

December 2014

Setting price controls for 2015-20  
**Final price control determination notice:  
policy chapter A2 – outcomes**



**OFWAT**

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## Overview

For the first time, companies have developed a set of outcomes that reflect what their customers need, want and can afford, and they have committed to delivering these. Outcomes focus on what a company can deliver with its assets and capabilities, not how many assets it has.

This document sets out our approach to assessing outcomes in setting final determinations for the five years from 1 April 2015 and summarises the results of our review of representations received following publication of the draft determinations.

## Our final determinations

Companies have embraced the outcomes approach, proposing a total of 171 outcomes, 515 performance commitments and 312 financial outcome delivery incentives. There has also been strong evidence of some excellent work to engage with customers – identifying their key priorities and what they are willing to pay to have them delivered, and what should happen if they are not delivered.

All the companies have proposed outcomes covering the essential elements of their services that customers value highly, such as:

- excellent water quality;
- a reliable water supply and protection of the natural environment on the water side; and
- a reliable wastewater service, reduced sewer flooding and protection of the natural environment on the wastewater side.

As well as these essential outcomes, companies have also proposed innovative outcomes that their customers value (for example, outcomes relating to customer satisfaction in their dealings with the company and fair billing).

Alongside the outcomes, companies have proposed a set of new measures that will demonstrate how well each of the outcomes is being delivered. In a number of cases, individual outcomes have more than one measure. For each of the measures, companies set out the level of performance they expect to deliver over the next price control period - their performance commitments (PCs). They have also proposed outcome delivery incentives (ODIs) associated with these performance measures. Some of the incentives are reputational only so although the company must still

explain the performance being delivered to its customers, there are no financial incentives if they over, or under deliver. However, 61% of the ODIs have financial incentives and so where a company delivers less than expected, either because circumstances change and it was no longer the best approach, or because the company did not achieve what it intended, customers are compensated.

We have reviewed and adjusted these parameters to ensure customers are protected. Our review included:

- comparative assessments where it was possible to compare PCs and ODIs across the sector and therefore challenge companies to deliver an upper quartile (UQ) level of performance to protect customers and to ensure that any outperformance is rewarded only when it is genuinely stretching; and
- company-specific assessments to ensure that the PCs that each company has proposed are challenging, appropriately incentivised and supported by customer engagement.

For non-enhanced companies we are also applying an aggregate cap and collar on the financial impact of ODIs, set at a level that will not unduly distort companies' behaviour, but which at the same time delivers an overall level of protection to customers. This cap and collar will not apply to retail businesses.

For enhanced companies, the position on ODIs will remain as set out in their draft determinations to preserve their overall package of risk and reward.

## **Our approach**

Historically, targets for delivery have been set with reference to inputs (such as the construction of a length of pipe) or outputs (such as delivery of a particular engineering scheme). For the first time in this price review, companies have to focus on delivering what matters to customers, such as the reliable delivery of water that is safe to drink, and what matters to society more widely, such as environmental outputs.

We have designed this innovative outcomes approach to deliver a number of benefits to customers and wider society.

- **Focus on customer priorities:** companies have developed outcomes through customer engagement, including detailed dialogue with the customer challenge groups (CCGs). This ensures strong focus on the delivery of customer priorities across current customers, future customers and the environment.
- **Company ownership of business plans:** companies have to develop and take ownership of, and accountability for their own business plans, rather than responding to regulatory prescriptions about what they should deliver.
- **Outcome delivery incentives (ODIs):** the ODIs associated with the outcomes create strong incentives for companies to innovate and become more efficient, protecting customers against instances of under-delivery and where merited, rewarding companies for outperformance in areas where customers are willing to pay more to receive more of what they want.
- **Greater accountability:** we have required companies to publish independently assured and challenged information about their performance against outcomes each year. This creates greater accountability for how well they deliver for customers and the environment in the longer term.

‘Setting price controls for 2015-20: final methodology and expectations for companies’ business plans’ (our ‘final methodology statement’) allowed companies considerable freedom to develop outcomes that reflected the needs of their customers. This, together with the subsequent guidance and requirements for the business plans, has resulted in a range of different approaches.

For each outcome proposed, we asked companies to identify one or more measures that would provide evidence that they were delivering the outcome. On each measure, companies had to propose the following.

- **Committed performance levels:** companies had to provide evidence to justify the performance levels to which they were committing, typically demonstrating that these levels represented an improvement on past performance and, where comparative analysis was possible, that the levels were at least as good as those achieved by UQ efficient companies.
- **ODIs (either penalty only or penalties and rewards) for performance different to the committed level:** companies were encouraged to make the incentives financial rather than just reputational. Where customers were willing to pay for higher levels of performance and a company could demonstrate that performance was at a high level relative to its peers, then

the financial incentives could contain rewards for over-delivery, as well as penalties for under-delivery.

All companies must continue to deliver on their statutory obligations and responsibilities in addition to their new outcomes and ODIs.

Our review of ODIs during the risk-based review (RBR) identified that companies had tended to take a conservative approach, with a substantial number of incentives that were reputational only with no financial element, and also that few of the financial incentives proposed elements of reward as well as penalties despite evidence that customers were willing to pay for improvements to services. The need to take a less conservative approach on incentives was one of the themes within [‘Setting price controls for 2015-20 – risk and reward guidance’](#) (our ‘risk and reward guidance’), published in January 2014.

We considered for enhanced status the companies that performed sufficiently well in the RBR and accepted our risk and reward guidance. We granted enhanced status to two companies – Affinity Water and South West Water – with only a small number of changes to their revised outcomes proposals.

For the remainder of the companies, we provided detailed feedback from the RBR on each of their outcomes and the associated PCs and incentives.

In August 2014, we explained that we had developed three broad interventions for the non-enhanced companies to ensure that customers were protected. We have maintained these interventions to non-enhanced companies in our final determinations.

- **Making use of comparators:** where possible, we have performed detailed comparative analysis across all companies where they have proposed similar measures. This is a further check on the calibration of incentives between wholesale costs and outcomes. In particular, it is important that companies deliver UQ efficiency – for both costs and outcomes. Our analysis highlighted some variations, causing us to intervene to ensure that customers’ interests are protected. In particular, we have intervened to ensure that companies face incentive penalties in the event of non-delivery and are only able to access rewards where performance exceeds sector UQ levels. This intervention is important where there is a high degree of comparability between outcomes

because customers of water companies are unable to switch suppliers or easily compare water company performance<sup>1</sup>.

- **Company-specific PCs and ODIs:** where it is not possible to make simple comparisons, we have performed company-specific analysis on individual company proposals to check that they:
  - comply with the methodology;
  - represent value for money; and
  - protect customers against under-delivery.
- **Aggregate cap and collar:** we have introduced an aggregate cap and collar on the financial impact of incentives, set at a level that will not unduly distort companies' behaviour but which at the same time, delivers an overall level of protection to customers. Recognising that ODIs are a new and innovative feature of this price control, the cap provides an element of protection to both customers and companies while retaining the strong incentives that the outcomes approach brings. The delivery of certain large schemes for customers sits outside these caps and collars. It will be possible for companies and/or CCGs to apply to us to alter the cap within period, if they provide convincing evidence that the arrangement was working against the long-term interests of customers – for example, including customer support for the change.

For the enhanced companies (Affinity Water and South West Water), following the RBR we had relatively high confidence in the business plans and the proposed outcomes and PCs and ODIs. On this basis, we have accepted their proposals with relatively minor adjustments after draft determinations to reflect feedback from stakeholders such as the Environment Agency. The determinations for the enhanced companies have not been changed to reflect the comparative analysis, since we continue to consider that it is appropriate to accept the enhanced companies' business plans in the round. However, both enhanced companies have recognised that even though their financial incentives are not being changed, they face reputational incentives to improve their performance in areas where they are not yet delivering UQ performance.

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<sup>1</sup> Two companies – Northumbrian Water and Dŵr Cymru – submitted their revised business plans earlier than the other non-enhanced companies and received their draft determinations at the end of May. The comparative analysis was not possible until all the non-enhanced companies had submitted revised business plans, and so these two companies received an update to their draft determinations to apply the results of the comparative analysis at the end of August.

## Key changes since draft determinations

For the non-enhanced companies we have reviewed the representations on the interventions arising from the comparative analysis (referred to as the 'horizontal checks' in our draft determinations) and made a number of changes to practical implementation points on the performance levels and introduced some neutral zones where incentives will not apply (deadbands).

We have also made one intervention to reflect a company-specific factor identified by Dŵr Cymru on supply interruptions, introducing a reward in the event that the company can move beyond UQ performance.

We have introduced a number of additional incentives as a result of consistency checking on special factor cost claims. We have also made some further interventions on incentives associated with asset health to ensure that future incentives will adequately protect customers. We have also made a number of detailed interventions on specific incentives for individual companies. We summarise these in annex 4 of the relevant company-specific appendices.

We have clarified that the aggregate cap on incentives will not apply to retail and provide further detail as to how the cap will work in practice.

## A2.1. Introduction

In this policy chapter, we set out and explain the approach we have used in making our final determinations on outcomes, including the performance commitments (PCs) and outcome delivery incentives (ODIs) that will apply for the five years from 1 April 2015. We summarise the results of our review of companies' business plans and how we have responded to the issues raised by representations to our draft determinations.

This introduction:

- sets out the structure of this policy chapter; and
- describes the development and refinement of our outcomes approach.

### A2.1.1 Document structure

In section A2.1.2 below, we describe the development and refinement of our new outcomes approach. The remainder of this policy chapter is then structured as follows.

- Section A2.2 provides an overview of the outcomes that companies will deliver for their customers.
- In the remaining sections, we then explain the three sets of interventions we have made in our final determinations.
  - Section A2.3 explains our approach to the use of comparative analysis that challenges companies to deliver UQ performance.
  - Section A2.4 discusses our assessment of company-specific performance commitments and ODIs.
  - Section A2.5 explains our proposal for an aggregate cap and collar on the financial impact of ODI rewards and penalties.

Within each of sections A2.3, A2.4 and A2.5, we outline:

- our proposed policy position as set out in our draft determinations;
- the key issues raised by the representations received to our draft determinations; and
- our final position.

We received a substantial number of representations from:

- companies;
- customer challenge groups (CCGs);
- the Consumer Council for Water (CCWater);
- the Environment Agency;
- Natural England; and
- Natural Resources Wales.

In addition, while it did not submit a formal representation to our draft determinations, we have also taken account of the views of the Drinking Water Inspectorate (DWI) expressed as part of our ongoing dialogue with the DWI.

Within this document, we focus primarily on issues raised about our overall industry approach or points of comparison between companies, and so the emphasis is on the use of comparators and the aggregate cap and collar. Where there are common themes from the company-specific analysis that apply across a number of companies, we also provide an overview of those interventions in this chapter. Otherwise, consistent with the final policy position set out in this chapter, our company-specific decisions are set out in annex 4 of the relevant company-specific appendices.

ODIs will impact on companies' financial performance. The impact will be determined by the aggregate effect of rewards earned and penalties incurred as a result of performance. We consider the balance of risk implied by companies' ODIs in '[Policy chapter A7 – risk and reward](#)' (the 'risk and reward policy chapter').

Throughout the risk-based review (RBR) and subsequent stages of assessment of the business plans, we have placed considerable emphasis on the importance of the future arrangements for companies to report their performance on their outcomes to their customers. The effectiveness of the incentives set out in these final determinations will be reliant on the measurement, reporting and assurance framework in the next regulatory period, and it is important that robust arrangements should be in place from the start of the price control period in April 2015.

As indicated in '[Policy chapter A1 – introduction](#)', we will publish further information on the reporting requirements on 9 February 2015, and explain how these will work alongside the outcomes reporting that companies will provide to their customers. This will establish some additional requirements that will vary depending on the initial assurance category that each company is assigned to.

These additional requirements will not be replacements for the companies' own arrangements, and so it is essential that the companies continue to finalise their planned arrangements. In order to ensure that suitable arrangements are in place from the outset, as part of the final determinations we are expecting all companies to publish an outcomes reporting policy document by the start of the new price control.

### **A2.1.2 Our approach**

The focus on companies delivering the outcomes that customers and society want and can afford is one of the innovative elements of the vision for PR14 as set out in our final methodology statement. We have designed this new outcomes approach to deliver a number of important benefits for customers, which we outlined in the overview above.

To encourage the delivery of these benefits, our final methodology statement allowed companies considerable freedom to develop outcomes that reflected the needs of their customers. As we explain further below, during the course of our assessments we identified some specific circumstances where the proposed incentives did not adequately protect customers' interests and we have intervened accordingly. However, the majority of the incentive packages remain as companies proposed them.

The final methodology statement specifically required companies to include incentives in only two areas. These were:

- leakage, reflecting its importance to customers and the potential environmental and efficiency benefits of its reduction; and
- the service incentive mechanism (SIM), which has successfully incentivised substantial improvements in performance in the recent past and requires comparisons of relative performance across all companies.

Our focus throughout the review has been on making sure that the promise of the new outcomes approach is realised, with the creation of effective incentives that protect customers against under-delivery and where merited, reward companies for outperformance. Our methodology required companies to demonstrate that the ODIs represent value for money. They were asked to provide evidence that the proposed incentives reflected the value of the outcomes delivered to customers, justified by evidence of customers' willingness to pay for the costs of delivery. They also had to provide evidence to justify the performance levels to which they were committing, typically demonstrating that these levels represented an improvement on past

performance and that the levels were at least as good as those achieved by efficient companies.

Companies first submitted their business plan proposals to us in December 2013. The assessments of the proposed outcomes during the RBR demonstrated that the outcomes approach was starting to deliver benefits. There was clear evidence of:

- extensive and high-quality customer engagement;
- robust challenges on behalf of customers from the CCGs; and
- company ownership of their outcome proposals.

The RBR results also illustrated some of the challenges to develop and implement outcomes in the new regulatory framework. Companies had tended to take a conservative approach to incentives, with 68% of the proposed incentives being non-financial and only 11% having penalties and rewards. So as part of our risk and reward guidance, we encouraged companies to specify more financial ODIs and include both rewards and penalties.

Companies that performed sufficiently well in the RBR and accepted the risk and reward guidance were considered for enhanced status. Two companies – Affinity Water and South West Water – were granted enhanced status with only a small number of changes to their revised outcomes proposals.

For the remainder of the companies, we provided detailed feedback from the RBR on each of their outcomes, and the associated PCs and ODIs. We also published further information on how best to demonstrate that the proposed incentives were effective in [IN14/08, '2014 price review – information for companies on revising their outcomes proposals'](#).

Two of the non-enhanced companies – Northumbrian Water and Dŵr Cymru – submitted revised business plans in May, with the remaining 14 non-enhanced companies submitting revised plans in June. These revised business plans showed a clear response to the guidance and feedback. Looking across all companies, the proportion of non-financial incentives fell to 40%. There was also a notable increase in the proportion of incentives that were both penalty and reward (35% in the revised business plans, compared with only 11% in the original proposals).

As we highlighted in our draft determination documents, our review of the companies' revised business plan proposals sought to strike the right balance for customers. We considered that allowing scope for outperformance in relevant areas provides strong incentives for companies to do more of what their customers want and are willing to pay for. However, we do not want to allow rewards for performance

that is less than stretching for an efficient company, as this would not represent value for money. It would also weaken our cost challenges and risk leaving customers funding inefficiency in their bills.

Some of the companies' revised business plan proposals did not strike the right balance. For example, there were instances in which companies proposed that they received rewards for performance levels markedly below the performance that other companies had already achieved under the existing regulatory controls. There were also some instances where company performance has in the past been markedly worse than the majority of other companies, but where the company was proposing limited, if any, catch-up in performance during the next period.

In the light of these concerns, at draft determinations we developed interventions to protect the interests of customers in the following three areas.

- **'Horizontal interventions' (making use of comparators)** to challenge companies to deliver UQ performance.
- **'Bottom-up' (company-specific) interventions** ensuring that performance is challenging, appropriately incentivised and supported by customer engagement.
- **An aggregate cap and collar on the financial impact of delivery incentives**, to provide an overall level of protection to customers.

For the two companies who submitted their revised business plans earlier than the other non-enhanced companies and received their draft determinations at the end of May, the sequence of events was slightly different. The comparative analysis was not possible until all the non-enhanced companies had submitted revised business plans. These companies received an update to their draft determinations at the end of August when we published the draft determinations for the other non-enhanced companies.

Table A2.1 below sets out details of the additional policy documents that we have published since our final methodology statement (including those mentioned above).

**Table A2.1 Additional policy documents published relevant to outcomes**

| Document name                                                                                                                                           | Publication date | Description/policy content                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 'Setting price controls for 2015-20 – risk and reward guidance' (our 'risk and reward guidance')                                                        | January 2014     | Guidance on approach to risk and reward, including the balance and level of risk of ODIs.                                                                                                                                                 |
| 'Setting price controls for 2015-20 – pre-qualification decisions';                                                                                     | March 2014       | <ul style="list-style-type: none"> <li>• Overview of RBR test applied for outcomes and companies' performance against these tests.</li> <li>• Outlined 'do no harm principle'.</li> <li>• SIM direction of travel for 2015-20.</li> </ul> |
| 'Setting price controls for 2015-20 – policy and information update';                                                                                   | April 2014       | <ul style="list-style-type: none"> <li>• Set out equivalence of treatment for June and August draft determinations.</li> <li>• Outcome of the future SIM consultation we initiated in October 2013.</li> </ul>                            |
| 'Setting price controls for 2015-20, Draft price control determination notice: technical appendix';                                                     | April 2014       | Our approach to outcomes as part of the draft determinations for enhanced companies.                                                                                                                                                      |
| 'IN14/08, 2014 price review – information for companies on revising their outcomes proposals' (our 'information notice on revising outcomes proposals') | May 2014         | Companies were also provided with additional feedback about the results of the RBR assessments and how best to demonstrate that the proposed incentives were effective.                                                                   |
| 'Setting price controls for 2015-2020, Draft price control determination notice'                                                                        | May 2014         | Our approach to outcomes as part of the draft determinations for the non-enhanced companies that requested an early draft determination (Dŵr Cymru and Northumbrian Water).                                                               |
| Revised data table requirements following our risk-based review (amended 2 June 2014)                                                                   | June 2014        | Guidance on the information to be provided in the revised business plans for June resubmission                                                                                                                                            |

| Document name                                                                                                                                                                          | Publication date | Description/policy content                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 'Setting price controls for 2015-20, Draft price control determination notice: technical appendix A2 – outcomes' (the outcomes technical appendix to our August draft determinations') | August 2014      | <p>Set out our approach to outcomes for the August draft determinations, consistent with earlier guidance.</p> <p>In addition, it:</p> <ul style="list-style-type: none"> <li>• outlined the comparator checks that we had performed; and</li> <li>• proposed the outcomes cap and collar.</li> </ul> |

Details of company-specific outcomes interventions in our draft determinations can be found in the relevant company-specific appendices to our [draft determinations published in April, May and August](#).

## A2.2. Overview of sector outcomes

In this section, we provide an overview of the new sector outcomes in these final determinations, setting out:

- the outcomes that companies are proposing;
- the coverage of performance commitments;
- the improvements that companies are committing to; and
- innovative performance commitments.

### A2.2.1 The outcomes companies are proposing

Outcomes are one of the key innovations of the 2014 price review (PR14). Outcomes are what customers want companies to deliver, for example, the reliable delivery of safe clean drinking water. This is a new approach compared with other price controls in regulated industries, which focus on outputs such as the delivery of a particular network development project.

Company business plans for PR14 have focused on outcomes rather than outputs. This ensures that companies are incentivised to deliver efficiently what customers and society need, want and are willing to pay for, and helps to legitimise their role in providing vital public services.

The 18 companies have proposed 171 outcomes between them. All the companies have outcomes covering the essential elements of their services which customers value highly, such as:

- excellent drinking water quality, a reliable water supply and protection of the natural environment on the water side; and
- a reliable wastewater service, reduced sewer flooding and protection of the natural environment on the wastewater side.

As well as these essential outcomes, companies have also proposed innovative outcomes which their customers value. We have listed innovative outcomes for 4 companies below for illustrative purposes, but each company has examples.

- South West Water proposed outcomes on the resilience of its services in extreme conditions, benefitting the community;

- Affinity Water proposed an outcome on minimising disruption to the local community;
- Severn Trent Water proposed an outcome on making a positive difference in the community; and
- Sutton & East Surrey Water proposed an outcome on increasing the resilience of its network to drought, flooding and equipment failure.

These outcomes are underpinned by PCs and ODIs to ensure that the outcomes customers value are delivered.

### **A2.2.2 The coverage of performance commitments**

Companies carried out extensive consultation with their customers and other stakeholders to find out what their customers' priorities are. There are 515 PCs in the final determinations for all 18 companies covering a wide range of areas.

Table A2.2 Coverage summary of water related PCs for water and sewerage and water only companies

|                                      | Company | Water quality compliance | Supply interruptions | Water quality contacts | Leakage | Asset health | Consumption of water | Water quality events | Customer perception of performance | Supply restrictions | Security of supply | Resilience | Biodiversity/SSSIs | Impact of abstraction |
|--------------------------------------|---------|--------------------------|----------------------|------------------------|---------|--------------|----------------------|----------------------|------------------------------------|---------------------|--------------------|------------|--------------------|-----------------------|
| Water and sewerage companies (WaSCs) | ANH     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|                                      | NES     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|                                      | SRN     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|                                      | SVT     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|                                      | SWT     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|                                      | TMS     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|                                      | UU      |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|                                      | WSH     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|                                      | WSX     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|                                      | YKY     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
| Water only companies (WoCs)          | AFW     |                          |                      |                        |         | *            |                      |                      |                                    |                     |                    |            |                    |                       |

|  | Company | Water quality compliance | Supply interruptions | Water quality contacts | Leakage | Asset health | Consumption of water | Water quality events | Customer perception of performance | Supply restrictions | Security of supply | Resilience | Biodiversity/SSSIs | Impact of abstraction |
|--|---------|--------------------------|----------------------|------------------------|---------|--------------|----------------------|----------------------|------------------------------------|---------------------|--------------------|------------|--------------------|-----------------------|
|  | BRL     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|  | DVW     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|  | PRT     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|  | SBW     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|  | SES     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|  | SEW     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |
|  | SSC     |                          |                      |                        |         |              |                      |                      |                                    |                     |                    |            |                    |                       |

**Key:**

ANH = Anglian Water; NES = Northumbrian Water; SRN = Southern Water; SVT = Severn Trent Water; SWT = South West Water; TMS = Thames Water; UU = United Utilities; WSH = Dŵr Cymru; WSX = Wessex Water; YKY = Yorkshire Water; AFW = Affinity Water; BRL = Bristol Water; DVW = Dee Valley Water; PRT = Portsmouth Water; SBW = Sembcorp Bournemouth Water; SES = Sutton & East Surrey Water; SEW = South East Water; SSC = South Staffordshire Water.

Green = company has at least one PC related to this area.

**Note:**

\* Affinity Water does not have a PC on asset health but does have an asset health indicator.

The table above shows the coverage of water related incentives across the water and sewerage companies (WaSCs) and water only companies (WoCs) at final determinations. We have highlighted in green the areas with coverage for a given company. On the left-hand side of the table there is full coverage of areas, such as:

- water quality compliance;
- supply interruptions;
- water quality contacts;
- leakage; and
- asset health.

Nearly all companies proposed PCs covering these areas and we only had to intervene in a small number of cases to ensure full coverage. On the right-hand side of the table coverage varies between companies reflecting that they have proposed PCs that reflect their customers' priorities and their particular circumstances.

**Table A2.3 Coverage summary of wastewater related PCs for water and sewerage companies**

| Company | Sewer flooding | Asset health – infrastructure | Asset health – non-infra | Pollution events | Environmental compliance | Other (impact on the environment) | Customer perception of performance | Biodiversity/SSSIs | STW Odour |
|---------|----------------|-------------------------------|--------------------------|------------------|--------------------------|-----------------------------------|------------------------------------|--------------------|-----------|
| ANH     |                |                               |                          |                  |                          |                                   |                                    |                    |           |
| NES     |                |                               |                          |                  |                          |                                   |                                    |                    |           |
| SRN     |                |                               |                          |                  |                          |                                   |                                    |                    |           |
| SVT     |                |                               |                          |                  |                          |                                   |                                    |                    |           |
| SWT     |                |                               |                          |                  |                          |                                   |                                    |                    |           |
| TMS     |                |                               |                          |                  |                          |                                   |                                    |                    |           |
| UU      |                |                               |                          |                  |                          |                                   |                                    |                    |           |
| WSH     |                |                               |                          |                  |                          |                                   |                                    |                    |           |
| WSX     |                |                               |                          |                  |                          |                                   |                                    |                    |           |

| Company | Sewer flooding | Asset health – infrastructure | Asset health – non-infra | Pollution events | Environmental compliance | Other (impact on the environment) | Customer perception of performance | Biodiversity/SSIs | STW Odour |
|---------|----------------|-------------------------------|--------------------------|------------------|--------------------------|-----------------------------------|------------------------------------|-------------------|-----------|
| YKY     |                |                               |                          |                  |                          |                                   |                                    |                   |           |

**Key:**

ANH = Anglian Water; NES = Northumbrian Water; SRN = Southern Water; SVT = Severn Trent Water; SWT = South West Water; TMS = Thames Water; UU = United Utilities; WSH = Dŵr Cymru; WSX = Wessex Water; YKY = Yorkshire Water

Green = company has at least one PC related to this area.

For wastewater, the WaSCs all have PCs on:

- sewer flooding;
- asset health;
- pollution events; and
- environmental compliance.

### A2.2.3 The improvements companies are committing to

Companies are committed to delivering significant improvements in the aspects of service that customers most value. We have intervened to ensure that companies' PCs were sufficiently challenging through detailed, company-specific analysis and through comparisons between companies on certain measures.

During the period from 2015 to 2020, companies are committing to:

- reducing the time lost to supply interruptions greater than three hours by 32% on average;
- reducing the number of internal sewer flooding incidents by 1,450 a year – a 33% reduction;
- a target of zero serious (category 1 or 2) pollution incidents for those companies with commitments;
- a 22% drop in the number of other pollutions incidents (category 3);
- reducing leakage levels from 3,281 million litres a day (ML/d) to 3,123 ML/d (that is, by 158 ML/d by 2020) – equivalent to a drop of about 5%;

- measures to encourage water efficiency, which are forecast to save around 215 Ml/day by 2020;
- a target of 100% compliance on drinking water quality for all companies (currently compliance in England and Wales is 99.97% – already one of the best in Europe);
- reducing customer contacts around problems such as the odour, colour or taste of water by 34%; and
- increasing the level of metering from 48% in 2014-15 to about 61% by 2019-20.

These commitments are backed up by financial penalties or reputational incentives if they are not met, and, in some cases, financial rewards for delivering stretching performance improvements beyond the commitments. Companies have included 312 financial ODIs at final determinations. The creation of ODIs directly linked to the outcomes encourages strong performance on a continuous basis. The incentives give the best-performing companies the opportunity to earn improved returns from financial rewards where there is evidence customers have indicated their support.

The incentives also ensure that customers are protected against poor performance, with less well-performing companies held to account where performance falls below the committed performance levels, and where the incentive is financial, paying money back to customers. Company performance will also be more transparent than in the past as they will report annually to their customers on performance against all their outcomes, PCs and ODIs, using independently assured data.

The scale of penalties and rewards can be illustrated as follows.

- For leakage, the maximum penalties which companies in aggregate could incur if they under-deliver is £510 million and the maximum reward companies in aggregate earn for delivering stretching performance is £228 million upside.
- For water supply interruptions, companies can be penalised up to £291 million and can earn a reward of up to £234 million if they deliver stretching performance.
- For internal sewer flooding, companies collectively face a penalty of up to £353 million if they do not deliver on their commitment to reduce the number of properties affected. They can earn a maximum reward of £278 million if they deliver stretching improvements beyond their PCs.

## **A2.2.4 Innovative performance commitments**

In addition to the PCs discussed above with high coverage across the sector, companies have also proposed bespoke, innovative PCs that reflect their customers' particular priorities and specific issues facing the company. We have listed four innovative PCs below for illustrative purposes, but again each company has examples. We have chosen an example from both of the enhanced companies and an example from one non-enhanced water and sewerage company and one non-enhanced water-only company.

- South West Water's suite of PCs includes an innovative one on supplies interrupted due to flooded company sites. Under this PC, the company will be penalised if one of its sites is flooded during 2015-20 and the flooding event interrupts more customer supplies than the site's designed resilience standard. South West Water earns a reward if the company manages the flooding event so that fewer customers have their supplies interrupted for more than 24 hours than the site's design standard allows for.
- Affinity Water has a PC on sustainable abstraction reduction supported by a financial penalty and reward ODI. The company has committed to reduce its deployable output by a cumulative amount of 42.1 Ml/day by 2018-19 to 1067 Ml/day, which should help the company reduce its environmental impact.
- Severn Trent Water has proposed two PCs on its Birmingham resilience scheme. The PCs include penalties for delay and non-delivery. The company plans to test its completed assets and to base the non-delivery penalty on the effectiveness of what the assets deliver for customers compared with the company's plan. The penalties are based on the long-term benefits customers will forego if Severn Trent Water delivers a less effective scheme than it has committed to.
- South East Water has eight PCs based on customer satisfaction supported by financial penalty and reward ODIs. For example, the company has PCs based on customer satisfaction with the taste and odour of their water, the level of leakage and the frequency of water use restrictions. Given the innovative nature of these PCs, South East Water has kept the financial incentives relatively small during 2015-20 and supported them with other measures. But it hopes to develop its customer satisfaction approach further after 2020.

## **A2.3. Making use of comparators**

### **A2.3.1 Our draft determinations**

In section A2.4 of the outcomes technical appendix to our non-enhanced companies' August draft determinations, we summarised our rationale for interventions resulting from comparative analysis to companies' PC and ODI proposals and the nature of such interventions.

These comparator checks and resulting interventions act as an important safeguard of customers' interests and helped us to maximise the value of comparative regulation by benchmarking PCs and ODIs.

Where our comparative analysis established that a high proportion of companies were proposing incentives on broadly similar aspects of service delivery, and where there was a high degree of comparability, we intervened more extensively on PC levels to ensure customers receive a UQ level of performance. We proposed that all companies should be achieving UQ performance by 2017-18. As a result of our comparator checks, we identified five specific aspects of service delivery where it was possible to compare performance levels. These were:

- duration of supply interruptions;
- number of contacts from customers regarding water quality;
- compliance with DWI water quality standards;
- number of sewerage pollution incidents; and
- number of properties impacted by internal sewer flooding.

We also considered leakage, given our requirement that all companies propose leakage PCs and ODIs, but adopted a different approach in this area, which we discuss in more detail below.

In our August draft determinations we proposed to incentivise all non-enhanced<sup>2</sup> companies proposing commitments in these five areas to achieve UQ performance by 2017-18. We therefore adjusted PCs and associated incentives so that incentives were based on these targets. We calculated UQ performance based on historical performance, where possible using three years of historical data. We proposed that the UQ level would be static throughout the price control period, recognising that this was the first time that this form of comparative benchmarking had been employed in the water sector.

For the first two years of the price control we also introduced neutral zones where incentives will not apply (deadbands). We set these deadbands at the projected outturn performance in 2014-15 to provide some transitional protection against penalties for performance below UQ levels during the first two years while ensuring that companies still incur penalties for deterioration in performance. We introduced this transitional protection recognising that the use of outcomes is innovative and that the companies' starting positions vary. We removed these deadbands from 2017-18, such that non-enhanced companies performing worse than UQ would return money to their customers through penalties.

We followed a different approach for leakage: we did not determine leakage PCs with reference to a single UQ performance threshold across the sector. This is because companies' proposals on leakage aligned with the sustainable economic level of leakage (SELL) and local issues (such as availability of water resources and statutory abstraction reductions) significantly influence the SELL. Instead, we made interventions on penalty collars for leakage to ensure that the range over which penalties apply for all companies was at least 10% of their proposed PCs. We did not make this intervention where companies had proposed a sufficiently high penalty incentive rate to protect customers.

Where a company proposed a reputational incentive in an area where the majority of other companies had proposed a financial incentive, we also intervened to change the incentive from reputational to financial.

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<sup>2</sup> The August draft determinations set out a framework for deriving 14 company-specific sets of interventions, using data from all 18 companies' proposed business plans where relevant. The interventions resulting from the comparative analysis also apply to the two companies for which we had published an early draft determination in May 2014 (Dŵr Cymru and Northumbrian Water). The interventions do not apply to the enhanced companies (Affinity Water and South West Water), consistent with the separate approach that we have applied for these two companies.

We recognised that companies and their customers and CCGs had not previously had access to comparative data on companies' revised outcomes proposals, as each company had developed its own set of outcomes together with its customer representatives with limited or no visibility of other companies' proposals.

However, we explained that in future we would expect companies to engage with their customers on their comparative performance and ODIs, and that we had designed our approach on the comparative checks to encourage this.

## **A2.3.2 Issues raised by representations**

In this section, we focus on representations on the comparative analysis. We discuss representations on the company-specific analysis in section A2.4.2.

Representations on the comparative analysis applied to the non-enhanced companies covered three main areas.

- The principles of the interventions resulting from comparative analysis that we proposed in our August draft determinations.
- The practical application of our comparative analysis to support these proposals.
- Factors specific to companies that were considered to be beyond their management's control, and materially impact their performance for those PCs where we have applied UQ benchmarking to propose targets for the next control period.

In this section, we summarise the key issues that companies raised in these three main areas. Some representations also questioned whether the comparative analysis would be applied to the enhanced companies as well as the non-enhanced. We respond to these issues and outline our final determinations in section A2.3.3.

### **A2.3.2.1 The principles of the comparative analysis**

Eleven respondents (the large majority of which were companies, but also including CCGs and CCWater) commented on the principles of comparative analysis in their representations.

Some respondents (in particular CCGs) saw merit in our comparator checks, particularly to ensure that companies were not rewarded for levels of performance below those already achieved by better performing companies.

CCWater was supportive of our interventions requiring companies to achieve UQ performance, although it was concerned that unduly aggressive improvement targets in their PCs might drive companies to deliver short-term responses which would not be in customers' longer term interests.

CCGs observed that our expectation that all companies should be able to achieve historical industry UQ performance by 2017-18 would stretch the lower performing companies. This would make penalties more likely and rewards more difficult to achieve.

Some companies supported the incentives based on UQ targets, recognising both that they could support dialogue with customers about performance achievements and also support elements of reward for the best performing companies. A number of other companies chose not make specific representations on the incentives based on UQ targets. Overall however, the majority of responses from companies included some challenge to the underlying principles of UQ targets based on our comparative analysis. In some cases companies made these comments at an overarching level, in other cases they made these comments in reference to specific comparative measures. Companies made two main types of representations in this area.

- They argued that companies were not funded to deliver an UQ level of service and that therefore applying UQ benchmarking to establish the levels of PCs was not appropriate.
- The UQ benchmarking approach proposed in our draft determinations did not account for customers' priorities and willingness to pay, and therefore was not cost beneficial.

The CCGs also recognised the need to strike a balance between cross-sector benchmarking and customer priorities in individual company areas.

We respond to these representations and present our final determinations in this area in section A2.3.3.1.

### **A2.3.2.2 The practical application of the comparative analysis**

Fourteen respondents (thirteen companies and one CCG) made representations on the practical application of the comparative analysis used to inform our draft determinations<sup>3</sup>. In particular, respondents commented on three main areas.

- Two respondents suggested improvements to our calculation of UQ performance for specific measures.
  - Anglian Water said that the proposed approach to setting the UQ target for supply interruptions appeared to be inconsistent with the analytical approach we had adopted for other measures.
  - Northumbrian Water said that the composite measure we had used to calculate the proposed UQ target for sewer flooding might contain an element of double counting.
  - Nine respondents commented that our proposed approach did not sufficiently account for variability of performance as a result of factors outside management control.
- Six respondents suggested that the proposed glide-path to historical UQ performance targets (that is, the requirement for all companies to achieve these performance levels by 2017-18 to avoid the risk of penalties) introduced an excessively challenging timescale, which did not account for existing performance gaps across companies and for their investment plans. Some respondents also indicated that in order to meet this timescale they would need to carry out sub-optimal investment.

We respond to these representations and present our final determinations in this area in section A2.3.3.2.

### **A2.3.2.3 Company-specific factors**

In their representations, some respondents indicated that there are factors specific to individual companies that are beyond their control and materially impact their performance on the five PCs where we applied a UQ benchmarking challenge<sup>4</sup>. These respondents suggested that we should take these specific factors into account when setting the targets for the five measures concerned.

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<sup>3</sup> described in section A2.4.2 of the outcomes technical appendix to our August draft determinations.

<sup>4</sup> Our draft determinations referred to six comparator measures. However, we are not including leakage in this section as at draft determinations we did not apply a UQ benchmarking challenge and we did not receive representations on company-specific factors in this area.

1. Supply interruptions.
2. Water quality contacts.
3. Water quality compliance.
4. Pollution incidents.
5. Sewer flooding.

Thirteen companies commented to varying degrees on some of these factors. These companies mostly argued for specific factors in areas where they had performance gaps compared to UQ.

We respond to these representations and present our final determinations in this area in Section A2.3.3.3.

## 1. Supply interruptions

Respondents highlighted six types of company-specific factor that they said could impact their performance on supply interruptions. We describe these below.

- **Population differences:** Dŵr Cymru stated that the proposed UQ target for supply interruptions was calculated without taking into account the relative size of each company. It stated that the calculation of UQ is dominated by a number of small WoCs. The company said that if the objective is to set targets that would bring the service received by 75% of customers into line with that received by the best served 25%, then the calculation should be weighted. The company estimated that only 11% of customers received better than UQ performance level in 2013-14.
- **Mains length per customer:** four companies (Anglian Water, Thames Water, Dŵr Cymru and Wessex Water) suggested that the UQ calculation should take into account the property density (measured as length of mains per property). All of these companies' average historical performance over 2011-14 was worse than UQ. These companies stated that longer lengths of mains per property would be expected to have more bursts per property and consequently more interruptions per customer.
- **Interconnectivity of network:** three companies (Dŵr Cymru, Sutton & East Surrey Water and Wessex Water) stated that supply interruptions are greater for companies with limited connectivity (for example, if they are served by a single source of supply or have limited re-zoning options) on their network.

- **Chalk and iron deposits:** Sutton & East Surrey Water highlighted a legacy issue with chalk and iron deposits. The company stated that this issue impacts its ability to improve its performance at the rate indicated in our draft determinations.
- **Night-time work:** Sutton & East Surrey Water said that it carries out most of its planned work at night to minimise disruption to traffic and the impact on customers interrupted. The company stated that in order to achieve a new target based on historical UQ industry performance it would face additional costs and it may have to return to daytime working, which is cheaper to deliver. The company stated that this would create greater inconvenience to customers and cause additional traffic disruption.
- **Other specific circumstances:** Thames Water also highlighted other specific circumstances in its region that it considered had an impact on this measure. These include the presence of old mains in clay, and the slow moving traffic in the London region, which causes delays in resolving supply interruption incidents.

## 2. Water quality contacts

Most respondents stated that targets for water quality contacts should take account of factors that affect the appearance, taste and odour of drinking water. There were seven such factors, which we describe below.

- **Source water types:** three companies (Yorkshire Water, United Utilities and Dŵr Cymru) stated that the presence of peaty upland raw water sources in their areas and their interaction with cast iron mains has an impact on discolouration, which in turn affects the number of water quality contacts.
- **Ease of contact:** Wessex Water also suggested that an aspect that affects observed performance in this area is how easy it is for customers to contact the company. It indicated that, if it is easy for customers to make contact, the company will have more contacts. Alternatively, if it is hard to make contact, the company will receive fewer contacts. Wessex Water showed the relationship between ease of contact, as measured as part of the service incentive mechanism (SIM)<sup>5</sup>, and number of contacts. It noted that the

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<sup>5</sup> Wessex Water showed the average score on the 'ease of contact' component of the SIM over the past three years.

company with the lowest contact rate has the lowest ease of contact score under the SIM.

- **Use of multiple sources of water in grid system:** two companies (Yorkshire Water and United Utilities) also suggested that companies with 'grid' systems that allow them to use multiple sources of water may experience more complaints because the source water used can change as a result of changes in operational requirements. Customers may contact the companies to complain about the taste and odour of water if they are receiving water from an area they are not used to, which may result in the water tasting slightly different.
- **Investment timescale for a specific scheme:** two companies (United Utilities and Dee Valley Water) stated that there are specific investment schemes that will improve their performance on water quality contacts during the next price control period. The companies suggested that the required timescale for achieving UQ targets should reflect the planned timelines for delivering these schemes.
- **Milky appearance of water:** Yorkshire Water indicated that air can get into water pipes in various ways and cause a milky appearance of water. Yorkshire Water stated that in many cases such occurrences are outside its control.
- **Water chemistry:** Wessex Water stated that the proposed approach does not account for issues related to water chemistry and the corrosiveness of water.
- **Customer pipework:** Wessex Water stated that a significant portion of the taste and odour contacts relates to issues with customers' pipework, rather than its own managed network. Yorkshire Water also suggested that a significant contributor of water quality contacts is the impact of chlorine related contacts relating to the taste and odour of water, often related to the interaction of chlorine in water with customer plumbing.

### 3. Water quality compliance

Respondents highlighted six company-specific factors that they said could impact their performance on water quality compliance. We describe these below.

- **A more stringent lead standard:** five companies stated that the introduction of a more stringent lead standard in December 2013 has resulted in more water quality failures, especially for those companies that have a higher percentage of lead pipes.
- **Investment timescale for a specific scheme:** two companies (United Utilities and Dee Valley Water) stated that there are specific investment schemes that will improve their performance on water quality contacts during the next price control period. They suggested that the proposed timescale for achieving UQ targets should reflect the planned timelines for the delivery of these schemes. This company-specific factor is the same as the one these companies highlighted for water quality contacts, as noted above.
- **Metalddehyde in raw water:** two companies (Sutton & East Surrey Water and Yorkshire Water) said that the presence of metalddehyde (a pesticide) in raw water affects their performance on this measure and is only partially within their control.
- **Disproportionate risk for small zones:** three companies (Sutton & East Surrey Water, Sembcorp Bournemouth Water and Dŵr Cymru) stated that smaller companies face a disproportionate risk of failure in this area. In particular, they indicated that a very small number of failures can be sufficient for these companies to fail the target and incur a penalty.
- **Issues with mean zonal compliance<sup>6</sup>:** two companies (Sutton & East Surrey Water and Yorkshire Water) did not agree with using mean zonal compliance as a measure of water quality. In particular, Yorkshire Water said that the measure does not include compliance in relation to its assets and only incorporates sample failures from customer assets or defined supply points.
- **Other uncontrollable risks to performance:** three companies (Wessex Water, Yorkshire Water and Dŵr Cymru) and CCWater (commenting on the proposals for Sutton & East Surrey Water) said that some failures are driven by other risks over which the company has no control, such as the condition of customer-owned assets.

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<sup>6</sup> Mean zonal compliance is a measure of overall drinking water quality used by the Drinking Water Inspectorate, comprising an average of 39 different parameters.

## 4. Pollution incidents

Respondents highlighted three company-specific factors that they said could impact their relative performance on pollution incidents. We describe these below.

- **Level of self-reporting:** two companies (Southern Water and Anglian Water) highlighted that there are currently significant differences in the level of self-reporting of pollution incidents across companies. Anglian Water indicated that self-reporting has increased significantly in recent years, but it is concerned that an ODI on pollution incidents could discourage this trend, especially if too heavy a financial penalty is applied to each incident. Southern Water indicated that this factor will affect the reliability and comparability of observed performance information. The company indicated that the level of self-reporting is reflective of both the monitoring equipment in place within companies (for example, monitoring systems may allow companies to report incidents even if not visually observed), as well as internal process that ensure transparent reporting.
- **Differences in consents:** Anglian Water noted that all category three pollution incidents are included in the measure, regardless of whether they are consented. The company expressed a concern that this could encourage unnecessary investment to avoid penalties and suggested that we should take into account differences in company consents in this measure (for example, by setting a less challenging target for consents or by otherwise focusing the incentive on unconsented pollution incidents).
- **Impact of receiving waters:** Southern Water indicated that the sensitivity<sup>7</sup> and dilution factors<sup>8</sup> of receiving waters will affect the relative consumer impacts of observed pollution incidents.

## 5. Sewer flooding

Respondents highlighted two types of company-specific factors that could affect performance on sewer flooding. We describe these below.

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<sup>7</sup> The sensitivity of receiving water reflects ecological status and the potential for discharges to adversely impact on that status.

<sup>8</sup> The dilution factor is a relative measure of the volume of the sewage discharge compared to the receiving body of water taking into account the rate at which the receiving water is flowing at the point of discharge.

- **Environmental, social and legacy asset factors in the North West:** United Utilities stated that the North West suffers from a unique combination of environmental, social and legacy asset factors that contribute to their current performance level. These factors include the amount and intensity of rainfall, sewer type and age, and property type and density. The company stated that the unique combination of these factors acting together contributes to its relative performance.
- **Urbanisation:** two companies (Thames Water and United Utilities) stated that companies in highly urbanised areas experience a greater degree of sewer flooding and suggested that this should be taken into account in our approach.

### A2.3.3 Our final determinations

Some representations questioned whether the comparative analysis would be applied to the enhanced companies (South West Water and Affinity Water) as well as the non-enhanced. Having considered these representations, we have decided not to change the determinations for the enhanced companies to reflect the comparative analysis. We continue to consider that it is appropriate to accept the enhanced companies' business plans in the round. A decision to the contrary could undermine the incentive properties of the possibility of achieving enhanced status, weakening the incentive on all companies to produce the highest quality business plans.

In addition, both enhanced companies have recognised that even though their financial incentives are not being changed, they face reputational incentives to improve their performance in areas where they are not yet delivering UQ performance. The enhanced companies are continuing to engage with their CCGs on how they will track performance against the comparative measures during the period, and both have recognised the reputational impacts in the latter years of the price control if their performance is below UQ.

In the remainder of this section, we outline our final determinations in the three key areas highlighted by representations on comparative analysis for the non-enhanced companies.

- Principles of the comparative analysis.
- Practical application of the comparative analysis.
- Company-specific factors.

We provide a summary below.

- **Principles of the comparative analysis:** we have retained our basic approach of applying comparative analysis to a sub-set of the companies' PC and ODI proposals as outlined in our August draft determinations. This approach is consistent with how we have set cost allowances and allows additional headroom, recognising that the outcomes framework is new. We consider that the approach is also consistent with customer priorities and ensures that companies are incentivised to drive efficiency and innovate. The use of benchmarking measures to drive performance is particularly important as customers currently do not have the ability to switch their water supplier. It is also important to highlight that, where customers expressed their views to specific companies during the preparation of business plans, they generally did so without a full understanding of performance across the sector. We discuss this area in more detail in section A2.3.3.1.
- **Calculating UQ performance:** in response to respondents' views we have made three changes to the calculation of UQ performance to improve the definition of some measures (sewer flooding and water quality contacts) and improve consistency in the calculation of UQ across all the five relevant measures. We discuss this area in more detail in section A2.3.3.2.
- **Introducing deadbands:** we have introduced limited deadbands from 2017-18 to recognise that there may be an element of volatility of performance that lies outside the control of even efficient management. To ensure that only an efficient level of variability of performance is taken into account, we have set the deadbands from 2017-18 at the UQ level of variance across the affected companies<sup>9</sup>. We discuss this area in more detail in section A2.3.3.2.
- **Glide-path to UQ:** we have maintained the length of the glide-path to UQ proposed in our draft determinations, which anticipates that all companies should be incentivised to reach historical UQ levels of performance in these areas by 2017-18. In the event that this level of performance cannot be achieved, then it is appropriate that customers are refunded some of the money that has been paid to companies. We discuss this area in more detail in section A2.3.3.2.

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<sup>9</sup> Variance calculated as the difference between average performance over the three years from 2011-12 to 2013-14 and the best performance within that period.

- **Company-specific factors:** we did not adjust the calculation of performance commitments or deadbands to reflect any company-specific factor as the factors presented by respondents were not sufficiently material, materially different for specific companies and outside their managements' control. On balance, companies have more control than customers on these areas. For example, although companies may not have complete control on some factors relating to water quality, to manage the contacts their customers make on water quality, companies can proactively manage their customers and inform them about how various factors may affect the appearance of water. It is also important to highlight that we would not necessarily expect all companies to achieve an UQ level of performance within the period. Companies that do not achieve this performance will pay back money to their customers through incentive penalties at a rate consistent with the evidence on what customers are willing to pay. We discuss this area in more detail in section A2.3.2.3.
- **Supply interruptions for Dŵr Cymru:** we applied our regulatory judgement to introduce a reward for the incentive for supply interruptions for Dŵr Cymru, in order to strengthen the incentive on the company to make significant improvements in its performance in this area up to and beyond historical UQ levels. We discuss this area in more detail in section A2.3.2.3.

#### **A2.3.3.1 Principles of the comparative analysis**

Following consideration of representations on the principles of applying comparative analysis, our basic approach remains unchanged from that outlined in our August draft determinations.

Our approach is designed to protect customers. Although the PR14 approach of developing outcomes has had many advantages, it remains the case that customers are often unable to compare companies' performance and will not have understood how cost allowances were set. It is important that cost allowances and outcomes are calibrated to ensure that the overall efficiency challenge is appropriate on companies.

In addition, our approach is consistent with customer priorities and ensures that companies are incentivised to drive efficiency and innovate. Below we outline these arguments in more detail.

## **Our approach is consistent with how we have set cost allowances and allows additional headroom, recognising that the outcomes framework is new**

The proposed approach is consistent with our statutory duties as it protects customers' interests and promotes efficiency. Efficiency must be assessed against both outcomes delivered for customers and the costs incurred to deliver them. Where a company does not deliver an outcome it is appropriate that money is refunded to customers. Equally, if customers have expressed a willingness to pay for performance, it can be appropriate for companies to be rewarded.

In our draft determinations, we incentivised companies to deliver UQ levels of service in the five outcome areas where we applied comparative analysis. We calculated this UQ level based on historical performance. Our approach to allowing wholesale costs has similarly incorporated an efficiency challenge derived from historical UQ levels of cost efficiency.

Both the approaches to setting UQ levels for wholesale costs and PCs subject to comparative analysis are static and based on historical data and do not dynamically adjust during the price control period to take into account improvements over time. In addition, in recognition that outcomes are a new area, as a transitional step we have on this occasion allowed a two year period during which deadbands protect companies against incentive penalties for performance below UQ.

Therefore, the combination of the methodology used to calculate UQ performance and the two-year glide-path provides scope for catch up and outperformance over the period.

Our approach to setting totex baselines<sup>10</sup> has applied the following principles.

- We expect companies that have lagged behind their peers in cost efficiency in the past to be capable of catching up to historical UQ efficiency levels by 2015.
- Companies that are already relatively efficient also have the opportunity to earn additional rewards from continued improvement, through the totex outperformance incentive.

We have applied consistent principles to the outcomes subject to comparative benchmarking.

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<sup>10</sup> As discussed in [‘Policy chapter A3 – wholesale water and wastewater costs and revenues’](#).

- Customers should not bear additional costs for companies to catch up to performance levels already achieved by UQ companies.
- Companies should give some money back to their customers if they do not achieve UQ level of performance to compensate for the lower level of service provided.
- It is appropriate to reward those who outperform historical UQ performance in areas where such outperformance is clearly valued by customers.

Where companies plan to deliver large new enhancements that we cannot benchmark with historical industry cost data, we have amended the cost targets to fund additional efficient expenditures, and reflected the variations in specific associated ODIs to safeguard customers as appropriate.

Our approach to setting targets for PCs that can be benchmarked is therefore entirely consistent with our approach to allowing wholesale costs.

### **The approach is consistent with customer priorities**

Customers of most companies highlighted all our proposed outcomes subject to comparative analysis as priorities. Therefore, we were able to establish a large enough evidence base for commitments and performance from business plans in these areas to propose targets based on benchmarking.

In such cases, there are risks from basing our safeguards exclusively on evidence presented by individual companies from engagement with individual sets of customers. Where customers expressed their views to specific companies during the preparation of business plans, they generally did so without a full understanding of performance across the sector.

In many cases, however, companies have not provided evidence of new engagement that fully takes into account the interventions resulting from the comparative analysis we proposed in the draft determinations. We recognise that this was, in part, constrained by the timeline for developing the new outcomes framework, but given these constraints we must place more weight on sector-wide information in making our final determinations in these specific areas.

Companies' regular transparent reporting of their outcome delivery achievements during 2015-20 will help to improve engagement on future business planning.

Given the considerations above, we have maintained our basic approach for comparative analysis in our final determinations.

### **A2.3.3.2 Practical application of the comparative analysis**

In this section, we set out our final determinations with respect to the practical application of the comparative analysis in the following three areas.

- Calculating UQ performance.
- Introducing deadbands.
- Glide-path to UQ.

#### **Calculating upper quartile performance**

Following our review of representations and of the UQ calculation, we have intervened in the following areas.

- **We have introduced a more consistent approach to deriving UQ targets across all measures.** In our draft determinations, we used different approaches to averaging when calculating the UQ on supply interruptions and pollution incidents. Following further consideration as a result of representations received, in our final determinations we have introduced a more consistent approach to deriving the UQ targets across all comparative measures<sup>11</sup> by averaging historical performance of the companies across the same three years (2011-12 to 2013-14). The table below illustrates the impact of this refinement in our approach for final determinations.

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<sup>11</sup> Excluding leakage, where no UQ benchmarking was applied.

**Table A2.4 Change in UQ from draft determinations to final determinations (annual measures)**

| Measure <sup>12</sup>    | Units               | UQ – draft determinations proposal | UQ – final determinations |
|--------------------------|---------------------|------------------------------------|---------------------------|
| Interruptions            | Min/property        | 10                                 | 12                        |
| Pollution incidents      | No/1,000km          | 41                                 | 42                        |
| Water quality contacts   | Rate per 1,000 pop. | 1.22                               | 1.23 <sup>13</sup>        |
| Water quality compliance | MZC %               | 99.97                              | No change                 |

- **We have adjusted the measure we have used to calculate UQ for sewer flooding.** In our draft determinations, we used a composite measure to include incidents driven by lack of capacity on the network and incidents due to other causes (for example, blockages). The element used for incidents driven by lack of capacity could contain an element of double counting. Therefore, as Northumbrian Water suggested, we have used the serviceability measure for flooding due to overload sewers. This approach eliminates the risk of double counting and allows the UQ to be calculated across three years, consistent with other measures.
- **We have updated the definition of the measure used to calculate UQ for water quality contacts.** Some companies excluded certain types of water quality contacts from their performance measures. In our draft determinations, we did not fully reflect some of these exclusions in the UQ calculation and we have altered the measure used in the UQ calculation to reflect these exclusions. This ensures a fully comparable metric is used. We have applied this adjustment only for the purposes of the UQ calculation. We have not changed the definition of the metrics proposed by different companies.

In addition to the areas outlined above, we have also identified an error in the calculation of the ‘supply interruption’ measure for Bristol Water in our draft determinations. Bristol Water’s proposed measure only included unplanned

<sup>12</sup> We do not show the updated UQ for sewer flooding as we have introduced an updated measure (as discussed below).

<sup>13</sup> We have identified a minor error in the calculation of UQ at Draft Determination. The correct UQ level for WQ contacts is 1.23.

interruptions. Our calculation of the overall UQ was unaffected by this as we used companies' historic KPI data which was for planned and unplanned interruptions. However, when the UQ level was then applied to the individual company measures to determine the upper quartile equivalent performance, an incorrect adjustment was made for Bristol Water. This meant that Bristol Water was incorrectly identified as UQ in the draft determinations.

We have intervened to correct this error, applying the performance levels and deadbands necessary to give upper quartile equivalent performance on the measure chosen by Bristol Water. We provide further detail on the changes to the incentive as a result of this intervention in the company-specific appendix for Bristol Water.

### **Introducing deadbands**

Companies provided evidence that there is some natural volatility in performance as a result of factors beyond management control even when average performance has reached historical UQ levels.

Such influences should imply volatility around a central expected annual estimate, the financial impacts of which are more likely to net off where incentives have penalties and rewards without deadbands. In these final determinations we have intervened to remove reward deadbands that were set at levels of service better than UQ for companies not operating at UQ levels.

However, for penalty only incentives there is a greater risk of a distorting effect, with the potential for companies to be penalised for factors beyond their control without any compensating rewards even when average annual expected performance had reached historical UQ levels.

Therefore, in these final determinations we have introduced limited deadbands beyond 2017-18 for non-enhanced<sup>14</sup> companies not operating at UQ levels that have such penalty only incentives on areas subject to comparative analysis.

To ensure that only an efficient level of variability of performance is taken into account, we have set the deadbands from 2017-18 at the UQ level of variance across the affected companies<sup>15</sup>.

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<sup>14</sup> As we explained in the introduction to section A2.3.3, we did not apply the comparative analysis to the enhanced companies as we consider that it is appropriate to accept the enhanced companies' business plans in the round in order to maintain the incentive on companies to produce the highest quality business plans. As a result, the limited deadbands were applied only to the non-enhanced companies.

The table below illustrates the impact of this intervention.

**Table A2.5 Deadband in final determinations**

| Measure <sup>16</sup>                | Units               | Upper quartile <sup>17</sup> | Deadband from 2017-18 <sup>18</sup> |
|--------------------------------------|---------------------|------------------------------|-------------------------------------|
| Interruptions                        | Min/property        | 12                           | 2                                   |
| Pollution incidents                  | No/10,000km         | 42                           | 6                                   |
| Water quality contacts <sup>19</sup> | Rate per 1,000 pop. | 1.23                         | 0.06                                |
| Water quality compliance             | MZC %               | 99.97                        | 0.02                                |

For example, a company proposing a PC (with a penalty only ODI) at or worse than UQ for pollution incidents from 2017-18, has a deadband of six incidents/10,000 km. Therefore, for the years from 2017-18 to 2019-20, the company will start incurring a financial penalty with a performance of 48 incidents/10,000 km. This is calculated as the PC level (in this case the UQ PC of 42 incidents/10,000 km) plus the deadband (six incidents/10,000 km).

In general, we have not intervened on deadbands proposed by companies performing at UQ levels. However, in order to ensure consistency with companies at or worse than UQ we have applied two interventions where necessary. Firstly, where the company proposed a penalty deadband, such that it could deteriorate to a level worse than UQ without being penalised, we have intervened such that penalties will be incurred for any performance worse than UQ.

Secondly, for companies proposing performance better than UQ with penalty only incentives that have deadbands smaller than those being applied to companies performing worse than or at UQ, as shown in table A2.5, we have intervened to

<sup>15</sup> Variance calculated as the difference between average performance over the three years from 2011-12 to 2013-14 and the best performance within that period.

<sup>16</sup> The proposed deadband does not apply to water quality contacts and sewer flooding as no company performing worse than UQ has proposed penalty only incentives in this area.

<sup>17</sup> Includes the adjustments presented in table A2.4.

<sup>18</sup> The proposed deadband applies from 2017-18 when the proposed UQ target applies. The other interventions on deadbands before 2017-18 (to provide temporary protection against penalties) remain as proposed in draft determinations.

<sup>19</sup> The proposed UQ level and deadband have been adjusted for companies proposing non-standard measures, to ensure comparability.

include a penalty deadband of the same size. Where relevant we have applied the deadband to their proposed PC. For example, a company proposing a supply interruptions PC of nine minutes per property for each year from 2017-18 to 2019-20 will start incurring financial penalties with a performance of 11 minutes per property in one of those years. This is calculated as the PC level (in this case the company's proposed PC of nine minutes per property) plus the deadband (two minutes per property).

### **Glide-path to UQ**

We consider that a glide-path to UQ remains appropriate recognising that this is a new area. A two year glide-path balances the need to incentivise companies to deliver UQ levels of service with the challenges some companies may face in catching up to this threshold.

We have considered representations stating that our proposed duration of the glide-path for companies to achieve historical UQ levels of performance at draft determinations was insufficient.

Not all companies made such representations: companies typically responded positively to our draft determinations challenge and in their own representations assumed catch-up by the middle year of the control period (2017-18) as we proposed.

Therefore, given the variety of responses and the evidence that other companies have already achieved such performance levels, we do not propose a generalised change to our proposal in the draft determinations for the final determinations, as there is insufficient evidence that this would be in customers' interests.

We have however considered case by case representations where companies have provided evidence of particular extenuating circumstances – discussed in the next section. This is a similar approach to our consideration of company evidence in relation to special cost factors in assessing allowed wholesale and retail costs, via company-specific 'deep dives'.

Following publication of our draft determinations, we published working documents that set out the approach used to apply the comparative analysis. The spreadsheets provided details of the data sources and calculations made, and how the observed upper quartiles were translated into upper quartile equivalent performance for each

company<sup>20</sup>. We will publish updated spreadsheets setting out the revised calculations used in these final determinations on our website after the publication of our final determinations.

### **A2.3.3.3 Company-specific factors**

As discussed in the previous section, in their representations, some respondents suggested that when we set UQ targets at draft determinations we did not account for factors specific to individual companies that are beyond companies' control and materially impact their performance.

We reviewed the specific factors suggested by respondents, and we assessed them against three criteria. We have used criteria aligned with those against which we have assessed evidence that efficient wholesale and retail costs are not represented in our models based on historical industry benchmarks (cost thresholds and average cost to serve – 'ACTS'). The three criteria were as follows.

- Is the factor highlighted a material driver of performance?
- Is the factor outside management control?
- Does the factor impact the company (or companies) in a materially different way to other companies?

We discuss below our key findings on the company-specific factors raised in representations and our final determinations in this area.

### **Key findings**

None of the evidence on company-specific factors that we reviewed was clearly sufficient to pass all three of our assessment criteria. The table below shows the results of our assessment against the three criteria outlined above. Within the table, green indicates the criterion was clearly met; amber indicates that the assessment was inconclusive; red indicates the criterion was not met.

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<sup>20</sup> [http://www.ofwat.gov.uk/pricereview/pr14/pr14publications/prs\\_web20141008pr14uq](http://www.ofwat.gov.uk/pricereview/pr14/pr14publications/prs_web20141008pr14uq)

Table A2.6 Assessment of company specific factors on areas subject to comparative analysis

| Comparative area       | Representation                                  | Companies making representations |          |                     |                      | Assessment         |
|------------------------|-------------------------------------------------|----------------------------------|----------|---------------------|----------------------|--------------------|
|                        |                                                 |                                  | Material | Outside mgt control | Materially different | Overall assessment |
| Supply interruptions   | Population differences                          | WSH                              |          |                     |                      | Fail               |
|                        | Mains length per customer                       | ANH, TMS, WSH, WSX               |          |                     |                      | Fail               |
|                        | Interconnectivity                               | WSH, SES, WSX                    |          |                     |                      | Marginal           |
|                        | Chalk and iron deposits                         | SES                              |          |                     |                      | Fail               |
|                        | Night time work                                 | SES                              |          |                     |                      | Fail               |
|                        | Other specific circumstances                    | TMS                              |          |                     |                      | Fail               |
| Water quality contacts | Source water types                              | WSH, YKY, UU                     |          |                     |                      | Marginal           |
|                        | Ease of contact                                 | WSX                              |          |                     |                      | Fail               |
|                        | Use of multiple sources of water in grid system | YKY, UU                          |          |                     |                      | Fail               |
|                        | Investment timescale for a specific scheme      | UU, DVW                          |          |                     |                      | Fail               |
|                        | Milky appearance of water                       | YKY                              |          |                     |                      | Fail               |
|                        | Water chemistry                                 | WSX                              |          |                     |                      | Fail               |
|                        | Customer pipework                               | WSX, YKY                         |          |                     |                      | Fail               |

| Comparative area                | Representation                                                          | Companies making representations |          |                     |                      | Assessment         |
|---------------------------------|-------------------------------------------------------------------------|----------------------------------|----------|---------------------|----------------------|--------------------|
|                                 |                                                                         |                                  | Material | Outside mgt control | Materially different | Overall assessment |
| <b>Water quality compliance</b> | A more stringent lead standard                                          | BRL, PRT, SES, TMS, YKY          |          |                     |                      | Fail               |
|                                 | Investment timescale for a specific scheme                              | DVW, UU                          |          |                     |                      | Fail               |
|                                 | Metaldehyde in raw water                                                | SES, YKY                         |          |                     |                      | Fail               |
|                                 | Disproportionate risk for small zones                                   | SES, SBW, WSH                    |          |                     |                      | Fail               |
|                                 | Issues with mean zonal compliance                                       | SES, YKY                         |          |                     |                      | Fail               |
|                                 | Other uncontrollable risks to performance                               | WSX, YKY, WSH                    |          |                     |                      | Fail               |
| <b>Pollution incidents</b>      | Level of self-reporting                                                 | SRN, ANH                         |          |                     |                      | Fail <sup>21</sup> |
|                                 | Differences in consents                                                 | ANH                              |          |                     |                      | Fail               |
|                                 | Impact of receiving waters                                              | SRN                              |          |                     |                      | Fail               |
| <b>Sewer flooding</b>           | Combination of company-specific factors in the North West <sup>22</sup> | UU                               |          |                     |                      | Fail               |

<sup>21</sup> We have reviewed the evidence available and this failed our tests of materiality and materially different. Our analysis demonstrated that there is not a strong correlation between the level of self-reporting and the number of incidents; therefore we have not made any allowances in our comparative assessment.

<sup>22</sup> As noted in section A2.3.2.3, United Utilities stated that it is impacted by a set of factors including amount of intensity of rainfall, sewer type and age and property type and density. We did not find evidence that the impact of these factors was materially different for United Utilities to other companies.

| Comparative area | Representation | Companies making representations |          |                     |                      | Assessment         |
|------------------|----------------|----------------------------------|----------|---------------------|----------------------|--------------------|
|                  |                |                                  | Material | Outside mgt control | Materially different | Overall assessment |
|                  | Urbanisation   | TMS, UU                          |          |                     |                      | Marginal           |

**Key:**

ANH = Anglian Water; BRL = Bristol Water; DVW = Dee Valley Water; SBW = Sembcorp Bournemouth Water; SES = Sutton & East Surrey Water; SRN = Southern Water; TMS = Thames Water; UU = United Utilities; WSH = Dŵr Cymru; WSX = Wessex Water.

Green indicates the criterion was clearly met; amber indicates that the assessment was inconclusive; red indicates the criterion was not met.

However, where the case for making changes to our draft determinations proposals was marginal (that is, none of the factors assessed was rated as a clear 'fail') we also considered whether it would be appropriate to amend our proposals based on regulatory judgement. To inform these more judgmental decisions for our final determinations, we also considered the following questions.

- Does the decision drive the best outcome for customers today?
- Does the decision drive the best outcome for customers tomorrow?
- Does the decision promote the credibility of the regulatory framework?

The three areas that we considered in more detail were the:

- impact of urbanisation on sewer flooding;
- impact of source water types on water quality contacts; and
- impact of interconnectivity of network on supply interruptions.

As a result of this further assessment, we intervened to introduce a reward for the incentive for supply interruptions for Dŵr Cymru.

We discuss our final determination assessments in the three marginal areas in more detail below.

### **Impact of urbanisation on sewer flooding**

Two companies (Thames Water and United Utilities) made representations in this area. We summarised these representations in section A2.3.2.3.

The level of urbanisation of an appointee's area is outside management control. However, we did not have conclusive evidence demonstrating that this issue is material for the performance measures concerned, or that it materially impacts some companies differently from others.

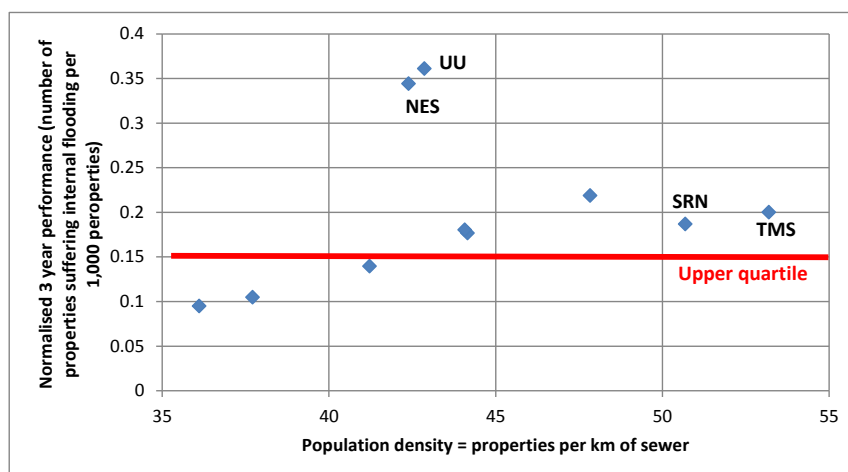
As the decision was marginal in this area, we analysed in more detail the relationship between population density and sewer flooding, based on data that the companies provided in their responses to our draft determinations.

Figure A2.1 shows the results of this further analysis. We could not find evidence demonstrating a clear relationship between population density and sewer flooding incidents.

In particular, the chart shows that United Utilities is not an outlier for population density and has a significantly higher number of incidents than other companies.

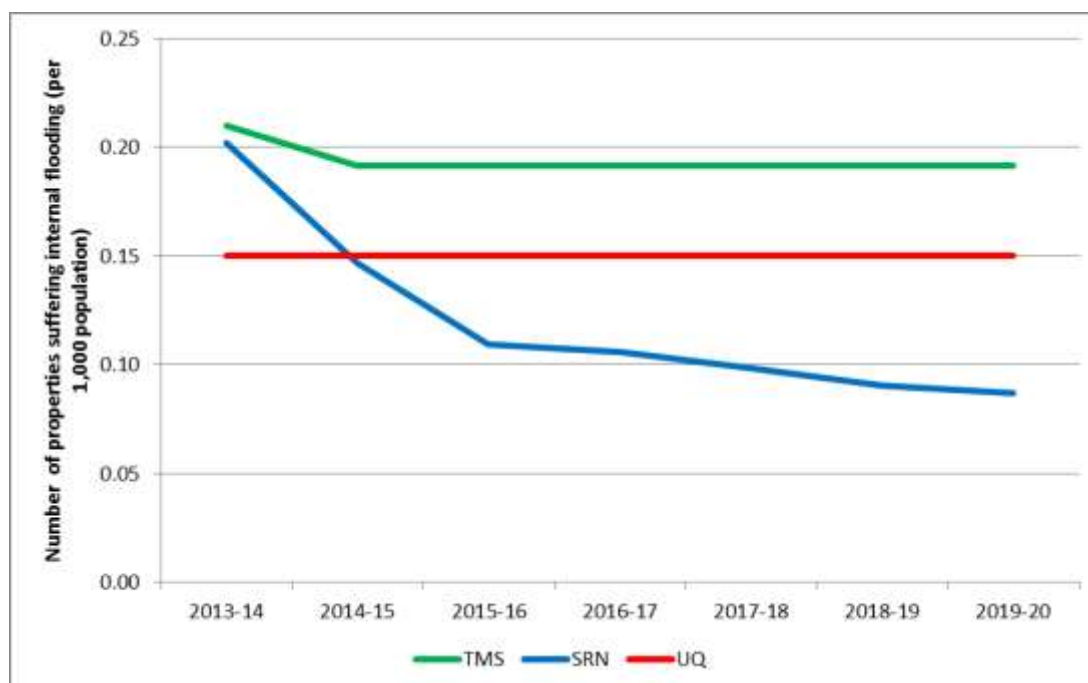
In addition, Southern Water proposed a very significant improvement (41% over the price control period) in their sewer flooding performance, despite having a comparable level of population density to Thames Water. This suggests that the UQ challenge is achievable for companies that have high population density. Figure A2.2 below shows the proposed performance level in this area for Thames Water and Southern Water.

**Figure A2.1 Analysis of relationship between population density and sewer flooding<sup>23</sup>**



<sup>23</sup> The figure shows the UQ level for sewer flooding adjusted for the interventions on the UQ calculation described in section A2.4.3.2.

**Figure A2.2 Sewer flooding performance proposed by companies in response to our draft determinations – Thames Water and Southern Water<sup>24</sup>**



Based on the analysis described above, we did not adjust the proposed UQ measure to reflect this factor using company-specific data.

### Impact of source water types on water quality contacts

Three companies (Dŵr Cymru, Yorkshire Water and United Utilities) made representations on the impact of source water types on water quality contacts. We summarised these representations in section A.2.2.2.

Overall, the evidence in this area was inconclusive. In particular, we could not find evidence that some companies are affected by this issue in a materially different way to others.

We reviewed the evidence provided on the impact of differences in the type of source water available by region, and in particular on the presence of peaty upland

<sup>24</sup> The figure shows the UQ level for sewer flooding adjusted for the interventions on the UQ calculation described in section A2.3.3.2. We have presented the proposed PC levels as a measure of number of properties so that they can be comparable with the proposed UQ level.

raw water sources in some companies' areas. However, respondents did not clearly evidence and quantify the impact of these factors on water quality contacts.

Therefore, we reviewed in more detail the proposed performance of some of the companies that are affected to some extent by the factor of peaty upland source water. Table A2.7 shows the 2013-14 performance and the companies' own proposed PCs for this measure, as outlined in their representations.

**Table A2.7 Actual and proposed performance<sup>25</sup> on water quality contacts (companies impacted by peaty upland raw water sources)**

| Companies affected by peaty upland sources | 2013-14 performance (contacts per 1,000 pop.) | Proposed performance 2017-18 | Proposed performance 2018-19 | Proposed performance 2019-20 |
|--------------------------------------------|-----------------------------------------------|------------------------------|------------------------------|------------------------------|
| Dŵr Cymru                                  | 3.20                                          | 2.25                         | 2.25                         | 2.25                         |
| Yorkshire Water                            | 2.74                                          | 2.13                         | 2.08                         | 2.03                         |
| United Utilities                           | 2.10                                          | 1.81                         | 1.72                         | 1.63                         |
| Northumbrian Water                         | 2.57                                          | 1.70                         | 1.70                         | 1.70                         |
| Severn Trent Water                         | 1.67                                          | 1.23                         | 1.23                         | 1.23                         |

Although two of these five companies – Northumbrian Water and Severn Trent Water did not make representations in this area, they are also affected to varying degrees by these same issues. However, Severn Trent Water proposed a significantly better level of performance than the other companies, and was projecting performance at close to the UQ level (1.23 contacts per 1,000 population) by the end of the period. The overall picture shows substantial variation in performance levels across the five companies.

As the initial assessment was marginal, we considered whether we needed to change our draft determination proposals by, for example, adjusting the underlying UQ target or introducing deadbands for some affected companies.

We concluded that incentivising companies to achieve a uniform UQ performance level, as proposed in our draft determinations, remains appropriate for our final determinations for the following reasons.

<sup>25</sup> PCs for United Utilities and Northumbrian Water have been adjusted to ensure comparability, as some components were excluded from their definition.

- This approach better protects current customers, as it incentivises companies to be proactive in addressing complaints (for example, by informing their customers of the causes of issues and how these are being addressed).
- This approach protects future customers, as they will expect to benefit from a better level of service in the future. The proposed target incentivises companies to stretch their performance to an historical UQ level of service.
- As we have conflicting evidence on how this factor specifically impacts the measured performance of companies, applying a different target for a given sub-set of companies based on incomplete evidence may undermine the credibility of the regulatory framework.

Therefore, based on the analysis described above, we did not adjust the proposed UQ measure in our draft determinations to reflect this company-specific factor in our final determinations.

### **Impact of interconnectivity of network on supply interruptions**

Three companies (Dŵr Cymru, Sutton & East Surrey Water and Wessex Water) made representations in this area. We have summarised these representations in section A2.3.2.

Companies provided varying degrees of evidence in support of their representations in this area. The evidence provided by Sutton & East Surrey Water and Wessex Water failed the assessment (and in particular failed the criteria of materiality and materially different impact).

Dŵr Cymru provided some supportive qualitative evidence that the limited connectivity of their network may impact their measured performance on supply interruptions. In particular, they showed that zones with a single source of supply tend to have a worse performance on supply interruptions than zones with multiple sources of supply. Dŵr Cymru also showed that they have more zones than other companies, and that these zones are smaller.

The evidence provided did not fully satisfy our criteria of materiality and materially different impact. In particular, Dŵr Cymru did not show that they have more zones with a single source of supply than other companies. In addition, the data provided by the company showed that Southern Water and Dee Valley Water have similar sized zones and are proposing to achieve UQ performance. Sutton & East Surrey Water also has similarly sized zones and is proposing a performance of 15 minutes

per property by the end of the period (against the updated UQ level of 12 minutes per property).

In its response to the challenge proposed in our draft determinations, the company proposed a significant improvement in its supply interruptions over the period, relative to its May business plan proposals. However, the proposed gap to the historical UQ target proposed in our draft determinations remained significant (even after taking into account the sector-wide adjustment to the UQ calculation we have made for our final determinations, discussed in section A2.3.3.2).

In light of the evidence that companies provided in this area, we concluded that it would not be appropriate to adjust the level of UQ incentive as the reliability of supply is clearly an area of great importance to customers. However, we recognise the remaining gap that Dŵr Cymru faces, given its starting position and its updated proposals for addressing this performance area, and considering the qualitative evidence of the impact of interconnectivity factors provided by the company. We have therefore concluded that it is appropriate to introduce a reward to strengthen the incentives on the company to make significant improvements in its performance up to and beyond historical UQ levels over the next period. We have reached this decision for the following reasons.

- Maintaining a challenging UQ target in this area, consistent with that in place for other companies, is best for customers today, as the company is incentivised to deliver significant performance improvements. The potential rewards for achieving improvements more quickly than it proposed are justified by the earlier benefits of improved supply reliability that customers would enjoy as a result.
- Customers will then also benefit from a better level of service in the future. Introducing a contingent reward for earlier achievement of the performance improvement provides further, stronger incentives on the company to improve its performance and, where possible, to outperform the UQ level of services.
- As we do not have clear evidence on the extent that the interconnectivity factor impacts any company in a specific, materially different way, providing less challenging incentives for any company (for example, by adjusting the UQ target itself, using inconclusive evidence) may undermine the credibility of the wider regulatory framework.

Therefore, consistent with these considerations, we did not adjust the proposed UQ measure to reflect this company-specific factor. However, we have introduced a specific reward for performance beyond UQ for Dŵr Cymru.

## **A2.4. Company-specific outcome delivery incentives**

As explained in the introduction, our final methodology statement allowed companies considerable flexibility to develop new and innovative outcomes that reflected the needs of their customers. Apart from two outcomes (SIM and leakage), we did not prescribe the outcomes that companies should deliver alongside their relevant statutory duties and licence obligations.

Companies embraced this flexibility in preparing their business plans, developing bespoke sets of incentives. Given the nature of these bespoke incentives, we developed a company-specific approach to assessment based on the principles set out in our final methodology statement.

In section A2.1.2, we summarised the range of benefits that moving to an outcomes approach should deliver for customers. To ensure that these benefits are realised, we have challenged companies to focus on what customers want and are willing to pay for and to demonstrate accountability for the future delivery of these priorities.

The focus on customer priorities has also been an important consideration for the approach we have taken to the assessment of company-specific outcomes proposals. Outcomes and the associated PCs and incentives are of fundamental importance to what will be delivered in future. They also represent an important part of a new and innovative approach to price controls and so inevitably there are some potential uncertainties and risks arising from the first use of outcomes. The combination of importance and newness means that in order to ensure that customers are protected, it is important for this price control to thoroughly assess the outcomes proposed.

At the same time, we have been very conscious of not undermining the principles that companies should have clear accountability for future delivery and that they should reflect what their customers value most. The assessments of outcomes that we have made throughout the different stages of the price control have focused primarily on the links to customers and checking that the configuration of the PCs and incentives shows companies delivering genuine efficiency for their customers. There has been only very limited focus on requiring companies to include PCs in specific areas.

During the RBR, detailed checks were made on the quality of engagement with, and evidence from, customers and CCGs, and the way in which the other stakeholders represented on the CCGs had been listened to. We checked that the customer

priorities and evidence from the engagement on willingness to pay had been clearly reflected in companies' business plans. We also examined companies' plans to measure and assure data on how well they were delivering, and how they would report on their delivery to customers.

Our RBR tests also examined the detailed configuration of the PCs, and incentives and whether they met the requirements of the methodology. We checked that each individual PC was consistent with the company's track record, and showed an ambition to improve relative to other companies. We also examined the evidence provided that the PCs and incentives would represent value for money for customers and protect customers against potential under-delivery.

As we reported in April, there was generally a high level of performance against the RBR checks on the quality of engagement with customers. Results on the testing of the detailed configuration of PCs and incentives were somewhat mixed. So questions of detailed configuration were a key area in our feedback on the detailed RBR results, and in the additional guidance provided at an industry workshop and in bilateral meetings with companies. In May 2014, we published an information notice on revising outcomes proposals that identified a number of questions designed to help company management to critically appraise their own proposals prior to submitting their revised business plans<sup>26</sup>.

The information notice did not alter the requirements of the methodology. It provided further feedback on how companies should apply the methodology, and in particular, on seven themes that help to define the characteristics of an effective incentive. Tables A2.8 summarises these themes.

**Table A2.8 Themes from the outcomes information notice**

| Theme                      | Further explanation                                                                                                                    |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Are supported by customers | Incentives cover areas of importance to customers, that they are willing to pay any reward elements and that they can afford to do so. |
| Protect customers          | Penalties protect customers from under-delivery and companies are not better off by choosing not to deliver their commitments.         |

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<sup>26</sup> [IN14/08, '2014 price review – information for companies on revising their outcomes proposals'](#).

| Theme                           | Further explanation                                                                                              |
|---------------------------------|------------------------------------------------------------------------------------------------------------------|
| Promote efficiency              | Companies are targeting the most cost beneficial performance levels at reasonable cost.                          |
| ‘Stretch’ their performance     | Rewards are earned for innovation, or performance beyond expected levels.                                        |
| Are fair                        | Upside and downside risk is balanced as well as incentives not double-counting other incentive mechanisms.       |
| Are likely to apply in practice | Any deadbands are properly justified through variability in historical performance or external factors.          |
| Are transparent                 | Performance can be assured independently and used in ongoing discussions with customers relating to performance. |

The information note also reminded companies of the importance of providing high quality evidence to demonstrate that their proposed PCs and incentives would deliver against these themes. However, consistent with our approach throughout this price control, it was silent on the subjects covered by the PCs and incentives.

### A2.4.1 Our draft determinations

We set out our approach to the company-specific outcomes in the relevant draft determinations documents including in sections A2.2 and A2.3 of the outcomes technical appendix to our August draft determinations. The seven themes in the May information note formed the basis of our assessments which we described as bottom up analysis to reflect their detailed nature. We also looked in detail at the levels of performance proposed in the revised business plans in order to ensure that companies had not responded to the cost efficiency challenges in the RBR by seeking to cut back on what they delivered. As we emphasised in the May information note, we also placed particular focus on the theme around stretch in performance levels and we continued to raise challenges where we had concerns that the committed performance levels proposed did not demonstrate this stretch.

The draft determinations published in August covered 14 of the 16 non-enhanced companies. The enhanced companies (South West Water and Affinity Water) received their draft determinations in April. The other two non-enhanced companies (Northumbrian Water and Dŵr Cymru) received their draft determinations in May.

The approach to company-specific outcomes was the same for all companies, emphasising the principles that companies should have clear accountability for future delivery and that the proposed outcomes should reflect what customers value most. In line with the high quality of their business plans, there were relatively few interventions for the two enhanced companies. There were a number of interventions for the two non-enhanced companies who received their draft determinations in May. Although the timing was earlier than for the other non-enhanced companies, the process followed and the considerations reviewed were identical.

We carried out a two-stage assessment process after 14 of the 16 non-enhanced companies resubmitted their business plans at the end of June. After the first assessment, we provided additional feedback to companies and sought further clarification on specific details. In some cases, this resulted in the companies making further alterations to the details of their proposed PCs and incentives. We then carried out a second round of assessment and the results of this identified the need for the further interventions set out in the August draft determinations.

We intervened in a number of cases to safeguard customer interests by adjusting incentive parameters or changing the type of incentive where we identified risks arising from deteriorating performance. For example, in some cases where the proposed incentives were not exposing companies sufficiently to the value that customers place on performance not falling below historical levels, we adjusted the incentive parameters to introduce or increase penalties.

Our interventions were not however particularly widespread. We focused our assessments on the incentives that could have the largest penalties or rewards. Across the 14 non-enhanced companies that received a draft determination in August, there were proposals for around 90 PCs with potentially large incentives associated with them. Out of these, around 30 were subject to sector-wide comparative analysis covered in the previous section, and an additional 20 were covered by the checks on asset health discussed further below.

Of the remaining 40 incentives, we did make some interventions on around half. Half of these interventions concerned the range of performance levels over which the incentive applied rather than the incentive rate, for example, making sure that incentive penalties would apply if performance deteriorated. There were also a small number of instances in which the incentive rate was adjusted, or proposed rewards that had not been justified so which were removed. Finally, there were a small number of cases in which we rejected the proposal completely as they did not reflect outcomes for customers.

As part of our assessment of company-specific outcomes we also undertook checks to ensure that the set of incentives in our draft determinations provided sufficient protection against the risks of possible future under-delivery. We performed three such checks.

- Consistency of the proposed PCs with our proposals for allowed costs, and in particular the strength of future incentives where companies had claimed allowances for major schemes or special factors, to be funded by customers in future bills.
- Specific areas of company underperformance identified in the current 2010-15 control period, and the strength of proposed future incentives in similar areas for those companies.
- A wider review of the overall coverage and strength of the package of proposed future incentives relating to the reliability and condition of assets (sometimes called asset health) for all companies that would in future take over from the current regulatory serviceability measures relating to asset health.

In our final methodology statement, we confirmed that companies' business plans had to demonstrate that their outcome commitments are consistent with the interests of future as well as current consumers, particularly in relation to the long-term sustainability of the asset base. However, we did not prescribe a particular approach that companies had to adopt. Instead, we gave them the freedom to demonstrate ongoing asset health in the manner they considered most appropriate and in the best interests of their customers.

For some companies, the approach taken was to revise the historical approach used by retaining, or changing, the basket of metrics used in the legacy serviceability incentives. Other companies devised a completely new approach through a combination of:

- financially incentivised PCs;
- independent assurance; and
- key performance indicators.

Companies were also asked to determine the appropriate scale of penalty that would apply consistent with the methodology. Historically this has been based on the cost of maintenance work in a particular area. In line with the outcomes approach, companies could instead base future penalties on the results of willingness to pay surveys; generating penalties that are directly linked to the benefit lost to customers

for under-performance. Because of this, future incentive penalties can be either larger or smaller than the legacy incentives on serviceability.

Given the importance of asset health, we carried out a number of checks in this area at draft determinations, and made some interventions as a result. In particular, these checks focused on how well company proposals covered the metrics of most importance to customers and that companies that had underperformed in 2010-15 were proposing incentives that would continue to provide customers appropriate protection in the future.

We did not make any interventions to asset health penalties for WaSCs as a result of the consistency checks. However, we made some interventions to specific company proposals on elements of asset health as a result of other parts of the company-specific analysis.

In the case of the WoCs, the picture was much more variable. There were a number of companies where potential penalties were low (Dee Valley Water, Portsmouth Water and Sutton & East Surrey Water) and one (Bristol Water) where potential penalties were quite high. We made interventions for Dee Valley Water, Portsmouth Water and Sutton & East Surrey Water to strengthen the potential penalties.

In the case of Dee Valley Water, we introduced financial incentives on supply interruptions and in the event of non-delivery of a particular treatment works scheme (at a place called Legacy), as well as increasing the strength of incentives on mains bursts and leakage. For Portsmouth Water, we increased incentives across five asset health measures. This was because it had proposed measuring performance over five years but used annual incentive rates. For Sutton & East Surrey Water, we made changes to the structure of the company's incentive for water mains bursts to ensure appropriate penalties applied in the event of under-performance.

We did not intervene in Bristol Water's proposals, but asked the company to consider its proposed penalties in light of our analysis. As a result, Bristol Water proposed updated incentives that reduced the maximum exposure and removed sub-measures from its asset health baskets that were already covered in individual performance measures.

There is one final aspect of incentives on asset health which was subject to review. At the draft determinations, we intervened to adjust the circumstances under which Thames Water and Southern Water would incur their asset health incentives. In its June business plan, Thames Water had proposed that an incentive would only occur for performance assessed as 'marginal' if this occurred for two consecutive years. Southern Water proposed that asset health incentives would only be incurred for two

years of consecutive under-performance, regardless of the extent of the under-performance.

We intervened on both companies so that incentives would be incurred following any one year of poor performance. Since both companies were potentially going to be shortfalled for some elements of poor performance in the recent past, we were concerned that their proposed future incentives would allow poor performance to continue for several years into the future before any financial penalties occurred. We were concerned that this would not adequately protect customers and so intervened to make financial penalties apply sooner if the poor performance were to continue.

### **A2.4.2 Issues raised by representations**

The large number of comments reflected the bespoke nature of the outcomes packages that each company developed and the variety of specific interventions included in our draft determinations.

The majority of comments were from companies commenting on our interventions on their own incentive proposals. However, other stakeholder groups also submitted valuable representations, including:

- CCGs;
- CCWater;
- the Environment Agency;
- Natural England; and
- Natural Resources Wales.

Most non-company representations were broadly supportive of the interventions we proposed in our draft determinations. However, CCWater and the Environment Agency expressed some concerns about incentives with rewards and consistency across environmental compliance commitments respectively, which we consider in more detail below.

#### **A2.4.2.1 CCGs**

CCG representations on the company-specific incentives were limited to scheme-specific issues at an individual company level and are therefore summarised in annex 4 of the relevant company-specific appendices.

#### **A2.4.2.2 Environment Agency**

The Environment Agency welcomed our draft determinations on PCs from the majority of companies that targeted improvements in environmental compliance and a reduced number of pollution incidents. However, it expressed some concerns about inconsistencies in the definitions that different companies used in their business plans in setting proposed baselines and PCs for:

- pollution incidents;
- flood risk; and
- sewer flooding measures.

The Environment Agency sought clarification regarding reporting and monitoring arrangements for PC delivery between 2015 and 2020, particularly in relation to verification and data assurance for measures that would result in financial rewards and penalties for companies.

The Environment Agency also highlighted circumstances where the PCs did not meet its requirement for 100% compliance to standards on discharges from wastewater treatment works, its expectation of zero serious pollution incidents, and proposed that we make further interventions for inclusion in our final determinations.

Finally, the Environment Agency expressed concern about financial rewards being available to companies for meeting their statutory compliance obligations, which it considered to be inappropriate.

#### **A2.4.2.3 CCWater**

CCWater made representations based on customer research it had carried out in March 2014. This research implied that many customers oppose the principle of paying rewards for service outperformance. They also commented that customers may react negatively in the event that companies receive rewards for particular services and outcomes that many would expect a company to deliver as ‘a matter of course’ (for example, reducing leakage or sewer flooding). Similarly, CCWater commented that customers may also react negatively should rewards not correspond with ‘above average’ performance relative to historical or wider sector levels of service. It commented that financial rewards should only be awarded for sector-leading performance.

CCWater supported the intervention at draft determinations to remove rewards for pollution incidents, as customers would not support rewards (that is, paying higher

bills) while serious pollution incidents could still occur. However, it agreed that corresponding penalties should be retained.

#### **A2.4.2.4 Natural England**

Natural England's representations were limited to scheme-specific issues at an individual company level and are therefore summarised in annex 4 of the relevant company-specific appendices.

#### **A2.4.2.5 Natural Resources Wales**

Natural Resources Wales' representations for Dŵr Cymru, Dee Valley Water and Severn Trent Water were limited to comments, concerns or issues at an individual company level and are therefore summarised in annex 4 of the relevant company-specific appendices.

#### **A2.4.2.6 Drinking Water Inspectorate (DWI)**

The DWI did not submit a formal representation to our draft determinations, but we have taken account of its views as part of our ongoing dialogue.

#### **A2.4.2.7 Company representations**

Representations from companies:

- accepted our draft determination interventions;
- provided minor drafting clarifications or raised challenges to the accuracy of the calculations on incentive parameters;
- sought removal of our draft determination interventions and justified instead retaining the proposals in the revised business plans; or
- in a small number of cases, proposed alternatives to our draft determination interventions.

A number of companies made representations against some of the interventions arising from the additional consistency checks, especially where we had intervened to increase the scale of penalties for non-delivery. However, given the bespoke nature of the incentives concerned, the specific points made were typically bespoke in nature as well, and are therefore summarised in annex 4 of the relevant company-specific appendices.

### **A2.4.3 Our final determinations**

We welcome representations made by all stakeholders on our assessment of outcomes in draft determinations. We have considered all these representations in making these final determinations. Our assessment process focused on whether the changes requested or implied by the representations would act in customers' interests. The criteria used for our consideration of customers' interests were the same as at draft determinations, looking at:

- value for money;
- performance levels;
- protection for customers against under-performance; and
- the correct calibration of incentives.

As throughout the price control, we were very conscious of not undermining the principles that companies should have clear accountability for future delivery and that they should reflect what their customers' value most. Where required, we intervened to protect customers by ensuring that incentives would protect them against the risk of under-delivery, and that rewards could not be gained without exceeding customers' expectations where customers have indicated a willingness to pay for improvements and that outperformance is genuinely stretching.

#### **A2.4.3.1 Response to representations from stakeholders other than companies**

As discussed in the previous section, the Environment Agency expects all companies to have in place a plan to achieve 100% compliance with all necessary permits, and we expect business plans to include provision to ensure compliance with existing statutory requirements.

All companies have included compliance with discharge permits within their wastewater PCs.

Our review of the draft determination proposals with regard to discharge consent compliance confirmed that companies fall into three categories explained in the table below. We also outline our interventions at final determinations for each of these categories.

**Table A2.9 Interventions on PCs for discharge consent compliance**

| Category                                                                                         | Companies                                                            | What we did at final determinations                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Company proposed a committed performance level moving towards, or already at, 100%.              | Northumbrian Water<br>South West Water*                              | No intervention.                                                                                                                                                                                                                                                                                                                                                                  |
| Company proposed a committed performance level of less than 100% for the period 2015-20.         | Thames Water<br>Southern Water<br>Severn Trent Water<br>Dŵr Cymru    | We have adjusted the committed performance level to 100% from 2015-16.<br>We have not adjusted the companies' proposed penalty deadband thresholds and collars.                                                                                                                                                                                                                   |
| Company proposed monitoring compliance as part of a basket of measures, not as a stand-alone PC. | Anglian Water<br>United Utilities<br>Wessex Water<br>Yorkshire Water | We have intervened where there are specific numeric targets that are not 100% compliance. This applies to Anglian Water and Yorkshire Water.<br>Where there is no specific target, we have stated in the company-specific appendix that the company must meet the Environment Agency's expectation of 100% compliance by 2020. This applies to United Utilities and Wessex Water. |

**Note:**

\*South West Water was an enhanced company. As part of the final determination process, we considered whether an intervention was required to address this representation from the Environment Agency.

These interventions address the Environment Agency's representations as they introduce 100% compliance for all companies. In addition, they are consistent with the proposed approach on water quality compliance outlined in section A2.3.

We also considered the representation from the Environment Agency regarding the potential to earn rewards. We have intervened to ensure that rewards are not available for companies simply meeting their statutory obligations. In a number of cases, we have removed rewards and in others we have clarified with the company that the reward applies only to going further or faster than their statutory obligations require in order to address the point made by the Environment Agency.

In addition, the determination documents make clear that PCs and ODIs do not take the place of the companies' legal obligations as water or sewerage undertakers. It is each company's duty to carry out all the company's functions and obligations set out in the Water Industry Act 1991 (WIA91), other relevant legislation and its instrument of appointment within the funding package we have arrived at in making this determination. Outcomes and PCs will typically be underpinned by statutory duties, such as the general water supply duty in section 37 of the WIA91 and the general wastewater duty in section 94 of the WIA91. We expect companies to perform all of their functions in an economically efficient manner and companies should similarly seek to achieve their outcomes and specific PCs economically. If a company fails to carry out its obligations within the period 2015-20, it is open to us to take action before the next price review to protect the interests of customers.

We are also placing a strong emphasis on reporting and monitoring arrangements in 2015-20 and sought further assurance of companies' approach ahead of draft determinations. In each company-specific appendix to our final determinations we have summarised the companies' proposed approaches to reporting and monitoring arrangements. As indicated in the introductory policy chapter, we will publish further information on the reporting requirements on 9 February 2015, and explain how these will work alongside the outcomes reporting that companies will provide to their customers.

As discussed in the previous section, CCWater commented that customers may also react negatively should rewards not correspond with 'above average' performance relative to historical or wider industry levels of service. They commented that financial rewards should only be awarded for sector-leading performance.

We recognise that the idea of rewards is new in the water sector, and also that the linkage between rewards and the overall balance of risk and reward that contributed to companies accepting a reduction in the cost of capital is not a simple one.

We note that research conducted by companies has obtained some different results for example Dŵr Cymru carried out a second round of research with its customers which identified growing acceptance for the idea of rewards. We consider that this highlights the importance of the ongoing customer conversation in this area.

We agree with the challenges about rewards being earned through good performance. As we stated in our risk and reward guidance, an effective package of rewards and penalties will benefit customers by providing meaningful incentives to encourage the best service. The most effective incentives link financial returns to company performance and consumer experience. We consider that good management teams should not be rewarded solely on the basis of the allowed

weighted average cost of capital (WACC) and retail margins, but should also have the opportunity to earn additional rewards by being more efficient or by delivering higher levels of performance where this is valued by consumers. We consider that after the interventions made, the incentives where rewards are proposed do now meet these challenges.

We have made clear to companies throughout the price review process that they should only propose rewards for genuinely stretching performance and not for 'doing the day job'. Where necessary, we have intervened through both company-specific and comparative checks to ensure that any rewards reflect stretching performance. As discussed in section A2.3, a company will only be able to earn a reward in the areas where we have applied comparative interventions if it delivers performance which is at least as good as the industry UQ performance and meets statutory requirements. In addition, companies have calibrated their rewards so that they reflect what customers are willing to pay for the improved performance. We have intervened where this is not the case.

#### **A2.4.3.2 Consistency checks regarding allowed wholesale and retail costs**

In the past customers have been protected from non-delivery through mechanisms such as logging down and shortfalling. With these mechanisms no longer continuing we required companies to put forward a range of ODIs to protect customers from future under-performance. This includes ODIs to protect customers from the non-delivery of major schemes, with penalties to claw back totex funding where a company fails to deliver on business commitments that are supported by evidence of customers' willingness to pay.

Major schemes and special factor cost claims are important because both the costs and benefits being delivered for customers, and in some cases the environment, are significant. We have therefore undertaken checks in order to determine whether the incentives proposed by companies to replace the existing incentives provide adequate protection, both with respect to the totex funding and the benefits foregone if these projects are delayed or not delivered.

At draft determinations these checks identified a number of large projects with insufficient customer protection. We therefore intervened in a number of areas, either increasing the size of existing incentives to better reflect benefits foregone, such as on Severn Trent Water's Birmingham resilience ODIs, or introducing new PCs in relation to the large projects, such as for Dee Valley Water's Legacy treatment works, where existing ODIs did not provide sufficient protection.

There were no representations on the need for these additional incentives. Some companies made representations on the details of incentives for specific schemes. These are summarised in annex 4 in the company-specific appendices.

The details of major schemes and special factor claims have changed at final determinations given changes in wholesale cost thresholds. As a result, we have performed further coverage and consistency checks. We have also taken the opportunity to look in more detail at the structure of the incentives and the level of protection that they will provide to customers.

### **Creating incentives that are adequate to protect customers**

A key part of the outcomes approach is the focus on delivery for customers. ODIs based on the costs of delivery mean that in the (unlikely) event that a company fails to even attempt to deliver something, the company cannot profit from doing so. The combination of the ODI and the totex efficiency sharing mechanism mean that the company must return all of the costs to customers.

However, from a customer standpoint, under this approach companies would return the costs to customers, not the expected benefits. The outcomes and PCs are all about delivering what really matters as expressed by the customers themselves. If a scheme is not delivered, as a result of the benefits foregone, customers will suffer an important economic loss compared to the position that they expected to be in.

Therefore it is appropriate to base the incentive rates in the ODIs on the value that customers place on delivery. This means that in the event of non-delivery, customers receive some compensation for the benefits foregone as well as recovery of the costs.

At the same time as protecting customers against non-delivery, we also want incentives to continue to encourage companies to become more efficient, reducing costs and finding better ways to deliver the same thing. As a result, it is important both that the incentives remain proportionate and that where a company follows an alternative approach as a result of efficiency or innovation, it is not penalised for doing so.

We have balanced these considerations by developing three types of incentives to cover the different circumstances that may arise.

- **Penalties for non-delivery:** based where possible on full cost recovery and 50% of the expected whole life benefits<sup>27</sup>, with graduated penalties where delivery of less than 100% of the expected results is still of value to customers. The incentive applied for the Severn Trent Water Birmingham resilience scheme is an example of this approach.
- **Cost recovery for schemes no longer required:** some large schemes may no longer be required, for example due to a change in statutory requirements. In these circumstances, the incentive should ensure that costs are returned in full. However, if the company was required to return more than this, this would mean that the company was incentivised to deliver the scheme even if it was not in customers' interests for it to do so.
- **Penalties for delay:** incentives that apply from the date of scheme completion based on 50% of annualised benefits (or if the scheme is not cost beneficial 50% of annualised costs). Where possible, penalties are graduated to reflect the amount of the programme not delivered. Cost recovery is not required here since in the event that the delays were to continue, the eventual penalties for non-delivery would achieve the cost recovery necessary.

For the incentives regarding non-delivery, we will undertake an additional assessment at the point of application at the end of the price control (or at scheme completion after March 2020 for schemes not due to deliver until then). The assessment is necessary to determine the circumstances around non-delivery and the extent of non-delivery. Companies should expect that in the event that they cannot demonstrate substantive delivery of the benefits of a scheme, the penalties for non-delivery will apply unless they can demonstrate that they have delivered an alternative outcome that delivers greater benefit to customers, or that the statutory requirement driving the scheme has been removed.

For the incentives regarding delay, we will undertake an assessment at the end of the financial year of completion and, if necessary, at the end of every subsequent financial year until completion is achieved. Where a scheme is not due for completion until after the next price control, we will undertake an assessment to demonstrate that delivery is on track. If this cannot be demonstrated, penalties for expected delay may be incurred at this milestone.

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<sup>27</sup> For four schemes (Severn Trent Water's Birmingham Resilience and Elan Valley Aqueduct – EVA – Community Risk, Thames Water's Deephams sewage treatment works and Wessex Water's integrated supply grid) we have set the penalties at 50% of whole life benefits to avoid a disproportionate incentive.

## Applying incentives that are adequate to protect customers

In order to identify where changes to incentives were required, we ran a new set of consistency checks between incentives proposed and the special factor claims made by companies across wholesale and retail costs. Where a special factor claim was passed in whole or substantial part, we then checked to see whether the set of incentives proposed by companies provide adequate coverage and sufficient incentive strength to protect customers against delay or non-delivery.

Where there was an additional cost claim that was agreed in part after adjustment as a result of the triangulation process for wholesale costs<sup>28</sup> we did not make interventions. This is because the additional allowance added to the basic cost threshold was significantly lower than the original amount claimed by the company. Therefore introducing penalties based on the full cost in this area would introduce disproportionate incentives.

Tables A2.10, A2.11 and A2.12 summarise the results of the updated consistency checks across wholesale water, wholesale wastewater and household retail elements respectively. In a number of cases, the incentives arising from the company proposed incentives in response to our draft determinations require no or only minor changes. However, there are also a number of instances where we have intervened on the incentives for non-delivery or delay in line with the approach described above in order to ensure that customers are adequately protected. The majority of the interventions have been to increase proposed penalties to reflect an element of customer benefit foregone as well as costs, and to cover both delay as well as non-delivery events.

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<sup>28</sup> The triangulation process is the process used to combine projections from different wholesale cost benchmarking models to produce an overall projection of totex. We provide more details in the [‘Risk-based review initial threshold model’](#).

Table A2.10 Delivery incentives for wholesale costs major schemes – wholesale water

| Scheme                                                                     | Totex (implicit allowance + FD allowance) | Incentive against non-delivery<br>Total of ODI + totex sharing | Incentive against delay<br>ODI penalty for delay ('benefits foregone')                                   | Additional FD intervention <sup>29</sup> | What we did at final determinations                                                                                                                                                                         |
|----------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dee Valley Water</b><br>Legacy water treatment works                    | £17m<br>(£5m + £12m)                      | £28m                                                           | £0.51m/year from 2018-19<br><br>Calculated as 50% of annualised benefit                                  | Yes                                      | In its representation, Dee Valley Water agreed with the introduction of a non-delivery PC.<br><br><b>We have also included a delay penalty and increased the penalty rate</b> to reflect benefits foregone. |
| <b>Dee Valley Water</b><br>Service reservoir water quality risk management | £8m<br>(£2m + £6m)                        | £13m                                                           | £2.2m/scheme (2019-20)<br><br>across 4 schemes<br><br>Calculated as totex plus 50% of annualised benefit | Yes                                      | <b>We have introduced a scheme-specific PC and penalty ODI.</b>                                                                                                                                             |

<sup>29</sup> In addition to draft determination proposal or company representation.

| Scheme                                                                 | Totex (implicit allowance + FD allowance) | Incentive against non-delivery<br>Total of ODI + totex sharing | Incentive against delay<br>ODI penalty for delay ('benefits foregone')   | Additional FD intervention <sup>29</sup> | What we did at final determinations                                                                                                                                                                                                                     |
|------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Severn Trent Water</b><br>Birmingham Resilience                     | £265m<br>(£23m + £242m)                   | £491m                                                          | £15.96m/year (PR19 milestone)<br>Calculated as 50% of annualised benefit | No                                       | <b>We have accepted changes</b> proposed by Severn Trent Water in its representation.<br><br>The company proposed reduced ODIs based on our draft determination approach and updated for new risk assessment figures.                                   |
| <b>Severn Trent Water</b><br>Elan Valley Aqueduct (EVA) Community Risk | £54m<br>(£5m + £49m)                      | £100m                                                          | £3.88m/year from 2019-20<br>Calculated as 50% of annualised benefit      | No                                       | <b>We have accepted changes</b> proposed by Severn Trent Water in its representation. The company proposed an ODI based on our draft determination approach for Birmingham resilience.<br><br>Note: this claim was rejected in our draft determination. |

| Scheme                                                          | Totex (implicit allowance + FD allowance) | Incentive against non-delivery<br>Total of ODI + totex sharing | Incentive against delay<br>ODI penalty for delay ('benefits foregone')                   | Additional FD intervention <sup>29</sup> | What we did at final determinations                                                                                                                                    |
|-----------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sutton &amp; East Surrey Water</b><br>Water softening        | £23m                                      | £29m                                                           | £3m/year from 2015-16 (annual assessment)<br>Calculated as 50% of (annual costs x 1.25)  | Yes                                      | <b>We have introduced an annual non-delivery incentive</b> to return 125% of the allowed costs to customers in the event of non-delivery of the activity in each year. |
| <b>United Utilities</b><br>Thirlmere transfer into West Cumbria | £216m<br>(£114m + £102m)                  | £300m                                                          | £2.34m/% (2019-20)<br>£5.4m/year (applied from 2022)<br>Calculated as 50% of annual cost | Yes                                      | In its representation, United Utilities proposed a PC with a cost-based incentive.<br><b>We have increased the penalty rate</b> to reflect benefits foregone.          |

| Scheme                                        | Totex (implicit allowance + FD allowance) | Incentive against non-delivery<br>Total of ODI + totex sharing | Incentive against delay<br>ODI penalty for delay ('benefits foregone')                                                                           | Additional FD intervention <sup>29</sup> | What we did at final determinations                                                                                                                                                               |
|-----------------------------------------------|-------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Wessex Water</b><br>Integrated supply grid | £115m<br>(£7m + £108m)                    | £214m                                                          | £0.8m/1,000 props/year from 2015-16<br><br>Note: equivalent to £4.9m/year for full non-delivery<br><br>Calculated as 50 % of annualised benefits | Yes                                      | In its representation, Wessex Water proposed cost-based ODIs for delay that will continue beyond this price control period.<br><br><b>We have increased the ODI</b> to reflect benefits foregone. |

**Table A2.11 Delivery incentives for wholesale costs major schemes – wholesale wastewater**

| Scheme                                                                                               | Totex<br>(implicit<br>allowance<br>+ FD<br>allowance) | Incentive against<br>non-delivery<br>Total of ODI +<br>totex sharing | Incentive against<br>delay<br>ODI penalty for<br>delay ('benefits<br>foregone')               | Additional FD<br>intervention <sup>30</sup> | What we did at final determinations                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Anglian Water</b><br>Investment for<br>wastewater growth<br>and minimum<br>treatment<br>standards | £77m<br>(£54m +<br>£23m)                              | £86m                                                                 | £0.62m/scheme<br>(2019-20)<br>across 76 schemes<br>Calculated as totex<br>+ (50% of benefits) | Yes                                         | In its representation, Anglian Water<br>proposed a new PC with a cost-based<br>incentive.<br><br><b>We have increased the penalty rate to<br/>reflect benefits foregone.</b>               |
| <b>Northumbrian<br/>Water</b><br>Whitburn UID1                                                       | £6m<br>(£0m+£6m)                                      | £7m                                                                  | £0.2m/year from<br>2018-19<br>Calculated as 50%<br>of annualised cost                         | Yes                                         | <b>We have introduced a scheme-<br/>specific PC and incentive.</b>                                                                                                                         |
| <b>Southern Water</b><br>Bathing water<br>enhancements                                               | £33m<br>(£18m +<br>£15m)                              | £41m                                                                 | £3.64m/bathing<br>water (2019-20)<br>across 7 bathing<br>waters<br>Calculated as totex        | Yes                                         | In its representation, Southern Water<br>proposed an ODI, which covers both<br>delay and non-delivery, based on cost<br>recovery only.<br><br><b>We have increased the penalty rate to</b> |

<sup>30</sup> In addition to draft determination proposal or company representation.

| Scheme                                                       | Totex (implicit allowance + FD allowance) | Incentive against non-delivery<br>Total of ODI + totex sharing | Incentive against delay<br>ODI penalty for delay ('benefits foregone')        | Additional FD intervention <sup>30</sup> | What we did at final determinations                                                                                                                                                                         |
|--------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                              |                                           |                                                                | + 50% of annualised benefits                                                  |                                          | reflect benefits foregone.                                                                                                                                                                                  |
| <b>Southern Water</b><br>Thanet Sewers                       | £38m<br>(£0m + £38m)                      | £51m                                                           | £0.95m/year (PR19 milestone)<br>Calculated as 50% of annual cost              | Yes                                      | In its representation, Southern Water proposed a non-delivery PC with cost-based incentive.<br><b>We have increased the penalty rate to reflect benefits foregone and introduced a penalty for delay.</b>   |
| <b>Southern Water</b><br>Millbrook sludge                    | £18m<br>(£3m + £15m)                      | £23m                                                           | £0.45m/year (PR19 milestone)<br>Calculated as 50% of (annualised cost x 1.25) | Yes                                      | In its representation, Southern Water proposed a non-delivery PC with a cost-based incentive.<br><b>We have increased the penalty rate to reflect benefits foregone and introduced a penalty for delay.</b> |
| <b>Southern Water</b><br>Woolston wastewater treatment works | £36m<br>(£0m + £36m)                      | £40m                                                           | £0.90m/year (PR19 milestone)<br>Calculated as 50% of annualised cost          | Yes                                      | In its representation Southern Water proposed a non-delivery PC with a cost-based incentive.<br><b>We have increased the penalty rate to reflect benefits foregone and introduced</b>                       |

| Scheme                                                     | Totex (implicit allowance + FD allowance) | Incentive against non-delivery<br>Total of ODI + totex sharing                                               | Incentive against delay<br>ODI penalty for delay ('benefits foregone')                | Additional FD intervention <sup>30</sup> | What we did at final determinations                                                                                                                                                     |
|------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |                                           |                                                                                                              |                                                                                       |                                          | a penalty for delay.                                                                                                                                                                    |
| <b>Thames Water</b><br>Counters Creek                      | £227m<br>(£137m + £91m)                   | £260m                                                                                                        | £6.88m/year (PR19 milestone)<br>Calculated as 50% of benefits annualised over 5 years | Yes                                      | <b>We have increased the penalty rate</b> to reflect benefits foregone                                                                                                                  |
| <b>Thames Water</b><br>Deephams wastewater treatment works | £206m<br>(£6m + £200m)                    | £299m                                                                                                        | £11m/year from 2017-18<br>Customers compensated through PCs SB1, SC3 and SC7          | Yes                                      | <b>We have increased the penalty for non-delivery</b> to recover the full costs, plus benefits foregone.                                                                                |
| <b>Thames Water</b><br>Lee Tunnel including shaft G        | £75m<br>(£0m + £75m)                      | AMP5 overlap scheme. We confirmed the need for the scheme at PR09 with completion due in 2015/16 but, due to | £6.6m/ year from 2016-17<br>Calculated at 50% of annualised benefits                  | Yes                                      | <b>We have included a scheme-specific ODI for delay.</b><br><br>We have set the incentive rate using the benefits of the scheme as estimated at PR09 as this is an AMP5 overlap scheme. |

| Scheme                                                                     | Totex (implicit allowance + FD allowance) | Incentive against non-delivery<br>Total of ODI + totex sharing                                                                                                                                                  | Incentive against delay<br>ODI penalty for delay ('benefits foregone')                                                                                                                                                             | Additional FD intervention <sup>30</sup> | What we did at final determinations                                                                                   |
|----------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
|                                                                            |                                           | the 5 year price control, could not confirm the final year costs. No additional incentive (as due for completion within year 1)                                                                                 |                                                                                                                                                                                                                                    |                                          |                                                                                                                       |
| <b>Thames Water</b><br>Thames Tideway Tunnel (TTT) construction activities | £227m                                     | Customers protected against non-delivery. In the event of non-delivery due to cancellation of the project, there is a mechanism in place to return the full costs to customers.<br>Where sites are removed from | Incentive penalty based on annualised average unit cost per site, uplifted with estimate of infraction costs as proxy for benefits foregone.<br>Results in incentive penalty per site of £3.4m per annum.<br>In the event that all | Yes                                      | <b>We have updated the calculation of the penalty to include proxy for benefits and clarified application period.</b> |

| Scheme                               | Totex (implicit allowance + FD allowance) | Incentive against non-delivery<br>Total of ODI + totex sharing                                                                                                                                                                                     | Incentive against delay<br>ODI penalty for delay ('benefits foregone')                | Additional FD intervention <sup>30</sup> | What we did at final determinations                                                                                                                                                                                               |
|--------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      |                                           | Thames Water's control as the IP has taken on the task of completing the construction tasks, further mechanism in place to ensure customers do not fund work twice (covering both the totex menu and the Infrastructure Provider (IP) cost claim). | sites were delayed until 2020-21, the total incentive penalty would be £157m.         |                                          |                                                                                                                                                                                                                                   |
| <b>United Utilities</b><br>Davyhulme | £101m<br>(£53m + £48m)                    | £145m                                                                                                                                                                                                                                              | £32m/year from 2017-18<br>Customers compensated through other ODIs on rivers improved | No                                       | <b>We have accepted changes</b> proposed by United Utilities in its representation<br><br>The company proposed increases to penalties through associated ODIs to ensure the aggregate impact reflects totex and benefits foregone |

| Scheme                                            | Totex (implicit allowance + FD allowance) | Incentive against non-delivery<br>Total of ODI + totex sharing | Incentive against delay<br>ODI penalty for delay ('benefits foregone')                                                    | Additional FD intervention <sup>30</sup> | What we did at final determinations                                                                                                                                                                                                 |
|---------------------------------------------------|-------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   |                                           |                                                                | and maintaining Wastewater Treatment Works (WwTWs)                                                                        |                                          |                                                                                                                                                                                                                                     |
| <b>United Utilities</b><br>Oldham and Royton      | £83m<br>(£22m + £61m)                     | £99m                                                           | £19m/year from 2017-18<br><br>Customers compensated through ODIs on contribution to rivers improved and maintaining WwTWs | No                                       | <b>We have accepted changes</b> proposed by United Utilities in its representation.<br><br>The company proposed increases to penalties through associated ODIs to ensure the aggregate impact reflects totex and benefits foregone. |
| <b>United Utilities</b><br>NEP 3 & 4 Biodiversity | £40m<br>(£15m + £25m)                     | £60m                                                           | £40m (2019-20)<br><br>Customers compensated through ODI on contribution to rivers improved                                | No                                       | <b>We have accepted changes</b> proposed by United Utilities in its representation.<br><br>The company proposed increases to penalties through associated ODIs to ensure aggregate impact reflects totex and benefits foregone.     |

| Scheme                                                                                            | Totex (implicit allowance + FD allowance) | Incentive against non-delivery<br>Total of ODI + totex sharing | Incentive against delay<br>ODI penalty for delay ('benefits foregone')                                                                      | Additional FD intervention <sup>30</sup> | What we did at final determinations                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>United Utilities</b><br>NEP phase 3 & 4<br>bathing water<br>intermittent<br>discharge projects | £171m<br>(£79m +<br>£92m)                 | £216m                                                          | £20m/bathing<br>water equivalent<br>(2019-20)<br><br>Calculated through<br>adjustment to<br>company rate                                    | Yes                                      | In its representation, United Utilities proposed an ODI for non-delivery/delay annually.<br><br><b>We have increased the incentive rate in 2019-20</b> to reflect whole life benefits |
| <b>Wessex Water</b><br>North Bristol sewer<br>scheme                                              | £36m<br>(£18m +<br>£18m)                  | £57m                                                           | Frome:<br>£1.86m/year (PR19<br>milestone)<br><br>Trym: £0.97m/year<br>(PR19 milestone)<br><br>Calculated as<br>annualised benefits<br>x 0.5 | Yes                                      | <b>We have introduced a scheme-specific PC and incentive.</b>                                                                                                                         |
| <b>Wessex Water</b><br>Sewer flooding<br>programme                                                | £58m<br>(£46m +<br>£12m)                  | £78m                                                           | £1.8m/year (2015-<br>16)<br>rising to<br>£19.6m/year<br>(2019-20)                                                                           | No                                       | <b>We have made no intervention.</b><br><br>In its June 2014 business plan, Wessex Water proposed an ODI providing incentives that cover full totex and benefits foregone.            |

| Scheme | Totex (implicit allowance + FD allowance) | Incentive against non-delivery<br>Total of ODI + totex sharing | Incentive against delay<br>ODI penalty for delay ('benefits foregone')                 | Additional FD intervention <sup>30</sup> | What we did at final determinations |
|--------|-------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------|
|        |                                           |                                                                | Customers compensated through ODIs on internal flooding incidents and risk of flooding |                                          |                                     |

**Table A2.12 Delivery incentives for wholesale costs major schemes – household retail**

| Scheme                                                                                  | Totex<br>(implicit<br>allowance<br>+ FD<br>allowance) | Incentive against<br>non-delivery<br>Total of ODI +<br>totex sharing | Incentive against<br>delay<br>ODI penalty for<br>delay ('benefits<br>foregone') | Additional FD<br>intervention <sup>31</sup> | What we did at final determinations                                                                            |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Northumbrian Water</b><br>Consolidated Customer Information and Billing (CIB) system | £5.5m                                                 | £5.3m                                                                | £1.25m/year (from 2018-19)                                                      | Yes                                         | <b>We have introduced a penalty only incentive</b> to protect customers against non- delivery or late delivery |
| <b>Sembcorp Bournemouth Water</b><br>New customer relationship management system        | £1.2m                                                 | £1.44m                                                               | £0.17m/year (from 2015-16)                                                      | Yes                                         | <b>We have introduced a penalty only incentive</b> to protect customers against non- delivery or late delivery |

<sup>31</sup> In addition to draft determination proposal or company representation.

| Scheme                                                                                                   | Totex<br>(implicit<br>allowance<br>+ FD<br>allowance) | Incentive against<br>non-delivery<br>Total of ODI +<br>totex sharing | Incentive against<br>delay<br>ODI penalty for<br>delay ('benefits<br>foregone') | Additional FD<br>intervention <sup>31</sup> | What we did at final determinations                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Thames Water</b><br>New online<br>account<br>management for<br>customers<br>supported by web-<br>chat | £18.6m                                                | £33.5m                                                               | £6.5m/year (from<br>2018-19)                                                    | Yes                                         | <b>We have introduced a value based penalty for years 4 and 5</b> to fully compensate customers in the event of delay                                                                            |
| <b>United Utilities</b><br>Customer<br>Experience<br>Programme                                           | £17.8m                                                | £17.76m                                                              | £8.88m/year (from<br>2019-20)                                                   | Yes                                         | <b>We have reduced the company's proposed penalty in the event of delay and added a second penalty rate</b> if the company delivers the programme late or fails to deliver the programme at all. |

### **A2.4.3.3 Consistency checks regarding historical performance and asset health**

We discussed the importance of asset health in section A2.4.1 and summarised the approach taken at draft determinations. In particular, we carried out a number of consistency checks that focused on how well company proposals covered the metrics of most importance to customers and that companies that had underperformed in 2010-15 were continuing to offer customers appropriate protection in the future. As a result of the consistency checks applied, we made a number of interventions where companies had proposed no, or limited, asset health incentives.

We did not make any interventions to asset health penalties for WaSCs as a result of the consistency checks. However, some interventions were made to specific company proposals on elements of asset health as a result of other parts of the company-specific analysis.

In the case of the WoCs, the picture was much more variable. There were a number of companies where potential penalties were low (Dee Valley Water, Portsmouth Water and Sutton & East Surrey Water) and one (Bristol Water) where potential penalties were quite high. We made interventions for Dee Valley Water, Portsmouth Water and Sutton & East Surrey Water to strengthen the potential penalties.

We did not intervene in Bristol Water's proposals, but we asked the company to consider its proposed penalties in light of our analysis. In light of this, Bristol Water proposed updated incentives that reduced the previous overlaps between asset health and other individual performance measures, as well as reducing the maximum exposure to a level more consistent with other WoCs.

For final determinations and given the importance of asset health to further customers we have carried out additional consistency checking in this area. The approach taken with outcomes invited companies to develop their own thinking as to how best to incentivise asset health in order to protect their customers and so inevitably there are some differences of approach compared to legacy arrangements. However, we have undertaken some comparisons in order to build confidence that future incentives on asset health will provide adequate protection to customers.

In particular, our assessments have looked at four specific comparisons designed to build the necessary confidence in the effectiveness of future asset health incentives.

- A detailed comparison of the 11 2010-15 shortfalls<sup>32</sup> and the future incentive penalties that would arise in the event that the companies concerned to deliver similar levels of under-performance.
- Where companies had under-performed during 2010-15, but due to mitigating circumstances, shortfalls were not applied, we carried out an analysis of the potential future penalties that apply to these metrics.
- We updated the analysis of the coverage and aggregate scale of future asset health incentive.
- We carried out further checks to ensure that we had applied a consistent approach across the structure of penalty incentives for asset health following representations on company-specific interventions we made at draft determinations.

The first of the four comparisons was with 2010-15 shortfalls. Where companies have under-performed during 2010-15 and have been shortfalled for this, our comparison showed that in 8 of the 11 cases future incentive penalties would be larger than the 2010-15 shortfall applied. In these situations, we concluded that the future incentives would continue to adequately protect customers against under-performance.

We carried out further analysis of the remaining three cases as follows.

- **Severn Trent Water coliforms non-compliance at water treatment works:** overall, we have decided not to intervene. This is because the aggregate level of exposure for Severn Trent Water will be greater going forward than under the 2009 price review (PR09) arrangements.
- **Dee Valley Water discoloration contacts:** we have intervened to extend the penalty collar on the incentive as a result of our concerns that the penalty level the company proposed was substantially below the PR09 shortfall, and customers are further protected in this area by an additional incentive attached to the special factor wholesale cost claim for the work at the Legacy treatment works.

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<sup>32</sup> See 'Policy chapter A4 – reconciling 2010-15 performance', section A4.8.

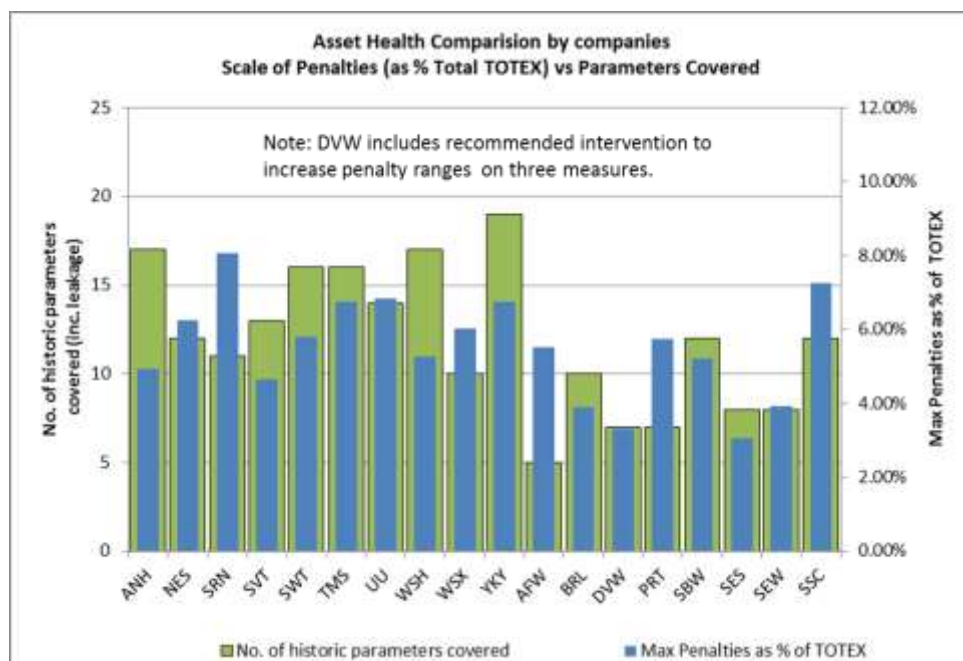
- **Southern Water population equivalent non-compliance on wastewater treatment works:** we intervened on this at draft determinations as the company had not proposed an incentive in this area. The incentive we proposed was based on the cost information that the company provided for its incentive on numeric non-compliance on the same assets (£155 million). The company has provided additional information on costs. This new information indicates a relevant cost figure of £299 million, comprising the direct costs of complying with the consents, projected costs of equipment failures and enhancement associated maintenance. We have intervened to apply this cost figure to the incentive, which results in a near doubling of the penalties that would apply in the event that the company continued to under-perform<sup>33</sup>.

The second of our four comparisons was on potential future penalties that companies have proposed where they have under-performed against a metric during 2010-15 but, due to mitigating circumstance, no shortfalls have been applied. In almost half of the cases, the future incentives would result in financial penalties. The future incentives also have the potential to work more effectively since they will apply in the annual performance reports on outcomes to customers that companies will be providing, making use of independently assured data.

The third specific comparison made was an updated analysis of the coverage and aggregate scale of future asset health incentives. Figure A2.3 summarises the results of this analysis.

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<sup>33</sup> Further details of this intervention are set out in Southern Water's company-specific appendix.

**Figure A2.3 Asset health comparison by company**

In terms of coverage, as would be expected overall there are more measures for water and waste water service providers than water alone. However, for both sets of providers, the proposed incentives cover a high proportion of historical parameters<sup>34</sup>.

Regarding the scale of incentives, under the rules of the PR09 shortfalloffing, the shortfall applied for under-performance was up to a maximum penalty of 50% of the capital maintenance budget for the relevant sub-service. In theory, this could have equated to about 12-14% of totex had companies failed to the maximum extent on every measure. In practice, however, the aggregate scale of shortfalls applied equated to around 0.3% of totex.

The analysis of future incentives shows that the aggregate maximum potential incentive penalties are somewhat smaller than the theoretical maximum. However, although there is some variability across the sector, potential penalties remain very substantial (about £2.4 billion and 6% of totex). Further, as part of the new outcomes framework, the way in which incentives operate should also be more effective with companies reporting annually to their customers on actual delivery.

<sup>34</sup> In addition to the specific parameters covered in the graph, Affinity Water is also going to publish an additional asset health index which will further increase its coverage.

We have therefore concluded that for almost all companies, the future asset health penalties will adequately protect customers.

There was one exception to this conclusion. Dee Valley Water was somewhat out of line with the rest of the sector with respect to its asset health related penalties, which equated to less than 3% of totex. Performance on discolouration contacts and water quality compliance is protected through the penalties on the large schemes (treatment works at Legacy and service reservoir water quality), but this increases the risk that resources could be diverted away from other measures in order to concentrate on these large schemes. One of the reasons for the smaller penalty exposure was due to the small penalty ranges that Dee Valley Water proposed.

We have therefore intervened to increase the penalty range for two of the measures that are not covered by the large schemes – namely, mains bursts and supply interruptions. This is in addition to the increase to the penalty range already being proposed to discolouration contacts due to the proposed shortfall for poor 2010-15 performance<sup>35</sup>.

The fourth and final comparison was on the consistency of our intervention approach on the structure of penalty incentives. At draft determinations, we intervened to adjust the circumstances under which Thames Water and Southern Water would incur their asset health incentives. We intervened such that incentives would be incurred after a single year of poor performance, rather than occurring only after two consecutive years of poor performance as was proposed by the companies. Both companies challenged these interventions, arguing that we had not been consistent in our approach.

The reason for our interventions was a concern that because both companies were showing poor performance on more than one measure during 2010-15, any further under-performance would represent continued poor asset performance. We made this intervention only in areas in which the companies were showing poor performance on more than one measure.

We carried out a further review of this approach for asset health incentives to ensure it was appropriate to continue to apply these interventions. Given the importance of asset health noted above, we remain of the view that it would not be in customers' interests if these companies could continue poor performance for longer before an incentive would apply.

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<sup>35</sup> Full details of these interventions are set out Dee Valley Water's company-specific appendix.

Six companies had proposed approaches whereby incentives would only be incurred for poor performance longer than one year – the two companies challenging the interventions along with:

- South East Water;
- Bristol Water;
- Dŵr Cymru; and
- Sembcorp Bournemouth Water.

These companies did not have any instances of poor performance, or at most one, and so our approach was consistent.

We also identified that three companies (Severn Trent Water, Northumbrian Water and Portsmouth Water) proposed approaches that measured average performance over a period of more than one year. For example, Severn Trent Water uses measures that average performance over a period of four years. In effect, this can allow these companies to avoid a penalty for poor performance in the early years of the new price control period.

Of the three companies proposing measures based on performance averaged over a period of more than one year, Severn Trent Water was the only one that showed poor performance on more than one measure in the 2010-15 price control period. We have concluded that in order to provide sharper incentives to protect customers, the asset health measures for Severn Trent Water should use annual measures rather than four-year averages. This now ensures consistency with Thames Water and Southern Water such that annual incentives will apply for all companies that have had poor performance on more than one measure in the 2010-15 price control period.

#### **A2.4.3.4 Other interventions of relevance to more than one company**

The SIM has provided strong incentives for the companies to improve retail customer service. We are retaining a form of the SIM as a required household retail service ODI for all companies in the next control period, and adapting it for non-household customers in Wales, who will not have access to the same competitive market as is proposed in England.

We do not propose to require the company to include a SIM PC in the wholesale control. The PR14 methodology confirmed that we would use the SIM as a standard minimum national incentive for customer service for 2015-20. We also confirmed that its likely scale and scope would be similar to the current SIM, but that (in England) it would apply only to the household retail price control.

## A2.5. Aggregate cap and collar

The following section considers the aggregate cap and collar on ODIs. This was introduced in the draft determinations given the uncertainty in the expected performance against individual ODIs particularly where they are innovative.

This section does not apply to the enhanced companies (South West Water and Affinity Water). The enhanced companies proposed a set of ODIs which we accepted as part of an overall package of risk and reward. So providing additional protection via a cap on penalties would not be appropriate (the enhanced companies are also not obliged to have a cap on rewards).

### A2.5.1 Our draft determinations

In section A2.5 of the outcomes technical appendix to our August draft determinations, we outlined new proposals for an aggregate cap and collar on the financial impact of outcome delivery rewards and penalties.

These proposals recognised that the outcomes framework is an innovative approach to incentives for the water sector. There was therefore a degree of uncertainty in companies' P10 and P90 estimates<sup>36</sup> of outcome delivery rewards and penalties, and also the additional analysis we had carried out.

The aggregate cap and collar was therefore proposed to provide a further safeguard to customers and companies, and reduce the need to intervene more systematically to reduce the risks associated with individual new incentives.

The August draft determinations proposed that the cap on total rewards and collar on total penalties should have the following characteristics.

- **An aggregate cap and collar of  $\pm 2\%$ <sup>37</sup> of the return on regulated equity (RoRE) a year**, calculated over a term of five years (allowing netting off between years but not unless specified between rewards and penalties). We noted that some companies proposed licence changes so that they could

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<sup>36</sup> We asked companies to express the risk range on a P10/P90 basis such that there is a 10% probability of an outturn occurring below the identified range (P10) and an equal 10% likelihood of achieving a return above the identified range (P90).

<sup>37</sup> Our risk and reward guidance stated that the aggregate RoRE exposure from ODIs (excluding SIM) would not normally be expected to be beyond the  $\pm 2\%$  range.

receive or ‘cash out’ their rewards and penalties during the price control period. If companies cash out rewards and penalties during the price control period, prior to the application of the aggregate cap/collar at the end of the period, an end of period adjustment may be required.

- **The cap and collar would apply to each price control element separately<sup>38</sup>** consistent with the approach of moving to separate price controls in this price review.
- **There would be no netting-off between the rewards earned from one ODI and the penalties arising from another ODI**, unless the PCs were part of a trade-off package that we have approved at final determinations.
- **The cap and collar would apply to all ODIs for each element apart from the SIM unless specifically excluded in the final determinations.** In the draft determinations we noted that this would cover incentives related to:
  - specific projects where performance would not be assessed within the 2015-20 period;
  - outcome delivery risks from specific newly funded enhancements; and
  - incentives providing additional funding for expected performance improvements.

We stated that an aggregate cap and collar would not alter the arrangements, or importance, for the reporting and assurance of company performance against all outcomes, regardless of whether the aggregate cap and collar has been reached.

We recognised that caps and collars could distort incentives, as a company close to the cap might put less effort in improving performance. Our modelling suggested that, while the aggregate cap and collar would provide back-stop protection, these aggregate limits were not expected to bite for the majority of companies: at P10 we estimated that only three companies would be affected by the aggregate collar and at P90 we estimated no companies would be affected by the aggregate cap.

We also recognised that the aggregate cap and collar was new. To ensure that the cap/collar was not distorting incentives against the customer interest we proposed the cap and/or collar could be amended within the next control period with our agreement if it could be clearly demonstrated, by the company and/or CCG, that the arrangement was working against the long term interests of customers. Any such

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<sup>38</sup> Wholesale water, wholesale wastewater, household retail and non-household retail.

application would need to be accompanied by convincing evidence over a period of several years.

### **A2.5.2 Issues raised by representations**

We received responses from three companies and CCWater.

- Thames Water raised a number of concerns.
  - The cap should exclude tax otherwise the impact is understated.
  - The cap should be 1.5% of RoRE based on customer research.
  - The Thames Tideway Tunnel ODI should not be excluded from the cap as performance will be assessed during the 2015-20 period.
  - The RoRE calculation should be based on notional gearing (to avoid movements in actual gearing changing the level of the cap/collar).
  - The aggregate cap and collar should be monitored on an annual basis to provide transparency to customers and stakeholders.
  - It was unclear how the RoRE cap would apply to the household given that it did not have an RCV.
- CCWater raised concerns of a risk of a future negative customer reaction if bill increases are driven by incentive rewards.
- United Utilities stated that it supported the cap.
- Southern Water noted that it was one of three companies that reach the cap.

### **A2.5.3 Our final determinations**

We set out our consideration of each of the responses in table A2.11. We consider that we should make the following changes to the cap and collar.

- Remove the cap from household and non-household ODIs –most companies only have one household financial ODI (the SIM, only Dŵr Cymru has non-household ODIs) and therefore financial incentives are limited and an aggregate cap is unlikely to be binding. Any cap could also conflict with the regulatory incentives set through the SIM.
- Remove exclusions covering projects where performance would not be measured in period as we expect to measure performance on all projects during 2015-20.

- Reporting – where we agree with Thames Water that regular reporting through the regulatory accounts and transparency on the £m level of the cap would be beneficial to customers.

**Table A2.13 Our assessment of representations**

| Representation                                                                                                                                                                                      | What we have done                                                                                 | Why we did it                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Thames Water:</b> the cap should exclude tax otherwise the impact is understated.                                                                                                                | <b>No change</b>                                                                                  | Calculating the cap pre-tax would reduce the level of the cap and increase the number of companies reaching the cap, potentially distorting incentives and would not be consistent with the calibration of the ODI RoRE ranges (which we calculated post tax). We therefore consider that we should continue to assess post tax-based on a notional tax rate of 20% to avoid distortions across companies. |
| <b>Thames Water:</b> the cap should be 1.5% of RoRE based customer research which they consider showed support for ODI impacts in the range of $\pm 1.0\%$ to 1.5% RoRE, assuming zero tax impacts. | <b>No change</b>                                                                                  | The Thames Water survey is not conclusive, with 27% supporting a 2% and 15% a 3% cap compared to 34% for a 1% cap. The main concern appeared to be the potential scales of rewards although based on the P10/P90 range companies are unlikely to reach the cap. The company and/or CCG can amend the cap where it is in the best long-term interests of customers.                                         |
| <b>Thames Water:</b> TTT ODI should not be excluded from the cap as performance will be assessed during the 2015-20 period.                                                                         | <b>No change to exclusion of TTT ODI but remove exclusions of projects not assessed in period</b> | Both schemes mentioned that would not be assessed in 2015-20 (TTT and Birmingham Resilience ODIs) will in effect be assessed during this period. However, both schemes are in the list of ODIs related to newly funded enhancements in 2015-20 which we consider should be excluded from the cap.                                                                                                          |

| Representation                                                                                                                                                                                           | What we have done                                                            | Why we did it                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Thames Water:</b> The RoRE calculation should be based on notional gearing (to avoid movements in actual gearing changing the level of the cap/collar).                                               | <b>No change</b>                                                             | The cap was calculated based on notional gearing in the draft determinations, we agree that this appears sensible as actual gearing varies from 56% to 88% and the level of the cap and should not depend on companies decisions over their own financial structure.                                                                                                                                                                                                                   |
| <b>Thames Water:</b> the aggregate cap and collar should be monitored on an annual basis to provide transparency to customers and stakeholders.                                                          | <b>Agree included proposals</b>                                              | We agree that the aggregate cap and collar should be monitored on an annual basis and this should be included in companies' regulatory reporting. We propose to publish the level of the cap for each company in £m terms in due course to ensure clarity over calculation of the level of the cap during 2015-20.                                                                                                                                                                     |
| <b>Thames Water:</b> do not understand how the RoRE cap will apply to household without any RCV.                                                                                                         | <b>Change approach to remove cap from household and non-household retail</b> | The cap is likely to be non-binding as most companies have only one household retail financial ODI and financial incentives are limited.                                                                                                                                                                                                                                                                                                                                               |
| <b>CCWater:</b> there remains a risk of a negative customer reaction in the future if bill increases are driven by incentive rewards as well as inflation (even if bills do not increase in real terms). | <b>No change</b>                                                             | The cap and collar have been put in place because we recognise that this is a new area. Companies should lead any conversations with customers over the impact of rewards on bills (and a number of companies, for example Yorkshire Water and United Utilities have identified customer support for rewards for improved performance). Customers do and should support lower overall bills, which are reduced by including rewards only for achieving exceptional performance (backed |

| Representation | What we have done | Why we did it                                                                            |
|----------------|-------------------|------------------------------------------------------------------------------------------|
|                |                   | up by willingness to pay). We will review the effectiveness of these measures over time. |

Based on our assessment of the representations, we consider that the aggregate cap and collar on rewards and penalties should have the following characteristics.

- **An aggregate cap and collar of  $\pm 2\%$  of RoRE a year**, calculated over a term of five years – that is, the cap and collar will be calculated once at the end of five years by summing two percentage points of RoRE in each of the five years. The cap will apply at the end of five years and so allowing netting off between years. RoRE will be calculated using a notional capital structure with RCV and equity values taken directly from the final determinations financial model. The cap will operate post-tax and will be calculated at the end of the control period. In the operation of the cap, rewards and penalties will be factored by 80% to make them post tax. Three companies (South West Water, Severn Trent Water and Anglian Water) have proposed licence changes so that they can receive some of their rewards and penalties during the price control period through an adjustment in the k factor (so there is a clearer link between payments and performance and minimises financing risk between investing and receiving rewards for better performance). If companies receive rewards and penalties during the price control period, prior to the application of the aggregate cap/collar at the end of the period, an end of period adjustment may be required.

#### Example of application of cap.

Company A has a RoRE of £200 million in the first two years, and £210 million in the last three years.

Over the five years, the cap is therefore £20.6 million. The company has penalties in each year of £4 million, £5 million, £5 million, £4 million and £5 million, which total £23 million over the period.

This is greater than the cap so company payments will be capped at £20.6 million.

- **The cap and collar would apply to wholesale water and wholesale wastewater controls separately.** This will encourage companies to deliver their PCs in each area and is consistent with the approach of moving to separate controls in this price review. While there are retail ODIs, there would not be an aggregate cap and collar on household retail and non-household

retail ODIs as it is unlikely to be binding, with most companies only having one financial retail ODI.

- **There would be no netting-off between the rewards earned from one ODI and the penalties arising from another ODI.** There are no PCs that are part of a trade-off package and so this would apply to all ODIs.
- **The cap and collar would apply to all ODIs for the wholesale water and wastewater control unless otherwise stated.** The following ODIs would be excluded from the cap and collar.
  - Incentives covering events of non-delivery or delay relating to major schemes or special factor cost claims in water and wastewater, as outlined in table A2.10 and A2.11 above and confirmed in annex 4 of each company-specific appendix.
  - Incentives providing additional funding for expected performance improvements – this only covers Anglian Water's leakage financial rewards.
- **Amending the cap.** The aggregate cap and/or collar can be amended under certain circumstances to ensure that it is not creating distortions which act against customers' interests. The company and/or the CCG (or relevant customer body) could apply to us to amend the cap and/or collar in the event that they consider the arrangement was working against the long term interests of customers. We will consider the merits of amending the cap on a case by case basis. We would expect to see convincing evidence over a period of several years for us to agree to alter the cap. For example, the company would need to show that it is delivering service genuinely beyond UQ performance to increase the reward cap. If the company could not show CCG and/or customer support for its proposal it would need to provide even more convincing evidence for us to agree to increase the aggregate reward cap.

Similarly, we would also need to see convincing evidence from the CCG (or relevant customer body) for us to change or adjust the penalty collar. The CCG (or relevant customer body) would be able to draw on its ongoing role in monitoring and checking the assurance of company's performance in relation to outcome measurement and reporting, as well as performance reporting at an industry level.

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We are responsible for making sure that the water sector in England and Wales provides customers with a good quality and efficient service at a fair price.



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