe winters early in the AMP5 period reinforced by analysis from two external consultants. SMC have not reviewed this evidence but accept that Ofwat have made previous judgements on this area for Anglian and on this basis a stable judgement is appropriate provided 2014/15 outturns close to predicted levels.

The supply interruption measure significantly exceeded the UCL in 2011/12 but has since recovered. However, current forecasts indicate that it may be exceeded in 2014/15 although mitigation evidence is provided on the nature of the two key events at Littleport (1087 props and Ravensthorpe 447 props). The evidence for the Littleport event is not compelling as it relates to a second burst on refilling the mains and is, perhaps, indicative of an underlying asset health issue. The Ravensthorpe event relates to high turbidity following contact tank cleansing and, on a risk based approach, seems an appropriate choice to interrupt supplies. However if the Littleport event is included in the property numbers the indicator will have failed the UCL in 2014/15 as well as 2011/12 and as such **SMC originally suggested** that Ofwat give further consideration to shortfaling against this measure.

Ofwat have now undertaken this further review and commented that *“The company has had two breaches of the upper control limit in 2011-12 and 2014-15. Performance in 2012-13 and 2013-14 is near the reference level. Performance in 2013-14 was stable as required by the FD09 output commitments; hence no shortfall is to be applied at the final determination. However, 2014-15 performance is at risk of a marginal assessment and potential shortfall. This will be reviewed again in 2015 and a shortfall applied if performance is not considered stable.”* **SMC concur** that this approach is appropriate.

All other indicators for water infrastructure are generally below the RL.

Water Non-Infrastructure – WNI

WTW coliforms have one year at UCL with remainder at or below RL. Other indicators are fine.

Sewerage Infrastructure –SI

Indicators for sewer collapses and blockages are below the RL for all years. The indicators for “Pollution incidents and for flooding from overloaded sewers” have one-off spikes in a generally good performance with most years being close to RL.

The indicator for “flooding other causes failed the UCL for the first three years of AMP5 but has since recovered. The company has provided evidence to Ofwat on the impact of extreme rainfall during these years and its linkage to increased flooding. High water tables can, and do, lead to high base flows in sewerage systems such that relatively minor rainfall events exceed the available pipe capacity and cause flooding. Ofwat have indicated that these extreme rainfall events provide mitigation to the UCL failures for this measure and **SMC concur** with this approach. This aligns with the approach taken for the flooding measures at South West Water where prolonged rainfall is seen as an appropriate mitigation.

Sewerage Non-infrastructure -SNI

Indicators for %age of non-compliant treatment works and for the p.e. of non-compliant works are generally good but with a one year spike against the p.e. failing works where the UCL was exceeded. If 2014 actual performance is as predicted **SMC concur** with Ofwat’s judgement that this sub-service is stable.

Anglian Water – ANH – Summary

Ofwat have defined the water and sewerage non-infrastructure sub-services as stable and SMC see no reason to disagree with this assessment. **SMC originally suggested** that the current performance projections for supply interruptions in the water infrastructure sub-service indicates should be given further consideration by Ofwat to determine whether shortfalling is appropriate. This review has been undertaken and Ofwat have concluded that a shortfall is not appropriate due to improved performance in years 3 and 4 of AMP5 although current year actual performance will be given additional consideration in respect of potential shortfalling in AMP6. **SMC consider** that this is an appropriate action for this sub-service. The sewerage infrastructure sub-service has UCL failures against “flooding other causes” but the evidence provided by the company on extreme weather events has led Ofwat to mitigate any shortfalling action and **SMC concur** with this approach.

Dwr Cymru – WSH***Water Infrastructure – WI***

All indicators bar “Unplanned Interruption to supply >12 hrs” are generally at or below the Reference Level. The numbers of burst mains are generally below the reference level. However the supply interruption measure shows a very significant performance shortfall varying from 5106 properties in 2011/12, or approximately 17 times the UCL, to 8.6 times

the UCL in 2013/14 (2555 props). The projected performance for 2014/15 is for a failure level of approximately 9.7 times the UCL (2901 props). The RL (93 props) and UCL (298) for AMP5 appear to have been set (and agreed) at PR09 FD, following a period of sustained high performance or possibly following a set of poorly managed data returns for this measure. It is clear that this level of performance is unlikely to be achievable and this has led to the significant performance failure for this measure.

Within their representations WSH highlight the percentages of trunk mains (those >200mm dia.) without drawing to a conclusion the numbers of properties impacted by a trunk main failure and the relationship with the performance indicator. There may be some rationale to their thinking on this issue but it needs to be evidenced to form a useful mitigating factor. They also introduce a concept of a dendritic mains system without evidence or to the point of concluding why it creates a high failure level for this measure. Indeed if they are aware that trunk mains and a dendritic type distribution system are a key issue for them in maintaining supply it could be expected that cross-linkages would be installed at critical points as part of normal distribution system management. WSH have provided evidence for a trunk main failure due to a landslide (and the subsequent extended time to repair the main due to safety considerations) which affected 1891 properties. Apart from this issue SMC did not find the representations convincing in mitigating the performance failure.

Ofwat have shortfalled WSH for the water infrastructure measure (£32.8m post efficiency). In developing their shortfall calculation they have reduced the failing property numbers to reflect the impact of the landslide event. They have also capped the failure level. Despite these mitigating effects, the annual nature of the failure and the magnitude of the failure leads to the high level of shortfalling.

SMC conclude that the shortfall has been consistently applied and has been mitigated for the impact of events outside the company control. It should be noted that much of the representation concerns the use of a basket of measures or of primary lead indicators and the impact on the sub-service as a whole.

Water Non infrastructure – WNI

Performance is generally better than RL and Ofwat have defined the water non-infrastructure sub-service as stable and SMC see no reason to disagree with this assessment.

Sewerage Infrastructure – SI

Performance was better than UCL for all indicators and Ofwat have defined the sewerage infrastructure sub-service as stable. SMC see no reason to disagree with this assessment.

Sewerage Non-infrastructure – SNI

The performance for the %age of sewage treatment works discharges failing numeric consents was above the UCL in 2011/12 but has been below the RL for the next two years

and is projected to be just above the RL for this year. A stable performance assessment seems to be appropriate.

Dwr Cymru – WSH – Summary

Ofwat have defined the water non-infrastructure and the sewerage sub-services as stable and SMC see no reason to disagree with this assessment. Water infrastructure shows a very significant performance failure for supply interruptions >12 hours. The company representations do little to provide mitigating evidence for the performance failure. Ofwat have taken into account factors outside the company control in defining the extent of the shortfall. **SMC conclude** that the performance position has been effectively assessed by Ofwat and mitigation has been applied where appropriate.

Northumbrian Water (including Essex and Suffolk) --NES

Water Infrastructure – WI

Ofwat have defined performance in this sub-service as stable and SMC see no reason to disagree with this assessment.

Water Non infrastructure – WNI

Ofwat have defined performance in this sub-service as stable and SMC see no reason to disagree with this assessment.

Sewerage Infrastructure – SI

Indicators other than Flooding – other causes are stable within AMP5. The reference limit for “Flooding – other causes” is 150 events per year with an UCL of 256. The upper control limit was significantly breached in 2011/12 (313 events) and 2012/13 (357) with 2013/14 being at 231 events and 2014/15 performance projected at 150 events.

The company were potentially shortfalled at the DD and have submitted further information on this issue. The additional evidence within the representations is well structured and relevant to the performance shortfall issue. (Notwithstanding a number of comments relating to primary lead measures and the overall basket of measures) The company have indicated that a serviceability action plan is in place with an increase in activities such as root cutting being implemented. An increase in education for fat management for sewage discharges, plus increased fat control within sewers, are also in place. These activities should restore sewer capacity capability and lead to a reduction in the flooding other causes indicator as demonstrated with the improved performance in 2013/14 and the projected improvement for 2014/15.

As a result of these representations Ofwat have proposed that the potential shortfall is withdrawn for the FD and **SMC agree** that this is appropriate. Failure to meet the projected

improvement in performance may lead to shortfaling being imposed at the next Price Review.

Sewerage Non-infrastructure – SNI

Ofwat have defined performance in this sub-service as stable and SMC see no reason to disagree with this assessment.

Northumbrian Water – Summary

The water sub-services and sewerage non infrastructure have been defined as stable by Ofwat and SMC see no reason to disagree with this assessment. Sewerage infrastructure has failed indicator for flooding – other causes and a shortfall was proposed at DD. Further representations and evidence of a focused action plan to improve performance have allowed the shortfall proposal to be withdrawn for the FD and **SMC concur** with this action.

Southern Water – SRN

Water Infrastructure – WI

The performance indicator for bursts exceeded the UCL in the first year of AMP5 but has since been close to or below the RL. The indicators for mean zonal iron compliance, DG2 and Customer contacts are all close to or below the RL with one value for customer contact at the UCL. The performance indicator for TIM has one exceedance of the UCL in year 1 of AMP5 but has since recovered.

The performance indicator for interruptions to supply >12 hrs has failed the UCL in three of the five years with significant failures in two of the three failing years (4.5 times UCL 2012/13). The company have made extensive representations on this and other performance issues and they have indicated that Ofwat have already accepted mitigation evidence for an event at Meopham in 2010/11, where supply was interrupted to 319 properties. The full documentation is not available to SMC but the event was due to a sink hole appearing in the soil strata causing pipe fracture. It seems clear that this was outside the company control and aligns with the approach taken in WSH for an exclusion of DG3 properties due to a pipe failure following a landslip.

An event at Lowtherville on the Isle of Wight over Christmas 2013 caused an extended loss of supply to approximately 1540 properties. A high intensity storm caused flooding of the supply site and high turbidity in the raw water leading to site shut down. Back up supplies suffered from the same issue and were not able to be used to supplement the Lowtherville area. Transport links to the Isle of Wight were also disrupted and efforts to restore supplies were hampered (although it is worth noting that the evidence indicates that one in four Wightlink ferries (trips?) were not operating, thus implying that three out of four were operating and it may have been possible to get temporary treatment plant to the site earlier). Nevertheless it is clear that several levels of resilience in the supply system were in

place but were overtaken by the storm. In this case, Ofwat have accepted that this event should be excluded and **SMC concur** with this assessment. The third significant event was at Midanbury Lane where 1456 properties were impacted by extended supply failure. SRN have not offered mitigation for this event.

If the excluded events are removed from the performance assessment the resultant performance has one significant exceedance of the UCL with other figures being reasonably close to the RL.

Ofwat have indicated that they propose to withdraw the potential shortfall indicated at the DD on the basis of excluding events outside the company control with the proviso that 2014/15 predicted performance is close to actual outturn values. **SMC concur** with this approach.

Water Non-Infrastructure – WNI

All of the water non-infrastructure performance indicators are below the UCL and are generally at or below the RL. Ofwat have defined performance in this sub-service as stable and SMC see no reason to disagree with this assessment.

Sewerage Infrastructure – SI

The sewer collapse performance indicator is generally close to or below the RL. The sewer blockages indicator is generally above the RL but there are no exceedances of the UCL. Performance against the “flooding from overloaded sewers” indicator has one failure of the UCL in year 3 of AMP5 but performance has now been restored and this may be assumed to be a one-off spike.

Pollution events show two failures of the UCL in the first two years of AMP5 but performance has now been restored and lies between the RL and UCL for the final three years of AMP5. Ofwat do not propose to shortfall against this indicator provided that actual outturn for 2014/15 is close to the predicted values and **SMC concur** with this assessment.

The performance against “Flooding – other causes” shows failure against the UCL in three of the five years with, in addition, one further result which lies very close to the UCL. The company have provided significant amounts of information on the extreme levels of rainfall in 2012 and 2013. They have produced evidence (at one location) of very high groundwater levels and imply that this causes high base flow in sewers such that relatively low intensity rainfall events trigger flooding. The evidence leading to this conclusion is not well structured but the underlying analysis is in place.

Ofwat propose to shortfall SRN against this measure but **SMC initially considered** that there was sufficient weight of evidence to question this approach. The issues of extreme rainfall leading to high groundwater levels and causing high base flows in sewers has been used as mitigating evidence in the conclusions on South West and Anglian.

SMC have now had the opportunity to undertake a further, more detailed assessment of the company evidence. There is a significant weight of evidence presented but much of it is

not well structured and some of the underlying data is weak and then used to undertake further analysis. The basis of the company contention is that extreme wet weather distorted the underlying level of flooded properties in 2012/12 and 2013/14. It would have aided the company case if the causes for properties being flooded under this category had been presented i.e. the proportion of properties flooded due to blockages or equipment failures compared with the proportion flooded due to excessive flows in sewers (and not attributed to flooding – overloaded sewers). It would have then been possible to disaggregate the flooding due to wet weather and achieve some linkage to extremes of wet weather and flooded properties.

In the chart in Figure 3 the linkage hypothesised between wet weather and flooded properties does not correlate well. For instance higher rainfall in September 2013 does not lead to an increase in flooded properties – there may well be a lag effect and an analysis with a one month or two month lag between rainfall and properties flooded may have been beneficial. The case being made is for high groundwater levels impacting on base flows in sewers and the response time to rainfall is not necessarily immediate.

Figure 5 purports to show linkage between monthly rainfall (over a 14 year data set) and the count of flooded properties attributed to the other causes category. However the R^2 value is 0.1529 which casts significant doubt over the validity of using this data. It has then been used to support a normalisation exercise for property numbers that could be excluded due to wet weather consequently the validity of this approach must be questioned due to concerns over the base data and assumptions.

Figure 8 shows data for 2013/14 and in common with the data set for 2012/13 in figure 3 does not show a good correlation to support the company position. Monthly rainfall totals are shown as increasing from June through to September but with no commensurate increase in the monthly flooded property numbers. As indicated earlier, it may have been helpful to the company case to undertake some analysis with a lag effect introduced. In addition some analysis using Soil Moisture Deficit data to demonstrate the degree of soil profile saturation may have been beneficial. Some evidence of company action to restore their serviceability position would have been helpful, e.g. the implementation of increased root cutting programmes and / or fat management initiatives to minimise blockages. This would have indicated that the company had recognized the failure to perform and were seeking to restore the agreed levels of customer service, but the implementation of any action plans is not apparent in the extracts of company evidence provided to SMC.

Following this detailed review **SMC have now modified** their original position and conclude that the evidence presented by the company does not carry sufficient weight to exclude flooded properties from the assessment and that Ofwat have consistently applied their methodology and a shortfall is appropriate.

Sewerage Non-infrastructure -SNI

The performance measure for the % age of failing treatment works indicates significant failures against the UCL in three out of the five AMP5 years with performance for this year predicted to be close to the RL. This is based on the raw data and the company have

provided a significant amount of evidence and analysis on whether the compliance failures at specific sites should form part of the performance assessment against this indicator, or should be excluded from consideration. There is comprehensive documentation between the company and Ofwat on the rationale between inclusion or exclusion of specific sites and the impact of permit changes on compliance. As a general overview **SMC agree** with the overall acceptance to excluding iron compliance failures (and associated phosphorous failures) from the assessment, pending full agreement between companies and the regulators on this issue. Ofwat have rejected the case made for Lidsey STW on the failure to achieve compliance levels for copper. **SMC consider** that Ofwat have consistently applied the shortfall position due to the failure of the copper consent standard in accordance with the permit conditions applied by the Environment Agency. It is also noted, however that some discussions between the regulatory bodies continue and the final position at FD may differ. The methodology set down by Ofwat has been consistently applied in the light of the current consent position. It is also noted that an upper tier failure against the BOD₅ standard for the current year occurred in April 2014 and this failure should be included in the assessment.

SRN have made a case for the exclusion of consent failures at Faversham STW from this performance measure on the grounds of high trade effluent discharges from the Shepherd Neame brewery. The company have indicated that the existing trade effluent agreement provided limited scope to manage the discharge rate and load and thus the compliance failure was due to a third party event outside their control. Ofwat have reviewed the evidence but rejected the conclusion. **SMC agree** with Ofwat's assessment, as even with minimal contractual control over the brewery, an effective trade effluent management process should have been able to ascertain changes in discharge and load rates and implement action plans for flow and load diversion and for temporary treatment plants. It is noted from the presented evidence that the diversion of cess and septic tank wastes allowed the treatment works to remain within consent parameters even with an increasing trade flow load. An increased catchment management awareness and earlier diversion of cess and septic tank flows may have provided sufficient capacity for the works to remain within its consent conditions.

However these actions appear to have been implemented following failure, so the issue is one of awareness and timely intervention.

At Hailsham North the company contend that a discharge of silt or clay laden effluent from a construction site led to a failure of suspended solids and iron following blinding of a sand filter. They indicate that this works should be excluded from consideration under this measure on the basis of third party activities. Ofwat have previously accepted that failures against the iron standard can be excluded at this site but have rejected the company case for the third party impact on suspended solids. **SMC concur** with this approach. Sewage treatment works are designed to cope with fine suspended particles as part of the normal treatment process and it is surprising that the particles have finished in the sand filter at the tertiary stage of the treatment processes.

At Woolston STW failure occurred due to a significant saline ingress following an illegal connection. Ofwat have accepted the exclusion of this site on third party action grounds and **SMC concur** with this approach. Treatment works are not designed to cope with large saline discharges which can have a significant impact on treatment performance in contrast to accommodating suspended, non-organic particles as at Hailsham North.

Ofwat have indicated within their review documentation that the exclusions of treatment works on the grounds of their iron consent limits from the assessment for the %age of failing works has allowed them to reassess the company position on shortfall against this measure. **SMC have not reviewed** the detailed calculation which leads to this decision but have agreed with the principles which led to the inclusion or exclusion of events as noted above, with the exception of Lidsey treatment works on copper consent grounds.

The performance measure for the % age of p.e. at failing treatment works shows significant failures against the UCL for three out of the five AMP5 years. This is on a raw data basis and the company has provided a significant amount of evidence and analysis with the intent of removing of events from the subset of failing works.

Much of the rationale for excluding failing works is common to the issues outlined above in the overview of the numbers of failing works. In this case, however, many of the works which can be rightfully excluded on iron consent grounds have relatively low population equivalents and thus have a smaller proportional mitigating impact than outlined for the preceding performance measure. **SMC concur** given that Ofwat have confirmed that the shortfall calculation is not affected by the potential failure of the copper consent standard in accordance with the permit conditions applied by the Environment Agency.

It is also noted, however that some discussions between the regulatory bodies continue and the final position at FD may differ. The methodology set down by Ofwat has been consistently applied in the light of the current consent position. It is also noted that an upper tier failure against the BOD₅ standard occurred in April 2014 and this failure should be included in the assessment for the current year.

Ofwat have indicated their intent to shortfall against this performance measure at the FD. **SMC concur with the principles** of the inclusion and exclusion of sites failing their consent standards. **SMC have not reviewed** the detailed calculations on population equivalents of the included and excluded failing works but would expect that the small p.e. of the excluded sites will not result in significant changes to the overall result.

Southern Water –SRN- Summary

At the DD Ofwat indicated that they intended to shortfall Southern Water against the water infrastructure, sewerage infrastructure and sewerage non-infrastructure sub-services. The company have provided a significant amount of evidence and analysis on the nature of the performance failures and contend that a number of performance failures should be excluded from the serviceability assessments.

In the case of the water infrastructure sub-service, where the raw data indicated failure against the supply interruption indicator, the company have provided evidence on significant incidents at Meopham and on the Isle of Wight (Lowtherville) which have led to the exclusion of these incidents from the performance assessment. Ofwat have indicated that they do not intend to shortfall the company against this sub-service and **SMC concur** with this view.

At the initial review for the sewerage infrastructure sub-service, Ofwat indicated their intent to shortfall due to the performance failures against the “flooding –other causes” indicator. At that point **SMC considered** that there was sufficient evidence of extreme levels of rainfall leading to high water tables and consequently high base flows in sewers to revisit this decision. SMC have now had the opportunity to consider the data submitted by the company in some detail and **SMC now conclude** that the evidence is not of sufficient weight to exclude flooded properties from the analysis and the decision to apply a shortfall against this sub-service is consistent with the evidence reviewed.

The sewerage non-infrastructure sub-service shows poor performance against both the % age of failing works and the % age of p.e. at failing works performance indicators in the raw data. The company have provided a large amount of evidence and analysis for the failing sites. In general Ofwat have accepted exclusions from the performance assessment for sites where the iron consent condition (associated with phosphorous reduction) has been exceeded. **SMC concur** with this position. **SMC concur** with the position taken by Ofwat on the remainder of sites including Faversham, Hailsham North and Woolston.

SMC understand that the reduction in the number of failing works within the assessment following the company representations has led to a decision that the performance for this indicator is now within acceptable bounds. The indicator for the % age of p.e. at failing sites, even with the exclusions for the iron consented sites, still shows poor performance. SMC have not reviewed the calculations in detail but would expect this to be the position, as many of the sites excluded on iron consent grounds have relatively low population equivalents. A decision to shortfall against this measure, and thus the sub-service, has been proposed by Ofwat and **SMC concur** with this approach.

Severn Trent Water – SVT

Water Infrastructure – WI

The burst main, customer contact and DG2 indicators are satisfactory and generally below RL. The performance indicators for mean zonal iron compliance and TIM both have one year above the UCL but performance has recovered and is now satisfactory. The performance on the supply interruption measure has been above the UCL on two of the AMP5 years with 2014/15 predicted to also be above the UCL.

Ofwat have indicated their intent to implement a shortfall against this measure and **SMC concur** with this approach. Severn Trent has indicated that they do not propose to challenge the implementation of a shortfall for this sub-service, although discussions on the financial extent of the shortfall continue.

Water Non infrastructure – WNI

The performance indicator for water treatment works coliforms has two years above the UCL with performance for the current year also predicted to be above the UCL. On this basis Ofwat have indicated their intent to implement a shortfall against this measure and **SMC concur** with this approach. Severn Trent has indicated that they do not propose to challenge the implementation of a shortfall for this sub-service, although discussions on the financial extent of the shortfall continue.

Sewerage Infrastructure – SI

The performance indicators for sewer collapses, pollution incidents and flooding from overloaded sewers are satisfactory and generally below the RL. The indicator for “flooding-other causes” has one year above the UCL but performance has recovered. The indicator for sewer blockages has been significantly above the UCL for 4 years of the AMP5 period (including predicted performance in 2014/15). There are some references in the representations to the impact of the transfer of private drains and sewers but this is not quantified in the manner undertaken in Yorkshire. It is also interesting to note that in the last full year before transfer that performance was above the UCL. Ofwat have indicated their intent to implement a shortfall against this measure and **SMC concur** with this approach. Severn Trent has indicated that they do not propose to challenge the implementation of a shortfall for this sub-service although discussions on the financial extent of the shortfall continue.

Sewerage Non-infrastructure – SNI

The performance indicator for the %age of failing treatment works has one failure against the UCL in the second year of AMP5 with a significantly improved performance since then. The %age of p.e. at non-compliant works has two failures against the UCL in the first two years of AMP5, but with a significantly improved performance from that point. A shortfall could be considered against this element, but Ofwat have indicated that they do not intend to implement a shortfall assuming the actual performance in this year is close to the predicted performance. **SMC concur** with this approach.

Severn Trent – SVT – Summary

At the time of this report Ofwat indicated their intent to implement a shortfall for the water infrastructure and non-infrastructure sub-services and for the sewerage infrastructure sub-service. **SMC concur** with these assessments.

Severn Trent have indicated that they do not propose to challenge the implementation of a shortfall for these sub-services although discussions on the financial extent of the shortfall continue.

South West Water – SWT**Water Infrastructure – WI**

All indicators show performance generally below Reference Level with no breaches of Upper Control limit for any single indicator

Water Non infrastructure – WNI

All indicators show performance generally below RL. Only the unplanned maintenance approached the UCL for one year (2013/14) but performance remained below UCL. This indicator does not currently form part of the overall assessment process in any case.

Sewerage Infrastructure – SI

The indicators for Pollution Incidents, Flooding – Other Causes and Flooding – Overloaded sewers have breached the UCL for two years, one year and two years respectively during AMP5. This assessment is against the originally agreed reference and control limits, although the representations refer to a letter of the 30th April 2013 regarding an upward revision to the limits following a change in the Environment Agency approach – particularly in the self-reporting of Pollution Incidents. It is not clear from the documentation available to SMC whether this change was agreed and this review is therefore based on the original control limits.

The company representations are focused on the changes in categorisation of pollution incidents following revision of the EA approach and the influence of prolonged periods of unusually high rainfall for both the pollution incident and flooding indicators.

In respect of the Pollution Incident category the failures in 2012/13 and 2013/14 were 8% and 4% above the UCL respectively with projected performance for 2014/15 falling within the UCL. However all years would be above the original RL. The focus of the representation is on revising the control limits as requested in the 30th April 2013 letter. If these revised limits are accepted, the reported performance falls within the UCL – however this aspect is a policy decision by Ofwat and should be offered to all WASC's. It is not clear from the available documents whether these control limit changes have been accepted. If the original limits are still in place, SMC concluded that Ofwat's reasoning to implement a shortfall for this indicator is appropriate.

For the original assessment Ofwat indicated that a further review of the detail of the potential pollution incident shortfall was being implemented. Ofwat have now concluded:

“The company has had two breaches of the upper control limit in 2012-13 and 2013-14. However 2014-15 performance is expected to improve to below the upper control limit. The company has provided evidence to show that severe weather in 2012 and the winter of 2013 had an adverse impact on performance. We consider this to be a reasonable explanation for the increase in pollution incidents and have therefore not applied a shortfall.

Taking these exceptional events into account, we would expect the company to demonstrate stable performance in 2015. If this is not achieved we may consider a shortfall”

SMC have now reviewed the additional information and the Ofwat position on the pollution event performance indicator and, in particular, the weight placed on the influence of severe weather. SMC now agree with the Ofwat position that a shortfall using this indicator is not appropriate.

Flooding – other causes breached the UCL for 2012/13 with the performance for the remaining years being below the UCL but above the RL. Projected performance for 2014/15 is below UCL but above the reference level. Flooding from overloaded sewers has failure of the UCL in 2012/13 and 2013/14 with a significant failure in 2012/13. Projected performance for 2014/15 is below the RL.

The focus of the representations is on the extreme wet weather experienced through 2012 and 2013. This period was typified by prolonged periods of wet weather, rather than intense storms, and it can be argued that sewerage systems are (or should be) designed to accommodate intense, relatively short duration rainfall events and thus the sewers should have been capable of carrying flows from these prolonged low rainfall intensity events. However, fully saturated ground with high water table levels following the prolonged rainfall tends to significantly increase sewer base flows with a consequent impact on flooding following relatively minor rainfall events. Performance on flooding measures for 2014/15 is predicted to improve and to be below the RL for overloaded sewers and below the UCL for other causes. This is likely to be more representative of performance under “normal” conditions.

As a result of these representations Ofwat have indicated that the potential shortfall for these flooding measures should not be applied and **SMC agree** that this is appropriate. Failure to meet the projected improvement in performance may lead to shortfalling being imposed at the next Price Review.

Sewerage Non-infrastructure -SNI

The “percentage of sewage works discharges failing numeric consents” failed the UCL in 2011/12 but has been below the RL for two of the subsequent three years. A stable assessment seems appropriate provided the projected 2014 performance is confirmed.

The “percentage of total p.e. served by works in breach of WRA or UWWTD (LUT) consents” has a significant breach of the UCL in 2013/14. The company indicate that this performance failure was attributed to two large treatment works where improvement works were planned in 2014/15. In some respects this is a red herring as fully effective asset management would have programmed the improvement works before failure occurred. However this does appear to be a one-off event, as current performance is predicted to be below the RL. In this case Ofwat have indicated that they do not intend to implement a shortfall in this area and **SMC concur** with this approach.

South West Water – SWT – Summary

The water infrastructure and non-infrastructure sub-services have been defined as stable by Ofwat and SMC see no reason to disagree with this assessment. The sewerage infrastructure sub-service has performance failures against three indicators, Pollution Incidents, Flooding – other causes and Flooding – overloaded sewers. The company representations on their performance on the flooding indicators have provided evidence on the impact of prolonged wet weather and allowed any potential shortfall to be mitigated. **SMC concur with this approach.** The original representation in respect of Pollution Incidents is focused on changes to EA and company reporting regimes and does not currently provide enough evidence of the influence and impact of the reporting changes to remove the shortfall assessment but Ofwat undertook to perform a further review of the information. This has indicated the impact of severe weather on this measure and that the imposition of a shortfall is no longer appropriate. Following further review of the information **SMC concur with this approach.**

Sewerage non-infrastructure has had UCL failures against two indicators but performance has now been restored following improvement works. Ofwat do not intend to implement a shortfall in this area and **SMC concur with this approach.**

Thames Water – TMS

Water Infrastructure – WI

The performance indicator for bursts is below the RL for all of the AMP5 years. The performance indicators for mean zonal iron non-compliance, DG2, customer contacts and TIM have no UCL exceedances and are generally below the RL. In the case of the DG2 and customer contact indicators they are significantly below the RL.

In the case of the supply interruption indicator, there are two significant exceedances of the UCL in AMP5 period. The company have provided evidence in mitigation over two specific incidents at Hoddesdon and Hurtwood with the evidence focused on the Health and Safety issues around safe working practices and the extreme weather conditions at the time of the events. In contrast to the evidence produced by Bristol Water relating to H & S in terms of pipeline repair (see later section) the Thames evidence is much more focused and relates to the issues faced. Ofwat have rejected the evidence but **SMC consider** that the event at Hoddesdon should be reconsidered for exclusion but that the Hurtwood event is correctly included.

Ofwat have indicated that they do not intend to impose a shortfall against this measure as performance has recovered in 2014/15. Provided the improved performance is sustained **SMC concur** with this approach.

Water Non infrastructure – WNI

Performance indicators for the water non-infrastructure sub-service are all below the UCL and many are below RL. Ofwat have defined performance in this sub-service as stable and SMC see no reason to disagree with this assessment.

Sewerage Infrastructure – SI

The performance indicators for sewer collapses and flooding from overloaded sewers are below the relevant RL for all of the AMP5 years. The performance indicator for sewer blockages is at or below the reference level but does not meet the enhanced service levels. The additional analysis for assessing performance against enhanced service levels does not form part of the SMC scope.

The performance indicator for pollution incidents is above the UCL for the last three years of AMP5 when the predicted performance for 2014/15 is included. The company have acknowledged their failure to meet the performance standards, but have provided evidence to mitigate the impact of the shortfall proposed by Ofwat at the DD. The evidence is focused on the changes in pollution event numbers following the move to self-reporting. This defence has been promoted by other companies, but has not been accepted by Ofwat. On this basis, **SMC concur** that the mitigation does not change the decision to shortfall and the extent of the shortfall will be defined by Ofwat in accordance with their methodology. It is also noted that even if the potential changes to the indicator were implemented and the reporting change mitigation was accepted, the three years in question would still be above the UCL.

The performance indicator for flooding – other causes has exceeded the UCL for three of the AMP5 years. The company have acknowledged their failure to meet the performance standards but have provided evidence to mitigate the impact of the shortfall proposed by Ofwat at the DD. The evidence is focused on two areas. Firstly, changes in public perception on liability for sewer flooding events following the transfer of private drains and sewers in October 2011 and, secondly, the impact of extreme wet weather with high groundwater levels and associated impact on sewer base flows in 2012/13. In respect of the impact of private sewer transfer there is little evidence beyond “. . . we have modelled . . .” with the output of a number of properties to be excluded. This is not compelling when compared with other companies e.g. Yorkshire. Ofwat have not accepted this element as an exclusion. **SMC concur** with this approach. In the case of extreme weather Ofwat have also rejected the case for exclusion. However **SMC consider** that there is more credibility to this evidence and it aligns with the approaches taken at other companies over high groundwater levels and high sewer base flows. **SMC suggest** that Ofwat give further review to this element of the supporting evidence. In practice it makes little difference to the shortfall position at Thames but will aid the consistency of decision making.

Sewerage Non-infrastructure -SNI

The performance indicator for the percentage of failing works has all results below, or predicted to be at, the RL. The indicator for the percentage of p.e. at failing works shows an

anomalous result in year 3 of AMP5 and is above the UCL, but has since recovered with three years being zero and the prediction for this year being at the RL. Ofwat have defined performance in this sub-service as stable and SMC see no reason to disagree with this assessment.

Thames Water – TMS – Summary

Ofwat have defined performance in the water and sewerage non-infrastructure sub-services as stable and SMC see no reason to disagree with this assessment.

In the case of the sewerage infrastructure sub-service, the company have acknowledged their failure to perform and the extent of the shortfall is the subject of discussion within Ofwat. **SMC concur** with the decision to shortfall.

The water infrastructure sub-service shows failure against the supply interruption measure. However performance has been restored and Ofwat have indicated that they do not intend to shortfall against this service. Provided the improved performance is sustained, **SMC concur** with this approach.

Wessex Water – WSX

Water Infrastructure – WI

Performance against the burst mains indicator is above the RL in all years, but there is no exceedance of the UCL. All other indicators are generally below the RL and **SMC concur** with Ofwat's decision that a shortfall is not applicable.

Water Non infrastructure – WNI

Performance is generally fine across all indicators, with those for service reservoir coliforms, turbidity and potential enforcement actions being at, or below, the RL. The indicator for WTW coliforms is creeping up and was close to the UCL in year 4. The actual performance in year 5 compared to the predicted performance may need consideration in AMP6 performance reviews. **SMC concur** with Ofwat's decision that a shortfall is not applicable.

Sewerage Infrastructure – SI

The performance indicator for sewer collapses is close to the RL with three years being between RL and UCL but with no exceedances of the UCL. The indicators for pollution incidents, flooding from overloaded sewers and for sewer blockages are satisfactory and generally below the RL. The indicator for flooding from other causes has one year above the

UCL – 2012/13. The company has provided representations on the impact of the prolonged periods of wet weather during this period on groundwater levels and soil saturation, thus causing high base flows in sewers and impacting on performance against this indicator. This is credible and is aligned with the approach taken at other companies in respect of mitigating failures against this flooding indicator. **SMC concur** with Ofwat's decision that a shortfall is not applicable.

Sewerage Non-infrastructure – SNI

The performance for both the % age of failing works and for the % age p.e. at failing works have no results above the RL. **SMC concur** with Ofwat's decision that a shortfall is not applicable.

Wessex Water – WSX – Summary

There are no significant performance issues in any of the sub-services and **SMC concur** with Ofwat's decision that shortfalls are not applicable.

United Utilities – NWT

Water Infrastructure – WI

Performance indicators with the exception of supply interruptions are generally below RL. The last three years performance (including predicted performance for 2014/15) are good and below RL. The first two years of the AMP5 period have significant exceedance of the UCL. **SMC assume** that the issues in 2010/11 and 2011/12 have been previously discounted by Ofwat following indications that the company has revised its operational practices regarding bursts on larger (trunk) mains. **SMC concur** that performance is stable in this sub-service

It is interesting to note that the company report the percentage of zones compliant with the iron standard in their representation report rather than the non-compliant percentage figure which is used for the RL and UCL. This has the potential to cause confusion in reporting and a standard practice should be adopted.

Water Non infrastructure – WNI

Performance indicators are generally satisfactory with the exception of a single year breach of the UCL for WTW coliforms in year 4 of the AMP5 period. The company have provided evidence that they have undertaken a re-training programme for samplers, improved laboratory processes and renewed sample taps and sample lines to ensure a consistent application of sample analysis. This course of action appears appropriate as performance has recovered. **SMC concur** with Ofwat's view that that performance is stable in this sub-service.

Sewerage Infrastructure – SI

The performance indicators for sewer collapses, pollution incidents and blockages are generally below the RL. Flooding – other causes had a minor breach of the UCL in year 1 of the AMP period, but has since recovered to a performance position well below the RL. Flooding from overloaded sewers shows a breach of the UCL in 2012/13, but all other years are below RL. The company have drawn attention to the extreme wet weather during that year as mitigation against this failure and this seems to be a reasonable approach and aligns with that taken for other companies. It would have been expected that the flooding – other causes indicator would also have risen in 2012/13, but the change in the reported numbers is not significant. **SMC consider** there may be a need to review the allocation of flooding events between categories for future performance reporting. **SMC concur** with Ofwat's view that performance is stable in this sub-service.

Sewerage Non-infrastructure – SNI

Performance against both the % age failing works and % age p.e. at failing works is very good with no results above the RL in either indicator. **SMC concur** with Ofwat's view that performance is stable in this sub-service.

United Utilities – NWT – Summary

There are few performance issues in any of the sub-services. The position on WTW coliform compliance may have some emerging issues and a view on actual performance in 2014, rather than predicted performance, may show some ongoing issues into AMP6. **SMC concur** with Ofwat's decision that there are no shortfalls in performance in any sub-service.

Yorkshire Water - YKY***Water Infrastructure – WI***

Indicators are generally at or below RL. Burst mains exceeded UCL in 11/12 but below RL for next two years. Ofwat have not shortfalled the company against this measure and **SMC concur** with Ofwat's view that performance is stable in this sub-service.

Water Non infrastructure – WNI

The performance indicators for WTW coliforms and turbidity are satisfactory. One spike marginally above UCL for service reservoir coliforms in 2012, but back to zero exceedance in following years. Ofwat have not shortfalled the company against this measure and **SMC concur** with Ofwat's view that performance is stable in this sub-service.

Sewerage Infrastructure – SI

The collapsed sewer indicator is consistently above RL but no exceedance of UCL. Pollution incidents and the two flooding indicators are generally below RL. The sewer blockage

indicator has been above the UCL since the transfer of private sewers and drains under S105A in October 2011. The company have made representations and provided further evidence for this measure since the DD when a shortfall was proposed. A report from BearingPoint consultants indicates that their analysis shows a step change in reported sewer blockages of 25% at the time of S105A transfer of which 14% could be attributed to previously unreported blockages on the pre-transfer asset base.

This is attributed to householders believing that it was their responsibility to clear blockages on pipes close to their property and the increased publicity associated with the sewer transfer had changed this perception. This is a credible reasoning for part of the sewer blockage increase and it is interesting to note that the full year (2010/11) prior to the transfer had a blockage level less than the RL. It can be argued that the company should have more robust processes and effective data management in place to resolve transfer issues, but there were high levels of uncertainty throughout the WASC's over the impact of the transfer and forecasting errors are understandable. A reduction in the reported blockage levels results in all years post transfer being below the UCL although above the RL. Ofwat have accepted the mitigation evidence and indicated that no shortfall is to be applied at FD. **SMC concur** with this approach.

Sewerage Non-infrastructure– SNI

The indicator for the “percentage of sewage works discharges failing numeric consents” had marginal failures against the UCL in 2011 and 2012, but has since recovered and is still above the RL. The indicator for the %age of p.e. at failing works has been zero throughout the period suggesting that the failing works noted above are small in size. **SMC concur** with Ofwat's view that performance is stable in this sub-service and that a shortfall is not applicable.

Yorkshire Water – YKY – Summary

Ofwat have defined the water and sewerage sub-services as stable and SMC see no reason to disagree with this assessment. Sewerage infrastructure has had persistent failures of the UCL against the sewer blockage indicator, although other indicators are satisfactory. However the company have produced evidence that shows the influence of the transfer of private sewers and drains in October 2011 on the number of reported blockages. This evidence provides a reasonable mitigation of the performance shortfall against this indicator and Ofwat have indicated that the shortfall proposed at the DD will not now be imposed at the FD. **SMC concur** with this approach.

6.5 Water Only Companies

Affinity Water – AFW

Affinity Water is the aggregation of three water only companies which were brought under one common branding during AMP5. No shortfall for performance during AMP5 was applied at the Draft Determination stage.

Affinity Water Central – TVN***Water Infrastructure – WI***

Stable performance during AMP5 with an improving category for the discolouration indicator.

Further detail has not been made available.

Water Non infrastructure – WNI

Ofwat have defined performance as stable.

Further detail has not been made available.

Affinity Water South East – FLK***Water Infrastructure – WI***

All indicators, bar discolouration, are stable through AMP5. Discolouration contacts per 1000 pop. have exceeded Upper Control Limit (UCL) for two years during AMP5 and 2014 is just below UCL. Company have indicated that capital works have been implemented which will sustain performance improvement.

Ofwat's position is that improvement in performance can be sustained with a further check to be made when full figures for 2015 are available with any potential performance correction to be applied for next price review if necessary. **SMC agree** that this is a reasonable approach.

Water Non infrastructure – WNI

The performance indicator for Water treatment works coliforms is close to UCL for two years (2012 and 2013) but not exceeded. Performance Indicator is recovering in 2014. Ofwat define as stable and **SMC concur** with this view.

Affinity Water East – THD***Water Infrastructure – WI***

Ofwat define as stable. Serviceability is shown to be stable and there are no representations by the company.

Water Non infrastructure – WNI

Ofwat define as stable. Serviceability is shown to be stable and there are no representations by the company.

Affinity Water – AFW – Summary

The serviceability performance through AMP5 (and projected performance for the final year) is generally good, at or below the reference level, with a potential issue for

discolouration contacts and coliform compliance in the South East area. Both indicators are recovering and Ofwat have defined serviceability performance as stable and **SMC concur** with this assessment.

Bristol Water – BRL

Water Infrastructure – WI

The performance indicator for bursts had an exceedance of the UCL in the first year of AMP5 but subsequent results have generally been below the RL. The customer contacts measure and the DG2 measure are generally below the RL. The % age mean zonal compliance for iron shows two exceedances of the UCL from the raw data. However the sampling position and associated statistical analysis has been revised following the change in the number of supply zones from 52 to 27 in 2013. Ofwat have indicated that following further analysis of the zonal non-compliance using the revised zone numbers that performance against this indicator is satisfactory and they do not propose to impose a shortfall. The zone number issue also impacts on the TIM measure, which is also deemed to be satisfactory. SMC have not reviewed the statistical analysis underpinning these decisions but the action taken by Ofwat is considered appropriate and consistent with that taken elsewhere when the number of zones has been changed.

The RL and UCL for the supply interruption > 12 hrs measures are 75 and 150 properties per year respectively. There were breaches of the UCL in 2011/12 (194 properties) and 2013/14 (860). Further information from the company for the current year (2014/15) shows a very significant failure of the UCL with approximately 36300 properties without supply for more than 12 hrs. This failure was as a result of two significant events in May 2014 (approx 12200 properties) and late September 2014 (approx. 24000 props). In addition an event in 2012/13 resulted in 145 properties being without supply – just below the UCL.

The company have provided evidence on each of the events that resulted in failure of this measure and they contend that all the significant incidents were outside of management control. The incident in 2011/12 was at Barton Hole and affected 194 properties. The company contend that the failed 9” pipe was out of round and repair clamps failed. This is not an unusual occurrence on older cast iron pipes and one which the company must have faced before. **SMC consider** that this event should be included in the analysis.

The incident at Wookey Hole in 2012/13 impacting on 145 properties (just below UCL) is stated to have a delayed repair time through Health and Safety consideration due to working in woodland at night. Once again this must be regular occurrence for the company and its contractors and a developing a safe method of working should have been within management control. **SMC consider** this event should be included in the analysis.

The incident in 2013/14 on the Luckington main resulted from planned operations for renewing a length of main but where a contractor operated a valve incorrectly. The

contractor is clearly under the control of the company in terms of working practices and **SMC consider this event** should be included in the analysis.

In May 2014 a burst on a 450mm main at Brent Knoll resulted in nearly 12300 properties being without supply for more than 12 hours. The company indicate that the repair was complicated by the presence of a large thrust block and through the main being located in a trunk road. Part of the mitigation from the company is the length of time taken to refill the system after the service reservoir had drained down. The combination of circumstances were clearly a challenge to the company, but **SMC still consider** that this should be included within the analysis as operating processes were within management control.

The event in September 2014 involved a burst on a 30" main in Fisher Road Kingswood and impacted approximately 24000 properties for approximately 43 hrs. The repair was complicated by the failure of an adjacent gas main which had to be repaired before the repair to the 30" main could be implemented. This event was clearly a significant and challenging event for the company. Even if the time taken for the gas main repair (approx. 23 hrs from water mains burst notification) is discounted, there is still a major failure of the 12 hr standard. In common with the Brent Knoll incident a key factor was the time required to recharge the system. **SMC still consider** that this event should be included within the analysis as operating processes were within management control.

The evidence presented on these events is clearly abbreviated but from the extent of the evidence provided to Ofwat, and thus to SMC, it does not appear that these events are outside management control. As a consequence they should form part of the analysis. Ofwat intend to shortfall the company against this sub-service and **SMC concur** with this approach.

Water Non infrastructure – WNI

There have been two instances of WTW coliform compliance approaching the UCL but not breaching it. Other performance indicators in this sub-service are all fine. **SMC concur** with Ofwat's view that no shortfall should be applied to this sub-service.

Bristol Water – BRL – Summary

There have been significant failures in the water infrastructure sub-service against the supply interruption measure. The company have provided evidence in respect of the failure events, which Ofwat has indicated is not compelling and SMC agree with this assessment. Ofwat have indicated their intent to shortfall against this sub-service. **SMC concur** with this approach. Ofwat have defined the water non-infrastructure sub-service as stable and **SMC concur** with this assessment.

Dee Valley Water – DVW**Water Infrastructure – WI**

The indicators for burst mains and DG2 pressure are generally at or below the RL. The interruption to supply indicator had spikes above the UCL early in the AMP5 period but has since been below the RL for the past three years which suggests performance has been restored.

The indicator for %age Mean Zonal Compliance for iron is close to the RL and below the UCL through the period. However the indicators for Customer contact for discolouration and for Turbidity, Iron and Manganese (TIM) have been consistently above the UCL through the period. Company representations indicate that this is due to primarily due to manganese in raw water which has entered and been deposited in the distribution system post treatment. These deposits are then disturbed through transient flow events following bursts and discharged through customers' domestic supplies. This appears to be a reasonable assumption regarding the root cause of the discoloured water.

The company have indicated within their representations that their action plan for resolving this issue is to implement improvements to treatment works processes and to undertake a structured programme of mains cleansing. They state that work at Llwyn Onn TW and cleansing of the Wrexham ring main has already led to an improvement in this indicator – however their predicted performance is still above the UCL at the end of the period.

In view of the persistent failure to perform against these indicators **SMC believe** that DVW should be shortfalled against their Water infrastructure sub-service. From their representations it suggests that they were aware of causes of discolouration complaints/contacts, but have not implemented improvement plans in a timely manner. The Ofwat position on this issue is not clear, although as no shortfall spreadsheet has been supplied, we can assume that it is not intended to implement a shortfall. A comment with the spreadsheet (File ref: "15th October 2014 1330 serviceability 2014 Assessment overview") states "*Query response from DVW confirms that issues is related to raw for which they have a log up, no shortfall to be applied*". In the case that there is a valid reason for these performance failures, the SMC judgement above can be revisited. SMC understand that Ofwat are reviewing this issue with the DWI and the company and a decision will be made for incorporation within the Final Determination.

The Ofwat review has been undertaken and they have now indicated that the results of this review are: "*A shortfall on discolouration contacts has been proposed for the final determination*". **SMC concur** with this assessment.

Water Non infrastructure – WNI

WTW coliform compliance has been marginally above UCL in two years although revised data from the DD representations indicates that performance is better than originally perceived. Other WNI indicators are below RL. Ofwat have defined this sub-service as stable and SMC see no reason to disagree with this assessment.

Dee Valley Water – DVW – Summary

SMC originally considered that Dee Valley should be shortfalled against the water infrastructure sub-service due to persistent failure of the discolouration customer contact and TIM measures. Improvement plans have been implemented but should have been put in place at an earlier stage. There may be mitigation in the form of a logging up item, but further background on this is needed before any revised judgement can be made. Ofwat have now reviewed their original position, and the information available and have indicated their intent to impose a shortfall. **SMC concur** with this approach.

Portsmouth Water – PRT**Water Infrastructure – WI**

The indicator for supply interruptions had a one-off spike in 2011/12 but with all other years at zero properties so now satisfactory. Similarly the iron zonal non-compliance exceeded the UCL for the first two years but has now recovered so accept as stable. The TIM indicator was above the UCL for the first year and close to it in the second year of the AMP (probably associated with iron non-compliance), but has since recovered. The customer contacts for discolouration are generally below the RL which is at odds with the iron zonal compliance figures; so, at a customer level, the iron failures have not resulted in a problem. Other indicators are generally at or below the RL. Ofwat consider this sub-service to be stable and **SMC concur** with this view provided that the current good performance predicted for mean zonal iron non-compliance and TIM is confirmed with the final results.

Water Non infrastructure – WNI

Ofwat consider this sub-service to be stable and **SMC concur** with this view.

Portsmouth Water – PRT – Summary

The performance for the water infrastructure sub-service has recovered after UCL failures for zonal iron compliance in the first two years of the AMP and for TIM in the first year of the AMP and is now considered stable by Ofwat. **SMC concur** with this view.

Sutton and East Surrey Water – SES**Water Infrastructure – WI**

The performance indicators for burst mains, mean zonal iron non-compliance, Customer contacts in respect of discolouration and for TIM are all below the RL throughout the AMP5 period. The performance indicator for DG2 is at the RL and that for supply interruptions is

oscillating around the RL. There are no exceedances of the UCL for any measures. Ofwat consider this sub-service to be stable and **SMC concur** with this view.

Water Non infrastructure – WNI

The performance indicator for water treatment works coliforms is below the RL through the AMP5 period. All other performance indicators in this sub- service are at the RL. Ofwat consider this sub-service to be stable and **SMC concur** with this view.

Sutton and East Surrey Water – SES – Summary

Performance is good for all indicators in the infrastructure and non-infrastructure sub-services through the AMP5 period with no exceedances of the UCL. Ofwat consider these sub-services to be stable and **SMC concur** with this view.

South East Water – SEW

Water Infrastructure – WI

The performance indicator for burst mains has improved through the AMP5 period and is now close to the RL. The indicators for DG2 pressure and customer contacts show good performance and are generally below the RL. The performance indicator for mean zonal iron compliance has recovered from a relatively poor first two years (although not above UCL) and is now close to the RL.

The TIM indicator has had three failures of the UCL in the five year AMP5 period and the predicted performance for this year is close to the UCL. Ofwat have not proposed to shortfall against this measure at either DD or FD, but **SMC consider** that this decision should be reviewed. As the company have not previously been made aware of this potential shortfall, there is no mitigation evidence to be reviewed and it is entirely possible that the raw data has been misinterpreted by SMC.

The performance indicator for supply interruptions greater than 12 hrs shows persistent, significant failures for the middle three years of AMP5, although performance for the current year is predicted to be close to the RL. The company have provided details of the events causing loss of supply with property numbers and brief reasons for the extended repair periods. SMC do not find the evidence compelling other than for the Faversham incident affecting 55 properties in 2012/13, where failure of an adjacent gas main and sewer restricted access for pipeline repair. The remainder of pipeline failure events would appear to be within the company and their contractor's control. For the supply failures following power outages, the company appear to have recognized the potential risk to supply interruptions and have implemented a programme of standby generator installation, but the fact remains that failures during AMP5, due to power outages, have impacted on customer service. Ofwat intend to implement a shortfall against this measure and **SMC concur** with this decision.

Water Non-Infrastructure – WNI

The indicator for Water Treatment works coliforms has two years at the UCL but has since recovered performance. Ofwat have defined performance in this sub-service as stable and **SMC concur** with this view.

South East Water – SEW – Summary

The performance indicator for supply interruptions shows significant failure against the control limits for three out of the five AMP5 years. Ofwat do not find the evidence presented in mitigation of the performance shortfall as compelling and **SMC agree** with this position. Ofwat intend to implement a shortfall against this sub-service. **SMC concur** with this approach.

In addition the performance indicator for TIM has shown failures against the UCL for three years out of the five year AMP5 period. Ofwat have not proposed a shortfall against this measure, but **SMC consider** this decision should be reviewed. Ofwat have provided further information on the changes on the numbers of zones and thus the statistical basis of the assessment. The revisions on the number of zones and sample numbers have brought this measure within the control limits. **SMC now consider** that the assessment is consistent with the evidence reviewed.

Sembcorp Bournemouth Water – SBW***Water Infrastructure – WI***

There was a UCL exceedance of iron zonal compliance for one year but for other years this indicator was very low, thus indicating a one-off incident. Other indicators within the sub-service are at or below RL. Ofwat have defined this sub-service as stable and SMC see no reason to disagree with this assessment.

Water Non infrastructure – WNI

The Ofwat documentation indicates an issue over the correct reporting of coliform failure at treatment works. The raw data indicates a breach of the UCL in one year, but this may be an incorrect reporting position. The Reporter (Halcrows) have confirmed that there have been no coliform failing samples since 2012. In addition, company representations indicated that changes to the works configuration and processes at Alderney WTW should further reduce the risk of failure. Other indicators within the sub-service are at or below the RL.

Sembcorp Bournemouth Water – SBW – Summary

There are only isolated minor performance shortcomings against the indicators in both sub-services and Ofwat have proposed a stable categorisation. **SMC concur** with this assessment.

South Staffs Water – SSC

Water Infrastructure – WI Cambridge

Spikes above UCL on supply interruptions for year 1 and year 3 of AMP period, but since have had good results. All other infrastructure indicators are satisfactory and generally below RL. There are no company representations on the supply interruption issue and it is possible that the year 1 result of 347 properties without supply > 12 hours has had previous mitigating evidence as the classification for that year, in the Ofwat tracker spread sheet, is a stable assessment. In view of the failure of the UCL in two years for this indicator, **SMC originally considered** that Ofwat should review whether any of the AMP5 results for the supply interruption measure have been previously mitigated and, if not, Ofwat should consider shortfalling against this measure.

Ofwat have now undertaken a further review and have commented *“Of the four years 2011-12 to 2014-15, there is only one breach of the upper control limit in 2012-13 and performance for 2013-14 is below the RL and forecast for 2014-15 is at the RL. Therefore no shortfall has been proposed in the final determination for SSC (CAM)”*. **SMC now agree** that the decision to not impose a shortfall is appropriate but that actual performance in 2014/15 should form part of later serviceability assessments.

Water Infrastructure – WI South Staffs

Indicators are generally satisfactory apart from a significant failure of the UCL for supply interruptions for 2013/14 although other results for this indicator are around the RL. The zonal non-compliance for iron has also failed the UCL for one year, but with good performance in other years. Ofwat have considered this sub-service to be stable and **SMC concur** with this view provided that actual performance in 2014/15 is in line with the predicted values.

Water Non infrastructure – WNI – Cambridge

WTW coliforms failed UCL in year 3, but performance has now restored. All other indicators are fine. Provided that predicted performance on WTW coliforms is achieved then **SMC concur** that a stable assessment is appropriate.

Water Infrastructure – WNI South Staffs

WTW coliforms marginally failed UCL in year 3 but performance now improved. All other indicators are fine. Provided that predicted performance on WTW coliforms is achieved then **SMC concur** that a stable assessment is appropriate.

South Staffs – SSC – Summary

Ofwat consider that the water infrastructure sub-services are stable for both areas in the company. **SMC originally considered** that the position on water infrastructure for the Cambridge area should be further reviewed in respect of the supply interruption indicator where there have been two failures of the UCL in the AMP period. Mitigation evidence may have been previously supplied to Ofwat on this issue and is not available to SMC; this may mitigate the impact of this failing measure.

Ofwat have now undertaken this review and the re-analysis of data confirms that a shortfall is not appropriate. **SMC concur** with this reassessment.

The water non-infrastructure indicators for both areas have one year failures against UCL for WTW coliforms but performance has been restored. Provided that the 2014 predicted performance is matched by actual performance, **SMC concur** with a stable assessment for this sub-service.