



BRISTOL WATER'S REPLY



13 APRIL 2015

'Our vision is to meet our customers' expectations by providing an outstanding water service in a sustainable and affordable way'



# Bristol Water's Reply to Ofwat's Response to the Statement of Case

## 13 April 2015

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# Bristol Water's Reply

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## 1 Executive Summary

### 1.1 Introduction

1. This is Bristol Water's reply (the **Reply**) to Ofwat's response submitted on 25 March 2015 (the **Response**) to the Competition and Markets Authority (**CMA**) in relation to our Statement of Case (**SoC**). It also sets out our comments regarding Ofwat's initial submission provided to the CMA on 4 March 2015 (the **Initial Statement**) as well as Ofwat's presentation to the CMA on 19 March 2015 (the **Presentation**).
2. At the outset it is worth noting that Ofwat states that it stands by its determination.<sup>1</sup> As such Ofwat notes that unless otherwise indicated, its Response "*amplifies or explains our determination and associated documents*".<sup>2</sup>
3. Similarly, Bristol Water stands by its Business Plan, as set out in the SoC. Our approach to developing our Business Plan was consistent with good industry practice and incorporated strong and effective customer engagement, with oversight, challenge, governance and assurance provided by the Local Engagement Forum (**LEF**),<sup>3</sup> our Board, and external advisors. This has resulted in a Business Plan that reflects the priorities and requirements of customers and other key stakeholders, and enables Bristol Water to provide its services at the levels expected in a sustainable and efficient way. In particular, we believe that our Business Plan will deliver greater resilience and reliability, reduce leakage, meet all our statutory requirements and bring benefits for the environment while reducing average customer bills relative to inflation.
4. In this Reply we address the comments and criticisms made by Ofwat in its Response and demonstrate that, in our opinion, Ofwat has not set out arguments that detract from or counter the position put forward in our SoC.

### 1.2 Key themes

#### Scope of Ofwat's cost assessment and evidence for assertions on efficiency

5. In relation to the substantive matters at the heart of this redetermination, Ofwat's Response, Initial Statement and Presentation reiterate the messages from FD14 and conclude that the gap in allowed totex between FD14 and our Business Plan can be explained on the basis that we have "*a relatively high cost plan and the scope to make very significant efficiency savings*".<sup>4</sup>

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<sup>1</sup> Response, para. 15.

<sup>2</sup> Response, para. 15.

<sup>3</sup> The LEF was our version of the Customer Challenge Group (**CCG**).

<sup>4</sup> Response, para. 51.

6. As we have explained in detail in the SoC, our Business Plan and the associated costs were developed using a thorough and robust process that was subject to external verification and assurance. As such, we are satisfied that the costs included in our Business Plan include an appropriate efficiency challenge, and we do not agree with Ofwat's explanation for the totex gap.
7. The only evidence that Ofwat has presented in support of its position is based on the output of its models.<sup>5</sup> It is our understanding that Ofwat has neither carried out a detailed review of each component of our proposed costs, nor carried out an assessment of what it considers operating expenditure should be on a standalone basis with the exception of certain special cost factor claims.<sup>6</sup> The grounds on which it concludes that our plan is relatively high cost are, therefore, only as robust as Ofwat's models. In **Section 3** below we question this robustness.<sup>7</sup> In circumstances where there is such a significant gap in the totex estimates we consider that it would have been helpful if Ofwat had made more use of engineering assessments to properly understand all the components that contribute to the gap. Similarly, Ofwat has neither offered any suggestions as to the nature of the "*very significant efficiency savings*" it suggests are required, nor whether they would be practicably achievable within the allowed timeframe.

### Impact of CC10 redetermination on Bristol Water's cost profile

8. In the Response Ofwat draws attention to Bristol Water's greater than 50% increase in base costs between from 2010/11 to 2012/13, and notes that Bristol Water "*had not provided sufficient explanation or supporting evidence*" to explain the increase.<sup>8</sup> As we set out in **Section 3.2.2**, however, this movement can be simply explained by reference to the impact of the CC10 redetermination which endorsed an increase of this magnitude from spending levels within AMP4.<sup>9</sup>
9. Contrary to Ofwat's assertion that this increase in costs was, effectively, temporary in nature,<sup>10</sup> we have adequately demonstrated the legitimate continuation of certain costs into AMP6, which was forecast in our PR09 Plan and that this was envisaged by the Competition Commission (CC) in the CC10 redetermination. This includes, for instance, future need for mains replacement as well as the use of asset based modelling to determine need. We believe that any analysis by engineering consultants would confirm our approach to be robust and in line with the assurance we have already received.

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<sup>5</sup> For instance, we note that whilst Ofwat has asserted that "*there is strong evidence that [its] allowances for costs are consistent with longer-term efficient levels*" (Response , para. 22.), Ofwat has not indicated what that strong evidence is, or where it can be found (see our request to Ofwat for clarification dated 31 March 2015 and as updated on 8 April 2015).

<sup>6</sup> Response, para. 141. We note that in the Response Ofwat states the level of wholesale opex that it has calculated for each year (Response, para. 420). This appears to be at odds with Ofwat's earlier assertion that it has not considered operating costs separately, with the exception of special cost factor claims (Response , para. 141.). We also note that Ofwat has not provided an explanation of how it has calculated these opex amounts (see our requests for clarification dated 31 March 2015 and as updated on 8 April 2015) and **Section 3.5.1** below).

<sup>7</sup> See also Section 11 of the SoC.

<sup>8</sup> Response, paras. 49 and 165, Presentation, slide 16.

<sup>9</sup> SoC, Section 3.

<sup>10</sup> Response, para. 167.

### Wholesale cost–base totex and enhancement

10. As demonstrated in Sections 7, 9 and 10 of the SoC, we used a wide range of cost assessment approaches, including benchmarking, which were thoroughly tested, verified and assured in order to develop our Business Plan and estimate the associated efficient costs. We have provided extensive evidence alongside the SoC to support our case.
11. As set out in **Section 2** below, we do not consider that the comments made by Ofwat in the Response in relation to our wholesale Business Plan proposals and costs are sufficiently persuasive or well-evidenced to nullify the arguments put forward in our SoC.
12. Ofwat's assertion that we have not explained or justified our costs is unfounded given the depth and strength of the evidence submitted to Ofwat during the PR14 process. Based on communications with Ofwat, we have concerns that as late as September 2014 Ofwat had not looked at the detail of our plan beyond the cost exclusion cases, indicating that its reliance on its modelled cost thresholds and the cost exclusion process was absolute.
13. Ofwat has characterised our behaviour as intransigent compared to other companies identified as having high cost plans during the process. In particular Ofwat has quoted ways in which United Utilities and Thames Water had closed large totex gaps. We demonstrate in **Section 2.4**, however, that such a comparison does not add anything substantive to the current redetermination and is, in any event, misleading. When looked at in detail, the movement by United Utilities and Thames Water can be explained by reference to factors that do not easily translate to Bristol Water's situation. Equally, Ofwat's comparison does not take into account the broader context of these movements, which includes the impact of any positive benefits built in to FD14 which might have offset the reduction in totex. We also explain that our conduct throughout the process is consistent with that of a company that genuinely believes that its Business Plan is robust, efficient and properly reflects customers interests and is, therefore, worthy of being defended.
14. Given the size of the gap between our modelled cost threshold, and the proposed totex in our Business Plan, we consider that Ofwat should have been prepared to supplement its modelling with other approaches to assessing costs in order to properly understand the costs we had presented and test the theory of inefficiency implied by the modelling results. Given that this appears not to have happened, it is disappointing that Ofwat continues to suggest that we have provided insufficient evidence.

### Cheddar Reservoir Two

15. With respect to Cheddar Reservoir Two, Ofwat restates in Section A1.2.3 of its Response its belief that there is not a case for proceeding with Cheddar Reservoir Two in AMP6. It supports this by appending analysis from Jacobs.<sup>11</sup>
16. Whilst we deal with the criticisms in detail in **Section 2.5** below, it is worth emphasising that the Jacobs analysis is limited in that it was not an assessment of the Cheddar Reservoir Two proposal on its merits, but by reference to the specific assessment criteria applied by Ofwat.

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<sup>11</sup> Jacobs. It should be noted that this assessment was carried out by Jacobs at the end of the PR14 process, with the draft dated 18 November 2014, and the final version dated 22 December 2014.

It is also not clear exactly what information Jacobs had access to when carrying out its assessment. There was certainly no interaction between Jacobs and Bristol Water directly.

17. What is clear from the supply-demand projections in the WRMP is that even if service to customers is not improved, and the potential demand from the power station does not materialise, then the reservoir needs to be completed by 2030. The net benefits to customers (willingness to pay less cost) are, however, much higher for our proposed approach than this delayed completion. Other scenarios show that the need for extra supply may be required earlier to maintain service levels. Bearing in mind the need to factor in build time of approximately 10 years, and that not continuing as planned will inevitably lead to increased overall costs and a delay in the receipt of customer benefits, it is difficult to understand the justification to postpone commencement of Cheddar Reservoir Two until AMP7. We note that Jacobs concludes that construction of Cheddar Reservoir Two is the optimal solution.<sup>12</sup>
18. Cheddar Reservoir Two is a sustainable and beneficial component of our Water Resources Management Plan (**WRMP**). Our AMP6<sup>13</sup> programme, which includes commencement of Cheddar Reservoir Two, is optimal irrespective of whether the potential non-potable demand from power stations materialises. The plans are fully consistent with the results of our customer engagement, are in the best interests of customers and are fully consistent with Ofwat's primary Resilience Duty.

#### **Ofwat's approach to cost assessment**

19. In its Response Ofwat states that it is confident that its projections of cost provide a reasonable estimate of the efficient level of costs.<sup>14</sup> In addition Ofwat raises concerns about our benchmarking and the modelling undertaken by Oxera.
20. We show that in respect of our benchmarking, the points raised in the Response do not undermine the robustness of our approach (see **Section 3.3**). We also show, supported by evidence from Oxera, that the points raised by Ofwat in respect of Oxera's modelling are unfounded.<sup>15</sup> In particular we show that Ofwat's approach to modelling is not consistent with good economic modelling practice (see **Section 3.4**).
21. We note that the Response has not demonstrated that Ofwat has taken a broad approach to cost assessment (see **Section 3.5.1**) and that it has not satisfactorily addressed the comments we made in the SoC about the shortcomings in the model approach (see **Section 3.5.2**). In addition, we show that the comments in the Response relating to asset age and upstream assets are not well founded (see **Sections 3.5.2.3.1** and **3.5.2.3.2**). The Response confirms that Ofwat's approach to enhancement costs is confused and unduly complex and that enhancement costs should have been excluded from the modelling (see **Section 3.5.3**). We also show that the cost exclusion process was not suitable for addressing the

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<sup>12</sup> Jacobs, p. 4.

<sup>13</sup> AMP6 is the period covered by the PR14 price control, from 2015-20.

<sup>14</sup> Response, para. 53.

<sup>15</sup> Oxera, Response to Ofwat's reply to Bristol Waters Statement of Case Cost Assessment, April 15 (REP049).

underlying weaknesses in the model (see **Section 3.5.4**). Overall, we consider that Ofwat's Response has not raised any material issues that undermine the case set out in the SoC.

22. In relation to the Response Oxera agrees and states:

*"Oxera's overall conclusion is that Ofwat's points do not raise any material issues. The issues we have identified with Ofwat's models in our earlier reports remain relevant. We therefore still consider that Ofwat's models are not sufficiently robust, while Oxera's model provides more robust estimates for Bristol Water's efficient cost level."<sup>16</sup>*

23. Given the weaknesses in Ofwat's approach, we consider that the CMA should not rely on it in their redetermination (see **Section 3.6**).

### Cost of capital

24. Ofwat has presented a range of arguments in its Response to which we respond in detail in **Section 4**.
25. We demonstrate that it is not appropriate to use a long-term RPI inflation forecast to calculate the expected costs of embedded debt and that the inflation rate we have used is very close to the OBR March 2015 estimates for AMP6.
26. Ofwat contends that we can considerably outperform the cost of new debt, despite our assumed cost being similar to Ofwat's. As explained in our SoC, we do not anticipate accessing debt markets until 2017 and will seek longer term funds when we do, to maintain a balanced portfolio and meet financial covenants. We therefore continue to believe that our cost of new debt assumption is appropriate.
27. In **Section 4.4**, we counter Ofwat's comments on our calculation of embedded debt costs. We still believe it is appropriate to classify our preference shares within debt, on which CC10 was not conclusive, as their nature is more like debt than equity and they trade in the market like a debt instrument. In line with CC10, we have based our embedded debt costs on the expected cash flows of the appointed company and have excluded the accounting treatment of historic cash flows, which Ofwat suggests should be considered.
28. In line with FD14 and based on its interpretation of the Finance Duty, Ofwat has continued to state that customers should only pay for efficient financing costs. As we set out in our SoC,<sup>17</sup> our embedded debt costs have been efficiently incurred. Ofwat has not set out any analysis to conclude differently.
29. Ofwat has concluded that CC10's approach to Bristol Water's asset beta was conceptually flawed. We reference published material that supports our approach, which is consistent with CC10. Also, we consider that Ofwat's assertion that operational gearing is likely to

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<sup>16</sup> Oxera, Response to Ofwat's reply to Bristol Waters Statement of Case Cost Assessment, April 15 (REP049), Executive Summary.

<sup>17</sup> SoC, Section 12.3.3.2.1

reflect specific rather than systematic risk is extremely unlikely to be correct. The conclusions it draws by comparing the operational gearing of WASCs is misleading.

30. In the Response, Ofwat states that management action could be taken to avoid a small company premium and implies Bristol Water should be restructured. We set out in our SoC that we have explored options to refinance our debt, but that it would incur a disproportionate cost and lead to significant refinancing risk. Based on Ofwat's duties, it should not consider an approach other than our current scale being maintained. We have set out our good historic performance and high customer satisfaction, so consider Ofwat's contention that we are a "*sub-optimal operation*" is extremely mis-placed.

### Serviceability penalty

31. Ofwat's FD14 proposes a £4.1m shortfall penalty on Bristol Water due to performance on unplanned interruptions of greater than 12 hours, and it continues to maintain this position in its Response.
32. In **Section 5** we consider that Ofwat has not addressed the issues set out in the SoC to explain why this penalty should not be applied, relating to the process followed, the relevant incidents being outside of management control, and the inappropriate level of the target. In particular, we note that Ofwat has not explained why the process used at PR14 was not consistent with its 2010 workshop example.
33. We provide further details to show that imposition of a regulatory penalty in relation to a small number of incidents with unique circumstances outside of management control is inconsistent with the Serviceability methodology set out at PR09, and that as such a penalty should not be applied.

### Performance commitments

34. Ofwat's Response attempts to justify its interventions on performance commitments by reference to the information provided to customers through our research projects, and the acceptance of all other non-enhanced companies of their final determinations that include these interventions. As such, Ofwat continues to defend the targets it has set, which are likely to lead to a £3.2m penalty being imposed on the Company at the next price control.
35. We provide further details on the comparative information that was made available to customers, to show that a fair representation of Bristol Water's relative performance was provided to assist customers in their responses that led to the development of our proposed performance commitments (see **Section 6.4**).
36. We also identify a number of issues that were raised by other companies in their responses to their draft determinations, which indicate that whilst they accepted the FD14 in the round, several companies had concerns with Ofwat's performance commitment interventions.

**Retail Household**

37. Bristol Water's Board has accepted the Retail Household price control. We agree with Ofwat's position that if the CMA is satisfied that this does not deserve further scrutiny we do not intend to pursue the discussion further.

**Retail Non-Household**

38. Bristol Water's Board has accepted the Retail Non-Household price control. As with Retail Household, if the CMA is satisfied that this does not deserve further scrutiny we do not intend to pursue the discussion on this control further.
39. Ofwat has continued to assert in its Response that exclusion of input price pressure from allowed Retail Non-Household costs is reasonable, and that it has made sufficient allowance for the costs of competitive market opening. This Reply provides further details as to why we consider such an approach is contrary to available evidence on inflationary pressure, and may adversely impact new entrants to the competitive market.

**Financeability**

40. Ofwat interprets the Financing Duty as ensuring that an efficient company with a notional capital structure is able to finance its functions. It considers the assessment of financeability should not review the actual impact of FD14 on the company. In addition, it believes the duty does not require a particular credit rating or metric to be targeted. It believes its assessment of PAYG is appropriate and is based on an assessment of operating expenditure that is reasonable. Ofwat concludes that Bristol Water is financeable under FD14.
41. In our view, the determination of appropriate and achievable levels of cost, WACC and other revenue allowances is required to ensure a company is financeable. We consider a financeability assessment should be performed on a notional structure. In addition, it is also appropriate to perform financeability tests on a post-menu choice incentive basis, using our actual structure so that unintended consequences can be avoided and that remedies are achievable in practice.
42. We do not consider that FD14's PAYG ratio is appropriate, but do not have visibility of the analysis Ofwat has performed. We ask Ofwat to provide its analysis of operating costs and PAYG that has informed its assessment.
43. Ofwat has been selective in its Response and has not commented on the analysis in our SoC that shows we are not financeable using credit rating metrics. We also believe it has misinterpreted the comments of Rating Agencies. Our conclusion that we are not financeable under FD14 remains valid.

**PR14 Process and assurance**

44. Ofwat makes a number of criticisms regarding our business planning process, including in particular some points on aspects of our third party assurance and benchmarking. In particular Ofwat suggests that we deliberately withheld third party reports, it had to request such reports repeatedly before we would supply them and that when we did, and the content raised concerns that our planning process was not consistent with good practice.

45. As we set out in **Section 11.2** and **Section 11.3** Ofwat's assertions are unfounded. Third party reports were not deliberately withheld from Ofwat, and information requests were dealt with promptly. The selective use of summaries of elements of these reports, without taking into account the broader context, does not support Ofwat's argument regarding the quality of our process.
46. Ofwat also argues that its critical assessment of our business case for Cheddar Reservoir Two in itself "*raises significant questions as to whether Bristol Water's business plan has been prepared in a way consistent with good practice*".<sup>18</sup> We do not believe that including a scheme which formed a key part of our published Water Resources Management Plan (**WRMP**) could be considered inconsistent with good practice.
47. Ofwat also criticises the quality and timeliness of our cost benchmarking analysis and the supporting evidence. Again, we show in **Section 11.4** that these assertions are not supported by reference to the underlying facts. For instance, we note that the quality of evidence is a subjective assessment, and that we have concerns that Ofwat either did not effectively engage with our submissions, or if it did, that the content was not understood. Ofwat's challenges around Cheddar algae removal illustrate this; if Ofwat had read and understood our submission, it would have been able to see that the historical challenges raised in the assurance were dealt with in the narrative.
48. Ofwat challenges the quality of our customer engagement, suggesting it was superficial and that we did not provide information on our comparative performance to customers. Our Business Plan, however, demonstrated that our customer engagement was thorough and subject to significant scrutiny from the Local Engagement Forum (**LEF**) customer survey subcommittee. Inspection of the customer research materials shows that we provided comparative information to our customers at the greatest level at which industry level comparative data was available to us (see **Section 11.5**).
49. Ofwat stresses that it made efforts to engage with us but that we did not make the most of the engagement offered, linking this back to the quality and timing of our evidential submissions. Whilst we appreciated the opportunity for additional engagement and endeavoured to provide Ofwat with the evidence it sought, with hindsight it was clear that the totex gap could not be resolved through such engagement as Ofwat was not prepared to consider our evidence or move on its models (see **Section 11.6**).

### Ofwat allegations regarding Bristol Water's conduct

50. Ofwat's Response, Initial Statement and Presentation raise allegations regarding Bristol Water's conduct during the PR14 process. In particular, Ofwat suggests that we have been factually inaccurate,<sup>19</sup> glossed over evidence which might not support our case,<sup>20</sup> been inconsistent in our approach<sup>21</sup> and that our business planning process does not reflect good

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<sup>18</sup> Response, para. 27.

<sup>19</sup> See, for example, the suggestion that we have overstated our actual embedded debt costs (Response, para. 294).

<sup>20</sup> See, for example, the suggestion that we deliberately withheld our third party assurance reports from Ofwat (Response, para. 183, Initial Statement p. 9).

<sup>21</sup> See, for example, the suggestion that the menu choice position we have adopted implies that we believe we can deliver the plan for less totex than we have argued for in the SoC (Initial Statement, p. 11).

practice.<sup>22</sup> We are disappointed by these allegations. As set out above, we consider that we have followed a good process and have received positive assurance to that effect.

51. As we demonstrate in this Reply, however, these allegations are unfounded. For instance:

- for PR14 the focus switched from the submission to Ofwat of a technical audit by a Reporter to company Board-owned assurance and governance. In that context, we submitted reports, such as that provided by Mott MacDonald, to Ofwat once they had become available – only the executive summary of the Mott MacDonald Assurance Report was provided to Ofwat as, whilst Mott MacDonald had provided verbal assurance to Bristol Water, it was all that had been provided to us by Mott MacDonald in written, publishable format at that stage (see **Section 11.2.2** below for further detail);
- the suggestion that we failed to provide the full Mott MacDonald report in response to requests by Ofwat is also misleading – as we demonstrate in **Section 11.2.2** below we have no record of any such request being made to us;<sup>23</sup>
- where we did receive requests for copies of reports these were provided to Ofwat promptly, so it is inaccurate to suggest that multiple requests were needed (see **Section 11.3** below);<sup>24</sup>
- there was no expectation that companies would need to build their own, third party assured, econometric models as part of PR14. The earliest point at which it became clear that Bristol Water should take this path was following Ofwat's announcement on 6 August 2014 regarding the size of the totex gap.<sup>25</sup> The decision to engage Oxera to develop a model was taken after this announcement as it was then clear that Ofwat had rejected the criticisms made by companies of its models (see **Section 3.4.1** below). In this context, and given the level of scrutiny that the models would come under, we do not consider that the time taken by Oxera to design, build, test and publish its models is excessive. Indeed, it is a much shorter time period than Ofwat used to develop its models;
- Ofwat suggests that our calculation of embedded costs is inaccurate.<sup>26</sup> As detailed in **Section 4.4** below, current market information and a variety of calculative methods demonstrate that our assessment of embedded debt costs is appropriate and is not an overstatement as alleged by Ofwat; and
- Ofwat claims that our decision to make a menu choice of 125 means that we are *"targeting a level of totex to deliver [our] performance commitments £31.4 million lower than [we] justified in [our] representations"*.<sup>27</sup> This is not the case, and is

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<sup>22</sup> See, for example, the suggestion that our failure to provide the Oxera modelling to Ofwat at an earlier stage in the process is an indication that we have not followed good business planning practice (Response, para. 31).

<sup>23</sup> Response, para. 183. A log of all the queries received from Ofwat during the PR14 process is provided as REP032, and a summary of the detail of the queries relating to third party evidence, and our response, is provided as REP030.

<sup>24</sup> Initial Statement, p. 21: *"They were instead submitted following a number of requests from us during the risk based review process."* As demonstrated in our summary of Ofwat queries relating to third party evidence REP030, this query was raised on 23 July 2014 following the June Submission (i.e. not as part of the risk based review as suggested by Ofwat) and we responded on 24 July 2014 (see Ofwat Query BRL-WHO-001f (REP036)).

<sup>25</sup> IB17/14 Protecting Customers August 2011 (SOC070).

<sup>26</sup> Response, para, 66.

<sup>27</sup> Initial Statement, p. 11.

simply a reflection of the fact that under FD14 Cheddar Reservoir Two would not proceed during AMP6 as the required funding is not provided.

52. As the Reply and the SoC demonstrate, we fully embraced Ofwat's PR14 principles and methodology, and believe that we followed a good process in developing our Business Plan. Whilst we recognise that any such process naturally has scope for improvements, we satisfied our obligations for PR14 and consider that in many respects that we went above and beyond the requirements stipulated by Ofwat.

### Relevance of 17 of 18 companies accepting FD14 and relative movement during the PR14 process

53. We continue to believe that this redetermination should focus on achieving the right result for Bristol Water's customers, rather than being side-tracked by a debate about the process. However, we consider that it is important to deal with Ofwat's reliance on the fact that Bristol Water is the only company to have rejected FD14.
54. In the Response, Ofwat draws some comfort from the fact that 17 of 18 companies accepted FD14, and Bristol Water is the only company that has rejected it.<sup>28</sup> Ofwat's Response relies on this as support for the robustness of its cost assessment and other components of FD14, and implies that Bristol Water is alone in having any objections to the underlying methodologies, etc.<sup>29</sup>
55. As we explain in detail in **Section 11.7** below, however, this approach is simplistic and does not accurately reflect the complexity of the decision that each company will have made when assessing whether to accept or reject each of the price controls. For instance, companies will have assessed FD14 as a package, looking at each of the price controls and balancing 'losses' in some areas with 'gains' in others. Some companies have, for instance, gained from Ofwat's modelling approach. If Ofwat's position in the "Consultation on the PR14 reconciliation rulebook" is accurate, others have been able to balance cost allowance reductions against the benefits from the CIS RCV adjustment (see **Section 9.2**). It should not, therefore, be assumed that all companies are wholly satisfied with the individual components that make up FD14.

## 1.3 Structure of the Reply

56. Our Reply is structured as follows:
- **Part A:** specific replies to the comments made by Ofwat regarding the arguments set out in the SoC (**Sections 2 to 11**); and
  - **Part B:** supporting appendices.
57. In **Part A** we address the points raised by Ofwat in its Response by reference to the key arguments contained in the SoC:

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<sup>28</sup> See, for instance, Response, para. 13.

<sup>29</sup> Response, paras. 96-98, 260.

- **wholesale cost allowance** - demonstrating that the FD14 cost allowance is insufficient to enable delivery of customer-led outcomes and that our assessment of our costs, in contrast, is robust, reliable and contains a suitable amount of efficiency challenge (see **Section 2**);
- **approach to assessment of wholesale costs** - Ofwat's cost assessment process was over-reliant on unreliable cost models and the exceptions process was too limited to address the modelling issues (see **Section 3**);
- **cost of capital** - the cost of capital in FD14 is insufficient to cover the actual financing costs of Bristol Water (see **Section 4**);
- **serviceability** - the application of a serviceability penalty is inconsistent with the test that should be applied and does not acknowledge that the events were outside management control (see **Section 5**);
- **performance commitments** - the FD14 amendments to the performance incentive targets are unrealistic and will lead to unavoidable penalties (see **Section 6**);
- **retail household** – we have accepted the retail household price control (see **Section 7**);
- **retail non-household** – we have accepted the retail non-household price control, but if it is looked at by the CMA, there are some issues we consider worth noting (see **Section 8**);
- **RCV CIS adjustment** – details of the issue identified by Ofwat in relation to the RCV CIS calculation (see **Section 9**);
- **financeability** - Bristol Water is unfinanceable under FD14 (see **Section 10**); and
- **PR14 process and assurance** – some general comments relating to the criticisms raised by Ofwat of our approach to PR14, our evidence, and the assurance we received (see **Section 11**).

58. This is supported in **Part B** by the following appendices:

- **Appendix One** – refinancing of Bristol Water plc 2003-05;
- **Appendix Two** – details of the request for supporting evidence sent to Ofwat in relation to its Response; and
- **Appendix Three** – a list of the documents referred to and submitted alongside this Reply that have not already been made available to the CMA with the SoC.

## 2 Wholesale price control: scope, costs and process

### 2.1 Introduction

59. This Section addresses the comments made in Ofwat's Response relating to our wholesale price control, excluding issues relating to Ofwat's cost assessment approach (see **Section 3**).
60. As we set out in our SoC, we followed industry good practice in developing our plan and our assessment of totex met both the spirit and the letter of Ofwat's requirements.<sup>30</sup> Our cost assumptions are demanding and have been set against a variety of benchmarks.<sup>31</sup> In particular:
- we have assumed a 1.5% p.a. cumulative efficiency challenge on opex (on average a 6% saving over AMP6) which will be challenging to deliver;<sup>32</sup>
  - FD14 results in an immediate reduction in opex of 18% - an unprecedented reduction in a long term regulated environment;<sup>33</sup>
  - we have quantified our future capital maintenance expenditure through the use of deterioration modelling and named schemes, which have been combined into the optimal plan through the use of our Cross Asset Optimiser,<sup>34</sup> and we benchmarked the assessments for this using a range of techniques;<sup>35</sup>
  - we have applied a challenging efficiency assumption of 10% to capital maintenance spend;<sup>36</sup> and efficiencies applied to enhancement schemes of 5% (Cheddar Reservoir Two, 10% (Trunk Main Lining) and 12.5% (all other enhancement schemes)
  - the expenditure included within our plan contains a realistic, evidence based and challenging assessment of our requirements;<sup>37</sup> and
  - we have received varied external assurance and benchmarking related to different aspects of our approach and costing.<sup>38</sup>
61. Cheddar Reservoir Two is a key component of our wholesale enhancement plan to deliver a reliable supply to our customers.
62. In its Response, Ofwat has criticised aspects of our proposed wholesale plan, both in relation to scope and our forecast totex, each of which is addressed in the following sections:
- the basis on which we have justified our costs (see **Section 2.2**);
  - application of an appropriate efficiency challenge (see **Section 2.3**);

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<sup>30</sup> SoC, Section 7.1.2.

<sup>31</sup> SoC, Section 7.8.

<sup>32</sup> SoC, Section 9.1.2.

<sup>33</sup> SoC, Section 9.1.2.

<sup>34</sup> SoC, Section 9.1.2.

<sup>35</sup> SoC, Section 9.4.

<sup>36</sup> SoC, Section 9.1.2.

<sup>37</sup> SoC, Section 9.1.2.

<sup>38</sup> SoC, Section 9.4.4.

- our response to Ofwat's cost interventions relative to other companies (see **Section 2.4**;
- our focus on 15 special cost factor claims (see **Section 3.5.4** ).
- our case for commencing the construction of Cheddar Reservoir Two in AMP6 (see **Section 2.5**); and
- our business planning processes (see **Section 11**)

## 2.2 Justification of Bristol Water's costs

63. In the Initial Statement Ofwat states that Bristol Water's "*original business plan did not sufficiently justify the level of expenditure proposed*".<sup>39</sup> Ofwat then states that despite the further engagement following the RBR, at FD14 "*we judged that the company had not provided sufficient explanation and evidence to justify all its proposed adjustments to its cost threshold*".<sup>40</sup> "*Consequently, the evidence was not sufficient to persuade us that the higher bills the company proposed were justified. Given our focus on customers, we considered that we had to continue to intervene in their interests.*"<sup>41</sup>
64. Our December Submission contained considerable levels of detail, evidence and support for both the forms of interventions proposed and the costs associated with them.<sup>42</sup> This information has therefore been made available to Ofwat from the outset of the process. It appears, however, that the only areas of the Business Plan that were singled out for 'deep dives' and were looked at during the RBR related to enhancement.
65. Following criticism by Ofwat at the RBR regarding quality of Business Plans across the industry, we provided greater levels of information to Ofwat with our June Submission in order to better meet the "*high evidential bar*".<sup>43</sup> This included submitting a 'Business Plan Evolution'<sup>44</sup> document which aimed to provide visibility of the 'golden thread' running through our process that Ofwat said it wanted to see.<sup>45</sup> Ultimately, we believe that the evidence we provided to Ofwat throughout the process was more than sufficient to enable it to understand and accept the scope of our proposed Business Plan and the associated costs.
66. Our impression of the PR14 process is that Ofwat has focussed on understanding variances from its modelled cost threshold, rather than on understanding the justification for companies plans. It has been a 'one size fits all' approach in many ways which reflects, in part, the time constraints that Ofwat has faced. This was confirmed in our discussions with

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<sup>39</sup> Initial Statement, p. 9.

<sup>40</sup> Initial Statement, p. 12.

<sup>41</sup> Initial Statement, p. 8, Response, para. 9. It is misleading to imply that we proposed "*higher bills*". Our Business Plan proposes bills that are lower than the levels paid at the end of AMP5 by approximately 5% in real terms. Our proposed average bills are, therefore, only "*higher*" when looked at relative to the average bill identified by Ofwat in FD14.

<sup>42</sup> Bristol Water PR14 Business Plan Overview December 2013 (SOC114).

<sup>43</sup> Setting Price Controls for 2015-2020 – Draft price control determination notice August 2014 (REP046).

<sup>44</sup> June 2014 Business Plan Evolution (SOC021).

<sup>45</sup> June 2014 Business Plan Evolution (SOC021).

the Wholesale Cost Team following DD14 which indicated that even as late as September 2014, Ofwat had not read the detail of our Business Plan.<sup>46</sup>

67. Given the size of the gap between our modelled cost threshold and the proposed totex in our Business Plan, we consider that Ofwat should have given the justifications and evidence we provided due consideration. Ofwat should also have been prepared to supplement its modelling with other approaches to assessing costs, including the use of engineering assessments as appropriate, in order to properly understand the costs we had presented and test the theory of inefficiency implied by the modelling results. This could have been achieved by interviewing the engineering companies that provided assurance to us. Given that this appears not to have happened, it is disappointing that Ofwat continues to suggest that we have provided insufficient evidence.

### 2.3 Ofwat's 19% efficiency challenge

68. In its response Ofwat states that *"it is important to be clear that our efficiency challenge has been applied in a way that replaces rather than adds to Bristol's own efficiency challenge."*<sup>47</sup>
69. Ofwat has not provided the calculations to support this assertion, and we remain unconvinced that Ofwat's efficiency challenge has been applied in such a way. Our understanding is that Ofwat has used the specific cost exclusion case level of expenditure in our Business Plan as the starting point for its assessment. This figure as included in our Business Plan is a post efficiency figure and therefore includes our 12.5% efficiency challenge. This means that when Ofwat has assessed the costs in our Business Plan as being 19% away from upper quartile, it has done so on the basis of costs which already include our efficiency challenge. It has, therefore, effectively applied a 29% reduction to our cost estimates.
70. Ofwat notes that application of its efficiency challenge *"leads to a relatively modest reduction in the allowance for un-modelled claims of £3.4 million relative to Bristol Water's revised business plan"*.<sup>48</sup>
71. The £3.4m amount referred to by Ofwat of £3.4m is a pre-triangulation figure and is an adjustment only applied to one model.<sup>49</sup> Once this has been triangulated, the amount increases to £18.4m, meaning that the impact is significant (see Table 1).

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<sup>46</sup> At a meeting with the Wholesale Cost Team on 2 September 2014 we asked the Director of Wholesale Price Controls whether the difference between the modelled expenditure and our plan was because we were massively inefficient or whether we were including too much activity in our plan. He indicated that Ofwat had not read the detail of our plan because that wasn't how it was setting prices at PR14 given that there was insufficient time to take this approach with all companies.

<sup>47</sup> Response, para. 218. We note that we have raised a query with Ofwat in relation to the underlying evidence to support this assertion (see queries dated 31 March 2015 and 8 April 2015).

<sup>48</sup> Response, para. 218.

<sup>49</sup> 'Triangulation' was the process followed by Ofwat in calculating basic cost thresholds, namely by calculating the (un-weighted) average of the three modelling approaches it carried out. For a worked example, see Section 11.2.2 of the SoC. In practice, because Ofwat replaced its refined totex model stream with the bottom up stream, the impact of triangulation was reduced to a one-third reduction.

Table 1 Comparison of Bristol Water's plan against pre- and post triangulated allowances for specific schemes

Unmodelled cost claim	Bristol Water DDR (net of IA) (post efficiency) (£m)	Ofwat's view in FD14 (net of IA) (pre triangulation) (£m)	Difference between Bristol Water and Ofwat pre-triangulation (£m)	Ofwat's view in FD14 (Net of IA <sup>50</sup> ) (post triangulation) (£m)	Difference between Bristol Water value and Ofwat's post-triangulated view (£m)
Raw Water Deterioration	18.7	16.9	-1.8	11.3	-13.1
Southern Resilience Scheme	11.4	10.5	-0.9	7.0	-7.9
NEP - Drinking Water protected areas	11	9.6	-1.4	6.4	-7.8
Asset reliability - discoloured water contacts	5.3	6	0.7	4.0	-3.3
<b>TOTAL unmodelled claims</b>	<b>46.4</b>	<b>42.9</b>	<b>-3.4</b>	<b>28.0</b>	<b>-18.4</b>

Source: Ofwat FD (SOC229) Table AA1.8; Ofwat Response, Table A1.1; Bristol Water analysis

72. We also note that the increase in our efficiency challenge at DDR was not intended to “partially address some of the concerns raised by its own assurance processes”<sup>51</sup> as Ofwat has suggested, but was a top-down assessment made by the Bristol Water Board and reflected the highest risk cost position it was willing to adopt in an attempt to reduce the difference to Ofwat’s view of costs.<sup>52</sup>

## 2.4 Movement in Bristol Water's Business Plan during PR14 relative to other companies

73. In the Response, Initial Statement and Presentation, Ofwat makes reference to the movement in Bristol Water's Business Plan in response to Ofwat's interventions comparative to other companies, and Thames Water and United Utilities in particular.
74. For instance, Ofwat makes the following statements:

*"[the] conspicuous contrast between the behaviour of Bristol Water and other companies exposed as relatively high cost by our wholesale cost assessment processes, where **both United Utilities Water and Thames Water (in relation to its separate Tideway activities) revisited business plans and brought forward significant efficiency savings.** In contrast Bristol Water appeared to concentrate on bringing forward 15 special cost factor claims".<sup>53</sup> (emphasis added)*

<sup>50</sup> Implicit Allowance.

<sup>51</sup> Response, para. 216.

<sup>52</sup> Our detailed discussion of the efficiency challenge in Section 9.4.2 of the SoC addresses the general comments made by Ofwat in its response on this topic (Response, paras. 215 – 217). We believed our costs to be efficient; the Oxera analysis described in Section 3 confirms that our costs are efficient.

<sup>53</sup> Response, para. 50.

*"The two other companies took the opportunity to substantially revise their business plan forecasts such that the gaps with our modelled allowances were significantly reduced. United Utilities Water substantially revised its business plan and reduced its forecasts of costs by more than £300 million, reducing its gap to our cost threshold for sewerage from 46% at the risk based review to 6% at final determination. Thames Water substantially reduced the costs associated with its separate tideway activities from £655 million to £404 million, which allowed us to make a full allowance for these cost at final determination. In contrast, Bristol Water reduced its costs forecasts by only £21 million (a reduction from their June business plan of 3.7%) and instead it focused only on explaining why there were special cost factors that meant its costs were exceptionally high."*<sup>54</sup> (emphasis added)

75. As we set out in the following sub-sections:

- such a comparison does not add anything substantive to the redetermination that is to be carried out by the CMA (see **Section 2.4.1**);
- when looked at in more detail, the movement by United Utilities and Thames Water can be explained by reference to factors that do not easily translate to Bristol Water's situation (see **Section 2.4.2**); and
- in any event, Bristol Water's decision to stand by its Business Plan is justifiable and reasonable (see **Section 2.4.3**).

#### 2.4.1 Value of the comparison

76. As we have set out in **Section 11.7** below, each company will approach a periodic review determination in its own way. Simply comparing cost movements, such as those referenced by Ofwat, in isolation without the benefit of the relevant context does not enable any meaningful conclusions to be reached.

77. For instance, United Utilities movement related to its wholesale wastewater price control, whereas for Thames Water it was linked to the unique Thames Tideway project. Neither of these is directly comparable to Bristol Water's wholesale water price control. In addition, the specific explanations behind the various cost movements set out in **Section 2.4.2** show that they cannot be clearly applied to Bristol Water's situation.

78. As such, these comparisons do not have any substantive impact on an assessment of Bristol Water's costs, and constitute an unnecessary distraction.

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<sup>54</sup> Initial Submission, p. 10. We note that the last sentence of this quote implies that the costs contained in our Business Plan were "exceptionally high". As we have set out in the SoC (see Sections 9 and 10) this is not the case. As such, it is misleading to suggest that we submitted special cost factor claims as a result of our costs being high. Instead, we submitted special cost factor claims because our efficient costs are higher than Ofwat's model predicted them to be.

## 2.4.2 Explanation of the movement of other companies

79. In the Response, Ofwat refers to the actual value of the relative movement made by United Utilities and Thames Water to reduce the size of their 'totex gaps', noting that "*all of these companies, with the exception of Bristol Water, managed to close the gap in totex*".<sup>55</sup>
80. Table 2 below sets out details of the movement in costs of the three identified companies at each stage of the process.

**Table 2 Relative movement in cost proposals in company business plans**

	Company Cost proposal (£m)			Relative movement in costs between submissions (%)		
	Dec plan	June plan	DDR	Dec plan to June plan	June plan to DDR	Dec plan to DDR
<b>Bristol Water - wholesale water</b>	572	562	541	-1.7%	-3.7%	-5.4%
<b>United Utilities - wholesale waste</b>	3566	3414	3112	-4.3%	-8.8%	-12.7%
<b>Thames Water – Thames Tideway Tunnel</b>	508	655	404	28.9%	-38.3%	-20.5%

Source: Bristol Water Analysis<sup>56</sup>

81. The following points are worthy of note:
- whilst the reduction in the Thames Tideway Tunnel costs from £655m in the June plan to £404m in the DDR is substantial, it should be seen in the context that those costs had actually risen in June from the initial submission of £508m in the December plan;
  - based on information in its final determination, Thames Water's movements relate specifically to disagreements around timing and uncertainty of costs relating to a specific contractor appointment, rather than the potential for reductions in scope or efficiencies;<sup>57</sup>
  - the movement in United Utilities' wholesale waste cost proposals related to amendments to the schemes it put forward in relation to the National Environment Programme (NEP), effectively renegotiating its NEP obligations with the EA.<sup>58</sup> In

<sup>55</sup> Response, para. 8.

<sup>56</sup> Data sourced from United Utilities (REP021), Thames Water (REP022) and Bristol Water's (SOC009) Draft Determinations.

<sup>57</sup> For instance, Thames Water's representation on the Thames Tideway costs included an uncertainty mechanism around the timing of the appointment of the infrastructure provider. This was allowed by Ofwat but it adjusted the definition (Thames Water Final Determination (REP020), Section A4.5). Thames Water also argued for a £48.6m risk allowance if an uncertainty mechanism was not allowed, and Ofwat allowed £20.5m development costs based on its 'central' view of timing of the appointment of the infrastructure provider (Thames Water Final Determination (REP020), Section A4.4.1). Thames Water also reduced its logging up claim for 2010-15 expenditure on the Thames Tideway by £22m (Thames Water Final Determination (REP020), Section A4.4.4).

<sup>58</sup> The changes it proposed were to: reduce NEP5 Water Framework Directive by £77m (from £235m) through £41m early start, £20m scope and £16m efficiency savings - the remaining £158m claim was accepted in full; reduce NEP5 shellfish by £2m (from £35m to £33m) through efficiencies - £28m was allowed; reduce NEP4 chemical & phosphorous claim by £25m (from £51m to £26m) through £3m scope, £4m efficiency and accepting £18m implicit allowance - claim was not allowed; reduce Davyhulme wastewater treatment works claim by £70m (from £200m to £130m)

summary these reductions amounted to a £64m reduction in scope, a £38m, reduction arising from efficiency savings, and an acceptance of Ofwat's Implicit Allowance effectively worth £94m;

- during the Presentation, Sonia Brown noted that United Utilities accepted that the efficiency challenge had changed from average efficiency to upper quartile efficiency. However, as shown above, the efficiency challenge UU gave itself actually only equates to a 1% move - it was its acceptance of the implicit allowances and its ability to change scope which had the greatest impact;
- when looking at the value of efficiency savings on a standalone basis, between the June Submission and the DDR, United Utilities only offered a 1% efficiency saving, whereas our movement in efficiency assumptions equate to a 4% movement; and
- looking at this movement in isolation does not reflect the fact that price determinations will be assessed by companies as a package. For example, the implicit menu cost for Thames Water for both water and waste wholesale price controls is £232m lower than Ofwat's cost baseline<sup>59</sup>, and there may have been other areas in which these companies benefited from Ofwat's approach (see **Section 11.7** below).

82. Whilst our schemes are of a far smaller scale, we had already carried out significant negotiation with the EA ahead of our December Submission, particularly around the NEP eels scheme at Purton, which meant that the proposals contained in our December Submission were already as low cost as we could make them whilst remaining compliant with the specific obligations.
83. We note that Ofwat made a similar comparison during our engagement following DD14, with Sonia Brown encouraging Bristol Water to do as other companies had done and "*use the comparative information that has become available on future costs to revisit [your] own business plans and challenge both the scope of the activities [you] consider as necessary and the costs of delivery*", stating that "*for example Southern on its waste business 'closed the gap' (materially)*" between RBR and DD14.<sup>60</sup> We note that this is not consistent with Ofwat's recommendations to its Board regarding Southern Water's draft determination which states "*we recognise that the company did not materially close the gap following the risk-based review*".<sup>61</sup>
84. Inspections of comparisons of Ofwat and company cost movements (see Figure 1 and Figure 2) show that between our December plan and the DDR we moved the second most overall and the most on the wholesale water price control. Whilst these graphs show that Ofwat adjusted its basic cost threshold most for Bristol Water, the second and third highest adjustments for the wholesale water price control were for companies which also increased their costs between December and the DDR.

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through £16m efficiency and accepting £54m implicit allowance - £47m was allowed by Ofwat; reduce Oldham and Royton wastewater treatment works claim to £83m, accepting implicit allowance of £22m and updated for recent tender - £61m was allowed; and to Increase base totex claim to £188m - £20m was accepted (United Utilities Final Determination (REP019), Table A3.3, p. 37).

<sup>59</sup> Bristol Water analysis of Thames Water FD14.

<sup>60</sup> Sonia Brown email to Luis Garcia 11th Sept 2014 (REP011).

<sup>61</sup> Recommendation to Ofwat's board Southern Water DD14 (REP010), p. 9.

Figure 1 Ofwat and Company cost movements - Wholesale total

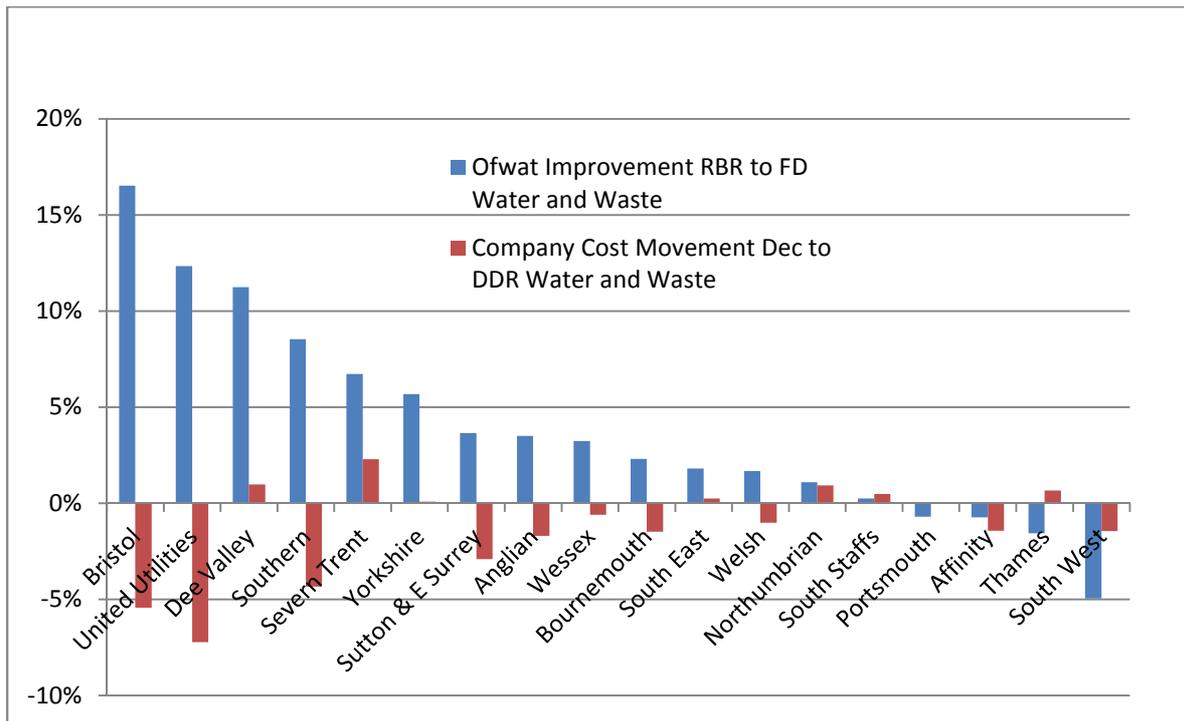
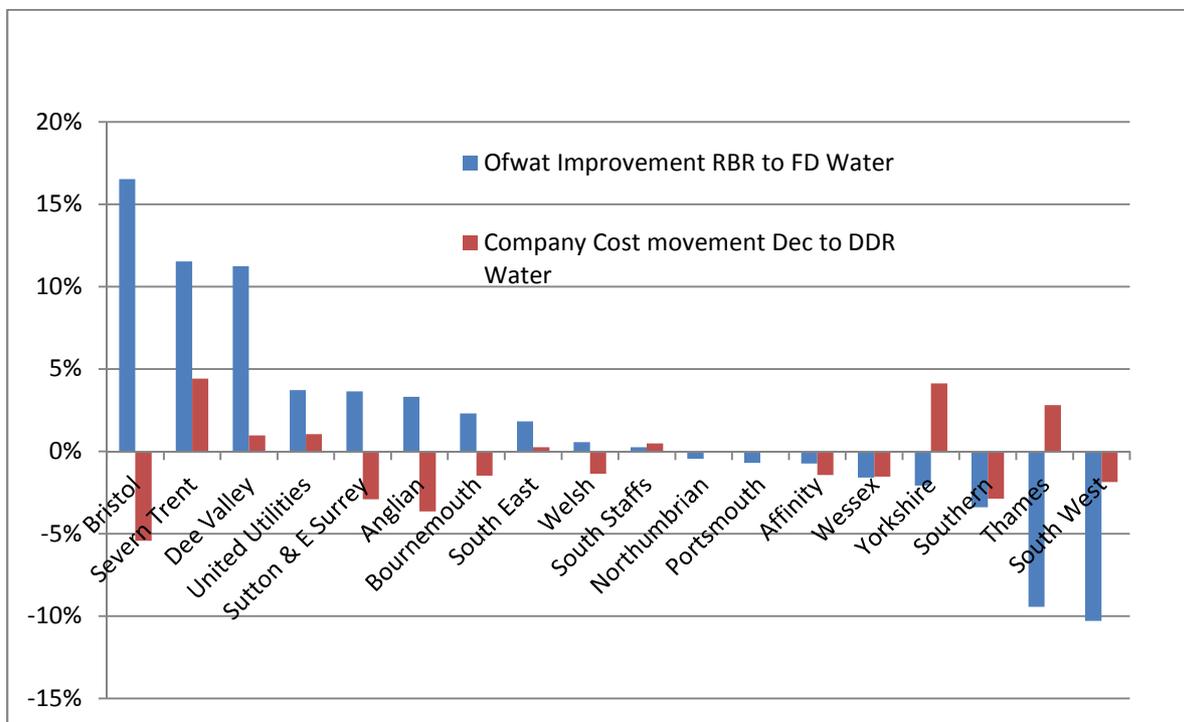


Figure 2 Ofwat and Company cost movements - Wholesale Water



### 2.4.3 Justification for Bristol Water's approach

85. Built into the comparisons Ofwat has made between Bristol Water, Thames Water and United Utilities is a criticism of Bristol Water for standing by its Business Plan and focussing on explaining the difference between our detailed assessment of costs, and the basic cost threshold estimated for us by Ofwat's models. Implicit in Ofwat's reasoning is that there is something inherently wrong with a company believing in its Business Plan and standing by it throughout a process.<sup>62</sup> This could be interpreted as endorsing an approach which is more akin to regulatory gaming, and penalising a company which has abided by its commitment not to game in any way and which put forward its best plan at the outset.
86. As we have set out in detail in the SoC, we followed a robust and thorough process to develop our Business Plan.<sup>63</sup> This included extensive customer engagement to identify customer priorities and preferences which were translated into potential intervention activities through detailed optioneering, whole life costing, deterioration modelling and supply demand balance modelling. Customer benefit and willingness to pay research was then used to identify the optimal combination of interventions required to deliver the performance customers want, and which our acceptability research indicated that 92% of our customers supported.
87. Bristol Water's conduct following the December Submission, therefore, is entirely consistent with our belief that the December Submission was a robust and efficient plan that properly reflected customers' interests. As such, whilst we did challenge ourselves to deliver that optimal programme for less through the inclusion of more challenging efficiencies, we concluded that we could not change the scope of our Business Plan without either impacting on our ability to meet the performance commitments we had agreed with customers, or creating a sub-optimal plan.
88. We do not consider, therefore, that we should be criticised for having sought to enhance our special cost factor claims through the provision of additional evidence.<sup>64</sup> During meetings with Ofwat following the RBR,<sup>65</sup> Ofwat suggested that we should investigate whether there were more special factors to explain the gap between Ofwat's modelled cost threshold and our proposals. We took this on board and sought to:

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<sup>62</sup> We note that Ofwat has characterised Bristol Water's decision to stand by its Business Plan as a weakness, yet it has adopted the same position with respect to FD14. This includes Ofwat's continued belief in the appropriateness of the cost assessment approach it followed (modelling and cost exclusion cases), despite significant feedback from the industry regarding issues with the modelling (DD - A3 Wholesale (SOC331)).

<sup>63</sup> SoC, Sections 5, 6 and 7.

<sup>64</sup> We also consider that it is inappropriate to refer to these as "*a relatively large number of unconvincing special cost factor claims*" (Presentation, Slide 16). Firstly, given the size of the gap between Ofwat and Bristol Water compared to other companies, it is not surprising that we would choose to make a larger number of special cost factor claims. To put this in context, however, the only special cost factor we had included in our December Submission was Cheddar Reservoir Two as at the time we believed it was the only scheme which fitted Ofwat's definitions for special factors. We understand, however, that other companies had included a range of special factor claims in their December submissions. Also, we do not consider that our claims were "*unconvincing*" (see Sections 9 and 10 of the SoC).

<sup>65</sup> We participated in meetings with Ofwat's Wholesale Cost Team on 14 April 2014 and 21 May 2014 in order to better understand the issues arising from Ofwat's modelled cost estimate and understand how we might investigate the gap and explain it.

- reduce our costs wherever we could justify doing so (see **Section 2.6.1**);<sup>66</sup> and
- better explain the differences between Ofwat's model forecasts and our Business Plan through the use of cost exclusion cases, as recommended by Ofwat (see **Section 3.5.4**).

## 2.5 Cheddar Reservoir Two

89. In its Response Ofwat raises a number of issues in respect of Cheddar Reservoir Two.<sup>67</sup> In particular Ofwat argues that:

- the evidence suggests that Bristol can proceed on a sustainable basis without constructing the reservoir during the period 2015-20 (see **Section 2.5.1**);<sup>68</sup>
- the inclusion of a scheme in the WRMP has no weight in the price review process (see **Section 2.5.2**);<sup>69</sup>
- there is significant uncertainty surrounding demand for non-potable water, which Ofwat believes is the primary justification for Cheddar Reservoir Two (see **Section 2.5.3**); and
- evidence on customer engagement does not support the view that customers value the additional resilience that Cheddar Reservoir Two would provide (see **Section 2.5.4**).<sup>70</sup>

90. Its conclusions were supported by a briefing note from Jacobs reviewing the scheme against Ofwat's cost exclusion criteria, although it is unclear which documents Jacobs considered in forming its opinion. It is not disclosed what role the note had in supporting Ofwat's FD14 given that it is dated 22 December 2014. (See **Section 2.5.5**).

91. We address each of these issues below. The Jacobs' note appended to the Response touched on a number of these areas directly. Where relevant we have addressed the comments made by Jacobs in the appropriate sections.

### 2.5.1 Bristol can proceed on a sustainable basis without Cheddar Reservoir Two

92. In the Response, Ofwat states that "*the evidence suggests that Bristol Water can proceed on a sustainable basis without constructing this reservoir during the period 2015 to 2020*",<sup>71</sup> because it considers "*service can be maintained at expected levels for a lower cost and bill*

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<sup>66</sup> Our focus on identifying whether our costs were appropriate, utilised specific scheme cost benchmarking using Mott MacDonald and ChandlerKBS (**CKBS**). We also looked at broader benchmarking, for example participating in a totex benchmarking study carried out by Oxera. Following this we looked to more formally develop our own benchmarking at programme level to identify any potential inefficiency.

<sup>67</sup> Details supporting the case for Cheddar Reservoir Two were set out in Section 10.6 of the SoC. In addition, further details are set out in our Water Resources Management Plan (**WRMP**).

<sup>68</sup> Response, para. 25.

<sup>69</sup> Response, para. 193.

<sup>70</sup> Response, Section A.1.2.3.1.

<sup>71</sup> Response, para. 25.

impact over both the short and longer term"<sup>72</sup> without the construction of Cheddar Reservoir Two.<sup>73</sup> This appears to be supported by the Jacobs' note which states:

*"Reference to WRMP Table WRP 5 shows that if Cheddar 2 and Seabank were removed from the equation, but the planned interventions (leakage and metering etc.) were carried out the supply demand balance would remain positive beyond 2030."*<sup>74</sup>

93. There are a number of issues with this statement by Jacobs that may indicate a lack of familiarity with the water resources management planning process:
- removing components from an optimised solution will result in a non optimum plan for that scenario. If a demand is removed, the plan should be re-optimised to find the optimum solution. The re-optimisation based on this suggestion by Jacobs still results in Cheddar Reservoir Two being included in the plan (albeit 2 years later in AMP6) even if the non-household demand is removed; and
  - in the approach taken by Jacobs, a supply demand deficit emerges by 2031/32 which Jacobs ignores. A key aspect of the WRMP process is to look 25 years ahead to ensure that the best long term approach is not overlooked.
94. In our WRMP, we set out the results of a correctly optimised solution for the same scenario Jacobs has proposed above (referred to as scenarios 4A and 4B) .
95. A key uncertainty in our plan is whether significant non-potable demand will materialise in the Severnside area over the next ten years. Our WRMP is optimised assuming that demand does materialise. However, it also includes an alternative scenario (4B) that would be preferred in the event the non-potable demand does not materialise. Cheddar Reservoir Two is included in both scenarios.
96. Scenario 4B does not have a materially higher cost than 4A. Therefore, if we discount the likelihood of any future demand for water in the Severnside industrial area, scenario 4B would be our preferred plan for the reasons set out below:
- improved security for customers of a stored water solution over smaller less certain to deliver (riskier) schemes;
  - customer benefits of higher headroom and levels of service at a cost which is supported;
  - additional local supply security to handle more short droughts;
  - avoiding extra cost and bill impacts of shifting extra costs into AMP7 period; and
  - a lower cost solution beyond the period reviewed in the WRMP.
97. Scenario 4B includes Cheddar Reservoir Two, which is required by 2027. The construction process for the reservoir is projected to take at least 10 years, therefore we would still expect to begin the construction phase by 2017 at the latest.

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<sup>72</sup> Response, para. 202.

<sup>73</sup> Response, para. 202.

<sup>74</sup> Jacobs, p.4.

98. In addition, Ofwat states:

*“The incremental nature of the WRMP process means that company plans can evolve over time. This suggests that lower benefit and higher risk options (for example where interventions are based on highly uncertain future input assumptions as appear to be the case for the Cheddar 2 reservoir) can be considered later in the planning period. This allows the most time for the solution type or the size to be refined as projections solidify. Companies need to develop and sequence their plans in a proportionate way considering the robustness of the solutions. This should help promote efficient investment.”<sup>75</sup>*

99. Our WRMP delivers a managed set of outcomes intended to be deployed over time as suggested. However, for the greater number of scenarios tested, the long term optimum solution required is a reservoir scheme that has a significant lead time to completion. To ensure we can maintain supply security after 2025, the reservoir would have to be fully available at that time. As a result, the scheme would need to start within the AMP6 period. By suggesting that higher risk options should be taken, Ofwat appears to contradict the EA's advocacy of 'no regrets' planning.<sup>76</sup> Given the long lead time to build the reservoir there is little time for "projections" to solidify before it would be too late to build Cheddar Reservoir Two and maintain service levels. The ONS 2012 projections for population growth are higher than the projections we used in our WRMP.<sup>77</sup>

100. Indeed, a key benefit of our proposed approach is that it is the same as scenario 4B during AMP6. In other words, our plan is robust whether or not the non-potable demand materialises. If it does not, then there are some additional resource developments that will not be required in AMP7. In this way our plan is flexible to the uncertainties we face.

101. A significant risk of delaying construction of optimal long-lead time water resource solutions, is that the outcome will be a significantly higher cost for customers. We do not consider that such an outcome is consistent with the Consumer Duty. In addition, delaying provision of assets that improve resilience for customers is not consistent with the Resilience Duty.

102. Ofwat has not commented on the additional benefits that Cheddar Reservoir Two would provide beyond the supply and demand balance assessment.

## 2.5.2 Role of the Water Resources Management Plan in the Price Review Process

103. In its Response Ofwat states:

*“The Water Resources, Management Plan (WRMP) should inform the investment choices that are presented in business plans, for delivery in AMP6, but inclusion in the Final WRMP does not replace the need to successfully demonstrate the need and efficiency in line with the price review process.”<sup>78</sup>*

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<sup>75</sup> Response, para. 192.

<sup>76</sup> SoC, para. 1334.

<sup>77</sup> SoC, para. 1356.

<sup>78</sup> Response, para. 193.

104. We consider that this statement mischaracterises and attempts to reduce the importance of the WRMP process.
105. The Water Resources Planning Guidelines issued by Ofwat, the EA, Defra and the Welsh Government in June 2012 (the **WRP Guidelines**) note that the WRMP will be the basis of the assessment of supply-demand balance when considering price limits.<sup>79</sup> Ofwat's statement is not consistent with these guidelines.
106. It also ignores Defra's March 2013 Strategic Policy Statement which states:
- "The Government expects Ofwat to use its role as a statutory consultee to identify at an early stage any proposals within a WRMP that would be inconsistent with its approach to the price determination process."<sup>80</sup>*
- "More broadly, the Government expects that Ofwat will engage proactively with the other regulators and take their views into account in formulating its thinking."<sup>81</sup>*
107. We consulted widely and responded fully to representations on our WRMP during the consultation period. We provided all the additional details requested including further analysis requested by Ofwat. We note that although we responded fully to Ofwat at the consultation stage, its representation did not express specific concerns or request further information in relation to our plans for Cheddar Reservoir Two.
108. Our WRMP and the associated processes were subject to multiple levels of external consultation, review and assurance at draft and final stages as set out below:
- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Atkins</li> <li>• Atkins</li> <li>• Mott Macdonald</li> <li>• ChandlerKBS</li> </ul> | <ul style="list-style-type: none"> <li>Draft WRMP and CBA</li> <li>Final WRMP and modelling</li> <li>Capital and operating costs</li> <li>Cheddar Reservoir Two and other scheme costs</li> </ul> |
|---|---|
109. Throughout the consultation process, we worked with all stakeholders to resolve issues and concerns. The result of the process was a WRMP that the Environment Agency, Defra, the LEF and the local planning authorities agreed followed the principles of good practice and was acceptable.

### 2.5.3 Uncertainty surrounding non-potable demand

110. In its Response, Ofwat states:

*"There is significant uncertainty surrounding the demand for non-potable water that would come from the development of the Seabank 3 power station, which is the primary justification for the Cheddar 2 reservoir."<sup>82</sup>*

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<sup>79</sup> Water Resource Planning Guidelines October 2012 ('**WRP Guidelines**') (SOC040).

<sup>80</sup> Defra Strategic Policy Statement March 2013 (SOC030), para. 2.17.

<sup>81</sup> Defra Strategic Policy Statement March 2013 (SOC030), para. 2.18.

<sup>82</sup> Response, para. 194.

111. Ofwat is the only stakeholder that concludes that the primary justification for Cheddar Reservoir Two is the requirement for non-potable supplies.
112. Ofwat's focus on the narrow issue of non-potable bulk supplies within a short term investment period, rather than on a holistic plan that delivers customer requirements and benefits in the long term without significant bill impacts, is concerning.
113. At the time we finalised our Business Plan, we had good reasons to believe there would be a need to provide water supplies to Seabank and needed to expose the impact of that risk. However, in our WRMP we modelled alternate scenarios that showed the proposed reservoir remained an optimum solution even in the case where non-potable supplies would not be required.
114. We have made the point in our SoC that in the recent past, the company has provided large volumes of non-potable water to industrial sites in the industrial zone of Severnside. Our plan retains sufficient resilience to deliver higher levels of security and manage future growth at Severnside.
115. Ofwat makes a number of more specific points about the potential supplies to power stations, each of which is addressed in the following sections:
- that the timing of the power stations included in our plan is not consistent with the latest evidence (see **Section 2.5.3.1**);
  - that action can be taken later if the demand actually occurs (see **Section 2.5.3.2**);
  - that scenario 4A of the WRMP which excludes supply to the power stations is better for customers' interests (see **Section 2.5.3.3**); and
  - that Bristol Water does not have a statutory duty to plan for non-potable supply (see **Section 2.5.3.4**).

### *2.5.3.1 Timing of Power Stations*

116. Ofwat raises concerns in its Response that our WRMP assumed that a non-potable supply to Seabank would commence in 2018/19, but that the latest evidence suggests that the power station will not be ready at this time.<sup>83</sup>
117. We agree that it is now unlikely that either Seabank 3 or Avonmouth Power Stations will be complete before 2020.<sup>84</sup> However, Cheddar Reservoir Two is not planned to be in service until 2025. To rule out any potential impact from power station demand now, therefore, would require being certain that the stations were not going to be in place before 2025. We do not consider that this is a reasonable assumption at this time.

### *2.5.3.2 The demand can be addressed later*

118. Ofwat also states:

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<sup>83</sup> Response, para. 197.

<sup>84</sup> Scottish Power advised us in March that their Avonmouth Power station Proposals are now temporarily on hold. Scottish Power Letter – Avonmouth Proposals, March 2015 (REP047).

*"If the non-potable demand were to become certain it would be appropriate for Bristol Water to seek to fund any enhancement expenditure in such a way as to protect the interests of its domestic customers."<sup>85</sup>*

119. If the demand were to become certain at a later date, and no resources were in place to address it, then Bristol Water would have to identify an appropriate supply demand solution that could be delivered in a very short period. Cheddar Reservoir Two could not be delivered in a short period of time. This would inevitably result in a sub-optimal approach compared to the long-term planning approach specified in the Water Resource Management planning guidelines. This would clearly not be in customers' interests.
120. In addition, this approach advocated by Ofwat is not consistent with Defra's Strategic Policy guidance for Ofwat:

*"Water and Sewage Companies should continue to actively plan for new development and increasing demand on both water and sewerage networks, and to engage with planners, consumers, developers and others to ensure that the system is resilient and capable of supporting sustainable growth."<sup>86</sup>*

121. It is also inconsistent with the Government's intention of fostering a long-term approach through its introduction of the Primary Resilience Duty for Ofwat.

*"We need to take account of the impact of environmental pressures, population growth and patterns of demand on essential services; to reduce pressure on the water environment that we all rely on; and to reform the aspects of the system that institutionalise short term thinking, focusing instead on long term resilience.*

*To support the required change in behaviour, the clause creates a new primary duty to further the resilience objective. It has been given wide scope, to recognise the fact that water resources are managed in the natural environment and to reflect the need for innovative solutions, demand management and planning and investment that look to the long term."<sup>87</sup>*

122. We believe that it was to stop exactly the sort of short-term institutional behaviour that is being demonstrated here by Ofwat that the Resilience Duty was introduced.<sup>88</sup>

### 2.5.3.3 Scenario 4A is in customers' interests

123. Ofwat states:

*"we note the short and long term totex and bill impacts of scenario 4a are lower than Bristol's preferred scenario that includes the Cheddar 2 reservoir. While there*

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<sup>85</sup> Response, para. 206.

<sup>86</sup> Defra Strategic Policy Statement March 2013 (SOC030), para. 3.8.2.

<sup>87</sup> SoC para. 116. Dan Rogerson, Parliamentary Under-Secretary of State for Environment, Food and Rural Affairs, Public Bill Committee, Tuesday 10 December 2013.

<sup>88</sup> SoC, Section 2.5.1.4.

*remains significant uncertainty about the power station it would not seem consistent with customers' interests or Bristol's statutory obligations to proceed with the reservoir development.*<sup>89</sup>

124. This statement again implies a lack of familiarity with water resource planning processes. It is not appropriate to compare scenario 4a and our preferred plan as they represent different states of the world (i.e. with and without the Power Station demand). Instead scenario 4A should be compared with 4B for the WRMP period of assessment (both scenarios without the Power Station demand). The slightly lower cost of scenario 4A compared to 4B is more than offset by the significantly higher benefits arising from scenario 4B due to the higher resilience and lower risk for customers as set out above.
125. Since preparing the WRMP we have continued to develop Cheddar Reservoir Two in line with CC10. Therefore the marginal cost difference of the two scenarios will be reduced. In addition Ofwat is ignoring other forms of risk, such as development risk. Scenario 4A relies upon schemes that are less certain and controllable by Bristol Water. The WRMP considered the wider requirements and risks that Ofwat is ignoring in its analysis.
126. If it is accepted that there will never be any future requirement for non-potable water at Severnside, then Scenario 4B is optimum. This scenario allows for construction of a reservoir broadly at the same timings of our preferred plan, but with a reduced number of additional supply schemes in AMP7. It will also ensure that our customers receive an improved level of service comparable to that of neighbouring water companies.

#### **2.5.3.4 Bristol Water does not have a statutory duty to plan for non-potable supply**

127. Ofwat states that *"Bristol Water does not have a statutory obligation to plan for this non-potable supply"*.<sup>90</sup>
128. Under s.55(2) WIA'91 Bristol Water is under a duty to supply water for non-domestic purposes when requested to do so, unless one of the exceptions in s55(3) WIA '91 applies.<sup>91</sup> The purpose of the exceptions are to provide protection for domestic consumers, and to ensure that our ability to comply with our domestic supply duty under s52 WIA '91 is not compromised by non-domestic development. As such, it provides us with the ability to decline or defer an unanticipated non-domestic supply if to do so would compromise our domestic supply obligations.
129. In addition, the WRP Guidelines make it clear that in developing robust demand forecasts, Bristol Water must take into account all types of demand, including non-household consumption (see **Section 2.5.3.2** above).<sup>92</sup>
130. Given this, we consider that Ofwat's statement that we do not have an obligation to plan for non-potable supplies is not a reasonable position for it to adopt. Neither is it consistent with

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<sup>89</sup> Response, para. 206.

<sup>90</sup> Response, para. 207.

<sup>91</sup> SoC, Section 10.6.3.2.2.

<sup>92</sup> WRP Guidelines (SOC040), Section 4.

the expectation set out in the DEFRA Strategic Policy Statement that the WRMP should be sufficiently robust to deliver reasonable assumptions regarding economic growth.

## 2.5.4 Evidence from Customer Engagement

131. Ofwat raises concerns in its response that the evidence from customer engagement does not support the inclusion of Cheddar Reservoir Two in our plan. It states:

*“The evidence presented on customer engagement relating to levels of service does not appear to consistently support this view. Further, resilience benefits inherent in other WRMP scenarios and wider schemes do not appear to have been properly taken into account when comparing the scenarios. Customer preferences are for bills not to increase rather than service levels and bills to go up.”<sup>93</sup>*

132. A number of more detailed issues are raised in both the Jacobs note and Ofwat's Response, each of which is addressed below:

- Jacobs considers that the customer research indicated that maintaining service was acceptable to the majority of customers and thus there was no strong case for Cheddar Reservoir Two by itself (see **Section 2.5.4.1**);<sup>94</sup>
- Ofwat states that delivering enhanced levels of service alongside bill increases does not appear to reconcile with our customer engagement (see **Section 2.5.4.2**);<sup>95</sup>
- Jacobs also considers that in light of a national position for the current decade of wage rises being below inflation any price increase over and above inflation is undesirable (see **Section 2.5.4.2**);<sup>96</sup>
- Ofwat considers that intervening to deliver a significant supply demand surplus over normal requirements is contrary to the engagement on levels of service in the WRMP process (see **Section 2.5.4.3**);<sup>97</sup> and
- Ofwat expected that any desired improvements in the level of service should have been included in the headroom calculations (see **Section 2.5.4.4**).

### 2.5.4.1 Maintaining service levels is acceptable to the majority of customers

133. Jacobs states:

*“Customer research as presented on p 91 of the BRL Representation on the PR14 DD Report indicates that 'Maintaining Service' was acceptable to the majority (74%) of customers, thus there is no strong case for Cheddar 2 by itself.”<sup>98</sup>*

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<sup>93</sup> Response, para. 194.

<sup>94</sup> Jacobs, p. 4.

<sup>95</sup> Response, para. 211.

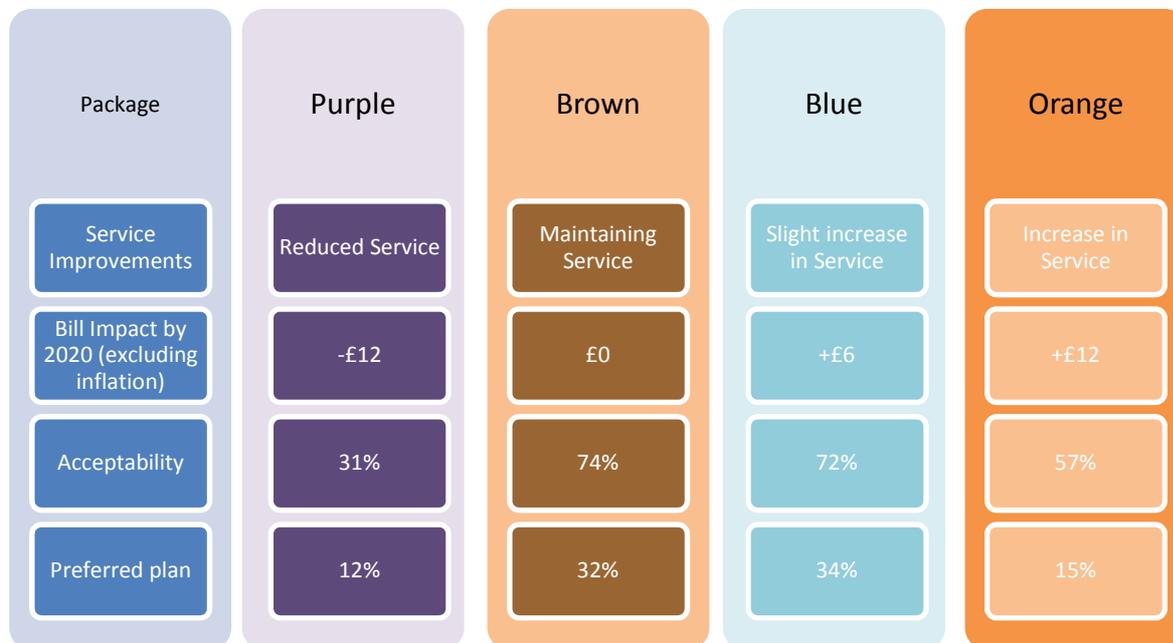
<sup>96</sup> Jacobs, p. 4.

<sup>97</sup> Response, para. 210.

<sup>98</sup> Jacobs, p. 4.

134. The results referred to by Jacobs are from phase 1 when we asked customers how acceptable four different packages of service and bill levels were. A summary of the results of this research is set out in Figure 3 below.

Figure 3 Phase 1 acceptability research results



Source: Bristol Water<sup>99</sup>

135. In its comment, Jacobs is referring to the results for the Brown plan. It is important to note the following details:

- each of the brown, blue and orange plans included building Cheddar Reservoir Two and details of this were included in the research, so that customers were aware; and
- the description of the service improvements included in the figure are a Bristol Water summary. They were not seen by the subjects of the research, who instead were presented with a more detailed package of service changes.

136. Given that the case that Jacobs refers to includes the construction of the reservoir, it is not reasonable for it to conclude that high acceptance of this case rules out Cheddar Reservoir Two. Moreover, it is not correct to interpret the results of this research as customers are happy with the current levels of service and do not want to see any improvement as this was not the description respondents saw. We are at a loss to explain how Jacobs reached this erroneous interpretation. .

137. Moreover, Jacobs' statement ignores the phase 2 acceptability research as to which see Figure 4 below. In this, we tested the preferred plan with customers including acceptability of proposals for 'sufficient water supply'. This included building Cheddar Reservoir Two to

<sup>99</sup> June Company Wide Plan (SOC005).

the brown and blue plans' timing. Customers found this element of the preferred plan to be 95% acceptable.

Figure 4 Phase 2 acceptability research – stimulus material on sufficient supply

**Information provided:** making sure there is sufficient water supply in the future to meet population growth and by using water more efficiently

22

<b>Bristol Water will start building a new reservoir at Cheddar - to be brought into service by 2025 - to ensure that there is enough water for a growing population</b>
<b>No change to the likelihood of Bristol Water imposing restrictions on water usage during drought periods ( a 1 in 15 year chance of a hosepipe ban will stay the same)</b>
<b>The plans include investment to reduce leakage. Bristol Water will reduce leakage from its current target of 18% to 16% by 2020.</b>
<b>Bristol Water will fit a water meter whenever a property changes hands, because being on a water meter encourages people to use less water. By 2020 an estimated 62% of households will have a water meter compared to 40% today.</b>
<b>Bristol Water will provide water efficiency advice to its customers</b>



Source: Blue Marble - Business Plan acceptability Phase 2 report final (SOC017), slide 22.

- 138. In its Response Ofwat states that the bill impact of scenario 4B relative to 4A is £9 per customer for AMP6/7.<sup>100</sup> We note that Ofwat made no comments or criticisms of the engagement at the WRMP consultation stage.
- 139. We are concerned that Ofwat may have misunderstood the purpose of the 'notional bill impact' referred to in the WRMP and assumed it represents a true bill increase. The figure is, as described, a notional value only for the purpose of ranking scenarios. It should not be used as a true projection of scheme impact on customer bills, as it does not reflect the actual treatment of costs in the way they will impact on bills.
- 140. Moreover, Ofwat has compared the notional costs on a short term rather than a whole life basis. Once again, we consider that this may indicate Ofwat's lack of familiarity with the WRMP process.
- 141. The notional bill impact over the full life of scenario 4B is £19 per customer compared to £17 per customers for scenario 4A. The difference of £2 is much less than the short term figure

<sup>100</sup> Response, para. 28 and footnote 27.

quoted by Ofwat of £9. As set out in the SoC, a formal cost benefit assessment indicated that scenario 4B has customer benefits of over £13 per customer compared to scenario 4A.<sup>101</sup>

142. These notional bill impacts do not reflect changes in bills that customers will actually see. As is clear in our SoC, our preferred plan, which includes greater expenditure than either scenario 4A or 4B in AMP7 which also reflects enhancements that deliver other requirements (such as the NEP), can be delivered with no real increase in prices. Given the long term nature of the forecasts a £2 difference should be considered as too marginal to use as the sole basis for such a decision.
143. Overall, we consider that our proposals in respect of Cheddar Reservoir Two are strongly supported by our customer acceptability research.

#### 2.5.4.2 Any price increase above inflation is undesirable

144. In its Response, Ofwat states:

*“Delivering enhanced levels of service alongside bill increases does not appear to reconcile with customer engagement on proposed bill and service levels”.*<sup>102</sup>

145. In addition, Jacobs states:

*“In light of a national position in the current decade where wage rises are running below inflation any price increase over and above inflation is undesirable”.*<sup>103</sup>

146. At no stage has our Business Plan proposed above inflation bill increases. We are not sure, therefore, why Ofwat and Jacobs consider that this is the case. Moreover, our Phase 2 acceptability research showed extremely high levels of acceptance for our plan overall which included building Cheddar Reservoir Two without increasing bills.
147. In addition, we note that Jacobs' statement is not supported by reference to any customer research, it does not take account of OBR forecasts for real wage growth over the next five years, and it does not take into account that customer preferences for cost and service might justify an increase. It is difficult, therefore, to see the basis on which the opinion has been formed.

#### 2.5.4.3 Surplus above normal requirements

148. Ofwat states:

*“Intervening to deliver a significant supply demand surplus over and above normal requirements appears to be contrary to the engagement on levels of service as part of the WRMP process.”*<sup>104</sup>

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<sup>101</sup> SOC, para. 1361.

<sup>102</sup> Response, para. 211.

<sup>103</sup> Jacobs, p. 3.

<sup>104</sup> Response, para. 210.

149. It is not clear what Ofwat means here by normal requirements. The additional 'surplus' provided by our plan provides a higher level of service compared to that on which Water Available For Use (**WAFU**) is based. Figure 67 of the SoC clearly demonstrates that the risk of rota cuts or standpipes is much higher for Bristol Water customers than for the rest of the country. As a result, improvements in the level of service move our customers closer to the average level of service across the country. They certainly do not move them over and above 'normal requirements'.
150. In addition, customers' views on the level of service were extensively sought through the WRMP and PR14 business planning processes and robustly included into our optimisation of the preferred outcome. The proposed increase in service (assuming the non-potable supplies do not materialise) is a direct result of the findings of this research.

#### 2.5.4.4 Improvements in Service Level should have been included in the headroom calculation

151. Ofwat states:

*"We would expect any desired improvements in the levels of service should have been considered and agreed as part of the headroom calculations, rather than through choosing a solution that delivers a large supply demand surplus through the planning period."<sup>105</sup>*

152. This statement implies a lack of familiarity with Water Resource Planning principles. A difference in the level of service reflects the company being able to cope with a different severity of drought without implementing supply or demand restrictions. As such this would be expected to result in a different assessment of the WAFU rather than changing the target headroom calculation.<sup>106</sup>

#### 2.5.5 Jacobs Note

153. The Jacobs note sets out a brief analysis of Bristol Water's case for Cheddar Reservoir Two based on an assessment of its views of the need, the cost benefit, and the costs and we respond in turn below.
154. We received no direct contact from Jacobs in the preparation of its note, and only became aware of its existence through its inclusion in Ofwat's Response. It is not clear what materials were made available for Jacobs to consider.
155. Overall, the review by Jacobs appears to have been very high level and cursory. As a result it has made a number of incorrect or unreliable judgements (see e.g. **Section 2.5.4.1** or **Section 2.5.4.2**). As such, we consider that little weight can be given to the note.

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<sup>105</sup> Response, para. 210.

<sup>106</sup> WAFU reflects the amount of water available for a particular level of service. If the level of service improves, e.g. from a 1 in 15 year hosepipe ban to a 1 in 25 year hosepipe ban, then the WAFU is calculated from a 1 in 25 drought rather than a 1 in 15 year drought. There is less rainfall etc. in a 1 in 25 year drought than a 1 in 15 year drought and therefore there is a reduction in the amount of water available.

### 2.5.5.1 Need

156. Jacobs questions the need for Cheddar Reservoir on the grounds that:

- there is uncertainty about whether potential additional non-potable supplies will materialise;
- that if such demand did materialise, the company could refuse to supply;
- that customer research does not support commencement of Cheddar Reservoir Two to deliver higher levels of service; and
- there are other options that allow supply and demand to be balanced if the non-potable demand does not materialise.<sup>107</sup>

157. We have addressed each of these points in more detail above. We show:

- that Cheddar Reservoir Two is the optimal solution irrespective of whether the non-potable demand materialises (see **Section 2.5.3**);
- that Bristol Water has a responsibility to plan for new non-household demand (see **Section 2.5.3.4**);
- that Jacobs has completely misinterpreted the customer research (see **Section 2.5.4.1**); and
- that Jacobs' analysis of the alternative option is not based on sound WRMP planning principles (see **Section 2.5.1**).

158. Overall, we consider that Jacobs' analysis is not robust, and that the case for the need for Cheddar Reservoir Two is strong.

### 2.5.5.2 Cost Benefit

159. In its report, Jacobs states that:

- if a large non-potable supply were required, Cheddar Reservoir Two is the optimum means of maintaining the supply demand balance;
- if a large non-potable supply were not required, customers would benefit from improved levels of service and security of supply;
- however this would increase bills as any offsetting revenue from Seabank would be lost; and
- increases in bills are undesirable.<sup>108</sup>

160. We agree with the first two of these statements.

161. Our current plan includes delivering Cheddar Reservoir Two for no increase in bills overall for AMP6 or AMP7. Potential revenue from the power station is not anticipated in AMP6, and therefore there is no differential impact on bills in AMP6. If at PR19 it was clear that there was not going to be any Power Station demand, then we would follow scenario 4B that has

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<sup>107</sup> Jacobs, Section 2, p. 4.

<sup>108</sup> Jacobs, p. 4.

less expenditure in AMP7 than our current plan. As a result, the loss of revenue from the power station in AMP7 would be largely offset by lower costs.

162. In addition, the additional supply security that Cheddar Reservoir Two would deliver is worth around £13 per customer from 2025 when it is complete.<sup>109</sup> This more than offsets any residual price impact.
163. We address Jacobs' views on price increases above (see **Section 2.5.4.2**).

### 2.5.5.3 Cost

164. Jacobs states:

*“At this stage in the development of Cheddar 2 it is likely that cost estimates will lack precision and an estimate representative of more accurate figures and higher relative cost efficiency could be expected to emerge if and when the project moves forward.”<sup>110</sup>*

165. Outline design was undertaken by Arup and an estimate produced that was appropriate to this level of design. The estimate was updated several times following a number of phases of investigation.
166. The estimates were reviewed by Bristol Water as the project progressed and a final challenge and assurance was provided by CKBS in September and October 2014. As a result estimates were again updated by Arup resulting in version 10 of the estimate being produced in late October 2014 showing an 8% reduction for the whole scheme. The costs currently included in our plan are lower than those in the WRMP.
167. Although a risk allocation has been included within the estimate, significant uncertainties relating to ground conditions, archaeology and the environment still exist. Further studies have been identified to investigate these key risks and, while we fully expect to minimise risks and subsequent costs, this outcome cannot be guaranteed.
168. We agree that more accurate figures will become available as the project moves forward. However, it is not clear whether this will result in costs increasing, decreasing or remaining broadly the same. In particular, given the unusual nature of the project (a reservoir of this scale has not been built in the UK for over 40 years) we do not consider it appropriate to assume that costs will decrease.

### 2.5.6 Summary of Cheddar Reservoir Two case

169. We consider that Cheddar Reservoir Two is a sustainable and beneficial component of our WRMP. In addition, we consider:

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<sup>109</sup> SoC, para. 1361.

<sup>110</sup> Jacobs, p. 3.

- our plans for AMP6 (including commencing work on Cheddar Reservoir Two) are optimal irrespective of whether the potential non-potable demand from power stations materialises;
- that they are fully consistent with the results of our customer engagement and are in the best interests of customers; and
- that they are fully consistent with Ofwat's primary Resilience Duty.

## 2.6 Issues that have not been addressed in the Response

170. We note that many of the arguments put forward in our SoC have not been commented on by Ofwat in its Response. Some key examples are set out in the following sections.

### 2.6.1 Efficiency and upper quartile costs and performance

171. In the SoC we explained that Ofwat's upper quartile approach may result in an efficiency challenge beyond what is reasonable for a company to achieve within the price review period and that such an approach may lead to under investment to the detriment of customers if it is applied to capital expenditure.<sup>111</sup> In particular we noted that:

*"Ofwat appears to be justifying an upper quartile performance assessment and performance commitments based on the use of upper quartile totex calculations. This implicitly assumes that upper quartile costs deliver upper quartile performance and that historically companies have been funded to deliver the same level of performance. Neither of these assumptions has been evidenced by Ofwat".<sup>112</sup>*

172. Ofwat has not responded to this comment, beyond merely restating its position.

### 2.6.2 Sufficient operating expenditure

173. Whilst Ofwat has reiterated in the Response that it did not "*consider operating and base capital costs separately*",<sup>113</sup> Ofwat has not addressed the issue identified in our SoC that FD14 results in an immediate reduction in opex of 18% and continues to provide no evidence to support the case for such a significant and unprecedented reduction in opex.<sup>114</sup>

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<sup>111</sup> SoC, Section 11.3.1.2.

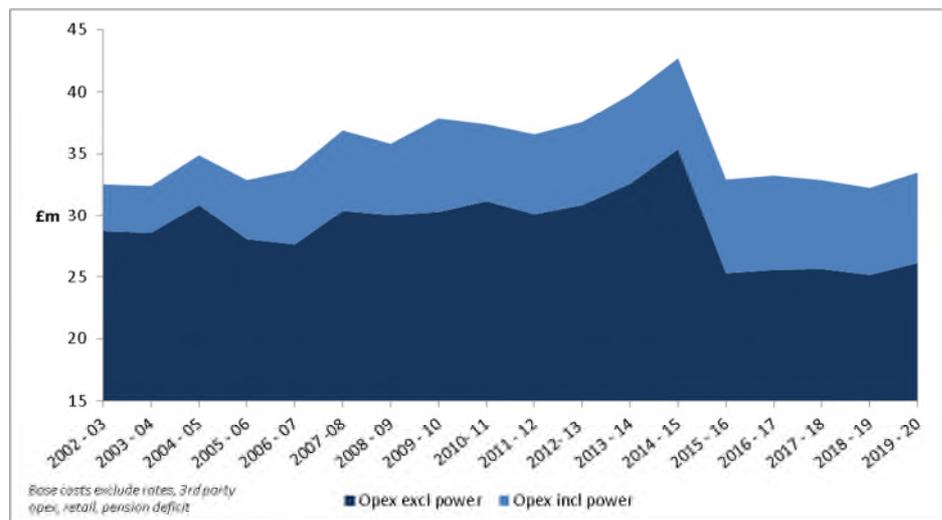
<sup>112</sup> SoC, Section 14.3.1.1.1.

<sup>113</sup> Response, para 141.

<sup>114</sup> SoC, section 9.6.3.2.

174. Figure 5 shows visually the size of the step change in £m.

Figure 5 Operating costs - historic and FD14



Source: Bristol Water analysis

### 2.6.3 Sufficient capital expenditure

175. As with opex, the amount of capex allowed in FD14 is less than that in our Business Plan. Ofwat has not taken the opportunity in its Response to identify what it considers we should exclude from our plan in order to meet its estimates.

## 2.7 Role of engineering assessments

176. In the Response Ofwat notes *“Bristol Water’s representations that it would ‘like the CMA to consider whether Bristol Water’s plan in relation to base totex is justified by making use of an engineering assessment of the needs, solutions and costs’. We note that such assessments are inherently difficult to undertake given the very detailed information that is involved and the limitations that are associated.”*<sup>115</sup>

177. We acknowledge that in the context of regulating 18 water companies, it is not necessarily appropriate for Ofwat to be expected to carry out detailed engineering assessments of the costs proposed by every company. However, in circumstances where, the industry-wide cost assessment process results in such a large gap between the modelled cost estimate and the costs proposed by a company, Ofwat should make use of a range of approaches in order to properly understand and address that gap.

178. We believe that the knowledge that comes with an engineering assessment of the needs, solutions and costs underlying our expenditure proposals will be beneficial for the CMA in carrying out its redetermination. Given that the CMA is only required to examine Bristol

<sup>115</sup> Response, para. 52.

Water's proposals, and not those of the remainder of the industry, the complications and limitations referred to by Ofwat should not be obstacles to such an assessment.

## 2.8 Conclusions on wholesale price control

179. Ofwat's assertion that we have not explained or justified our costs is unfounded given the depth and strength of the evidence submitted to Ofwat during the PR14 process. Based on communications with Ofwat, we have concerns that as late as September 2014 Ofwat had not looked at the detail of our plan beyond the cost exclusion cases, indicating that its reliance on its modelled cost thresholds and the cost exclusion process was absolute.
180. Ofwat has characterised our behaviour as intransigent compared to other companies exposed as relatively high cost by its wholesale cost assessment processes. Detailed assessment of how other companies moved, particularly United Utilities shows that we offered greater efficiencies but had already delivered all possible scope changes related to the NEP ahead of the December Plan so it was not possible to negotiate further in this area. Additionally, the movements relate to the wastewater price control and the specific Thames Tideway, neither of which are comparable to our Water price control.
181. Given the size of the gap between our modelled cost threshold, and the proposed totex in our Business Plan, we consider that Ofwat should have been prepared to supplement its modelling with other approaches to assessing costs in order to properly understand the costs we had presented and test the theory of inefficiency implied by the modelling results. Given that this appears not to have happened, it is disappointing that Ofwat continues to suggest that we have provided insufficient evidence.
182. Cheddar Reservoir Two is a sustainable and beneficial component of our WRMP. Our AMP6 programme, which includes commencement of Cheddar Reservoir, is optimal irrespective of whether the potential non-potable demand from power stations materialises. The plans are fully consistent with the results of our customer engagement, are in the best interests of customers and are fully consistent with Ofwat's primary Resilience Duty.

## 3 Approach to cost assessment

### 3.1 Introduction

183. In the SoC we provided details regarding:

- the benchmarking of base totex costs we had undertaken;<sup>116</sup>
- the additional benchmarking analysis provided by Oxera;<sup>117</sup> and
- a detailed critique of Ofwat's costs assessment process, particularly in respect of its efficiency modelling.<sup>118</sup>

184. In its Response, Ofwat has commented on some of these issues. Ofwat's views on each of the following points is addressed in the sub-sections below:

- Whether the movement in costs between 2010/11 and 2012/13 demonstrates our costs are inefficient (see **Section 3.2**);<sup>119</sup>
- concerns in relation to Bristol Water's cost benchmarking approach (see **Section 3.3**);
- issues regarding some aspects of Oxera's modelling (see **Section 3.4**);<sup>120</sup>
- some features of the modelling identified as weaknesses by Bristol Water are not really weaknesses (see **Section 3.5**);
- whether the cost exclusion process has addressed the weaknesses that are in the modelling (see **Section 3.5.4**);<sup>121</sup> and
- the alternative cost assessment approach proposed by Bristol Water for the CMA to follow is not appropriate (see **Section 3.6**).<sup>122</sup>

185. Overall, we consider that Ofwat has not adequately responded to the significant weaknesses that are present in its cost assessment process. Oxera agrees stating "*we therefore still consider that Ofwat's models are not sufficiently robust*".<sup>123</sup>

186. Consequently, we consider that Ofwat's approach should not be used by the CMA in its re-determination. Instead, we would like the CMA to explore a range of alternative approaches which are better able to cope with genuine differences between the operating environments of individual companies, rather than simply replicating the approach taken by Ofwat.

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<sup>116</sup> SoC, Section 9.4.

<sup>117</sup> SoC, Section 9.5.

<sup>118</sup> SoC, Section 11.3.

<sup>119</sup> Response, para. 49.

<sup>120</sup> Response, para. 42.

<sup>121</sup> Response, para. 46.

<sup>122</sup> Response, para. 52.

<sup>123</sup> Oxera, Response to Ofwat's reply to Bristol Waters Statement of Case Cost Assessment, (REP049), April 15, Executive Summary.

## 3.2 Cost trends

187. In the Response, Ofwat suggests that it is understandable that the gap between its cost projections and our Business Plan estimates is large *“given the greater than 50% increase in Bristol Water’s base costs that occurred between 2010-11 and 2012-13”*.<sup>124</sup>
188. Ofwat relies on this to demonstrate that our costs are inefficient, and that the predictions of its modelling are correct.<sup>125</sup> This is illustrated by Figure A3.1 of the Response.
189. In addition, Ofwat argues that there is a 7.7% year on year reducing trend in costs between 2012/13 and 2017/18 that, if continued, would mean that Bristol Water’s costs would be at Ofwat's 'efficient' level by 2020.<sup>126</sup>
190. We consider that there are three significant shortcomings with Ofwat's arguments, each of which is addressed in the following sections:
- capital expenditure costs are managed over a five year period, and have historically been subject to a cyclical pattern. As a result care is needed before drawing conclusions about expenditure trends from comparing one individual year to another (see **Section 3.2.1**);
  - the increase in expenditure between AMP4 and AMP5 reflected the CC10 redetermination that set out that a significant increase in capital expenditure was required to maintain our supply system (see **Section 3.2.2**); and
  - Ofwat's modelling approach is not capable of correctly modelling the costs of a company that has undergone a required step change in expenditure (see **Section 3.2.3**).

### 3.2.1 Capital costs are managed over a five year cycle

191. Companies tend to manage their capital expenditure programmes over the five-year regulatory period. In the past this has tended to result in cyclical expenditure patterns with higher expenditure in the middle of a period. Moreover, enhancement and capital maintenance costs tend to be managed in total, so capital maintenance expenditure can be reduced in one year because enhancement expenditure is high, as activity is constrained by engineering capacity.
192. As a result of these year to year programme variations, comparing expenditure at the beginning of a period with the middle of a period can result in an apparent cost increase that is not a correct measure of the underlying change in costs. In addition, even if underlying expenditure levels are broadly flat, comparing a peak year to a trough year could incorrectly suggest a significant reducing trend.

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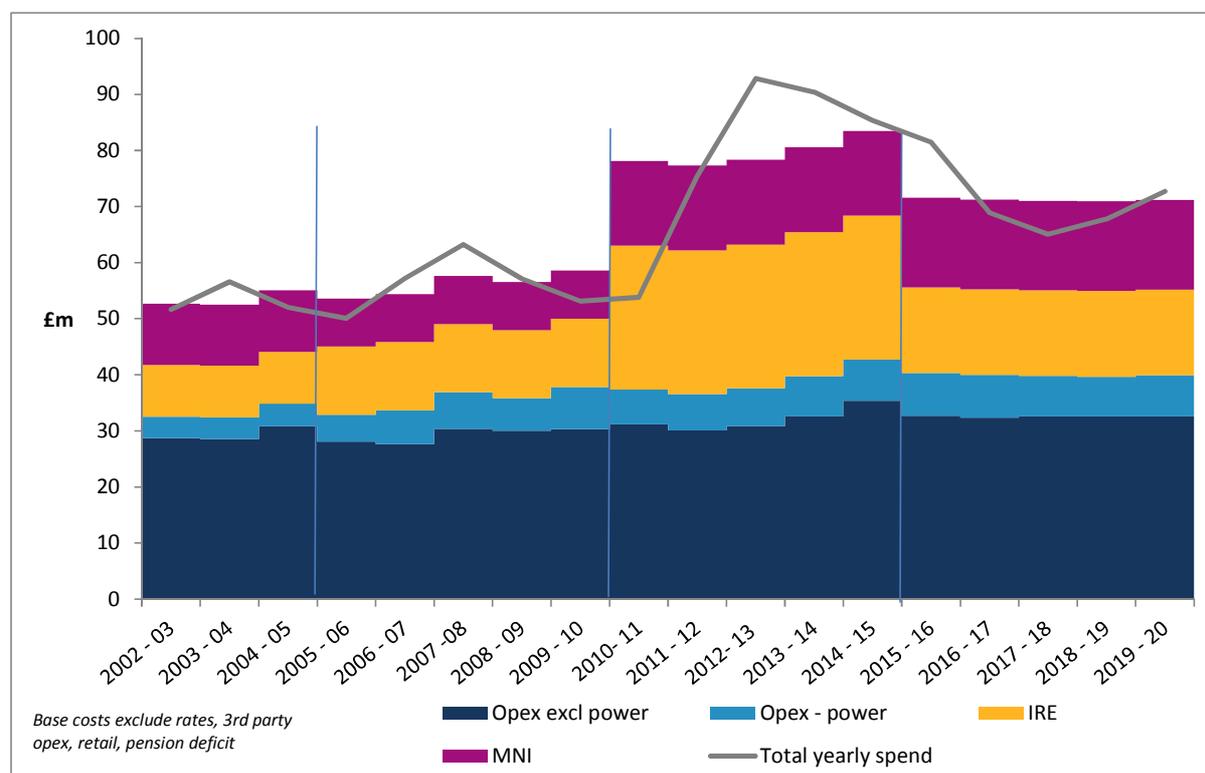
<sup>124</sup> Response, para. 49.

<sup>125</sup> Response paras. 49 and 165.

<sup>126</sup> Response para. 166.

193. For Bristol Water, capital expenditure in 2010/11 was strongly limited as a result of the constraints resulting from our redetermination by the CC.<sup>127</sup> In the subsequent years of AMP5, expenditure was higher to catch up on the slow start to the AMP5 programme.
194. Figure 6 below replicates Figure A1.3 of Ofwat's response, but instead uses capital costs averaged over each five year regulatory period. Operating costs continue to be shown on a yearly basis.

Figure 6 Analysis of Bristol Water Base Costs



Source: Bristol Water

195. Ofwat argues that its version of the graph indicates an increase in spend of over 50% between 2010/11 and 2012/13, and then a 7.7% year on year declining trend between 2012/13 and 2017/18. Figure 6 shows that once cyclical effects of capital expenditure are taken into account, the conclusions that Ofwat draw from the graph are no longer valid.
196. Figure 6 shows an increase in expenditure during AMP5, principally driven by the increase in expenditure on infrastructure maintenance, followed by a reduction for AMP6. Overall, average base costs (excluding rates, 3rd party opex, retail and the pension deficit) were £281m in AMP4, £398m in AMP5 (+ 42% on AMP4), and £356m in the SoC proposal for AMP6 (-11% on AMP5).

<sup>127</sup> These constraints included avoiding the need to raise new debt, and uncertainty about which schemes would be included by the CC in its determination.

197. The graph shows that operating costs over the period have been relatively constant in real terms, despite the increasing water quality requirements and greater numbers of customers served over the period. This shows that the movement in expenditure is driven solely by changes in capital maintenance.
198. The reduction in base totex between AMP5 and AMP6 is a step reduction of 11%. This, as illustrated by Figure 6, clearly shows that Ofwat's assertion that costs are reducing by 7.7% per annum is not a reflection of the reality of the underlying costs.

### 3.2.2 The Increase between AMP4 and AMP5 reflected the CC10 Redetermination

199. Ofwat has suggested we have not "*provided sufficient explanation or supporting evidence*" to explain the increase in our costs between 2010/11 and 2012/13.<sup>128</sup> This movement can be simply explained, however, by reference to the impact of the CC10 redetermination which endorsed an increase of this magnitude from spending levels within AMP4.<sup>129</sup>
200. The need for a step change in capex from AMP4 was a key element of Bristol Water redetermination by the CC in 2010.<sup>130</sup>
201. Overall, the CC10 Redetermination allowed base totex expenditure of £475m (including retail expenditure).<sup>131</sup> Outturn base totex expenditure was marginally less than this at £472m. Given that the CC set Bristol Water an efficient cost allowance for AMP5, and given that Bristol Water's expenditure was marginally below this, it is not reasonable for Ofwat to conclude that the increase in expenditure in AMP5 was inefficient.
202. Ofwat argues that the level of expenditure included in the CC10 Determination for AMP5 was for that period only and is not an appropriate benchmark for AMP6, noting that it does "*not accept the view that efficiency or spending levels should necessarily be static over time*".<sup>132</sup>
203. In our plans and submissions for PR09 we were very clear that the need for a higher level of expenditure was a long term requirement, not just for AMP5.<sup>133</sup> Our Strategic Direction Statement published in 2007 forecast capital expenditure of over £300m per AMP period (in 2006/07 prices) for AMPs 5-9.<sup>134</sup> In addition, our 2009 Final Business Plan included a higher level of capital expenditure for AMP6 than was included for AMP5.<sup>135</sup> Given this, it is not reasonable to conclude that the uplift in expenditure was required for one period only.

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<sup>128</sup> Response, paras. 49 and 165, Presentation, slide 16.

<sup>129</sup> SoC, Section 11.

<sup>130</sup> 2010 Statement of Case (SOC128).

<sup>131</sup> CC10 Financial Model.

<sup>132</sup> Response, para. 167. We have been unable to identify whether Ofwat raised this as an issue prior to FD14 although it was not mentioned in our DD14 Company specific appendix. If Ofwat had wanted us to re-justify why the CC had made that decision, we would have expected it to have raised a query during the process or raised it as an issue at DD14.

<sup>133</sup> 2010 Statement of Case (SOC128).

<sup>134</sup> Bristol Water Strategic Direction Statement 2007 (REP028).

<sup>135</sup> PR09 BW FBP Section B4 (REP040).

### 3.2.3 Ofwat's Modelling Approach

204. Ofwat's modelling approach uses a smoothed capital expenditure (using data for the year and the four previous years) based on the years between 2008/09 and 2012/13. As a result, the capex expenditure the model is based on is that between 2004/05 and 2012/13. Consequently, the higher expenditure incurred in AMP5 is not really reflected in the data used to calibrate the model.
205. This means that Ofwat's models will effectively try to replicate companies' expenditure over the nine years (assuming stable opex). If the models are over-fitted, which WM3 certainly is,<sup>136</sup> then it is not surprising that they underestimate the costs of a company that has had a step change in capex at the end of the nine year period as they will fit to the mostly lower levels of expenditure. In Bristol Water's case, the step up from an unsustainable level of maintenance in AMP4 was only present in the last two years of data. As a result, an over fitted model would significantly underestimate our expenditure requirements.
206. This may also provide an additional reason as to why the models do not correctly predict the costs of Bristol Water which has recently experienced such a step change, but do for other companies. Other companies have not experienced such an upward step change in costs.

### 3.3 Bristol Water Benchmarking

207. In the SoC we set out a number of approaches we had used to benchmark our capital maintenance expenditure that indicated a range of benchmark expenditure of between £197 and £202m:<sup>137</sup>
- actual PR09 Performance against CC10 allowances;
  - the movement of our costs compared to the rest of the industry;
  - an MEAV life-cycle based assessment; and
  - Bristol Water econometric modelling.
208. In its Response, Ofwat has commented on:
- our performance in comparison with the CC10 allowance (see **Section 3.3.1**);<sup>138</sup> and
  - on the MEAV life-cycle based approach (see **Section 3.3.2**).<sup>139</sup>
209. Ofwat has not included any comments in its response on Bristol Waters' econometric modelling.
210. Overall, we consider that the benchmarking approaches set out in the SoC are robust. Ofwat's response has not addressed why the results of its modelling are so inconsistent with these other approaches.

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<sup>136</sup> We also consider that the instability of the coefficients in the reduced translog models indicates that these models are over-fitted.

<sup>137</sup> SoC, Section 9.4.4.2.

<sup>138</sup> Response, paras. 167 and 168.

<sup>139</sup> Response, para. 153.

### 3.3.1 CC10 Redetermination

211. Ofwat argues that:

- the CC capital expenditure assumption was relevant for AMP5 and is not applicable for AMP6;<sup>140</sup> and
- that the allowance we have compared costs to is not the appropriate figure.<sup>141</sup>

212. We note above in **Section 3.2.2.** the expectation at the time of the CC10 redetermination that high levels of capital expenditure would be maintained into future periods. In addition, in the SoC we show that Ofwat's view that the cost increase was only for AMP5 is not supported by the evidence.<sup>142</sup>

213. Ofwat states that the figure for capital expenditure used in our benchmark is too high as it includes the CIS uplift.<sup>143</sup> The CIS uplift was 6.8%, and therefore the benchmark excluding the CIS uplift is £184m. This remains considerably in excess of the £156m expenditure included in our plan. Moreover, the allowance including the CIS uplift was the amount that our determination revenues were based on. Given this we continue to consider that it is the appropriate number to use.

### 3.3.2 Asset MEAV Life-Cycle Approach

214. In the SoC we presented an MEAV life-cycle analysis to derive an additional benchmark for capital expenditure.<sup>144</sup> In addition we noted that the approach could be made more robust if asset value data was available for all companies. Ofwat was not, however, able to release the information required for us to undertake such an analysis.<sup>145</sup>

215. In its Response Ofwat notes that:

- it has concerns about the use of MEAVs as robust cost drivers;<sup>146</sup> and
- that its own analysis implies a different and longer set of asset lives than used in Bristol Water's analysis.<sup>147</sup>

216. MEAV is considered to be an important cost driver by many regulators to proxy network scale as it recognises that the immediate driver of much of companies' expenditure is the management of the existing asset base. Given this, we consider that Ofwat's dismissal to the use of MEAV is not consistent with good regulatory practice.

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<sup>140</sup> Response, para. 167.

<sup>141</sup> Response, para. 168.

<sup>142</sup> SoC, Section 11.3.3.2.1.

<sup>143</sup> Response, para. 168

<sup>144</sup> SoC, Section 9.4.4.2.4.

<sup>145</sup> SoC, para. 1024.

<sup>146</sup> Response, paras. 30 and 152.

<sup>147</sup> Response, para. 153.

217. We carried out the benchmarking that Ofwat refers to for comparative purposes; the intention was not to identify specific levels of expenditure but rather to have some broad level assessments of whether our investment programme was efficient.
218. We cannot comment yet on Ofwat's alternative analysis as it has not provided any details. Ofwat quotes that the implied life for mains is greater than 200 years which is longer than included in our analysis, however, it does not set out the conclusions for other asset classes nor for expenditure overall. In particular, Ofwat does not identify the overall benchmark for capital maintenance expenditure for Bristol Water that would result from its more detailed analysis, nor compare it to the amount included in the FD14. We will comment further when the full analysis and data has been made available.
219. Overall, Bristol Water had an asset base with a MEAV of £3.14bn at 31 March 2013. The detailed assessment by asset, set out in Section 9.4.4.2.4.1 of the SoC, identifies expenditure of £198.0m as a benchmark, equivalent to an average asset life of 80 years. In comparison, the maintenance expenditure included of £156m implies a replacement rate equivalent to an average life over all of our assets of 101 years. Although some asset types such as mains and service reservoirs are very long life, others such as vehicles, meters and computers have considerably shorter lives. Overall, we consider that an implied average life of over 100 years would result in an inappropriately low level of maintenance for a water company.
220. We continue to consider that an asset life-cycle approach is a useful benchmark for appropriate levels of capital maintenance expenditure.

### 3.4 Oxera Benchmarking

221. In the SoC we also provided additional benchmarking work undertaken by Oxera that showed the costs included in our plan were in the range of upper quartile costs.<sup>148</sup>
222. Ofwat has raised a number of issues about this benchmarking:
- timing of evidence (see **Section 3.4.1**);<sup>149</sup>
  - the use of a Cobb Douglas Modelling Approach (see **Section 3.4.2**);<sup>150</sup> and
  - the use of Stochastic Frontier Analysis SFA analysis (see **Section 3.4.3**).<sup>151</sup>
223. We asked Oxera to review the points Ofwat raised about its modelling in its response. Oxera's view is that Ofwat's points do not raise any material issues, and that Oxera still considers that its models provide more robust estimates of Bristol Water's efficient cost level.<sup>152</sup>

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<sup>148</sup> SoC, Section 9.5.

<sup>149</sup> Response, paras. 31, 155, and 236.

<sup>150</sup> Response, paras. 42, and 250-253.

<sup>151</sup> Response, paras. 254-258.

<sup>152</sup> Oxera, Response to Ofwat's reply to Bristol Waters Statement of Case Cost Assessment, April 15, Executive Summary

### 3.4.1 Timing of evidence

224. In the Response Ofwat states that *“Bristol Water notes in its executive summary that its business plan is supported ‘by Oxera through the use of disaggregated econometric models during the latter part of the PR14 process’. We received no such modelling during the PR14 process and the final Oxera report submitted as late as November 2014 merely noted that this was work in progress – despite a price review process spanning approximately 18 months. It is difficult to reconcile this with Bristol’s suggestions of good business planning practices.”*<sup>153</sup>
225. This comment includes a number of inaccuracies and also misrepresents aspects of the PR14 process. In particular:
- Bristol Water's planning process used an asset based bottom up assessment for capital maintenance expenditure optimised and constrained by the results of customer willingness to pay and affordability. A range of benchmarking approaches were used to cross-check that the costs included in our plan were reasonable.<sup>154</sup> Bristol Water provided Ofwat with an Oxera benchmarking report on its operating costs with its December 2013 submission,<sup>155</sup>
  - Ofwat published its models in April 2014. We provided a critique of the model in June 2014 along with many other companies.<sup>156</sup> It was only following Ofwat's letter of 6 August 2014<sup>157</sup> that we realised that Ofwat had chosen not to make any refinements to its modelling approach in response to the industry’s critique and that further evidence that our costs are efficient was required;
  - as a result, in August 2014 Bristol Water commissioned Oxera to undertake further analysis to assist in our response to DD14 and the subsequent representations. The initial focus of Oxera's work was to support our claims for cost exclusions;
  - two Oxera technical reports regarding modelling were submitted to Ofwat in October 2014 and 7th November 2014, within the extended timetable set by Ofwat;<sup>158</sup> and
  - there was not sufficient time to also develop the disaggregated models ahead of the November closing date for submissions. As a result the disaggregated models were developed following FD14.
226. It is misleading, therefore, for Ofwat to suggest that we had 18 months to develop these models. Ofwat’s models were not published until after the RBR in April 2014, 10 months into that price review process.<sup>159</sup> The need to engage Oxera to develop alternative models

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<sup>153</sup> Response, para. 155.

<sup>154</sup> SoC, Sections 7, 8, 9, and 10.

<sup>155</sup> Oxera, Bristol Water's relative operating expenditure for wholesale water services, November 13 (SOC015).

<sup>156</sup> Bristol Water PR14 Business Plan, Cost Exclusion Cases June 2014 (SOC006), p. 274 – 295.

<sup>157</sup> IB17/14 Protecting Customers August 2014 (SOC070).

<sup>158</sup> Oxera review Ofwat cost assessment Oct 2014 (SOC541); and Oxera, Quantifying the impact of Bristol Water's special factors within Ofwat's framework, November 2014 (REP026).

<sup>159</sup> Sonia Brown of Ofwat recently acknowledged that *“it's no secret that the overall timetable was tight and compressed and I think that was the key challenge”*. The Water Report February 2015 (REP003), p.6, Column 2.

did not then become clear until August 2014. When placed in that context, we acted promptly.

227. In any event, we do not consider Ofwat's conclusion that *"It is difficult to reconcile this with Bristol's suggestion of good planning practices"*<sup>160</sup> to be reasonable. Our business planning processes focussed on understanding the services our customers wanted and the best way to deliver this given the performance of our assets, rather than undertaking sophisticated industry wide benchmarking. Certainly, there was no requirement at any stage of the PR14 process that companies would need to develop their own complex econometric models.

### 3.4.2 Cobb Douglas Modelling Approach

228. The alternative disaggregated models provided by Oxera used a Cobb Douglas functional form rather than a translog form. In its Response Ofwat argues that *"a Cobb Douglas approach appears to put undue restrictions on scale effects, ignores statistically significant translog terms and so is prone to omitted variables bias"*.<sup>161</sup>
229. We understand the translog form is more flexible than the Cobb-Douglas model. However, with any model it is important that the model is consistent with economic theory. Oxera has shown that this is not the case with respect to Ofwat's translog model and therefore it should not be used.<sup>162</sup>
230. In particular, whilst the more flexible translog form should be considered, it should not be used if it introduces counterintuitive parameter estimates and poor statistical performance. Moreover, Oxera's analysis shows that even Ofwat's full totex model suffers from omitted variable bias, despite the use of a translog terms.<sup>163</sup>
231. Cobb-Douglas is the standard functional form assumed by regulators when developing their econometric models for costs assessment - for example it was used by Ofwat in PR09 and previous price reviews; by Ofgem in the RIIO controls in different sectors and in previous price reviews; and by ORR in its assessment of Network Rail's maintenance and renewals expenditure in PR13 and earlier.<sup>164</sup>
232. The points Ofwat has raised reach to the heart of the issues with its modelling approach. Ofwat's view appears to be that it is not important whether parameter estimates are stable<sup>165</sup> or of the right sign and magnitude,<sup>166</sup> nor whether they are significant. All that matters is that the costs predicted by the model overall are stable.<sup>167</sup>

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<sup>160</sup> Response, para. 31.

<sup>161</sup> Response, para. 42.

<sup>162</sup> Oxera Response to Ofwat's reply to Bristol Waters Statement of Case (REP049), p. 6..

<sup>163</sup> Based on the Ramsey RESET test, which is the standard test used by UK regulators to test for omitted variable bias. See, for example, the discussion on 'Selection of cost drivers' by Ofgem: RIIO ED1 final determination 2014 (SOC372), p. 187.

<sup>164</sup> Oxera Response to Ofwat's reply to Bristol Waters Statement of Case (REP049), p. 12.

<sup>165</sup> Response, para. 245.

<sup>166</sup> Response, para. 242.

<sup>167</sup> Response, para. 245.

233. This approach to modelling is not consistent with good econometric modelling practice. Econometric models should be developed on the basis of both operational/economic and statistical criteria. Ofwat's models contain implausible and counter intuitive elasticities. Where this is the case, it is not acceptable to include them in a model from an economic/engineering perspective.<sup>168</sup> That Ofwat includes such terms demonstrates that its approach is poor practice.
234. Ofwat states that using a Cobb-Douglas form “*results in substantially different outcomes and that for half of the companies (9 of 18) the outcome is over 5% higher than the outcomes obtained with the translog function*”.<sup>169</sup> Given that the model will produce the same overall industry costs, this must mean that a large number of companies costs will be predicted to be significantly lower than by the translog form (although Ofwat has not presented the results). Given that both approaches will have the same level of costs over the whole industry, it is not clear why Ofwat concludes its form protects customers better. Indeed, customers are best protected by accurate assessments of efficiency. Therefore, a wider range of evidence would be required to identify which approach was more accurate. Unfortunately as a result of Ofwat's narrow approach such wider evidence is not available.
235. We consider that this result should have been of significant concern to Ofwat as it indicates that there are potentially substantial errors in its cost assessment for many companies. It would be interesting to see whether the results from this alternate form are more closely related to the PR09 and earlier assessment of efficiency.
236. In Table A1.2 Ofwat sets out the difference in cost estimates from its models if the insignificant translog terms are excluded.<sup>170</sup> We note that for the WM5, WM6, and WM9 models the density term is also insignificant.<sup>171</sup> However, it is not clear why this was not dropped from the comparison.
237. Overall, we consider that the use of a Cobb-Douglas form in Oxera's modelling is appropriate. In addition, although a translog form may be appropriate in some circumstances, this is only the case if the resulting parameter estimates are consistent with economic/engineering theory. In the case of Ofwat's models they are not and therefore the models' translog form is inappropriate.

### 3.4.3 Use of Stochastic Frontier Analysis

238. In its Response Ofwat states that Oxera presents evidence based on a particular SFA model for which it does not have much confidence.<sup>172</sup> This statement ignores that the benchmarking by Oxera used a range of approaches of which SFA was only one. The results of the other approaches were consistent with the SFA modelling overall, so the benchmarking results are not dependent upon the SFA results.

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<sup>168</sup> Oxera Response to Ofwat's reply to Bristol Waters Statement of Case (REP049), Section 4, p. 6.

<sup>169</sup> Response, para. 252.

<sup>170</sup> Response, p. 64.

<sup>171</sup> Oxera BW's efficient cost level March 15 (SOC536).

<sup>172</sup> Response, para. 19.

239. Ofwat has not made any comments about Oxera's modelling using COLS or Random Effects.
240. In addition, Ofwat raises a number of other specific issues regarding SFA models:
- the four component model is relatively recent and untested;<sup>173</sup>
  - a quote from Kumbhakar taken out of context;<sup>174</sup>
  - Oxera uses forecast costs as well as historical cost;<sup>175</sup> and
  - some numbers are hard-coded in the stata code.<sup>176</sup>
241. We note that the results of a four component model were presented to the CC during the 2010 redetermination.<sup>177</sup> In addition, SFA has been used in numerous regulatory determination - such as those by Ofcom (BT wholesale), ORR (Network Rail O&M expenditure assessment), and Postcomm (Royal Mail).<sup>178</sup>
242. Oxera has provided a detailed response to all the points raised by Ofwat, so we have not sought to repeat the arguments here. In all cases Oxera concludes that Ofwat's points do not raise any material issues and that Ofwat's models are not sufficiently robust, whilst Oxera's models provide more robust estimates for Bristol Water's efficient cost level. Oxera states "*Ofwat's approach to disentangling noise from efficiency is ad-hoc and ignores the developments in this area in the academic literature*".<sup>179</sup>

### 3.5 Ofwat Cost Assessment

243. This Section addresses the comments made by Ofwat in the Response in defence of its cost assessment approach.
244. In the SoC we raised a number of significant issues about Ofwat's approach to cost assessment.<sup>180</sup> The key themes were:
- Ofwat has used a narrow approach;
  - the modelling approach is not robust and does not form a safe basis for assessing cost requirements;
  - the application of modelling for enhancement expenditure is not appropriate; and
  - the costs exclusion process was not sufficiently robust to overcome the weaknesses in the modelling.
245. Ofwat's response has failed to adequately address these criticisms. More details of why this is so are set out below for each area.

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<sup>173</sup> Response, para. 255.

<sup>174</sup> Response, para. 256.

<sup>175</sup> Response, para. 257.

<sup>176</sup> Response, para. 257.

<sup>177</sup> Bristol Water's efficiency: An assessment of relative operating expenditure efficiency for water services, Oxera report, April 2010 (REP053).

<sup>178</sup> Oxera Response to Ofwat's reply to Bristol Waters Statement of Case (REP049), p14.

<sup>179</sup> Oxera Response to Ofwat's reply to Bristol Waters Statement of Case (REP049), p14.

<sup>180</sup> SoC Section 11.3.

246. Ofwat has no evidence that Bristol Water is inefficient other than that arising from its modelling process which has been demonstrably shown to be weak. We consider that this demonstrates the over-reliance that Ofwat has placed on its modelling.
247. In a number of places, Ofwat argues that the models must be robust because no other companies have appealed their price determination.<sup>181</sup> Our response to this observation is set out in Section 11.7.
248. Finally, Ofwat's Response raises points in respect of the alternative process for cost assessment that we suggested to the CMA in our SOC. We respond to these points in **Section 3.6**.

### 3.5.1 Narrowness of Approach

249. In the SoC we set out our view that Ofwat has followed a narrow approach to cost assessment primarily based on top-down totex modelling. We noted that there was a range of alternative approaches that Ofwat could have adopted including:
- bottom up activity assessments;
  - using a disaggregated approach to assess opex, infrastructure maintenance and non-infrastructure maintenance separately; and/or
  - using a more disaggregated approach such as that used by Ofgem in ED1.<sup>182</sup>
250. In addition, we noted that a very significant weakness in Ofwat's approach was that it did not include a separate assessment of operating costs, which was important to ensure the tax building block and assessments of financeability were correct.<sup>183</sup>
251. In respect of this issue Ofwat has responded that:
- its approach was relatively broad because it used three separate top down modelling streams,<sup>184</sup>
  - the cost exclusion process meant that modelling costs in a more disaggregated manner was not required;<sup>185</sup> and
  - disaggregated approaches have serious disadvantages.<sup>186</sup>
252. We note that Ofwat has not specifically addressed:
- why it did not undertake a separate assessment of operating costs;
  - why it did not include more disaggregated approaches in addition to its top-down modelling; and

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<sup>181</sup> Response, paras. 36, 37, 47, and 162.

<sup>182</sup> SoC, Section 11.3.1.

<sup>183</sup> SoC, para 1434.

<sup>184</sup> Response, paras. 231.

<sup>185</sup> Response, para. 141.

<sup>186</sup> Response, para. 261.

- what cross checks it used to make sure that the results of its top-down modelling streams were accurate.
253. We do not agree that the use of three top down modelling approaches (presumably as opposed to one top down approach) constitutes a broad approach to cost assessment as it excludes a wide range of other useful approaches.
254. We address the shortcomings of the cost exclusion process below. However, the process was designed to address major differences in company circumstances rather than to overcome the underlying weaknesses in the modelling approach.
255. We disagree with Ofwat that disaggregated approaches have serious disadvantages. In Section 11.3.1.1.2 of the SoC we include a large number of quotes from other regulatory bodies and advisors that have used disaggregated approaches. Indeed, Ofgem deliberately used a very disaggregated approach because the "*model uses activity drivers that more closely match the costs being considered*".<sup>187</sup>
256. Indeed, CEPA advised Ofwat that a top down approach had "*some disadvantages compared to the more disaggregated approach taken by Ofwat in price reviews*".<sup>188</sup>

### 3.5.2 The modelling approach is not robust

257. In the SoC we argued that Ofwat's models were not appropriate for assessing Bristol Water's costs because the models were unstable, statistically poor and omitted explanatory variables that had a significant impact on Bristol Water's costs.<sup>189</sup>
258. Ofwat argues that
- it has adopted a rigorous approach to model selection and testing;<sup>190</sup>
  - the results of its modelling are relatively stable;<sup>191</sup> and
  - the cost exclusion process has addressed the potential impact of missing explanatory variables.<sup>192</sup>
259. In this section we set out:
- why Ofwat's approach to validation lacked independent challenge (see **Section 3.5.2.1**);
  - why the models themselves are not reliable (see **Section 3.5.2.2**); and
  - why the models are not appropriate to assess Bristol Water's costs (see **Section 3.5.2.3**).

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<sup>187</sup> RIIO ED1 final determination 2014(SOC372), para. 4.26.

<sup>188</sup> CEPA, Ofwat Cost Assessment Advanced Econometric Models, March 2014 (SOC227), p28.

<sup>189</sup> SoC, Section 11.3.2.

<sup>190</sup> Response, para.34.

<sup>191</sup> Response, para.38.

<sup>192</sup> Response, para. 41.

260. Overall, we do not consider that Ofwat's response had satisfactorily addressed the comments we made in the SOC about the shortcomings in the model approach. Oxera, in reply to Ofwat's response state "*we still consider that Ofwat's models are not sufficiently robust*".<sup>193</sup> Consequently, we continue to consider that the models should not be relied upon for the redetermination.

### 3.5.2.1 Approach to Validation

261. In its Response, Ofwat states:

- it consulted on the models in 2013 before publishing its models in April 2014;<sup>194</sup> and
- its models have been verified by its external consultants and advisors as robust.<sup>195</sup>

262. The 2013 CEPA modelling report was included in Ofwat's high level consultation on its proposed approach for PR14 in January 2013.<sup>196</sup> At this stage it was not clear that these models were going to be the sole method that Ofwat would use for its cost assessment as opposed to one element of a wider approach.

263. In our response to that consultation we noted that we considered that enhancement expenditure should be excluded from the modelling, because companies' expenditure on service enhancement, water quality, and balancing supply and demand would reflect their own individual circumstances and customer preferences.<sup>197</sup> Also, for each of those areas additional oversight is provided by external bodies such as the DWI and the EA.

264. We do not consider that Ofwat's approach has included appropriate levels of assurance, particularly so in respect of their suitability for price setting rather than their statistical consistency. Specific shortfalls include:

- there appears to be no cross checking of the predictions of the model by comparison to other approaches, including cross checking the predictions of the new approach with the results from the PR09 approach;
- Ofwat did not consult the industry on the modelling approach used for PR14 ahead of its RBR;
- Ofwat has not made any changes to its modelling following feedback from companies in June despite widespread criticism; and
- no further independent assurance was sought after Ofwat received feedback from companies about the appropriateness of its approach.

265. Ofwat states:

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<sup>193</sup> Oxera Response to Ofwat's reply to Bristol Waters Statement of Case (REP049), Executive Summary

<sup>194</sup> Response, para. 235.

<sup>195</sup> Response, paras. 19 and 260.

<sup>196</sup> Response, para. 19.

<sup>197</sup> Letter from Mike King [✉], 22 March 2013 (REP050).

*"We have adopted a rigorous and transparent approach to model selection and testing, which has involved validation by CEPA, PwC and our academic advisor (Dr Andrew Smith)".<sup>198</sup>*

266. CEPA and Dr Smith were heavily involved in developing the models. In addition, PwC was heavily involved in working with Ofwat on implementing the price control.<sup>199</sup> Given this, it does not appear that Ofwat has subjected its modelling approach to robust independent challenge.
267. Moreover, the lack of use of alternative approaches, or comparing the results with those from PR09 suggests that the degree of internal challenge was very limited.
268. We consider this to be a contributing factor to the weaknesses we have identified in Ofwat's modelling approach.

### 3.5.2.2 *The models are not reliable*

269. In the SoC we argued that there were a number of serious issues with respect to Ofwat's modelling that led us to conclude that it did not form a safe basis for regulatory judgements. In particular:
- the results of the modelling are not consistent with the results of Ofwat's previous efficiency assessment;
  - the coefficients are unstable with respect to omission of individual companies;
  - the estimated values of coefficients are not consistent with what one would expect on the basis of economics or engineering; and
  - many of the coefficients are not statistically significant.<sup>200</sup>
270. In its Response Ofwat has not made any comments in respect of the difference in the results of its current models and the assessments made at PR09. We consider that this is a significant omission.
271. In respect of the other points, as stated above, Ofwat's Response is effectively that it is not important whether parameter estimates are stable<sup>201</sup> or of the right sign and magnitude,<sup>202</sup> nor whether they are significant. All that matters is that the costs predicted by the model overall are stable.<sup>203</sup>
272. We consider that this approach to modelling is not consistent with good econometric modelling practice. The aim of an econometric model is to try and uncover a representation

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<sup>198</sup> Response, para. 34.

<sup>199</sup> It is not good practice to have assurance provided by companies already working for you. Ofwat's Reporter Protocol historically prohibited this (REP018, para 1.4 *"During the period of the reporter's appointment he/she shall: be completely independent from the company; not be engaged by the company in consultancy studies or other service contracts associated in any way with the preparation of submissions for the company"*).

<sup>200</sup> SoC, para. 1461.

<sup>201</sup> Response, para. 245.

<sup>202</sup> Response, para. 242.

<sup>203</sup> Response, para. 245.

of the underlying cost function of an industry. For such an approach to be successful, the resulting parameter estimates need to make economic and engineering sense. If they do not do so then the model needs to be revised until this is the case.

273. This is particularly important where a model is being used to forecast costs. If the parameter estimates are unreliable, then the predictions of the model could be poor even were it to match historical data.
274. Bristol Water's analysis has shown that the parameter estimates are unstable to the exclusion of individual companies.<sup>204</sup> In addition, Ofwat's analysis shows that the parameters are also unstable to the addition of another year's data.<sup>205</sup> Ofwat argues that this instability does not matter because the differences in predicted cost are much smaller.
275. We consider that this argument that the stability of model's predictions is more important than the stability of the estimated coefficients<sup>206</sup> is not an appropriate criteria for assessing models. For example, a very over-fitted model<sup>207</sup> will have very high stability of predicted costs, but very unstable coefficients in the event that new data is added, or companies are excluded. As such it would be judged good using Ofwat's criteria, even though in practice it would be widely described as a poor model, and its use for forecasting or extrapolation would be very questionable.
276. As we noted above with regards to Ofwat's modelling and its criticism of the Cobb Douglas form, econometric models should be developed on the basis of both operational/economic and statistical criteria. Parameter estimates should be consistent with these criteria. Ofwat's models contain implausible and counter intuitive parameter elasticities. Where this is the case, it is not acceptable to include those parameters in the model from an economic/engineering perspective. That Ofwat include such terms demonstrates that its approach is poor practice.
277. One specific comment that Ofwat makes is that it would expect additional metered customers to result in a reduction in costs because of the lower marginal costs of supplying measured customers due to their lower demand. We are surprised by Ofwat's view. The cost to the wholesale business of a metered customer will include installing the meter and the meter space. These costs will amount to around £3 per annum for the meter (c£40 meter replacement cost over 13 year life of a meter) and around £4 per annum for the meter space (c£200 over 50 years). In addition, there will be additional costs that occur from time to time such as meter and supply route checks. In contrast, the cost savings from lower consumption of metered customers is around £1 per annum (c10m<sup>3</sup> saving at £0.1 per m<sup>3</sup> marginal cost). Overall therefore, the expected cost would be an increase of around £6 per annum as opposed to the saving of £62 per annum predicted by the model.

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<sup>204</sup> SoC, Section 11.3.2.1.2.

<sup>205</sup> Response, para. 246.

<sup>206</sup> Response, para. 245.

<sup>207</sup> By an 'over-fitted model', we mean one that has a higher number of explanatory variables, or a more flexible functional form than is justified by the data.

### 3.5.2.3 *The models are not suitable for Bristol Water*

278. In the SoC we argued that Bristol Water is affected disproportionately by the weaknesses in the model in respect of:

- enhancement costs;
- missing explanatory factors; and
- specific features of the model structure.<sup>208</sup>

279. The issues around enhancement costs are set out in **Section 3.5.3**. The issues around the specific features of the model are set out above in **Section 3.4.2**.

280. In its Response, Ofwat states that it found “*important weaknesses*” in our use of a number of specific drivers to explain costs.<sup>209</sup> In particular, Ofwat states that our view that mains asset age and proportion of upstream assets are cost drivers appears flawed.<sup>210</sup>

281. In this Section we set out our reply in relation to:

- mains age (see **Section 3.5.2.3.1**); and
- upstream assets (see **Section 3.5.2.3.2**).

#### 3.5.2.3.1 *Mains Age*

282. In its Response, Ofwat makes a number of comments about the use of asset age.<sup>211</sup> In many cases these comments are materially incorrect, misleading or irrelevant. Moreover, they demonstrate a significant lack of understanding in respect of the underlying drivers of cost for water companies. The key points raised are addressed in turn below.

##### 3.5.2.3.1.1 *Drivers for Asset Replacement*

283. Ofwat states:

*“Bristol Water ... uses asset age - including mains age - as a driver in capital maintenance workload forecasting, so it is not surprising that using it as a driver better explains Bristol's forecast of costs.”*

*“service to customers should drive asset replacement, not age per se”<sup>212</sup>*

284. Firstly, Bristol Water's level of maintenance activity on the network is driven completely by service to customers. Potential different levels of maintenance activity are fed into the cross asset optimiser, which chooses the appropriate level of activity based on the impact on customer service taking into account customer's willingness to pay. The optimiser also takes

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<sup>208</sup> SOC, para. 1488.

<sup>209</sup> Response, para. 146.

<sup>210</sup> Response, para.30.

<sup>211</sup> Response, para. 147.

<sup>212</sup> Response, para. 147.

account of the potential contribution from identified schemes and maintenance activities on other assets in its approach to identifying the optimum level of activity.

285. Moreover, asset age is not used as a driver for determining capital maintenance activity for the network. A model is used to forecast mains performance depending upon the level of maintenance activity that is undertaken. The actual level of activity is then chosen by the cross asset optimiser based on the overall impact on service. The model does take into account the breakout rate of bursts on mains that have not previously burst using the observed and stable relationship between age and burst rate for those mains. However, age is not used as a factor in modelling the behaviour of those mains that have already burst.

#### 3.5.2.3.1.2 *Asset age or mains age*

286. Ofwat states:

*“mains age may not be representative of the age of other assets, and the industry spends more on capital maintenance for other assets than for mains”*

*“mains age is not typically a statistically significant driver of costs if added to our cost models”<sup>213</sup>*

287. In the SoC we have argued that mains age is a cost driver for capital maintenance on the network. We have not argued that it is representative of the age of other types of assets. We note that the costs of maintaining the network typically amount to over 35% of capital maintenance costs.

288. Within our own econometric models mains age was only used as an explanatory variable for infrastructure maintenance, an approach that was also adopted as a sensitivity by Oxera in its capital maintenance modelling.

289. Ofwat states that including mains age within its models indicated that it was not a statistically significant driver of costs. This is in complete contrast to Oxera who found that adding mains age as an additional explanatory variable to Ofwat's models resulted in significant parameter estimates.<sup>214</sup> Ofwat has not set out any details of its analysis so it is not possible for us to comment further.

#### 3.5.2.3.1.3 *It is not clear that mains age is an appropriate cost driver*

290. Ofwat states:

*“25 years after privatisation asset age has been significantly influenced by the management policies and practices in those years”*

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<sup>213</sup> Response, para. 147.

<sup>214</sup> Oxera's response to Ofwat's reply to Bristol Water's SoC (REP049).

*“there is no meaningful relationship between mains condition (proxied by bursts per km) and mains age – and so it is not clear that mains age is an appropriate cost driver.”<sup>215</sup>*

291. Around a sixth of our network has been laid over the last 25 years (including replacements and renewals). Given this, we do not consider that mains age has been significantly influenced by management practice over this period. Significantly higher rates of replacement would have been required on a sustained basis to affect average mains age materially.
292. We agree that there is no material relationship between mains bursts and mains age (although we note the exclusion of Thames Water which has the highest burst rate and oldest mains from the graph is materially misleading). We would not expect such a relationship, and it is not relevant to whether mains age is a driver of costs.
293. The reasons behind this are set out below:
- the burst rate of a network depends upon its maintenance history as well as its age. If a company has been better at targeting the worst performing mains then the burst rate of the remaining mains will be lower. Given this, differences would be expected even between companies with similar age mains;
  - for at least the last fifteen years companies have been charged with maintaining stable serviceability. For mains, serviceability is measured by burst rate. Therefore companies maintenance policies have been driven by maintaining a stable burst rate, irrespective of the level of burst rate;
  - in an environment where burst rates are to be maintained stable, it is not the level of bursts that drives capital maintenance but the rate of degradation. For example, if there was no degradation then no mains would need to be replaced, irrespective of burst rate;
  - degradation in terms of burst rate is largely driven by mains that have never previously burst beginning to burst; and
  - our case is that older mains have a higher rate of degradation. This is demonstrated by Figure 75 of the SoC, which shows that the burst rate of mains that have never previously burst increases with age, and therefore an older network will have a higher rate of emerging bursting mains.
294. In its Response, Ofwat has not addressed our arguments that it is degradation rather than condition (burst rate), that is the main driver of maintenance activity. We consider that this omission is significant. Moreover, Ofwat has provided no evidence to contest our view that an older network experiences a higher rate of degradation.

#### *3.5.2.3.1.4 Mains age data is not robust*

295. Ofwat states:

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<sup>215</sup> Response, para. 147.

*“mains age data does not appear robust, judging from some of the movements in average age between PR09 and PR14 data across companies”.*<sup>216</sup>

296. Ofwat has not provided any data to support this statement, and therefore it is difficult for us to comment.

### 3.5.2.3.2 Upstream Assets

297. In its Response, Ofwat states:

*“that upstream assets are not an important variable in explaining differences in costs between companies and are not an important factor to take into account in benchmarking costs.”*<sup>217</sup>

298. Unless upstream assets require no maintenance, a company that has a relatively higher proportion of upstream assets will incur relatively higher levels of capital maintenance expenditure. If a model does not include any explanatory factors relating to the higher level of assets, then it will not include this higher cost in its predictions. None of Ofwat's models include such a factor so they do not take into account such cost variations.
299. For Bristol Water, expenditure on upstream assets represent around a quarter of its infrastructure maintenance spend. In the context of infrastructure maintenance it is, therefore, a significant component. However, at the level of base totex it represents only around 4-5%, and for overall totex around 3%. Cost differences of this order can be hard for a model to tease out, because they can be swamped by noise in the data.
300. Ofwat has not explained the data included in Figure A1.2 in its Response (in particular which assets are included), so we are not sure whether appropriate data has been used in the correct way. However, the figure shows a weak correlation between upstream assets and inefficiency (i.e. a higher proportion of upstream assets is observed to lead to an increase in costs). We note that Ofwat has not calculated the magnitude of the effect for Bristol Water, nor investigated including it directly within its modelling suite to confirm whether it would be significant as an explanatory parameter.
301. Moreover, Figure A1.2 shows that the asset intensity for the majority of companies is relatively similar, with only a few outliers. When data is grouped this way, it can be hard for models to isolate the effect of the cost driver if it is not large. Given that the cost impact is not large at an overall level, then it would not be surprising if a top-down model failed to isolate the impact. These modelling issues highlight the value that additional insight from more disaggregated modelling could bring.
302. However, just because a top down model does not pick up a cost factor, this does not mean that it is not a reasonable driver of costs. In the case of upstream assets, there is a clear reason why costs would be expected to be different.

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<sup>216</sup> Response, para. 147.

<sup>217</sup> Response, para. 151.

303. Ofwat's approach appears to be, in effect, that if the model does not identify a factor as a cost driver then it is not a cost driver. This is not a reasonable stance to adopt where there are clear grounds for expecting a particular factor to have an effect on costs, as is the case for upstream assets. A more reasonable approach would be to try and understand the potential magnitude of the affect and then make an appropriate adjustment to the modelling.

### 3.5.3 Enhancements

304. We set out the details of our proposed enhancement programme in Section 10 of the SoC. We also explained that for those schemes where Ofwat did not dispute the need, it had allowed only £91m for us to deliver schemes that we had specifically costed at £126m, and that were included in our plan at a cost of £110m after application of an efficiency of 12.5%.<sup>218</sup>

305. We explained that this difference arose principally because:

- Ofwat had included enhancement expenditure in its modelling despite the specific local risks that drive enhancement expenditure not being included in the model explanatory factors;<sup>219</sup> and
- Ofwat had applied a 19% efficiency assumption on top of the challenging 12.5% efficiency assumption assumed by Bristol Water without any independent benchmarking to support the reduction.<sup>220</sup>

306. Ofwat has included responses on both these issues. We address its comments below.

#### 3.5.3.1 Inclusion of Enhancement in the Modelling

307. In its Response, Ofwat states that it:

- recognised enhancement spend is lumpy in nature and used a 5 year averaging process;<sup>221</sup>
- included a cost exclusion process to allow account to be taken of costs not included in the modelling;<sup>222</sup> and
- considered that it managed to obtain robust totex models that included enhancement expenditure.<sup>223</sup>

308. The lumpiness of enhancement expenditure was not an issue raised in our SoC. However, we consider that looking at expenditure for a period of 9 years starting 11 years before the period for which costs are being assessed to smooth expenditure adds significantly to the risk we have identified that the models do not reflect the specific drivers of enhancement

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<sup>218</sup> SOC, Section 10.5.

<sup>219</sup> SOC, Section 11.3.2.2.1.

<sup>220</sup> SOC, para. 1287.

<sup>221</sup> Response, para. 238.

<sup>222</sup> Response, para. 238.

<sup>223</sup> Response, para. 239.

costs. This is because such a long backwards looking view will not reflect current drivers for enhancement expenditure.

309. As we set out in the SoC, the use of the cost exclusion process for enhancement expenditure was confused and did not follow a clear process.<sup>224</sup> Ofwat has not addressed these criticisms in its Response.
310. It is not clear how Ofwat reaches the conclusion that they managed to obtain robust totex models. Of the two models that included enhancement expenditure, Ofwat discarded the results of one because its results were not credible for Bristol Water.<sup>225</sup> The other model, WM3 has nonsensical parameter estimates, insignificant parameters, and fails the majority of statistical tests. Indeed, Oxera is highly critical of the model and notes:

*“Ofwat’s use of the Full TOTEX model, WM3, is perhaps the first instance of an over-specified model, whose coefficients (and elasticities) are not in alignment with the economic/operational expectations, being used for setting cost allowances in a regulatory context.”<sup>226</sup>*

### 3.5.3.2 Scheme efficiency assumptions

311. In our SoC we stated that the basis of the efficiency reduction that Ofwat applied to our enhancement scheme costs was not clear, and that the efficiencies were not realistic or credible.<sup>227</sup>
312. In its Response, Ofwat states:

*“We also made the assumptions that a number of Bristol’s remaining enhancement projects totalling circa £70m (Southern Resilience, Cheddar Raw Water Deterioration, NEP and Discoloured Water Contacts) could be delivered with up to 20% greater efficiency, and, that our modelling of enhancement costs would cover the remaining elements of enhancement spending.”<sup>228</sup>*

313. Ofwat also states:
- they applied an efficiency adjustment where they used companies bottom up costs but considered there was insufficient evidence that the costs represented upper quartile efficiency;<sup>229</sup>
  - that their approach replaced rather than added to Bristol’s own efficiency challenge;<sup>230</sup> and

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<sup>224</sup> SOC, para. 1534.

<sup>225</sup> Response, para. 178.

<sup>226</sup> Oxera, Response to Ofwat’s reply to Bristol Waters Statement of Case Cost Assessment, April 15 (REP049), p. 7.

<sup>227</sup> SOC, para. 1539 and 1540.

<sup>228</sup> Response, para. 177.

<sup>229</sup> Response, para. 213.

<sup>230</sup> Response, para. 218.

- that the remaining £3m of difference is accounted for by higher unmodelled costs. These relate to the wide scope of its enhancement plans and the relatively weak evidence it provided in relation to its special cost factor claims.<sup>231</sup>
314. Ofwat has explained the criteria they used to decide whether to apply an efficiency assumption. The basis for the magnitude of the assumption has still not been explained. In particular, Ofwat has not explained how the efficiency challenge it has identified is relevant given Bristol Water's detailed cost estimation process, or how it expects Bristol Water to be able to deliver schemes that have been designed to a high level of detail for over 25% less than the estimates produced by external engineering consultants.
315. Ofwat states that their approach replaced rather than added to Bristol's own efficiency challenge, and set out data on the allowances included in the DD and FD in Table A1.1.<sup>232</sup> As set out in **Section 2.3** this table is misleading, because it does not take into account the effect of triangulation on the cost allowances for these schemes. The process of triangulation further reduces the allowed cost of these schemes by 33%.<sup>233</sup>
316. The overall impact can be seen by considering the NEP scheme, which is straightforward to assess as there is no implicit allowance. Bristol Water estimated specific costs for this scheme of £12.5m. After an efficiency assumption of 12.5% these were included in the DDR at £11.0m. Ofwat's allowance pre-triangulation is £9.6m. This represents an efficiency reduction of 23% on the specific costs of the scheme, and an efficiency reduction of 13% on the costs included in the plan. After triangulation the cost allowance is £6.4m, giving an efficiency reduction of 49% on the specific cost, and 42% on the amount included in our plan.
317. Overall, the impact of the scheme efficiency and triangulation on the four schemes identified in the table is £18m compared to the costs in the DDR.<sup>234</sup> This equals the overall difference in enhancement costs excluding Cheddar.
318. This example illustrates the complexity that has arisen for enhancement schemes as a result of Ofwat's approach to cost assessment for enhancement. If implicit allowances are also taken into account the complexity increases further.
319. Ofwat states of the £18m, £3m relates to unmodelled costs, but that the other differences relate to the wide ranging scope of our enhancement programme.<sup>235</sup> As we note above, the difference arising from the four specific schemes is £18m, and there is no need to look further to explain the difference.

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<sup>231</sup> Response, para. 219.

<sup>232</sup> Response, para. 218.

<sup>233</sup> The impact of triangulation is a 33% reduction rather than a 67% reduction because Ofwat has replaced the results of its refined totex model with those of the bottom up assessments that include the adjustments in Table A1.1.

<sup>234</sup> Calculated from £46.4m company view less 0.667\* £42.9m Ofwat view.

<sup>235</sup> Response, para. 252.

320. Given that even Ofwat appears to be confused about the impact of its process on cost allowances, the process is clearly over-complex. A better approach would be a more straightforward scheme by scheme assessment.

### 3.5.4 Cost Exclusions

321. In the SoC we:

- noted that the cost exclusion process was designed to assess costs that were atypical to the industry and would not be included in econometric models. This resulted in the cost exclusion process not being suitable to address costs that should have been predicted by the models;
- the application of efficiency assumptions and triangulation to enhancement costs led to insufficient allowance for enhancement schemes; and
- overall the cost exclusion process has not addressed the weaknesses in the modelling.<sup>236</sup>

322. In its Response, Ofwat states:

- the models are only part of the process, they have also considered modelling adjustments and special cost factor claims, which taken together means their approach is broad and robust;<sup>237</sup>
- a successful cost exclusion would have the potential to lead to an adjustment to all three modelling streams;<sup>238</sup> and
- the growth claim failed the need assessment as they considered it was substantially covered by the enhancement unit costs in the bottom-up stream.<sup>239</sup>

323. Ofwat has not responded to the criticism of the cost exclusion process we set out, particularly in respect of enhancement schemes (see **Section 3.5.3** above).

324. The key issue is that the process was not designed to address issues related to weaknesses in the modelling. As a consequence the approach of treating cost exclusion cases was ad-hoc and complex. In particular:

- the approach to assessing 'need' was unclear and inconsistent in respect of whether a case had to be to demonstrate the need of the activity; to demonstrate that the activity was atypical; or to demonstrate that it was not captured by the modelling;
- the criteria for assessing whether a cost would be triangulated were not set out and used inconsistently; and
- the process of triangulation resulted in the additional costs of schemes not being fully reflected in the final allowance.

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<sup>236</sup> SOC, Section 11.3.3.1.3

<sup>237</sup> Response, para. 35.

<sup>238</sup> Response, para. 187.

<sup>239</sup> Response, para. 189.

325. As a result of these weaknesses, the cost exclusion process was not robust, and was ineffective at addressing weaknesses in the modelling.
326. In our Business Plan submission we included ten cost exclusion cases to take into account the factors not taken into account in Ofwat's modelling.
327. Whilst Ofwat has set out further particulars in respect of some of these in its response, it has not set out further information on its reasons for not accepting our cost exclusion case for capital maintenance (nor for Bedminster Service Reservoir). The capital maintenance cost exclusion case was the key part of our response in respect of addressing the weaknesses in the modelling, and therefore the case that best demonstrates the inappropriateness of the cost exclusion process for dealing with this issue.
328. In respect of the growth claim, we note that in the FD14 Ofwat accepted we had demonstrated the need for the scheme to be undertaken.<sup>240</sup> The need test was failed because Ofwat considered that the costs were included in their modelling allowance for supply/demand. However, this did not take into account the costs allocated from the resilience scheme.<sup>241</sup> As a result the FD14 allowance does not allow enough costs for these schemes.

### 3.6 Proposed Approach

329. In our SoC we set out the approach to cost assessment we believe the CMA should follow in its redetermination. In summary:
- incorporate a separate assessment of operating costs and efficiency as a component of the overall totex approach;
  - assess capital maintenance expenditure using a bottom up approach supported by appropriate benchmarking; and
  - assess capital enhancement expenditure using a bottom-up approach supported by appropriate benchmarking.<sup>242</sup>
330. In its Response Ofwat states that:
- bottom up assessments are very difficult to undertake and do not draw on comparative efficiency assessments;<sup>243</sup>
  - assessing and treating operating costs separately can lead to a bias towards capex over opex solutions;<sup>244</sup> and
  - disaggregated approaches may fail to take account of capex and opex trade-offs and that the results may be distorted by the way companies categorise costs.<sup>245</sup>

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<sup>240</sup> FD14, BW appendix, p70

<sup>241</sup> Response, para.189.

<sup>242</sup> SOC, para. 478.

<sup>243</sup> Response, para. 52.

<sup>244</sup> Response, para. 233.

<sup>245</sup> Response, para. 234.

331. We consider that a review of the bottom-up approach we have used to determine our totex requirements would not be unduly difficult, particularly in respect of operating costs. In addition, we agree that use of appropriate benchmarks is an important part of the cost assessment process. Indeed, in the SoC we refer to a wide range of benchmarks that demonstrate our costs are efficient including analysis by Oxera.
332. In our approach to business planning we have used a whole-life cost approach. This ensures that there is a proportionate balance between capital and operating cost solutions. In contrast, an approach that was focussed on totex only would treat £1 of opex in a five year period to be the same as £1 of capex. For repeating opex, such an equivalence is inappropriate and could lead to significantly higher costs in the long run.
333. We accept there is a risk that disaggregated approaches may be distorted by the way companies categorise costs. However, our approach of aggregating the results of the opex and capital maintenance models fully mitigates this risk.
334. We disagree however, that a disaggregated approach fails to take account of opex and capex trade-offs. We have explicitly included these in our business planning approach which is set out in the SoC.<sup>246</sup>
335. In particular Ofwat state:
- “Separate benchmarking of opex and capital maintenance misses important cost drivers and the interaction between cost drivers. For example when a company spends money on maintaining pumps we would expect the refurbished pumps to use energy more efficiently and therefore energy costs should be lower. We do not see these types of interaction in Bristol’s plans, which we would expect given the size of their proposed maintenance programme, other than to increase costs when they take account of the additional opex arising from new enhancements”.*<sup>247</sup>
336. Where a company undertakes no maintenance on its pumps, then their efficiency will decline and its costs will increase. Undertaking maintenance will address the efficiency of a specific pump, but the impact of this overall depends upon the proportion of pumps being maintained. If a company were maintaining its assets in a steady condition, then the efficiency of the pumps overall would remain constant. In this case, even though a company is spending money on refurbishing pumps energy costs would not change.
337. Our asset model for pumps explicitly takes into account the impact of maintenance on efficiency and power costs.<sup>248</sup> Therefore we have fully taken this interaction into account. We are surprised by Ofwat’s comment as our Business Plan submission included this detail.
338. Moreover, the interaction between pumping efficiency and costs was explored within our business plan in respect of our performance measure for pumping efficiency.<sup>249</sup> A significant

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<sup>246</sup> See for example SoC, Section 7.6.2.2

<sup>247</sup> Response para. 154.

<sup>248</sup> Pumping Stations ALM WP1, (SOC356)

<sup>249</sup> December Wholesale Plan (SOC476), p. 347-350.

proportion of the improvement we hope to make in pumping efficiency will be delivered by changes in operation, rather than by capital investment in pumps themselves (although this will contribute). The costs savings anticipated from improvements in pumping efficiency are one of the ways we hope to be able to deliver the challenging catch-up opex efficiencies included in our plan.

### 3.7 Conclusions on cost assessment

339. In our SoC we demonstrated why Ofwat's cost modelling was an unsafe basis on which to rely for setting Bristol Water's cost allowance.

340. Ofwat's Response has not raised any material issues that undermine the case set out in the SoC.

341. In relation to the Response, Oxera states:

*"The issues we identified with Ofwat's models in our earlier reports remain relevant. We consider, therefore, that Ofwat's models are not sufficiently robust, while Oxera's model provides more robust estimates for Bristol Water's efficient cost level."*<sup>250</sup>

342. For its redetermination, we consider that the CMA should not rely on Ofwat's modelling approach.

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<sup>250</sup> Oxera, Response to Ofwat's reply to Bristol Waters Statement of Case Cost Assessment, April 15 (REP049), Executive Summary.

## 4 Cost of capital

### 4.1 Introduction

343. In its Response, Ofwat makes references to six areas of our submission on the WACC, each of which is discussed in detail below:

- Bristol Water's asset beta (see **Section 4.2**);<sup>251</sup>
- inflation (see **Section 4.3**);<sup>252</sup>
- the cost of embedded debt (see **Section 4.4**);<sup>253</sup>
- the cost of new debt (see **Section 4.5**);<sup>254</sup>
- the appointed wholesale difference (see **Section 4.6**);<sup>255</sup> and
- the validity of the benefits test (see **Section 4.7**).<sup>256</sup>

344. Overall we consider that the estimate of the Bristol Water's cost of capital in the SoC is robust to the points raised by Ofwat in its Response.

### 4.2 Bristol Water's Asset Beta

345. In our SoC, we argued that no changes needed to be made to the estimate of asset beta for Bristol Water that was made by the CC in the CC10 Redetermination. Underpinning this view was evidence that:

- the underlying asset beta of WaSCs was not lower than when the CC made its assessment in 2010;
- Bristol Water continued to be exposed to higher operational gearing and liquidity costs that resulted in it having a higher asset beta than WaSCs; and
- the PwC evidence of past RORE confirmed that WoCs have greater variability in returns.

346. In its Response Ofwat has made the following points, each of which is considered in the Sections below:

- we are in agreement on the asset betas for WaSCs;
- Ofwat considers that the approach adopted by the CC in 2010 is conceptually flawed and that Bristol Water's asset beta is not different to that of WaSCs (see **Section 4.2.1**);<sup>257</sup>

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<sup>251</sup> Response, A2.6.

<sup>252</sup> Response, A2.2.

<sup>253</sup> Response, A2.5.

<sup>254</sup> Response, A2.4.

<sup>255</sup> Response, A2.3.

<sup>256</sup> Response, A2.7.

<sup>257</sup> Response, para. 67.

- that the analysis presented by Ofwat of past returns has limitations and that there is no evidence that WoCs are riskier than WaSCs (see **Section 4.2.2**);
- that there is no observed relationship between observed asset beta and operational gearing (see **Section 4.2.3**);<sup>258</sup> and
- takeover premia suggest that a Small Company Premium (**SCP**) is not required (see **Section 4.2.4**).<sup>259</sup>

#### 4.2.1 Approach Taken by CC in 2010

347. In its assessment of Bristol Water's asset beta in 2010 the CC accepted that Bristol Water had higher systematic risk.<sup>260</sup> To account for this it increased the asset beta of Bristol Water to reflect the lower proportion of revenue accounted for by operating cash flow.<sup>261</sup> The CC acknowledged that on its own this approach might overestimate the impact, however, it considered that this would be offset by its approach of not explicitly allowing for the higher transaction costs of smaller companies.<sup>262</sup> As such the approach taken by the CC was not just a simple calculation, but a judgement that it considered in the round led to the right asset beta for Bristol Water.

348. Ofwat states that our approach based on the CC10 Redetermination lacks "*conceptual validity*".<sup>263</sup> It raises a number of issues with the approach used, each of which is considered below:

- that "*PwC concluded that they could not establish a conceptual basis for greater exposure to systematic risk as a result of a higher ratio of operational cashflows to revenue*" (see **Section 4.2.1.1**);<sup>264</sup> and
- that the application of the CC approach to different WoCs results in different asset betas and is therefore not a reliable approach (see **Section 4.2.1.2**).<sup>265</sup>

349. In summary, we disagree with Ofwat and consider that the approach taken by the CC in 2010 was soundly based on economic theory and the available evidence. Moreover, we consider that the available evidence in 2015 supports a similar judgement to that made in 2010.

##### 4.2.1.1 Conceptual Basis

350. The link between higher operational gearing and higher systematic risk is well established in finance theory. KPMG refers to some of this evidence in its report on relative risks,<sup>266</sup> specifically Brealy and Myers, and Damodaran.<sup>267</sup> Given this, we do not consider that it is

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<sup>258</sup> Response, para. 335.

<sup>259</sup> Response, para. 335.

<sup>260</sup> CC Determination 2010 (SOC011), p. 66.

<sup>261</sup> CC Determination 2010 Appendices (SOC553), Appendix N, para. 129.

<sup>262</sup> CC Determination 2010 Appendices (SOC553), Appendix N, para. 137.

<sup>263</sup> Response, para. 67.

<sup>264</sup> Response, para. 327.

<sup>265</sup> Response, para. 328.

<sup>266</sup> KPMG, Bristol Water: Assessment of relative risks, March 15, (SOC519), p8.

<sup>267</sup> Brealey, R., Myers, S., and Marcus A. (2001), "Fundamentals of Corporate Finance", Third Edition, p423.

reasonable to argue that there is no conceptual validity in adjusting asset betas to reflect differences in operational gearing.

351. Ofwat's arguments appear to be either:
- that all of the risk from higher operational gearing is specific risk and therefore it has no impact on asset beta; or
  - that because of the revenue cap, any higher systematic cost risk would tend to be negatively correlated with the market and thus reduce the cost of capital for WoCs compared to WaSCs.<sup>268</sup>
352. Ofwat does not appear to have provided any evidence to support either of these assertions.
353. We do not consider that either of these views is credible. WaSCs are exposed to systematic risk (as evidenced by their observed asset betas). The higher operational gearing of WoCs compared with WaSCs will mean that those systematic risks that demonstrably exist for WaSCs will have a greater impact on the returns of WoCs. This means that WoCs will have a higher asset beta than WaSCs.
354. Moreover, these systematic risks affect WaSCs despite the revenue cap (which was in place for AMP5 and this is thus reflected in their observed betas). Therefore similarly, the higher operational gearing of WoCs will result in these risks affecting their returns more than for WaSCs despite the revenue cap being in place. As a result, the existence of the revenue cap has no bearing on the relative risk of WoCs and WaSCs.

#### 4.2.1.2 *The quantification used by the CC in 2010 is unreliable*

355. Ofwat argues that the approach used by the CC in 2010 "*does not result in a stable basis for estimating the cost of equity for WoCs*".<sup>269</sup>
356. The approach used by the CC in 2010 was not simply a mechanical approach. In particular, the CC noted that "*this was likely to overestimate the relevant effect, and we consider that the overestimate of this aspect should offset our not allowing explicitly for the transaction costs involved in buying and selling smaller companies.*"<sup>270</sup>
357. It is not clear to us that dismissing an approach used for Bristol Water because it results in a different adjustment for other companies, is a strong reason not to use the approach for Bristol Water itself. In particular, the evidence presented by Ofwat in figure A2.2 of the Response shows that the calculated uplift for Bristol Water is lower than those of the other WoCs apart from South East Water, which is a significantly larger company. This suggests that the approach used by the CC has certainly not overestimated the additional systematic risk of Bristol Water.

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Damodaran, A. (2012) Investment Valuation, 3rd Edition, p194.

<sup>268</sup> Response, para. 326(c).

<sup>269</sup> Response, para. 328.

<sup>270</sup> CC Determination 2010 Appendices (SOC553), Appendix N, para 137.

358. Overall, we believe that the approach used by the CC in 2010 remains valid for Bristol Water.

#### 4.2.2 Evidence of Past Returns

359. In the SoC we highlighted evidence from PwC (produced for Ofwat) that the variability of returns for WoCs was higher than for WaSCs.<sup>271</sup>

360. Ofwat argues in the Response that there are a number of limitations with the use of historic variation data to measure risk, and that such variation "*is likely to reflect specific rather than systematic risk*".<sup>272</sup> In addition, Ofwat argues that the forward looking RORE ranges are more robust.<sup>273</sup>

361. The historic data presented by PwC shows that the range of RORE for WoCs is around twice that of the WaSCs.<sup>274</sup> We agree that some of this variation will relate to specific risk. If it were all systematic risk then the asset beta of the WoCs would be twice that of the WaSCs, rather than around 20% higher. However, Ofwat's position that **all** of this additional risk is specific is a very strong assumption and not supported by any evidence or theory. Given this we consider that it is extremely unlikely to be correct.

362. Ofwat notes that "*there are a number of limitations with the use of historic cost variation data to measure risk*".<sup>275</sup> It is not clear that these limitations will impact WoCs and WaSCs differently and therefore change the conclusion that there is a significant difference in variability of returns. In particular, the WaSC with the widest variation in returns is Southern Water. Its returns during AMP5 period have been lower because of a significant revenue shortfall that has been recovered through the revenue correction mechanism. If its returns during this period were corrected, the observed variability of its returns would reduce significantly, reducing the variability of returns of the WaSCs overall. Consequently, the observed difference in risk between WaSCs and WoCs is likely to increase.

363. Ofwat has the requisite data and is uniquely placed to undertake the additional calculations that are required to address the limitations that it has raised with its own analysis.<sup>276</sup> It is not clear why it has not done so.

364. We consider that the forward looking data on RORE is not robust. Ofwat set companies target ranges for the impact on RORE in each area, and said it would mark companies down if they did not match these ranges.<sup>277</sup> As a consequence, companies provided data consistent with Ofwat's proposed ranges. In particular, the specified ranges were the same for WoCs and WaSCs and therefore it is not surprising that the historically observed difference is not present in the future data. Given this approach by Ofwat, very little weight can be given to this data for the purposes of assessing likely future variability in costs.

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<sup>271</sup> SoC, Section 12.3.2.3.2.1.1.

<sup>272</sup> Response, para. 329 ii.

<sup>273</sup> Response, para. 329 iii.

<sup>274</sup> PwC, Company Specific Adjustments to WACC Aug 2014 (SOC119).

<sup>275</sup> Response, para. 329 ii (a)-(d).

<sup>276</sup> Response, para. 329 ii (a)-(d).

<sup>277</sup> Ofwat Risk and Reward Guidance Jan 2014 (SOC079) DD technical appendix A6, Risk and Reward (SOC118)

### 4.2.3 Observed Relationship between Asset Beta and Operational Gearing

365. Ofwat states in the Response that it “*observed that among listed WaSCs, there is no significant relationship between the level of operational gearing and the observed asset beta*”.<sup>278</sup>
366. Ofwat sets out the ratio of RCV to totex in Table A2.11 of its Response, and estimates of asset beta in Table A2.9. The data set out in Table 3 Comparison of Operational Gearing and Asset Beta below is taken from these tables.

**Table 3 Comparison of Operational Gearing and Asset Beta**

	South West	United Utilities	Severn Trent	Bristol Water
<b>Ratio of totex to RCV PR09</b>	11.0%	14.4%	15.1%	29.8%
<b>Daily asset beta over the last 2 years</b>	0.368	0.302	0.323	

Source: Ofwat Response Tables A2.9 and A2.11

367. Table 3 Comparison of Operational Gearing and Asset Beta shows that the difference in operational gearing between the three listed WaSCs is relatively small compared to the difference between the three WaSCs and Bristol Water. Given the uncertainty in the estimates of beta, together with the limited number of listed companies, we do not believe it is reasonable to conclude that the evidence on the effect of operational gearing on asset beta for listed WaSCs rules out a higher asset beta for Bristol Water.
368. Ofwat notes that Pennon has the highest asset beta despite having the lowest operational gearing.<sup>279</sup> However, a significant proportion of the revenues of the Pennon group arise from non-regulated activities (particularly waste management) that are riskier than the regulated water business.<sup>280</sup> An asset beta for South West Water will be derived from analysis of movements in Pennon’s share price, which will reflect the impact of both the non-regulated and regulated activities. As a result its asset beta would be expected to be slightly higher than a company with largely regulated activities. Given this, we do not consider that the asset beta of Pennon is directly comparable with those of Severn Trent and United Utilities. This further undermines Ofwat's argument.

### 4.2.4 Takeover premia

369. Ofwat states that “*WaSCs and WoCs tend to have similar valuation ratios*”.<sup>281</sup> Ofwat concludes from this that “*shareholders do not require a higher return to hold shares in Bristol Water or in small WoCs generally*”.<sup>282</sup>

<sup>278</sup> Response, paras. 335 and 338. Note these paragraphs refer to data on asset betas that does not appear to be referenced in the section.

<sup>279</sup> Response, para. 338.

<sup>280</sup> Response, footnote 98.

<sup>281</sup> Response, para. 332.

<sup>282</sup> Response, para. 332.

370. We consider that Ofwat has drawn the wrong conclusion from this observation. We note that an observation of similar valuation ratios is consistent with **either** of the following propositions:
- potential purchasers estimate future cashflows that do not include a small company premium and discount them by the return expected for WaSCs; **or**
  - potential purchasers estimate future cashflows that **do** include a small company premium and discount them by the higher return they require for holding shares in a WoC.
371. We consider that the latter of these two propositions is the correct interpretation. Ofwat has included small company Premia for equity in its determinations for 1994, 1999, and 2004. Similarly the CC, the higher regulatory authority, included a small company equity premium in its determination for Bristol Water in 2010.<sup>283</sup> Given this, we believe that investors' forecasts of cashflow for WoCs would have included the additional cashflows arising from the small company equity premium. Consequently, similar valuations clearly imply that investors require higher returns from WoCs.
372. We conclude, therefore, that Ofwat's observation that WaSCs and WoCs have similar valuation ratios supports the case for a small company equity premium consistent with that allowed by the CC in 2010.

### 4.3 Inflation

373. Ofwat's views in relation to inflation are considered in the following sections:
- the appropriate rate of inflation is a long-term RPI forecast (see **Section 4.3.1**);<sup>284</sup> and
  - the right rate of RPI inflation to use is 2.8% (see **Section 4.3.2**).<sup>285</sup>

#### 4.3.1 Appropriate Inflation Basis

374. In its Response Ofwat states that "*the appropriate typical inflation forecast is a long-term RPI inflation forecast*".<sup>286</sup> In the SoC we set out why we considered that the most appropriate basis for estimating inflation for converting nominal debt costs to real was the expected inflation over the regulatory period.<sup>287</sup> Ofwat has not explained why it believes an estimate based on a longer period should be used.
375. The advantage of using the regulatory period as the basis for the forecast can be seen by considering the example in Box 1 below.

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<sup>283</sup> CC Determination 2010 (SOC011).

<sup>284</sup> Response, para. 269.

<sup>285</sup> Response, paras 267, 269, and 311, and Table A2.7.

<sup>286</sup> Response, para. 269.

<sup>287</sup> SoC, para. 1719.

### Box 1 Inflation Example

Consider a forecast that has inflation of 2.5% for the next five years, 3.5% for the subsequent 5 years, and 3.0% for the five years after that applied to fixed rate debt with a coupon of 6%. For this example, we will assume that the inflation forecast is accurate.

If a regulator were to set an inflation assumption based on a five year period, then it would arrive at an estimate of 2.5% for the first period, which would turn out to be the correct adjustment between nominal and real debt costs for the period (the revenue cost allowance would reflect the true real cost of 3.5%. At the next review, it would forecast inflation of 3.5% which would also be correct for the subsequent period. In this case, the approach results in the correct adjustment from nominal to real for each regulatory period.

If instead the regulator had used a 10 year estimate of 3.0%, then the allowed cost of debt for the first five years would have been too low because the inflation was actually lower at 2.5% (i.e. the revenue cost allowance would reflect a real cost of 3.0% compared to an actual real cost of 3.5%. At the next review the regulator will again use a 10 year view, and use an inflation assumption of 3.25%. For this subsequent period, the inflation adjustment would result in companies receiving too high a real cost of capital, because actual inflation was higher at 3.5%. In this case, using a longer period to estimate the inflation rate has resulted in an incorrect adjustment for each period.

Source: Bristol Water analysis

376. The example demonstrates that using an inflation estimate based on a period that is longer than the regulatory period is likely to lead to incorrect estimates of inflation even if the inflation forecast is accurate.
377. We consider therefore that a period in line with the regulatory period is the appropriate basis for assessing inflation.

#### 4.3.2 The right rate of inflation to use

378. Ofwat assumed an inflation rate of 2.8% in its FD14, and has reiterated this position in the Response.<sup>288</sup>
379. As we noted in the SoC,<sup>289</sup> since the period leading up to FD14, there has been a substantial reduction in inflation assumptions. This is illustrated by Figure 7 below from the Office of Budgetary Responsibility (**OBR**) which shows a significant reduction in forecast inflation between December and March.<sup>290</sup>

<sup>288</sup> Response, para. 267.

<sup>289</sup> SoC, para 1721.

<sup>290</sup> OBR, March 2015 Economic and Fiscal Outlook (REP012), Chart 3.21.

Figure 7 OBR Forecasts of RPI



380. In the SoC we suggested using breakeven inflation estimates as the OBR data at that time did not reflect the lower expectations.<sup>291</sup> The updated OBR forecast in March does now include the recent change.<sup>292</sup> OBR Q1 estimates for inflation over the next five years are set out in Table 4 below.

Table 4 OBR March 2015 Inflation Forecasts

	2015	2016	2017	2018	2019	2020	Average in Period
<b>OBR Q1</b>	1.0%	1.7%	2.6%	3.1%	3.1%	3.1%	2.4%

Source: OBR<sup>293</sup>

381. The OBR estimates result in average expected inflation over the next five years of 2.4%,<sup>294</sup> very close to the estimate of 2.46% included in our SoC.

382. Given this, we believe that the estimate of inflation of 2.46% included in our SoC remains broadly appropriate.

#### 4.4 The cost of embedded debt

383. In its Response Ofwat raises a number of issues in respect of Bristol Water's cost of embedded debt, each of which is considered in the following Sections:

- we have included the preference shares in our estimate of fixed debt costs (see **Section 4.4.1**);<sup>295</sup>

<sup>291</sup> SoC, para 1723.

<sup>292</sup> OBR March 2015 Economic and Fiscal Output (REP012).

<sup>293</sup> OBR, March 2015 Economic and Fiscal Outlook (REP012), Chart 3.21 supporting data.

<sup>294</sup> Averaging the estimates of each individual quarter from 2015 Q1 to 2020 Q1 results in an estimate of 2.48%.

- the issuance Premia achieved on the Artesian Finance effectively reduce the cost of this debt (see **Section 4.4.2**);<sup>296</sup>
- the rate of inflation use to convert nominal rates to real rates should be 2.8% (see **Section 4.4.3**);<sup>297</sup>
- by averaging the cost of debt at the start and end of the period we have overstated our debt costs by 0.1% (see **Section 4.4.4**);<sup>298</sup> and
- whether the treatment of the loan to the holding company is appropriate (see **Section 4.4.5**).<sup>299</sup>

384. We have also considered the role of the Finance Duty in relation to the assessment of embedded debt (see **Section 4.4.6**).

385. Overall, we consider that the estimate of overall debt costs included in the SoC remains appropriate.

#### 4.4.1 Preference Shares

386. Ofwat states that *"it does not consider that it is appropriate to include preference shares in the cost of debt for an efficiently-financed notional company, given their equity-like characteristics"*,<sup>300</sup> although it does not dispute that the accounting treatment has been to present these as debt for the last 10 years.<sup>301</sup> Ofwat also notes that the CC *"excluded preference shares from the Bristol Water cost of debt in 2010"*.<sup>302</sup>

387. Removing the preference shares from embedded debt costs reduces the overall cost of debt by around 0.14% in 2015 reducing to 0.10% by 2020, an average impact over the period of 0.12%.

388. The preference shares were obtained in 1992 in order to help finance the expansion of Purton Treatment Works. This approach was used because concerns about our level of gearing at the time meant that conventional debt was not available.<sup>303</sup>

389. Although the preference shares are subordinated to the rest of the debt, they are more debt like than equity like in nature. In particular:

- they do not carry any voting rights;
- coupons are fixed with bi-annual payments; and

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<sup>295</sup> Response , Section A2.5.2.

<sup>296</sup> Response , Section A2.5.3.

<sup>297</sup> Response , para. 311.

<sup>298</sup> Response , para. 299.

<sup>299</sup> Response , Section A2.5.5.

<sup>300</sup> Response , para. 303.

<sup>301</sup> Response , para. 302.

<sup>302</sup> Response , para. 294

<sup>303</sup> Note that RCV was not formally introduced into the sector until during the 1994 price review process. As a result, the RCV metrics that assist financing today were not available at that time.

- if a coupon payment were missed for some reason, the missed payments are accumulated and have the same interest rate applied. Until the accumulated interest is paid, no equity dividends are payable.<sup>304</sup>

390. We also note that our preference shares trade at a typical spread of about 2.4% to the UK government 2.5% perpetual gilt.<sup>305</sup> This is a higher spread than our existing index linked debt. This illustrates that the markets treat preference shares as debt.

391. We believe that CC10 was not conclusive on the treatment of preference shares. For instance, whilst some debt calculations made excluded preference shares, they were treated as debt in the definition of notional equity<sup>306</sup> and excluded from the calculation of regulatory equity.<sup>307</sup>

392. For the reasons set out above, we consider that the inclusion of preference shares within the cost of embedded debt is a reasonable approach.

#### 4.4.2 Issuance Premia on Artesian Loans

393. In its Response, Ofwat argues that the amortisation of the Premia associated with the Artesian issuance should be taken into account in the assessment of issuance costs.<sup>308</sup>

394. Ofwat's Response appears to misunderstand the nature of the premia. In practice they differ from issuance costs as they are a balance sheet effect, rather than an offsetting cost (see **Appendix One**, Section 3). The premia obtained effectively increased cash and thus delayed the timing of subsequent debt issues. As such it is not correct to adjust the assessment of issuance costs to take these into account.

395. This issue was assessed by the CC in Bristol Water's 2010 redetermination. The approach of the CC was to assume issuance costs of 0.1% based on a debt portfolio that included the Artesian debt.<sup>309</sup> We see no reason why this approach should change.

#### 4.4.3 The rate of inflation

396. In FD14 Ofwat determined that an inflation rate of 2.8% should be used to convert nominal debt costs to real debt costs to estimate the cost of embedded debt.<sup>310</sup> Ofwat's Response does not appear to reflect the recent reduction in inflation expectations.<sup>311</sup>

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<sup>304</sup> Listing of Particulars of the Cumulative Irredeemable Preference Shares (REP048).

<sup>305</sup> Bristol Water analysis using data from Thomson Reuter Eikon.

<sup>306</sup> CC Determination 2010 (SOC011), page O7, para. 25 – notional equity was calculated as RCV minus net debt and preference shares.

<sup>307</sup> CC Determination 2010 (SOC011), page O12, para. 45.

<sup>308</sup> Response, Section A2.5.3.

<sup>309</sup> CC Determination 2010 Appendices (SOC553), Appendix N para.55.

<sup>310</sup> FD14 A7 – Risk and Reward (SOC218), p. 66.

<sup>311</sup> Response, para. 311.

397. In **Section 4.3.2**, we show that inflation expectations have reduced significantly since the autumn. In addition, in Table 4 we show that the OBR forecast over the period up to 2020 is 2.4%, close to the estimate we included in our SoC of 2.46%.
398. Using an estimate of 2.8% for inflation for adjusting embedded debt nominal rates rather than 2.46% would reduce the overall cost of debt by 0.10% on average over the five year period.
399. We consider that the inflation estimate included in our SoC remains broadly appropriate as it is consistent with the latest OBR estimate.

#### 4.4.4 Averaging Debt

400. Ofwat notes in the Response that using an average of the start and end debt costs would be over generous to Bristol Water as it would underestimate the downwards impact of the debt raised in November 2014 which is retired just ahead of the March 2020 estimate.<sup>312</sup> This does not take into account the offsetting effect from the new debt being back end loaded, partly as a result of the new debt being in place for early in the period, and partly as some is required to refinance existing debt towards the back end of the period including the November 2014 loan.
401. An alternative more accurate approach is to use an annual average of the debt costs. This would largely address the concerns raised by Ofwat, although it is more complex.
402. We have re-estimated our cost of debt based on such an annual approach. This is set out in the table below. Inflation of 2.46% is assumed in each year to convert fixed debt from nominal to real. The profile of new debt reflects the refinancing of existing loans in addition to funding required to finance the capex programme.

Table 5 - Assessment of Debt Costs by Year

	Dec-15		Mar-16		Mar-17		Mar-18		Mar-19		Mar-20	
Summary Table	Amount	Real rate %										
Existing IL debt	170,495	3.39	175,764	3.39	180,087	3.39	184,517	3.39	189,057	3.39	193,707	3.39
Existing Fixed Debt	81,570	3.90	81,570	3.90	81,570	3.90	71,570	3.98	71,570	3.98	71,570	3.98
New Fixed Loan Nov 14	50,000	-0.06	50,000	-0.06	50,000	-0.06	50,000	-0.06	50,000	-0.06	0	-0.06
Existing Variable Debt	12,529	0.12	12,529	0.72	12,529	0.00	2,529	3.66	2,529	4.06	2,529	4.26
New Debt	0	0.00	0	2.00	30,000	2.00	85,000	2.00	125,000	2.00	215,000	2.00
Blended Rate		2.84		2.88		2.78		2.76		2.70		2.86
Cash Balance/ Issuance costs		0.30		0.30		0.30		0.30		0.30		0.30
Total cost of debt		3.14		3.18		3.08		3.06		3.00		3.16

Source: Bristol Water

<sup>312</sup> Response, para. 299

403. The average total cost of debt over the period using this approach is 3.10%. This is only marginally lower than the estimate of 3.15% obtained using an average of the opening and closing costs set out in Table 116 of the SoC.
404. The calculation above is based on the totex included in the SoC. If the FD14 totex allowance were used instead, then the draw-down of new debt would be significantly reduced. This would increase the estimated cost of debt overall to 3.20%.

#### 4.4.5 Treatment of holding company loan

405. Ofwat states in the Response that the calculation of the embedded debt costs should net off interest received from the holding company, otherwise customers will be paying for financing costs which are not incurred by the regulated company.<sup>313</sup>
406. The holding company has no business of its own from which it can pay the interest on the intercompany loan (see **Section 5**). Instead it is financed by dividend transfers from the regulatory business which are then returned as interest payments on the loan. Under the terms of the agreement, the loan can be repaid at any time by a large transfer from the regulated company to the holding company that would then be immediately repaid to redeem the loan.<sup>314</sup> This illustrates why the loan is effectively a liability of the regulated business and needs to be taken into account in assessing its cost of debt. Accordingly, we have excluded both the dividend transfers and interest income from our Business Plan, so that the structure has no impact on our revenue allocation.
407. Ofwat's policy since the debt was raised has always been to ignore the intercompany loan and to treat it as if it were part of the regulated business (as it does for all companies with such arrangements). This was also the approach of the CC in 2010. Rating agencies also adopt this approach. It is not clear why Ofwat is now advocating a different treatment.
408. We consider that the historic approach of treating this debt as part of the regulated business remains appropriate.

#### 4.4.6 Finance Duty and embedded debt costs

409. As we have set out in Section 12.2 of our SoC, the s2(2A)(c) WIA '91 'Finance Duty' is relevant to the assessment of the appropriate cost of capital. This section addresses Ofwat's interpretation of the Finance Duty and how it impacts on the assessment of WACC.
410. The Finance Duty requires Ofwat, and the CMA, "*to secure that companies holding appointments under Chapter 1 of Part 2 of this Act as relevant undertakers are able (in particular, by securing reasonable returns on their capital) to finance the proper carrying out of those functions*".<sup>315</sup> The need to secure reasonable returns on capital is, therefore, a key element of the Finance Duty.

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<sup>313</sup> Response, para. 315.

<sup>314</sup> A consequence of this however, would be that the distributable reserves of the regulated business would be significantly reduced and would significantly impact the ability to support future dividend payments.

<sup>315</sup> SoC, Section 2.5.1.3 (p. 47).

411. Ofwat suggests that Bristol Water has argued that the Finance Duty “includes a separate duty to secure reasonable returns”,<sup>316</sup> whereas Ofwat has “pursued well-established practice and considered that there was a single financeability duty”.<sup>317</sup> This is inaccurate and misleading. We are not suggesting that there is a separate duty to secure reasonable returns, but simply noting that the reasonable returns element of the Finance Duty is relevant to the assessment of cost of capital, whereas the need to ensure that a company can access finance by maintaining investment grade credit ratings is considered as part of the broader financeability assessment.<sup>318</sup> Indeed, Ofwat has itself characterised the Finance Duty as having these two strands – the first relating to earning a return at least equal to the cost of capital, and the second regarding the ability to raise finance on reasonable terms.<sup>319</sup>

#### 4.4.6.1 Role of the notional company

412. In its Response, Ofwat states:

*“we had satisfied [the Finance Duty] by allowing sufficient revenue to make sure that Bristol Water was able to finance its functions, which includes **a return sufficient for an efficient, notionally financed company to finance its functions.**”<sup>320</sup> (emphasis added)*

413. In contrast, Ofwat notes that “Bristol Water submitted that this duty was owed with respect to the company as it is, rather than with respect to a notionally structured, efficiently operated company.”<sup>321</sup> Certainly, the starting point is to acknowledge that the WIA '91 Duties do not refer anywhere to a notional company. Instead, the Finance Duty is clear that the appointed company must be able to finance its functions.

414. This issue was considered by the CC in the CC10 redetermination, with the CC concluding that to comply with the Finance Duty, bearing in mind its interaction with the Consumer Duty,<sup>322</sup> Bristol Water's return on capital “should be equal to **its expected cost of capital**”.

415. We understand the role played by the notional company in the context of industry-wide economic regulation, particularly in the context of customer protection as summed up by Ofwat:

*“Equity holders should bear the consequences of their financing decisions, while **customers should only pay for efficient financing costs.** The use of notional*

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<sup>316</sup> Response, para. 341.

<sup>317</sup> Response, para. 349.

<sup>318</sup> SoC, paras. 1578-1579.

<sup>319</sup> Ofwat's initial submission to the CC on South Staffordshire /Cambridge Water (REP013), p.102.

<sup>320</sup> Response, para. 349. Earlier in the Response Ofwat states “We interpret this financing duty as requiring that we ensure that an efficient company with a notional capital structure is able to finance its functions.” (para. 74). We note that this interpretation differs from the wording of s2(2A)(c) WIA '91, which does not contain any explicit reference to the financing of efficient companies. Ofwat has not provided a detailed explanation to support this interpretation, particularly in the context of how it reconciles the interaction between the Primary Finance Duty and the Secondary Efficiency Duty (see SoC, Section 2.5).

<sup>321</sup> Response, para. 342.

<sup>322</sup> S2(2A)(a) WIA' 91. See also Section 2.5.1.1 of the SoC, p. 45.

*financing structure means that customers will bear costs associated with notional structure and companies gain benefit from outperformance and underperformance against notional structure. The use of notional structure also facilitates comparison across companies.*<sup>323</sup> (emphasis added)

416. Ofwat goes on to suggest that by asking the CMA to assess WACC by looking at Bristol Water as it actually is, rather than just relying upon the notional company, Bristol Water is effectively asking customers to fund inefficient costs:

*"Bristol Water's case is contrary to longstanding and best regulatory practice. Companies are expected to operate efficiently and Ofwat, and other regulators, have never endorsed inefficiency in the sense of passing on costs, leading to higher charges to consumers, which could have been avoided through management action. The cost of capital is not conceptually different from any other cost. **If a company raised capital at an unexplained premium it is hard to see why consumers should pay for this decision**, in much the same way as an unjustified over-payment for an item of investment or labour costs would never be sanctioned. This mechanism provides incentives to reduce costs. It is the strength of comparative regulation that this enables comparative efficiencies to be identified and applied across the industry. Capital is no exception to this.*<sup>324</sup>(emphasis added)

417. It is not clear on what basis Ofwat is arguing that our interpretation of the Finance Duty, which is based on the wording of the WIA '91<sup>325</sup> and regulatory precedent,<sup>326</sup> is "contrary to longstanding and best regulatory practice".
418. We agree that inefficient costs, which could have been avoided through management action, should not be passed on to customers in the form of higher charges. For wholesale totex, this is achieved through the application of an efficiency challenge. For the cost of capital, we make it clear that debt costs which are demonstrably due to inappropriate management decisions should not be funded. The logical corollary of this position, however, is that it is legitimate to pass on efficient costs to customers, even to the extent that this differs from the level of efficiency represented by the notional company.
419. The notional company utilised by Ofwat represents one view of what an efficient company might look like. That does not mean, however, that any company with a different structure or financial arrangements is inefficient. We recognise why the use of a notional company might be considered to offer important protection for customers against poor management decisions regarding financing and structure. Deviation from that notional norm is not, however, in itself a problem, but simply an indication that a problem might exist. We consider, therefore, the starting point for the use of a notional company as a cross-check in an application of the Finance Duty must be to demonstrate that the company in question is inefficiently financed or structured. If that can not be demonstrated then Ofwat and the

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<sup>323</sup> Response, para. 56

<sup>324</sup> Response, para. 343.

<sup>325</sup> S2(2A)(c) WIA' 91. See also Section 2.5.1.3 of the SoC, p. 47.

<sup>326</sup> CC Determination 2010 (SOC011), para. 9.2. See also Section 12.2 of the SoC, p. 411.

CMA should have regard to the actual circumstances of the company in accordance with the wording of the Finance Duty.

420. We have demonstrated that our embedded debt costs were efficiently incurred so we can not be characterised as having "*raised capital at an unexplained premium*" (see **Section 2**).<sup>327</sup> Ofwat does not appear to have set out any analysis to show that any tranche of our debt was inefficient. As such, we can not see any theoretical basis on which to assert that the proposition that our efficiently incurred embedded cost of debt should be covered is contrary to the Finance Duty or best regulatory practice.

#### 4.4.7 Conclusions on embedded debt

421. We consider that the estimate of the cost of embedded debt included in our SoC remains robust.
422. Undertaking the calculation of the overall cost of debt on an annual basis rather than using estimates at the start and end results in the estimated cost of debt overall reducing slightly from 3.15% to 3.10%, based on the totex levels in the SoC. Lower totex levels would result in a higher overall debt cost as the amount of lower cost new debt required would reduce.

#### 4.5 The cost of new debt

423. Ofwat states that the debt Bristol Water raised in November 2014 at a cost of -0.4% real "*suggests that there is considerable scope for out-performance against cost of debt raised early in the 2015-2020 period*".<sup>328</sup>
424. Firstly, we note that our assumed cost of new debt of 2% is similar to Ofwat's. Ofwat has not suggested revising its cost of new debt in its Response. We are therefore not clear what action Ofwat is suggesting should be taken.
425. We do not consider that such scope for out-performance is available in practice:
- as a result of the £50m loan raised in November 2014 we do not currently anticipate that we will access debt markets again until 2017;
  - the low costs of the loan partly reflected access to the Government's funding for lending scheme. This is anticipated to end in January 2016;<sup>329</sup> and
  - the low costs of the loan also reflected the short tenor. Our covenants include debt concentration clauses. As a result, and to ensure a balanced debt portfolio, the next tranche of debt we obtain is likely to be at least 20 years in tenor. As set out in our SoC, we have based our new cost of debt in line with this assumption.<sup>330</sup>

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<sup>327</sup> SoC, Section 12.3.3.2.1.

<sup>328</sup> Response, para. 287.

<sup>329</sup> Bank of England and HM Treasury FLS, 1 August 2012 (**'Funding for Lending Scheme'**) (REP037).

<sup>330</sup> SoC, para. 1658.

## 4.6 The appointed wholesale difference

426. In the Response Ofwat reiterates its position that *"it would be inappropriate to set the wholesale WACC equal to the WACC for the appointed company"*.<sup>331</sup>
427. In our SoC we explain why we consider that the adjustment to the appointee cost of capital to account for retail returns is inappropriate and not based on sound corporate finance theory,<sup>332</sup> and that even if an adjustment were appropriate, the size of the adjustment has been miscalculated.<sup>333</sup>
428. Ofwat states in the Response that if no adjustment is made the *"change in price control methodology would increase company's returns without any change in its risk profile"*.<sup>334</sup> However, the introduction of new and separate controls for retail has increased the risk profile of the business, as has the change in methodology. In particular:
- the removal of indexation for retail costs has increased the cost risk faced by companies; and
  - the returns on retail and wholesale businesses are generally negatively correlated. Standard economic theory shows that where the returns of two businesses are negatively correlated, the risk of the two combined together will be lower than that of the businesses separately. As a result, separating price controls for wholesale and retail results in a higher risk profile, as the risk of the two businesses separately is higher than the risk of an integrated business.<sup>335</sup>
429. In **Section 4.6.1** below we demonstrate that Ofwat's approach is theoretically wrong, and effectively removes returns on retail assets from the return of the appointed business.
430. In **Section 4.6.2** below we show that even adopting Ofwat's approach, but taking into account that retail returns are pre-tax nominal and the appointed WACC is post tax real, that there is a need for a return on new retail assets, and that there is additional risk in retail as a result of the loss of indexation of costs, then the required adjustment is zero (or positive).<sup>336</sup>
431. Given this we continue to consider that no adjustment is required.

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<sup>331</sup> Response, para. 282.

<sup>332</sup> SoC, Section 12.3.5.1.1.

<sup>333</sup> SoC, Section 12.3.5.1.2.

<sup>334</sup> Response, para. 282.

<sup>335</sup> The common ownership of the retail and wholesale businesses significantly mitigates this effect compared to full separation. However, it does not fully mitigate it because the separate controls mean that the scope for one business offsetting the results of the other is reduced compared to the status-quo ante which had one control. Note that we have not made any adjustments as a result of this issue.

<sup>336</sup> This would not be the case if the higher risk from loss of indexation was already in the estimate of the overall appointee risk. We do not consider this is the case. In the SoC we show in Figure 78 that the asset beta of listed WaSCs has increased significantly during 2014, perhaps reflecting the higher risk of the new controls. These higher estimates of beta have not been taken into account in our estimate of asset beta for Bristol Water.

#### 4.6.1 Ofwat's approach is theoretically incorrect

432. Ofwat's approach is only correct if the return of the appointed business does not include any return on retail assets. This is shown in Box 2 below.

##### Box 2 - Theoretical error in Ofwat's approach

The overall returns of the appointed business can be decomposed into the separate returns of the retail and wholesale businesses as shown in the equation below where C represents assets and R returns, and the subscripts a, w, and r represented appointed, wholesale and retail businesses respectively.

$$R_a C_a = R_w C_w + R_r C_r$$

Ofwat's approach is to set the wholesale return by reducing the appointed rate of return by the retail profits divided by the wholesale RCV. Using the notation above this can be written:

$$R_w = R_a - R_r C_r / C_w$$

However, rearrangement of the original equation shows that the wholesale return should be expressed as:

$$R_w = R_a C_a / C_w - R_r C_r / C_w$$

In other words, Ofwat's approach is only correct if  $C_a = C_w$ , i.e. if there are no retail assets at all. If intangible assets are ignored, this may be true on the establishment of retail on 01 April 2015, but it very rapidly becomes untrue as new assets and working capital are built up in retail.

Source: Bristol Water analysis

433. In its Response Ofwat has not addressed the theoretical arguments set out in Section 12.3.5.1.1 of the SoC. We consider that the theoretical approach we set out in the SoC remains valid and demonstrates that an adjustment is not required.

#### 4.6.2 Calculation of the adjustment

434. In its Response, Ofwat raised a number of issues in respect of our alternative calculation, each of which is considered in more detail below:

- it was specific to Bristol Water (see **Section 4.6.2.1**);
- it deducted too much for taxes (see **Section 4.6.2.2**);
- it deducted too much for retail assets (see **Section 4.6.2.3**); and
- It deducted too much for additional inflation risk (see **Section 4.6.2.4**).<sup>337</sup>

435. A key area that the Response does not address is that the retail returns are nominal returns and that these need to be adjusted to real returns before deducting from the appointed

<sup>337</sup> Response, para. 274.

WACC. This reduces the required adjustment by 0.10% using Bristol Water data, or 0.08% using industry wide data.

#### 4.6.2.1 The adjustment was specific to Bristol Water

436. Ofwat states that it considers it is appropriate to use industry wide data rather than company-specific inputs.<sup>338</sup> We adopted company specific inputs as this was in line with our overall approach to the cost of capital, and because using industry wide data would have resulted in a lower adjustment and might have been seen as being selective in the use of data to present the most favourable position.

437. Table 6 below sets out Table 119 from the SoC as adjusted by Ofwat in its Response.<sup>339</sup> It also includes an additional column to show our view of the adjustment based on sector wide figures.

Table 6 Wholesale Appointed Adjustment

		Ofwat	Bristol Water	Bristol Water Sector Wide
<b>Retail Net Margin</b>	A	0.9%	1.0%	1.0%
<b>Revenue Requirement (2015-20 year average)</b>	B	£10,812m	£109.8m	£10,812m
<b>RCV (2015-20 year average)</b>	C	£63,072m	£491m	£63,072m
<b>Retail Return on Wholesale RCV</b>	D=A*B/C	0.15%	0.22%	0.17%
<b>Convert to post-tax nominal return</b>	E=D*4.4/7.81 <sup>340</sup>		0.12%	0.09%
<b>Post-tax real return required on new Retail Assets and new working capital</b>	F	0.01%	0.03%	0.03%
<b>Residual real post-tax return</b>	G=F-E	0.14%	0.09%	0.06%
<b>Additional risk arising from loss of indexation of retail costs</b>	H	Not quantified	0.07%	0.07%
<b>Final Required Adjustment to Wholesale WACC</b>	I=H-G	-0.14%	-0.02%	+0.01%

Source: Bristol Water/Ofwat

438. Table 6 shows that using industry wide data would change the adjustment from a reduction of 2 basis points (**bp**) to an increase of 1 bp.

#### 4.6.2.2 Retail Taxes

439. Ofwat states in its Response:

- "Bristol Water has overstated the tax adjustment by using the ratio of pre-tax wholesale nominal returns with post real cost of capital, rather than calculating tax on retail margins";<sup>341</sup> and
- that it considers the tax rate of 20% used by Bristol Water is inappropriate.<sup>342</sup>

<sup>338</sup> Response, para. 276.

<sup>339</sup> Response, Table A2.3.

<sup>340</sup> The estimated pre-tax nominal cost of capital is 7.8%, compared to a post-tax real return of 4.4%, based on a tax rate of 20% and inflation of 2.46%. For the Sector wide column the adjustment is 3.74% divided by 7.07% reflecting the industry wide cost of capital

<sup>341</sup> Response, para. 278.

440. Ofwat has misunderstood the adjustment we have made. The adjustment we have included addresses both the tax element, and the fact that the retail returns are a nominal return, and need to be adjusted into a real return before they are subtracted from the real appointed cost of capital.
441. Ofwat states that it considers that a tax rate of 10% is more appropriate for retail as this is consistent with the average rate for the appointed business of the sector.<sup>343</sup> We believe that a comparison of a retail business with the overall sector is inappropriate because the majority of the appointed business is wholesale which pays lower taxes because:
- it benefits from very large capital allowances due to high levels of capital expenditure; and
  - the high level of gearing which provides a higher level of tax deductible interest.
442. The retail business has comparatively low levels of capital investment, and therefore will not benefit to the same extent from capital allowances. In addition, as Ofwat has noted,<sup>344</sup> the retail business will have low or zero gearing. As a result it will not benefit from the same level of interest costs as the wholesale business.
443. Given the nature of the retail business therefore we consider that a corporate tax rate of 20% is appropriate to use in the adjustment.

#### 4.6.2.3 Return on retail assets

444. Ofwat states: "*Bristol Water's estimate values the new assets deployed in the retail business at the net present value of all retail profits for the next 30 years*".<sup>345</sup> This is a misunderstanding. The 30-year calculation was used to estimate retail assets in the illustration of the theoretically correct approach because using actual assets would have made any adjustment required smaller (i.e. it is higher than the worse real case).<sup>346</sup>
445. Instead, for the adjustment in Table 119 of the SoC we used the average net book value of assets over the five year period. The average net book value of assets (based only on those added during the period) was estimated to be £2.02m. In addition, the incremental working capital (average over the five years) was estimated to be £1.34m, giving an average capital amount of £3.4m. This is much lower than the £11-£17m estimates in table 118 of the SoC derived from the NPV approach.
446. Consequently, the point Ofwat raises is not relevant to the adjustment set out in Table 119 of the SoC and A2.3 of the Response.
447. The return on this capital (at the appointed WACC) is 0.03% of RCV as shown in line F of Table 6 above, and Table 119 of the SoC. In practice, this approach may underestimate the

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<sup>342</sup> Response, para. 279.

<sup>343</sup> Response, para 279.

<sup>344</sup> Response, para. 279.

<sup>345</sup> Response, para. 280.

<sup>346</sup> SoC, Table 118, p. 440.

required return on assets in retail as the cost of capital of the retail business may be higher than that of the appointed business due to its higher risk (albeit this may be offset by lower gearing).

#### 4.6.2.4 Inflation Risk

448. Ofwat states in the Response that:

*"In carrying out its retail activities, Bristol Water is not exposed to the risk that RPI inflation might be higher or lower than expected, it is exposed to the possibility that its costs might turn out to be higher. But this is a risk that is more within its control, it can be managed and mitigated, and there is no reason to remunerate it through a specific allowance in the WACC or the retail margin."<sup>347</sup>*

449. The move from an index linked cost allowance to a pre-set inflationary allowance increases the risk the company faces from differences in inflation leading to its costs being higher or lower. The removal of indexation does not increase the company's ability to manage and mitigate such cost changes, and therefore the use of a pre-set inflation allowance rather than indexation creates an additional cost risk. This additional cost risk will create additional variability in profits.

450. Our estimate of the additional return required as a result of this risk has been obtained by:

- estimating the average uncertainty in inflation for years 2 to 6 to be 2.4% based on a single year forecast error in inflation of 1.2% (based on BOE published forecast errors);
- applying this to the cost base at risk (£9.2m) to obtain a relative risk of £0.2m pa;<sup>348</sup>
- comparing the effect of this variability in profits as a percentage of RCV to the overall market variability in profits of 8.5% over 5 years (SOC222) to get a relative risk (equity beta) of 0.014; and
- applying this relative risk to an ERP of 5.25% to obtain a risk premium of 0.07%.

451. Ofwat also states that the adjustment to the WACC should be *"a deduction of 0.01% from the adjustment of the wholesale WACC rather than the 0.07% proposed by Bristol Water"*<sup>349</sup> because *"the inflation risk premium implied in calculation of implied inflation in long term gilt yields suggests around 10% of the cost of debt."*<sup>350</sup>

452. This statement appears to show a misunderstanding by Ofwat. The additional risk we calculated above is based on the risk arising from cost variations as a result of differences in inflation, not as a result of the impact of inflation on financing costs. We are not sure

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<sup>347</sup> Response , para. 281.

<sup>348</sup> This calculation assumes that retail costs are affected 1 to 1 by differences in inflation. This is exactly true in comparison to the status quo ante in which the costs benefitted from indexation. It is likely to be true also directly, in particular because bad debts form the largest element of retail costs and these are linked to RPI through indexation of the wholesale control.

<sup>349</sup> Response , para. 281.

<sup>350</sup> Response , para. 281.

whether the latter risk that Ofwat has identified is applicable to retail, but if it were, then it would be in addition to the cost risk identified above.

#### 4.6.2.5 Summary of calculation adjustments

453. The points raised by Ofwat, either arise because of a misunderstanding by Ofwat or act to reduce the size of the adjustment by more than suggested by Bristol Water. Given this, we consider Ofwat's points strengthen the case that no adjustment should be made.

### 4.7 Small company premium and the customer benefits test

454. In the SoC we set out in detail the basis on which we face a higher cost of capital, and why we consider it would have been appropriate for Ofwat to allow a small company premium.<sup>351</sup>

455. In its Response, Ofwat states:

*“Ofwat’s case is that the costs may not be higher, a factual matter; that even if they were higher, costs could be lowered by management action, possibly involving structural change; lastly, if, exceptionally, there was some merit in Bristol Water’s current scale being maintained, only then should such higher costs be borne by customers.”<sup>352</sup>*

456. The factual question of whether our costs are higher is addressed in **Section 2** and **Section 3** above.<sup>353</sup> The second and third elements of Ofwat’s case are addressed in the following Sections.

#### 4.7.1 Can higher costs be mitigated through management action?

457. In the Response, Ofwat suggests that any higher costs experienced by Bristol Water could be avoided by management action and should not, therefore, be funded by customers:

*“Secondly, even if they are higher, we are not persuaded that any higher financing costs, possibly as a result of its smaller scale of operations are unavoidable. **Companies have a number of options** for addressing diseconomies of scale with regard to financing costs **such as pooling debt** with other companies as happened in relation to Artesian finance; and, with the imminent relaxation of the merger control regime, **sub-optimal operations might be remedied by acquiring scale**. The coming changes to the special water merger regime are set out in the Water Act 2014.”<sup>354</sup> (emphasis added)*

*“Ofwat’s case is that [...] even if they were higher, **costs could be lowered by management action**, possibly involving structural change.”<sup>355</sup> (emphasis added)*

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<sup>351</sup> SoC, Section 12.4.

<sup>352</sup> Response, para. 350.

<sup>353</sup> See also SoC, Section 12.

<sup>354</sup> Response, para. 346.

<sup>355</sup> Response, para. 350.

458. We agree that one way of mitigating higher financing costs arising from our size is to pool borrowing requirements and, as Ofwat acknowledges, that is exactly what Bristol Water did by making use of the Artesian loan (see **Appendix One**). We have also explored our options for refinancing in order to reduce the cost of embedded debt but, as is set out in Section 12.3.3.2.2 of the SoC, any refinancing would incur a disproportionate cost and lead to a significant refinancing risk. As set out in **Section 4.5** we have recently secured a £50m bank loan with a low rate due to the funding for lending scheme. This has been included within our embedded debt calculation. We explain in **Section 4.5** that this scheme is unlikely to be suitable or available for future debt requirements. As such, Bristol Water has carried out the mitigating actions that are reasonably available to it and within management control.
459. Regarding the suggestion that the acquisition of scale is a viable mitigating option, we note the following:
- it is mis-leading to suggest that the “*imminent relaxation*” of the special water merger rules will make it easier to acquire scale – all that is happening is that the automatic initiation of a phase II reference has been removed.<sup>356</sup> Instead, the CMA will have the discretion not to initiate phase II if the merger is unlikely to prejudice Ofwat’s ability to make comparisons between water companies in the context of its economic regulations or, if it does cause prejudice, that prejudice is outweighed by relevant customer benefits.<sup>357</sup> In making this assessment, the CMA will be informed by a published opinion from Ofwat which details the criteria applied and the relevant weighting.<sup>358</sup> Given that the impact on the use of comparators has been the central focus in previous water mergers when deciding whether to approve or block an acquisition,<sup>359</sup> substantively nothing will change – the effects are primarily procedural;
  - to characterise Bristol Water as a “*sub-optimal operation*” is neither accurate nor appropriate. Bristol Water does not consider that it has a “*sub-optimal scale*” and nor does it accept that it represents “*relative inefficiency*”;<sup>360</sup>
  - the acquisition of scale through the acquisition of another water company, or by the sale of Bristol Water to another water company, is not something that is within management control, so should not be used as a mitigating action in this context.
460. More generally, it is worth reiterating that is not within Ofwat’s remit to use its powers of economic regulation to drive structural change within the industry in this way. Bristol Water’s right to exist is enshrined in its Licence.<sup>361</sup> Ofwat is under a duty to regulate Bristol

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<sup>356</sup> For the time being, the de minimis threshold of £10 million remains in place. There is a possibility that it might be raised to £70 million in the future, but this remains a theoretical possibility only. In any event, even if it were raised to £70 million, the only water companies with 2013/14 turnover under that threshold are Sembcorp Bournemouth Water plc (£46.1m), Dee Valley Water plc (£23.7m), Portsmouth Water plc (£37m) and Sutton & East Surrey Water plc (£62m).

<sup>357</sup> S33A WIA ‘91.

<sup>358</sup> S33B-33C WIA ‘91.

<sup>359</sup> South Staffordshire Water /Cambridge Water, CC Merger Inquiry 2012 (REP014); South East Water Limited/Mid Kent Water Limited, Competition Commission 20072007 (REP015).

<sup>360</sup> Response, para. 347.

<sup>361</sup> Bristol Water Licence (SOC029).

Water until such time that it ceases to exist or is acquired. It is therefore not appropriate for Ofwat to consider an approach other than the “*current scale being maintained*”.<sup>362</sup>

#### 4.7.2 Should higher costs be borne by customers?

461. In its Response Ofwat states that “*if, exceptionally, there was some merit in Bristol Water’s current scale being maintained, only then should such higher costs be borne by customers.*”<sup>363</sup>
462. Ofwat has captured this logic in the customer benefits test that it has applied to assess whether or not WoCs should be allowed a small company premium. The customer benefits test, which was introduced for the first time as part of PR14, has been described in detail in Section 12.4 of the SoC. It essentially requires companies to pass a new ex-post hurdle in order to justify higher costs of debt, without any possibility of correcting the issue. In this Section, we focus on the aspects of the test that Ofwat has highlighted in its Response.

##### 4.7.2.1 Relationship of customer benefit test with the Duties

463. As Ofwat notes, we have argued in the SoC that the application of a customer benefits test as a pre-condition to funding a small company premium is inconsistent with the WIA ’91 Statutory Duties, particularly as it jeopardises our ability to finance our functions. In contrast, Ofwat takes a contrary position:

*“We consider that the benefits test is appropriate in order to ensure that we fulfil all our duties so far as is practicable. We consider that the test is consistent with our consumer duty as **it only allows incremental financing costs above efficient levels to be passed on to customers where it furthers consumers’ interests to do so.** We also consider that the test is consistent with our financing duty as our determinations are **sufficient to make sure that all companies are financeable on the basis of an efficient, uniformly notionally structured company.**”<sup>364</sup> (emphasis added)*

464. Regarding the interaction between the Finance Duty and the Consumer Duty, which is addressed in Section 12.4.1.2 of the SoC, Ofwat states:

*“As should be clear from the above, **Ofwat has not elevated or prioritised the duty to protect the interests of consumers** (the consumer objective in section 2(2A)(a) of the Water Industry Act 1991) over meeting the financing duty. **Bristol Water is seeking to elevate the financing duty over the interests of consumers** in expecting customers to **pay for what may be avoidable higher financing costs.** Ofwat’s position is that this is a false dichotomy: our aim is to create a framework and incentive regime that aligns the interests of investors and companies with the interests of customers. And specifically in relation to the consumer and financing duties – we think of it as **trying to maximise the interests of existing and future***

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<sup>362</sup> Response, para. 350.

<sup>363</sup> Response, para. 350.

<sup>364</sup> Response, para. 352.

***consumers, maximising the delivery of what customers want, subject to ensuring that efficient companies can access capital markets.***<sup>365</sup> (emphasis added)

465. Ofwat is suggesting that our application of the Statutory Duties to the customer benefit test inappropriately elevates the Finance Duty over the Consumer Duty. We consider, however, that our interpretation of the interaction between the duties is consistent with that of Ofwat expressed in the extract above. In accordance with previous decisions of the CMA and CC, we noted that it would not be legitimate to prioritise the Consumer Duty over the Finance Duty in circumstances where doing so would 'jeopardise' Bristol Water's ability to finance the proper carrying out of its functions.<sup>366</sup> This is simply another way of saying that consumers interests will be maximised, subject to ensuring the Finance Duty is satisfied, which is the approach being advocated by Ofwat and which we believe represents an appropriate balancing of these Primary Duties.
466. The only real point of debate, therefore, is what is meant by ensuring "*efficient companies can access capital markets*". For Ofwat, an efficient company is the notional company. Ofwat assumes that the notional financing costs of a notional company represent the threshold of what can be considered efficient. Ofwat is, therefore, making a presumption that any "*incremental financing costs*" above the "*efficient levels*" it has assumed for the notional company must be inefficient.<sup>367</sup> This approach does not make any allowance for the fact that individual companies may be efficient even if they differ from the notional company (see **Section 4.4.6.1** above). As set out in Section 12.3.3.2.1 of the SoC we consider that Bristol Water has been efficiently financed, so it is consistent with Ofwat's interpretation of the Finance Duty for the actual circumstances of Bristol Water to be taken into account when setting the appropriate cost of capital.
467. It is also worth reiterating that we are not suggesting that customers should be made to pay for "*avoidable higher financing costs*".<sup>368</sup> As we have set out above, these costs were efficiently incurred and any viable mitigating action has been taken. As such these costs should not be characterised as "*avoidable*". In any event, if Ofwat wants to rely on this logic, it should be prepared to demonstrate that those costs are, in fact, avoidable and/or inefficient.
468. Ofwat noted in its Initial Statement that "*all companies, including Bristol Water, were financeable (on a notional basis) in the absence of an uplift. We therefore considered that our methodology represented a reasonable balance between our duties.*"<sup>369</sup> As we explain in **Section 10** below, and in Section 17 of the SoC, Bristol Water is not financeable under FD14. As such, this does not offer any comfort as to the reasonableness or otherwise of the customer benefit test as a balancing of the Statutory Duties.

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<sup>365</sup> Response, para. 351.

<sup>366</sup> Competition Commission Sutton and East Surrey interim price determination ('CC SESW interim price determination') (SOC122), para. 4.53. See also SoC paras. 1768-1771.

<sup>367</sup> Response, para. 352.

<sup>368</sup> Response, para. 351.

<sup>369</sup> Initial Statement, p.27.

#### 4.7.2.2 Assessment of benefits for customers arising from Bristol Water's size

469. As set out in Section 12.4.1.3 of the SoC, whilst we do not agree with the customer benefits test in principle, if it is applied in practice then we consider that we have demonstrated sufficient benefits to customers arising from our size, and continued presence as a supplier of water services, to justify the inclusion of a small company premium.
470. Ofwat expressed the customer benefits test as requiring “a clear benefit to customers” for supporting a smaller company by funding a small company premium.<sup>370</sup> When this test was introduced, Ofwat provided no guidance on what it thought those benefits might be, or what the companies would need to produce to evidence this. As we explained in Section 12.4 of the SoC, ultimately Ofwat rejected all of the arguments put forward by each of the WoCs, and relied upon its own assessment based on the value of each WoC as a comparator:

*“Our benefits test for assessing whether providing a company specific uplift would be in the interests of customers considered the increased likelihood that, in the absence of an uplift, a water only company would merge and be lost as a comparator.”<sup>371</sup>*

*“Ofwat engaged in a form of cost-benefit analysis, familiar in merger analysis, and assessed the worth of each WoC to the regulator for the information that each generated about comparative performance. For example, if the company added value to the regulator in identifying superior efficiency, there was merit in its continuation as an independent comparator if the benefits outweighed the detriment to consumers through higher charges.”<sup>372</sup>*

471. The underlying message in adopting this test is that companies which are not considered to be valuable comparators can be underfunded, thereby potentially placing them in financial difficulty, but that this does not matter as they could and should be acquired.<sup>373</sup> As noted above, Ofwat should not use its powers of economic regulation to try and bring about structural change such as this within the industry.
472. We note that Ofwat makes the following assertion regarding our SoC:

*“It also claims that Ofwat “...has tested the presence of customer benefits by reference to one measure only, namely, which WoCs constitute efficient wholesale comparators.” We reject this claim and as set out below have considered quantified benefits for the customer service incentive mechanism (SIM), the impact on comparative outcomes and a range of other potential benefits on a qualitative basis.”<sup>374</sup>*

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<sup>370</sup> Response, para. 65.

<sup>371</sup> Initial Statement, p.26.

<sup>372</sup> Response, para. 347.

<sup>373</sup> Indeed, Ofwat states that its assessment “started from the proposition that not allowing an uplift would increase the probability of the company merging with another water company” (Response, para. 355).

<sup>374</sup> Response, para. 358.

473. To clarify, we intended to make the point that Ofwat's test is limited to considering our value as a comparator in the context of a merger control assessment. Whilst a variety of measures are considered, these are ultimately grouped together to give an overall comparator value.
474. The impact of wholesale cost efficiency, which for Bristol Water is skewed given the impact of Ofwat's cost assessment process, was a major factor in that assessment.
475. Clearly, the counterfactual that Ofwat envisages by applying this test is that Bristol Water is acquired by another water company to create greater scale. If this were to happen, given the impact of bill averaging within a common region, there is no guarantee, contrary to Ofwat's assertion that "*Bristol customers could continue to enjoy lower bills following a merger.*"<sup>375</sup> Given that the average water bills of Bristol Water's neighbours are higher than those charged by Bristol, including under the Business Plan, and those neighbours are the most likely candidates to be an acquirer if the aim is to achieve cost savings through synergies, it is inappropriate for Ofwat to dismiss this possibility so lightly and not to factor it into an assessment predicated on the impact of a merger.
476. Ofwat states that it "*applied this approach to Bristol Water and was not convinced that the benefits outweighed the consumer detriment.*"<sup>376</sup> In particular, having considered a number of impacts that a merger might have on various areas where comparative regulation is utilised,<sup>377</sup> it concluded that:

*"At -£29 million to -£21 million, the net benefit to customers of allowing a company-specific adjustment for Bristol Water is significantly more negative than that of any other water company. This is not caused by a single factor. While our estimate of the benefit under the SIM is positive for Bristol Water, we estimated a disbenefit in every other area we looked at. Simply put, our analysis shows that Bristol consistently performs poorly in most areas, meaning that it has no value as a comparator. Therefore we concluded that customers would not benefit from any uplift that we might allow for Bristol Water."*<sup>378</sup>

477. We do not consider that it is accurate to suggest that "*Bristol consistently performs poorly in most areas, meaning that it has no value as a comparator*".<sup>379</sup> We set out below some examples to show that Bristol Water is a relatively strong performer in the industry, and as such should be considered a useful comparator for industry analysis.
478. As Ofwat states in its Response the benefit under SIM is positive for Bristol Water.<sup>380</sup> Bristol Water was ranked 4<sup>th</sup> of the 18 companies, above all WaSCs with the exception of Wessex Water with whom our performance is closely linked as we jointly report performance on billing contacts. We are proud of this performance that shows us to be one of the leading companies at engaging with and satisfying our customers. SIM is Ofwat's chosen measure of

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<sup>375</sup> Initial Statement, p. 27.

<sup>376</sup> Response, para. 348.

<sup>377</sup> Response, para. 355.

<sup>378</sup> Response, para. 359.

<sup>379</sup> Response, para. 359.

<sup>380</sup> Response, para. 359.

providing comparative performance incentives for AMP5, and has been retained in a modified form for AMP6, so it is surprising that a strong performance in this measure carries so little weight in Ofwat's analysis.

479. Our strong SIM performance is reflected in our own customer surveys, which in 2013/14 showed 93% satisfaction with the service we provide, and 70% of our customers considering us to provide value for money.<sup>381</sup> We consider that this level of customer satisfaction again disproves Ofwat's characterisation of Bristol Water as a poor performer.
480. Ofwat states that it "*estimated a disbenefit [for Bristol Water] in every other area [it] looked at*".<sup>382</sup> Table A2.13 of the Response shows a tick against Mean Zonal Compliance, showing that Bristol Water's performance on this measure is positive, which is supported by its own analysis for FD14 that showed Bristol Water to have the 6<sup>th</sup> highest average compliance over 2011-2013.<sup>383</sup> It is therefore not clear why a positive performance on this measure has not contributed to Ofwat's analysis.
481. Ofwat also makes no allowance in its analysis for Retail Average Cost to Serve. Again, this is a surprising omission, and one that therefore ignores Bristol Water's position as an upper quartile efficient retailer.<sup>384</sup> Without Bristol Water's inclusion in the ACTS calculation the industry average would therefore be higher, causing an increase in household customers' bills for all companies above the industry average.
482. Ofwat excludes from its analysis other performance measures that are available to it through company KPI reporting and the data submissions made in August 2013. For example, Bristol Water's leakage figure per property is the 4<sup>th</sup> lowest in the industry during AMP5.<sup>385</sup> As a measure that often attracts media and customer attention we consider leakage is a worthwhile inclusion in any comparison of companies, as acknowledged by Ofwat through its inclusion as one of the KPIs that companies report to it each year.
483. Ofwat's own published summary of company's reported performance for 2013/14 shows Bristol Water to be one of only seven companies to report a full set of "green" indicators on its performance measures.<sup>386</sup> All the reported data included in this publication was subject to company Board statements on Risk & Compliance, which for Bristol Water included external audit of all KPI measures. Whilst we do not claim to be the leading company on all measures we consider this analysis to be clear evidence that we are far from being a poor performer.

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<sup>381</sup> Customer Satisfaction Report (SOC278)

<sup>382</sup> Response, para. 359.

<sup>383</sup> Response, para. 359.

<sup>384</sup> Response, Table a2.13, p. 98.

<sup>385</sup> SoC, Section 3.

<sup>386</sup> Performance data 2013-14 from Ofwat website (REP052).

484. Bristol Water is also one of the better companies in the industry for environmental performance. In 2013/14, our greenhouse gas emissions, another KPI that all companies are required to report to Ofwat, were the 7<sup>th</sup> lowest per customer served.<sup>387</sup>
485. As we have set out in **Section 6.6.1** and previously in our SoC, Ofwat's measure of supply interruptions is more a level of company activity than service to customers, as it includes planned interruptions where customers are given advance notice of outages and are able to make alternative arrangements for their water supply. We consider unplanned interruptions greater than 3 hours to be a better measure, as these types of interruption cause genuine inconvenience to customers with no advanced warning. The measure reflects the speed of response of companies in restoring supplies. The 2012/13 data that companies provided to Ofwat (the most recent available comparative data) showed Bristol Water to have the third lowest number of unplanned interruptions greater than 3 hours per customer of all 18 companies, only behind Bournemouth and Portsmouth Water.<sup>388</sup>
486. Ofwat's suggestion of Bristol Water's consistent poor performance is also at odds with its comparative performance assessment at PR09, the Overall Performance Assessment (**OPA**). The OPA included a wider basket of performance measures than the current SIM, including water pressure, interruptions, water quality, hosepipe restrictions, leakage, security of supply, customer service and environmental impact. At PR09, Bristol Water was ranked 8th of the 21 companies on the OPA, and received a 0.2% positive adjustment to its price limit as a result. In the context of the wider discussions of the relative value of WoCs compared to WaSCs as comparators it is worth noting that the five largest OPA adjustments at PR09 were all awarded to WoCs.<sup>389</sup>
487. In summary we consider Ofwat's characterisation of Bristol Water as a poor performer is ill-judged, in that it is over-reliant on the results of Ofwat's own poorly performing totex models and a narrow range of measures that do not provide a fair reflection of company performance.

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<sup>387</sup> Performance data 2013-14 (REP052).

<sup>388</sup> [http://www.ofwat.gov.uk/pricereview/pr14/pr14publications/prs\\_webpr14\\_augsubmission](http://www.ofwat.gov.uk/pricereview/pr14/pr14publications/prs_webpr14_augsubmission) - August 2013 data on Ofwat website.

<sup>389</sup> FD09 Bristol Water report (SOC371), table 12, p. 40.

## 5 Serviceability penalty

### 5.1 Introduction

488. This Section addresses the arguments made by Ofwat in the Response with respect to the £4.1m shortfall penalty imposed on Bristol Water in FD14 relating to performance against the sub-service indicator 'DG3 [Unplanned] Interruptions >12 hours' (**DG3 UI>12hrs**), which is referred to as the serviceability penalty.
489. Bristol Water considers that Ofwat has not addressed the issues set out in the SoC to explain why this penalty should not be applied relating to the process followed, the relevant incidents being outside of management control, and the inappropriate level of the target.
490. Bristol Water's position as set out in the SoC regarding why a shortfall is not appropriate is based on four key aspects:
- Ofwat has not followed the process it set out at FD09. If it had, a shortfall would not be applied;<sup>390</sup>
  - Ofwat agreed to account for factors outside of management control. It has taken a very narrow and, in our opinion, unrealistic view of management control;<sup>391</sup>
  - Bristol Water's FD09 target levels for DG3 UI>12hrs are too low;<sup>392</sup> and
  - Bristol Water's exceedances above the target levels for DG3 UI>12hrs do not relate to a lack of investment in the network.<sup>393</sup>
491. Bristol Water considers that Ofwat has not addressed the issues set out in the SoC and does not justify why a shortfall is valid. The Sections below address Ofwat's Responses in relation to each of the following issues:
- Ofwat's serviceability assessment method at PR14 (see **Section 5.2**);
  - indicator volatility and exceptional events outside management control (see **Section 5.3**);
  - the appropriateness of the target levels for DG3 UI>12hrs (see **Section 5.4**); and
  - demonstrating that upper control limit exceedances are not linked to infrastructure serviceability (see **Section 5.5**).

### 5.2 Ofwat's Serviceability assessment method at PR14

492. In its Response, Ofwat provides examples of text from the PR09 guidance and publications from PR14 which appear to support the notion of individual indicator assessments and which infer the appropriateness of an infrastructure serviceability shortfall for Bristol Water.<sup>394</sup> However, the Response does not acknowledge Ofwat's workshop in April 2010 which was

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<sup>390</sup> SoC, para. 1794

<sup>391</sup> SoC, para 1794.

<sup>392</sup> SoC, para, 1794.

<sup>393</sup> SoC, para, 1794.

<sup>394</sup> Response, paras. 104; 113; 484; 488; 489; 490; 492; 494.

provided to give practical applications of how to apply the serviceability guidance for the forthcoming AMP5.<sup>395</sup> This is important for two reasons:

- the workshop came after FD09 and before CC10 i.e. it summarised all of the guidance which had come before and informed our understanding of how it would be applied at the end of AMP5; and
- the workshop provided a very specific example of applying Ofwat's serviceability methodology which is directly analogous to our current position i.e. an assessment of a basket of measures with a headline indicator of 'Bursts', where DG3 UI>12hrs was marginal and all other indicators were stable. In April 2010 Ofwat concluded that the overall assessment for this scenario should be stable.<sup>396</sup> By assessing that our current analogous position is not also stable, Ofwat has not followed the example it gave to illustrate how its own process would work.

493. Ofwat states that the shortfall is not a "penalty" but a "claw back of monies that had been assumed in price limits at PR09, but which were either not spent or were spent but had not achieved the specific objectives desired".<sup>397</sup> We agree that a serviceability shortfall should be a claw back of monies but contest that DG3 UI>12hrs is not a valid measure of the success of infrastructure investment. Even if it were, our performance in AMP5 does not support a proposition that monies have either not been spent or have been mis-spent:

- **not spent monies** - During the current AMP we have spent more on infrastructure maintenance than had been allowed at FD09 and CC10<sup>398</sup> so performance should not be linked to an under-spend of allowed monies.
- **mis-spent monies** - Ofwat provides no evidence of a mis-spend of allowed monies i.e. investment in activities that were not appropriate.

494. The point that Ofwat is making is unclear to us as we consider that our exceedances over the upper control limit (**UCL**) of DG3 UI>12hrs could not have been avoided by infrastructure investment and, in the context of our additional investment in infrastructure maintenance, that our characterisation of the shortfall as a penalty is valid.

495. Ofwat does not acknowledge that the SMC assurance<sup>399</sup> of its FD14 serviceability assessments did not support the following aspects of its assessment:<sup>400</sup>

- "the basket of indicators" was not in scope;<sup>401</sup>
- "a lead-indicator" was not in scope;<sup>402</sup>

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<sup>395</sup> SoC, paras. 1820-1823.

<sup>396</sup> SoC, para. 1820.

<sup>397</sup> Response, para. 496.

<sup>398</sup> Infrastructure Maintenance: FD09 allowance £118m; BW expenditure £135m. Mains renewals: CC10 recommendation 47.5km pa (p5); BW AMP5 2010-14 average 60km pa. as in FD09 Bristol Water report (SOC371).

<sup>399</sup> SMC Serviceability Assurance for Ofwat December 2014 (SOC269).

<sup>400</sup> SoC, paras. 1819; 1833; 1840; 1844.

<sup>401</sup> SoC, para. 1819.

<sup>402</sup> SoC, para. 1819.

- the assurance did not cover *“events that may, or may not, be reflective of the underlying asset serviceability”*;<sup>403</sup>
- the assurance did not cover *“the methodology itself and how it was arrived at”*;<sup>404</sup>
- the assurance did not cover *“consistency with previous Periodic Reviews”*;<sup>405</sup>
- the assurance did not cover *“events that have been recorded on a basis that differs from how they were recorded in the period when control limits and reference levels were set”*;<sup>406</sup>
- the assurance did not cover *“each company’s serviceability assessment at the sub-service level”*;<sup>407</sup> and
- the assurance expressed concerns regarding *“the reliance on the measure for properties affected by supply interruptions lasting longer than 12 hours. Ofwat may wish to consider whether and to what extent the volatility inherent in this measure can be taken into account”*.<sup>408</sup>

496. Ofwat states that it assesses our DG3 UI>12hrs indicator as deteriorating, but that even if it had been assessed as marginal that we would still have been exposed to a shortfall.<sup>409</sup>
497. This view seems at odds against a measure which Ofwat has characterised as volatile.<sup>410</sup> Also, Ofwat’s PR14 shortfall calculation model<sup>411</sup> only accounts for exceedances over the upper control limit for each individual indicator and does not account for assessments as deteriorating or marginal or consider the sub-service assessments set out in its 2010 workshop.

## 5.3 Indicator volatility and exceptional events outside of management control

### 5.3.1 Indicator volatility

498. Ofwat agrees in its Response that the DG3 UI>12hr indicator is volatile, but contests that it has accounted for it by applying a factor of 0.75 and that making additional changes would not have been appropriate so late in the process.<sup>412</sup> However this argument detracts from the real issues regarding the FD09 methodology: inappropriate target levels, management control and infrastructure investment.
499. We have demonstrated that the volatility of the indicator is such that bursts on trunk mains can lead to disproportionately high numbers of customer interruptions i.e. the entire target

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<sup>403</sup> SoC, para. 1833.

<sup>404</sup> SoC, para. 1833.

<sup>405</sup> SoC, para. 1833.

<sup>406</sup> SoC, para. 1833.

<sup>407</sup> SoC, para. 1833.

<sup>408</sup> SoC, para. 1840.

<sup>409</sup> Response, para. 102.

<sup>410</sup> Response, paras. 111. BW SoC para(s): 1837-1839.

<sup>411</sup> Shortfall Calculator (REP016).

<sup>412</sup> Response, paras. 111. BW SoC para(s): 1837-1839.

level allowance can be accounted for by a single difficult event<sup>413</sup> and consider it a poor measure of infrastructure serviceability.

### 5.3.2 Exceptional events outside of management control

500. Ofwat's Response provides for the first time its definition of 'management control'. Ofwat states that it includes "*prudent preparation that management can take in advance to "maintain the flow of service to consumers", which includes mitigating the risk of failures occurring, increasing the speed and effectiveness of any operational response and putting in place other measures to maintain supplies despite incidents occurring*".<sup>414</sup> We agree with the wording used for this definition.
501. Whilst Ofwat characterises management control in the context of operational activities it goes on to suggest that other companies operate policies of customer focused "*continuous supplies*".<sup>415</sup> The implication is that Ofwat considers that we do not operate similar policies so do not follow good practice and have not, therefore, adequately demonstrated that the events we refer to in the SoC were beyond management control as interpreted by Ofwat.<sup>416</sup>
502. Ofwat notes that "*for evidence to give us confidence that events were beyond management control we would have expected to see a critical comparison of the business processes used by Bristol Water to industry best practice*".<sup>417</sup> We consider that our processes are consistent with industry best practice and that our examples of events outside management control are sufficiently explained and supported.
503. For instance, we do have policies such as those referred to by Ofwat. As a company we are aligned to the delivery of customer service and we operate in a customer focused 'continuous supply' regime wherever possible.
504. One of the key themes of the evidence we have provided regarding management control is that, once operational practices of continuous supplies are exhausted, it has to be accepted that it is regrettably not always possible to maintain customers' supplies.
505. In its Response Ofwat gives an example of a serviceability assessment which was adjusted to allow for events outside of a company's control.<sup>418</sup> The example centres on the effects of the extreme weather events of 2013 and the failure of four layers of management control to prevent interruptions associated with a flood event. We agree that the example is an exceptional event and not associated with a serviceability failure. However, it is important to note that all water companies will have similar 'resilience event' risk assessments and mitigations in place. We consider that our own examples of events which are outside of

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<sup>413</sup> SoC, paras. 1841; 1846.

<sup>414</sup> Response, para. 107.

<sup>415</sup> Response, para. 506.

<sup>416</sup> Response, para. 505.

<sup>417</sup> Response, para. 506.

<sup>418</sup> Response, para. 500-501.

management control are equally valid i.e. continuous supply management control options had been exhausted and >12hr interruptions could not be avoided.<sup>419</sup>

#### 5.4 Inappropriate target levels for DG3 UI>12hrs

506. Ofwat does not address our demonstration of its inconsistent target levels or that a company of a similar size to us has target levels set twice as high.<sup>420</sup>
507. Ofwat states that it is “*untimely for Bristol Water to suggest that the levels set at 2009 are inappropriate*”<sup>421</sup> given that all companies had the opportunity to respond to an invitation in March 2012 to review the reference levels and control limits set at PR09 and “*to put the case for revisions to individual serviceability standards*”, but that “*Bristol Water did not avail itself of this opportunity*”.<sup>422</sup> Ofwat also notes that “*Bristol Water, in particular, had the opportunity to raise such concerns when the CC carried out its redetermination in 2010*”.<sup>423</sup> As set out in the SoC (see Section 13) we considered that we have made our position clear in the comments provided at DDR09 and during the CC10 process. Given that we felt at that time that we had nothing further to add to the discussion, we did not respond to the March 2012 letter.
508. Ofwat states that “*Bristol Water did not raise its serviceability standards as an issue before the Competition Commission in 2010*.”<sup>424</sup> However, by the time of the CC10, we had already commented on what we considered to be inappropriate target levels in our DDR09 which were repeated in our SoC10<sup>425</sup>. Furthermore, we did not pursue the serviceability issues raised in SOC10 before the CC any further because we considered that the Ofwat workshop in April 2010 had addressed our concerns and provided clarity for the forthcoming AMP.

#### 5.5 Upper Control Limit exceedances not linked to infrastructure serviceability

509. We note that Ofwat does not comment on the majority of our examples of volatile events which we have characterised as difficult and not entirely within our control.<sup>426</sup> The following sections deal with those events on which Ofwat has commented in its Response.

##### 5.5.1 Detailed response to Ofwat's criticisms of our Management Control

510. Ofwat summarises that the event which led to our exceedance of the DG3 UI>12hr upper control limit resulted from a closed valve.<sup>427</sup> This is factually incorrect. The valve in question was only partially closed, which was one of the main factors as to why the source of the

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<sup>419</sup> SoC, para. 1851.

<sup>420</sup> SoC paras.1854-1858.

<sup>421</sup> Response, para. 108.

<sup>422</sup> Response, para. 487.

<sup>423</sup> Response, para. 108.

<sup>424</sup> Response, para. 486.

<sup>425</sup> 2010 Statement of Case (SOC128).

<sup>426</sup> SoC para. 1846.

<sup>427</sup> Response, para. 510.

interruption was so difficult to identify and consequently the cause of the extended duration of the interruption.<sup>428</sup> Ofwat also does not acknowledge the significant amount of planning, modelling and risk assessments that were undermined by the action of a single individual working for a contractor exceeding his authority.<sup>429</sup>

511. Ofwat does not comment on the fact that our exceedance in 2013/14 was entirely due to problems with a 'planned' job for which customers were compensated in the form of GSS payments totalling a £60 reduction from affected customers' bills (average annual bill was £191). The exceedance was not linked to a lack of investment in our infrastructure, rather to the contrary it was not a serviceability issue and we have already incurred a financial penalty for it.<sup>430</sup>

## 5.5.2 Reported Values for DG3 UI>12hrs – 2014/15

512. In its Response, Ofwat made various comments relating to the incidents that had taken place to contribute to our DG3 UQ 12hrs performance in 2014/15. We deal with each of these incidents in turn:

### 5.5.2.1 Wedmore Vale

513. Ofwat's conclusion that "*the incident on 22 August 2014 at Wedmore Vale affecting 450 properties for 15 hours was due to staff not having appropriate training or competence*"<sup>431</sup> is misleading. The need for a trained individual was picked up in a health and safety assessment undertaken during the event and relates to deep excavation training.<sup>432</sup> Such training is not typically required for a burst repair, however, the circumstances surrounding this event were exceptional and required it. The main cause of the >12hr exceedance was a delay caused by a requirement for additional shoring following the collapse of unstable ground before a first tranche of shoring could be installed to maintain the health and safety of the operatives working on the repair.<sup>433</sup>

### 5.5.2.2 Chewton Keynsham

514. Ofwat's summary that the >12hr interruption in Chewton Keynsham was "*driven by management action*" by changing supply arrangements which "*placed additional pressure on this main which then failed*"<sup>434</sup> is incorrect. The rezone did not cause the subsequent burst that led to the >12hr interruption.<sup>435</sup> A saddle connection on a 15in main failed, the main was isolated and a rezone was affected to minimise the effect on customer supplies. The 15in main was repaired and restored to normal operating functionality within 12hrs. The rezone to minimise the effect on customers did cause some smaller network main failures

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<sup>428</sup> CH2M Hill Report on unplanned interruptions Dec 2014 (SOC334) p51.

<sup>429</sup> CH2M Hill Report on unplanned interruptions Dec 2014 (SOC334) p51.

<sup>430</sup> SoC paras. 1866-1870.

<sup>431</sup> Response, para. 510.

<sup>432</sup> CH2M Hill Report on unplanned interruptions Dec 2014 (SOC334) p63-67.

<sup>433</sup> CH2M Hill Report on unplanned interruptions Dec 2014 (SOC334) p63-67.

<sup>434</sup> Response, para. 508a.

<sup>435</sup> CH2M Hill Report on unplanned interruptions Dec 2014 (SOC334) p61.

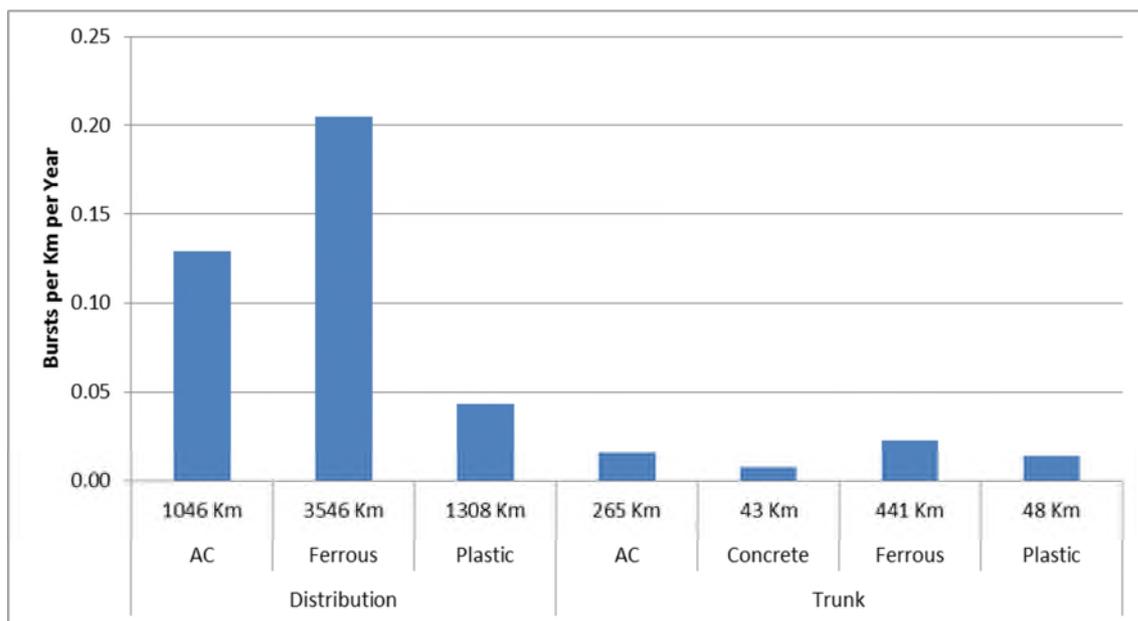
but, significantly, these were in a different part of the network and not related to the >12hr outage. The properties affected for >12hrs could not be restored by rezoning. The subsequent main failure which led to the interruption exceeding 12hrs relates directly to clearing an air lock i.e. the main failed whilst being restored to its 'normal' operating pressure regime.

**5.5.2.3 Burnham-on-Sea**

515. Ofwat characterises the 450mm Asbestos Cement (AC) main that failed and caused the Burnham–on-Sea interruption as being of a type which is “known to fail at a much higher frequency that (sic) other materials” and suggest that we should have had a “separate risk based operational practice” for it.<sup>436</sup>

516. We do not recognise this characterisation of AC mains. Figure 8 below shows the burst rates of our main materials per Km per year since 1994. It shows that AC mains have not burst at a much higher frequency in either distribution or trunk mains. It is also perhaps worth noting that in over 21,000 recorded bursts on our network, only 93 have been associated with AC trunk mains (i.e. of the bursts we have experienced in the last 20 years, only 0.4% were on AC trunk mains).

**Figure 8 Mains bursts per material per Km per year (1994-2015) Showing: Total Length; Material; Type**



Source: Bristol Water

517. The burst associated with the Burnham–on-Sea incident happened on a 6km length of AC trunk main which has had only one other failure in its nearly 40 year history and, consequently, the main was not considered as a “higher risk than others”.<sup>437</sup> An alternative

<sup>436</sup> Response, para. 508b.

<sup>437</sup> CH2M Hill Report on unplanned interruptions Dec 2014 (SOC334) p54-58.

12" steel main, which would normally have supported the district, was in the process of being replaced due to a high burst rate in order to protect customers' supplies. No other supply into the district was available. Most mains repairs (even to large strategic trunk mains) are complete within 12hrs. The reasons that this particular interruption exceeded 12hrs were entirely due to on-site complexities relating to repairing the main and restoring the supply. A very careful excavation was required in order to not disturb a thrust block. In order to do this a large excavation was required in difficult ground on the side on an A-road which was subject to localised flooding.

#### 5.5.2.4 Fisher Road, Keynsham

518. Ofwat notes that during the Fisher Road incident *"the wider network of assets was less resilient due to planned outages of numerous principle (sic) trunk mains"*<sup>438</sup>. This is incorrect as only a single main was unavailable which was being renovated for water quality reasons.<sup>439</sup>
519. It is important to clarify three additional aspects relating to the Fisher Road incident and the inherent risk of our renovation programme:
- the entire 35km length of the trunk main which burst had no record of leaks or failures in its 40 year history. After a risk assessment the proposed renovation works were sanctioned relying on the main;
  - had the main which was out of service for water quality reasons been available, we still would not have been able to supply c.8k properties which are dependent on the Fisher Road section of main; and
  - Ofwat does not address the significance that the Fire Brigade would not allow us to affect a repair for over 20 hours<sup>440</sup>.
520. Therefore, our lack of control over the events that unfolded should be seen as unpredictable and extraordinary and, regardless as to our renovation programme, we could not have avoided some eight thousand properties from being interrupted for >12hrs.

## 5.6 Conclusions on the application of a serviceability penalty

521. Ofwat has not set out any clear arguments for any of the four key aspects relating to the application of a serviceability penalty as set out in **Section 5.1** above and, therefore, a shortfall is not appropriate.
522. Key aspects of Ofwat's FD14 serviceability assessments as well as its methodology and process were not assured.
523. Ofwat accuses Bristol Water of focusing its arguments on the details of Ofwat's methodology and not on delivering appropriate service to customers, however:

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<sup>438</sup> Response, para. 508c.

<sup>439</sup> CH2M Hill Report on unplanned interruptions Dec 2014 (SOC334) p68-71.

<sup>440</sup> CH2M Hill Report on unplanned interruptions Dec 2014 (SOC334) p69.

- Bristol Water considers that the £4.1m serviceability shortfall relates directly to the application of Ofwat's methodology which differs to how it was set out at the start of the period; and
- Ofwat's response to Bristol Water's SoC also largely focuses on the details of the methodology and does not address most of Bristol Water's examples that explain why it was unable to prevent exceedances of Ofwat's UCL for 'DG3 UI>12hrs' on a limited number of occasions

524. Ofwat's arguments around methodology and its processes which were in place at the start of the AMP5 are contradicted by the content of its own workshop in April 2010 and the specific example which was provided that is analogous to our current position and which was assessed as stable.
525. Ofwat contests that the evidence of the C2HM Hill report focuses on repairing mains and not restoring supplies, however, it is important to contextualise that our operational response to any interruption is to restore our customers' supplies as quickly as possible. A typical response to a potentially large incident relating to a burst main is to rezone as soon as possible in order to minimise the effect on customers. However, where appropriate we also employ options such as live-main repairs, on-demand bowsering<sup>441</sup> and overland temporary mains.
526. Ofwat agrees that the DG3 UI>12hr measure is volatile but only account for this volatility with the introduction of a 0.75 factor to reduce shortfalls.
527. Ofwat characterises management control in a way that we already apply it, but then fails to acknowledge that when these controls are exhausted that a shortfall should not be appropriate.

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<sup>441</sup> 'on-demand bowsering' relates to plugging mobile tankered supplies into the network.

## 6 Performance commitments and outcome delivery incentives

### 6.1 Introduction

528. As set out in our SoC, for most of our outcomes and performance measures Ofwat has agreed with the targets desired by customers that we proposed in our plan. The dispute between Bristol Water and Ofwat is centred on three performance measures, where Ofwat has imposed its own targets that are likely to lead to a penalty of £3.2m being payable by the Company at the next price review.

529. In the Response, Ofwat has raised the following general points regarding outcomes and performance measures:

- that other companies have attained these levels of service at the cost levels that have been used to inform modelling of PR14 costs,<sup>442</sup> and the best companies are delivering both cost efficiency and relatively high levels of service (see **Section 6.2**);<sup>443</sup>
- customers are paying for the upper quartile performance targets and should receive it as soon as practicable (see **Section 6.3**);<sup>444</sup>
- that our customer research results are not applicable because customers were not provided with comparative information on company performance (see **Section 6.4**);<sup>445</sup>
- that the 15 other non-enhanced companies have accepted Ofwat's adjustments (see **Section 6.5**).<sup>446</sup>

530. In **Section 6.6** we address the specific comments made by Ofwat in the Response in relation to the three disputed performance commitments:

- unplanned customer minutes lost (see **Section 6.6.1**);
- negative water quality contacts (see **Section 6.6.2**); and
- mean zonal compliance (see **Section 6.6.3**).

### 6.2 Service levels and allowed costs

531. Ofwat states in the Response that *"the best companies are delivering both cost efficiency and relatively high levels of service."*<sup>447</sup>

532. We dispute this point, as Ofwat's key argument that companies should deliver both upper quartile costs and performance is not supported by any evidence or analysis.

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<sup>442</sup> Response, para. 432.

<sup>443</sup> Response, para. 94.

<sup>444</sup> Response, para. 94.

<sup>445</sup> Response, paras. 7, 433, 458.

<sup>446</sup> Response, paras. 96, 98.

<sup>447</sup> Response, para. 94.

533. Ofwat also states that:

*“We expect all the water companies to be able to catch up with historical upper quartile performance in terms of service performance on the five comparative assessment measures and cost efficiency. Other companies have attained these levels of service at the cost levels that have been used to inform our modelling of PR14 costs and we expect both cost and service efficiency to improve over time.”<sup>448</sup>*

534. Analysis of Ofwat's calculation of delivering upper quartile performance on water supply interruptions reveals that none of the four upper quartile service performance companies are in the upper quartile of the cost assessment.<sup>449</sup> The following graphs (Figure 9, Figure 10 and Figure 11) plot Ofwat's rankings of company business plan cost thresholds against performance rankings for the three measures where it has intervened in performance commitment targets.<sup>450</sup> Each of these graphs shows only an  $R^2$  value of less than 0.2, which indicates that there is no significant correlation between the companies assessed to have the most efficient costs and those providing the highest level of performance against these measures.
535. South West Water, the company that fared best on Ofwat's cost assessment, has the worst performance in the industry on negative water quality contacts, and fourth worst on supply interruptions over the period analysed. It also has the highest level of customer complaints.
536. Whilst we strongly contest Ofwat's assessment of cost efficiency, as we explained in Section 11 of our SoC, we note that it does not support Ofwat's contention that the companies it views as most efficient are also those delivering the best service. As we noted in our SoC (para 1943) service levels played only a minor role in Ofwat's cost modelling, so its approach was not calculated to equate performance commitments with allowed costs.

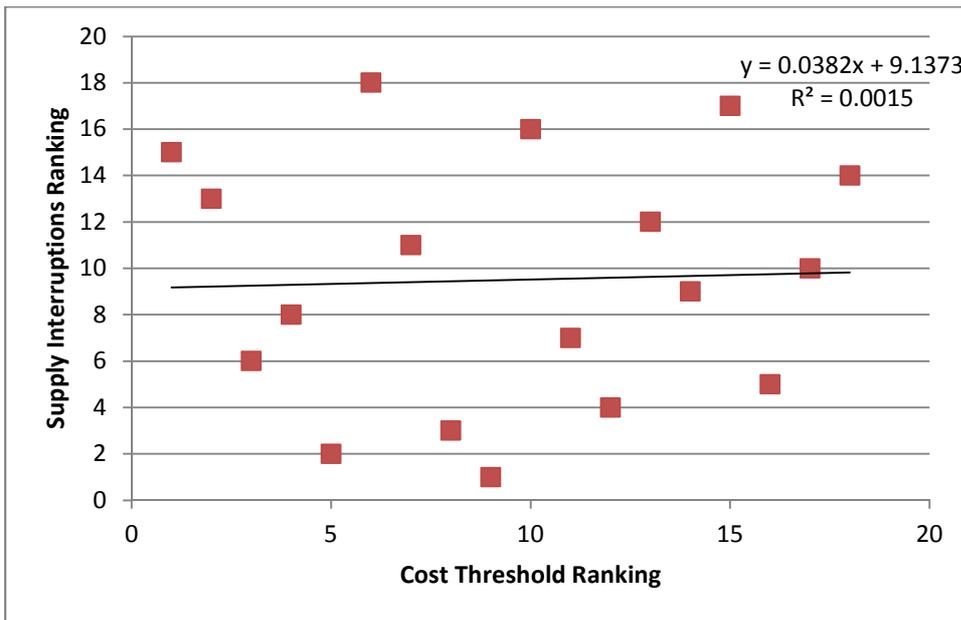
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<sup>448</sup> Response, para. 432

<sup>449</sup> Interruptions UQ = Bournemouth, Portsmouth, Northumbrian and South Staffs; Cost threshold UQ = South West, Affinity, Thames and Yorkshire.

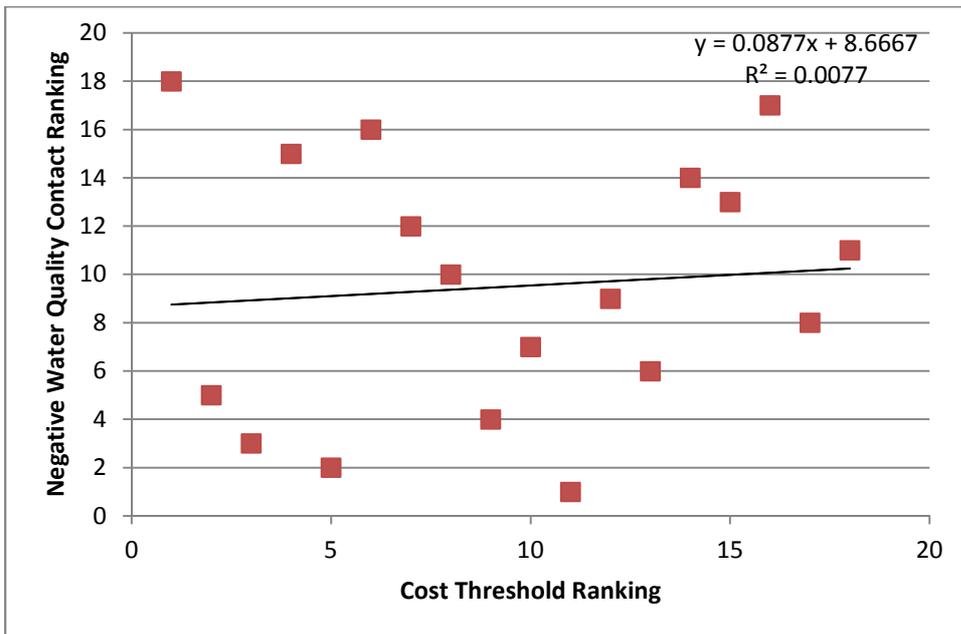
<sup>450</sup> FD14 - A3 Wholesale (SOC471).

Figure 9 Comparison of rankings on supply interruptions and cost threshold



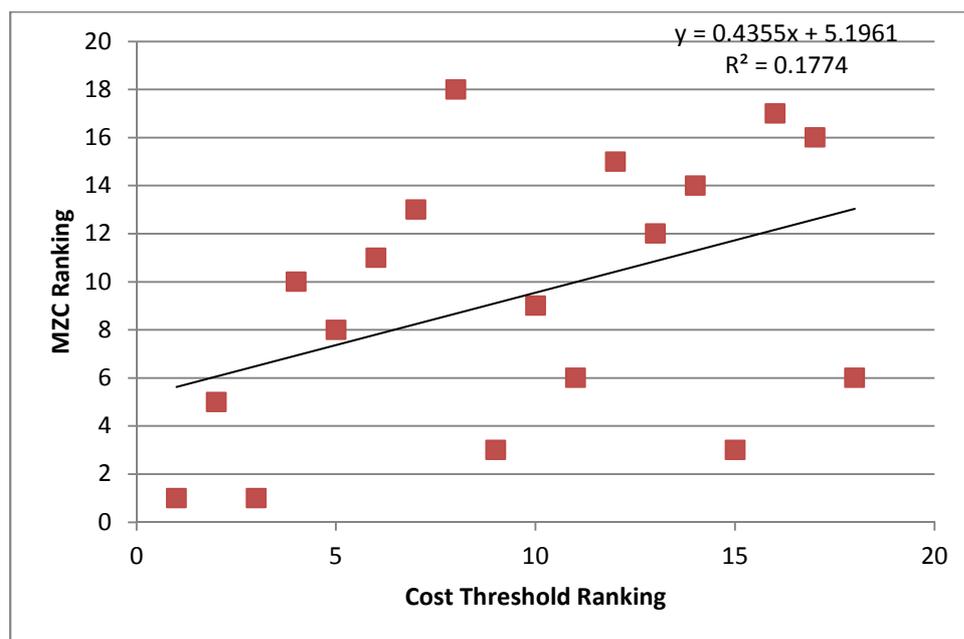
Source: Ofwat upper quartile calculation model, FD14 - A3 Wholesale (SOC471), Table A3.1.

Figure 10 - Comparison of Negative Water Quality Contacts ranking and Cost Threshold ranking



Source: Ofwat upper quartile calculation model, FD14 - A3 Wholesale (SOC471), Table A3.1.

Figure 11 Comparison of Mean Zonal Compliance ranking and Cost Threshold ranking



Source: Ofwat upper quartile calculation model, FD14 - A3 Wholesale (SOC471), Table A3.1.

### 6.3 Speed of delivery of performance commitments

537. In its Response Ofwat states that “customers are paying for the upper quartile performance targets ... and should receive it as soon as practicable”.<sup>451</sup> Ofwat has set a two-year glidepath for achievement of Upper Quartile targets. We note that this is not linked to Ofwat’s totex allowance profile or any customer research that we are aware of, and we have not seen any evidence to demonstrate why this timescale is considered fair or appropriate.
538. To move towards the target levels that Ofwat has proposed would require a significant increase in allowed expenditure, to support a programme of replacement and renovation of our network. To implement this without an adverse short-term impact on customer bills would require a much longer glidepath than two years.<sup>452</sup>

### 6.4 Applicability of Customer Research Results

539. In the Response Ofwat states that “when customers expressed their views to specific companies during the preparation of business plans, they generally did so without a full understanding of relative performance across the sector”.<sup>453</sup>
540. We included comparative performance information in the stimulus material provided to Bristol Water customers as part of our customer research.<sup>454</sup> This material was provided to

<sup>451</sup> Response, para. 94.

<sup>452</sup> LEF Report to Ofwat June 2014 (SOC023).

<sup>453</sup> Response, para. 433 (and FD - A2 Outcomes (SOC329) p.37).

<sup>454</sup> See SOC543.

Ofwat with our December and June Business plan submissions as part of an appendix on our methodology and approach to customer engagement.<sup>455</sup>

541. The comparative information does not wholly match the measures on which Ofwat has carried out its industry analysis due to the timing of the research and differences in definition of measures, but represents the closest available match to the measures at the time of the research. This stimulus material was agreed with the LEF in advance of the research workshops.<sup>456</sup>
542. For ease of reference we have provided copies of the relevant information in Figure 12, Figure 13, Figure 14 and Figure 15 below. The information was provided to each customer in a pack and included the following graphs showing how our targets and performance related to the range of industry performance. This information clearly shows that customers had a fair indication of Bristol Water's relative position on industry performance when making their assessment of acceptable levels of service, including against measures where Ofwat has intervened in AMP6 targets.

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<sup>455</sup> Customer Engagement Approach and Methodology Dec 2013 (SOC077).

<sup>456</sup> LEF Report to Ofwat June 2014 (SOC023), p. 3.

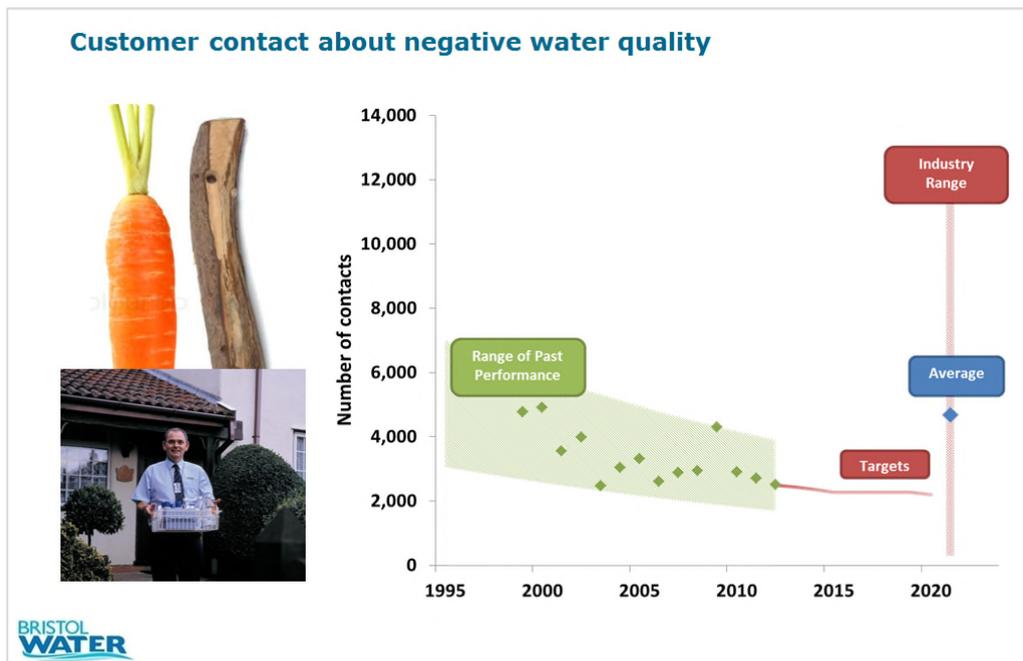
Figure 12 - November 2013 Incentives Workshop stimulus material<sup>457</sup>

**How does Bristol Water compare to other water companies?**

Measure	Current Bristol Water Performance	Industry Position	Industry Average
 <b>Interruptions to supply</b>	21 minutes per property per year	10 <sup>th</sup> out of 21	20 minutes per property per year
 <b>Complaints about discoloured water</b>	1,577 per year	13 <sup>th</sup> out of 21	2,201 per year
 <b>Leakage</b>	18% (43.1Ml/d)	10 <sup>th</sup> out of 21	20%
 <b>Carbon Dioxide emissions (from electricity used to pump water)</b>	435 Kg/Ml (N.B. Hilly terrain)	18 <sup>th</sup> out of 21	346 Kg/Ml

Source: Blue Marble Rewards and Penalties research Nov 2013 (SOC186).

Figure 13 – November 2013 Incentives Workshop - Negative Water Quality Contact stimulus material



Source: Blue Marble Rewards and Penalties research Nov 2013 (SOC186).

<sup>457</sup> The information presented on interruptions to supply was based on 2011/12 data on all interruptions greater than 3 hours

Figure 14 November 2013 Incentives Workshop - Leakage Stimulus Material



Source: Blue Marble Rewards and Penalties research Nov 2013 (SOC186).

Figure 15 Stimulus Material on SIM and Meter Penetration

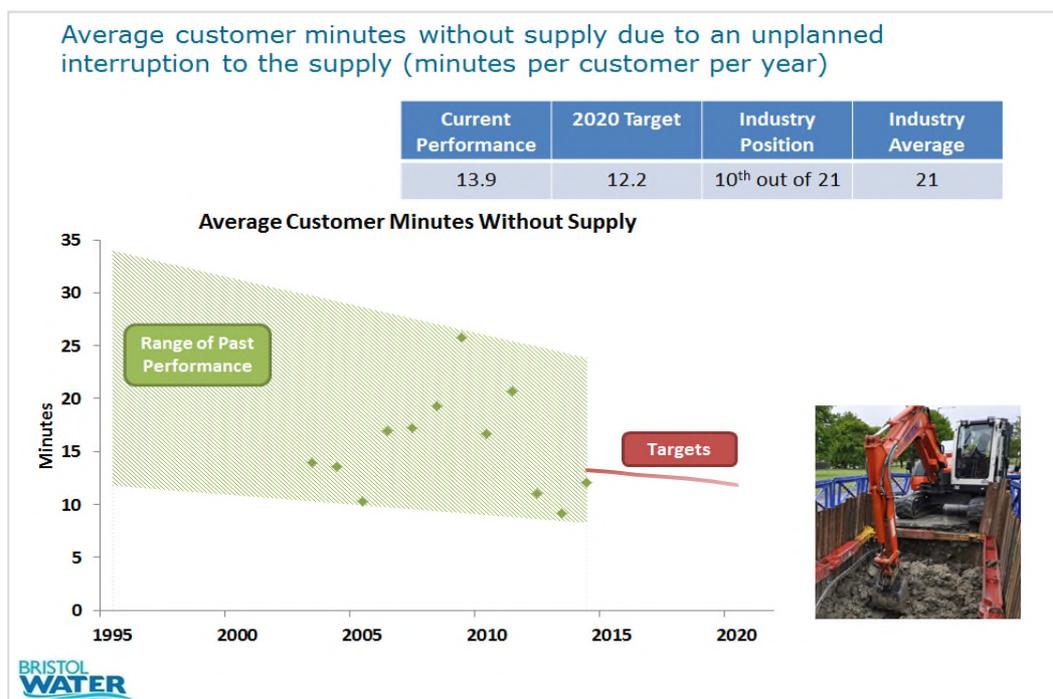
**How does Bristol Water compare to other water companies?**

Measure	Current Bristol Water Performance	Industry Position	Industry Average
 <b>Service Incentive Mechanism (SIM - Ofwat's measure of Consumer Experience)</b>	86 out of 100	4 <sup>th</sup> out of 19	78 out of 100
 <b>% Metered Properties</b>	42%	11 <sup>th</sup> out of 19	48%

Source: Blue Marble Rewards and Penalties research Nov 2013 (SOC186).

543. Our additional research undertaken in May 2014 included the materials shown above, and an additional graph on supply interruptions with a table showing Bristol Water performance against the industry:

Figure 16 - May 2014 Incentives Research - Supply Interruptions Stimulus Material



Source: Blue Marble Research, May 2014 (REP006).

544. We are not persuaded by the implication of Ofwat’s comments in its Response that customers may have expressed different preferences for levels of service if comparative data had been provided.<sup>458</sup> We are not aware of any research that Ofwat has carried out with customers of Bristol Water or more generally that supports its opinion on this point. Our plan is based on customers’ Willingness to Pay (**WTP**) for various levels of service and customers’ acceptability of an overall package of service level attributes.<sup>459</sup> These WTP results capture to customers’ own valuations of different performance levels for different aspects of service and should not be impacted by levels of service provided elsewhere.

## 6.5 Other Companies view on performance commitments

545. Ofwat repeatedly defends its approach on the grounds that the 15 other non-enhanced companies accepted its adjustments.<sup>460</sup> As we explain in **Section 11.7**, companies make a decision to accept or reject price controls in the round. Such decisions do not necessarily imply agreement with all elements of the determination. For performance commitments this is particularly the case, given the relatively low proportion of revenue concerned.

546. We note from companies’ responses to the draft determination a range of criticisms of Ofwat’s approach, and would suggest that companies’ acceptance of their final

<sup>458</sup> Response paras. 433 and 434.

<sup>459</sup> Details of our Willingness to Pay Research were provided in section 6.5.5 of our SoC.

<sup>460</sup> Response, para. 96.

determinations should not necessarily be taken to mean that these criticisms no longer stand.

547. In particular, in its FD14 policy chapter on outcomes, Ofwat states:

*“Overall however, the majority of responses from companies included some challenge to the underlying principles of UQ [Upper Quartile] targets based on our comparative analysis...*

*Companies made two 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 [Performance Commitments] 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.”<sup>461</sup>*

548. It can be seen from Ofwat's summary of representations it received on its approach to outcomes that other companies raised very similar concerns to those held by Bristol Water. As such, Ofwat's attempt to portray Bristol Water as the only company which disputes its interventions on incentives is misleading.

## 6.6 Response to points made by Ofwat related to specific performance measures

### 6.6.1 Unplanned Customer Minutes Lost

#### 6.6.1.1 Flawed comparison to Thames Water measure

549. Ofwat makes particular reference to Thames Water's acceptance of its intervention on its customer minutes lost measure.<sup>462</sup> We find this comparison to have limited relevance to our own issue, as in Thames Water's case the measure includes planned and unplanned interruptions, in line with Ofwat's industry-wide analysis, leaving the only difference as a 4-hour threshold for interruptions (rather than 3-hour for the rest of the industry), and a 20,000 customer hours cap per incident that we are not aware of any other company applying.<sup>463</sup> The limited difference between the Thames Water measure and that used by Ofwat means that only a minor calculation would be required to align the two measures to carry out horizontal analysis. In contrast, the calculation Ofwat has undertaken for Bristol Water is more complex, as it involves a correction from all interruptions to just unplanned, and a second correction from interruptions over three hours to all durations.

550. Moreover, we note that whilst Ofwat intervened in Thames Water's performance commitment at DD14, this intervention was reversed at FD14 to revert to the company's

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<sup>461</sup> FD - A2 Outcomes (SOC329), p.26.

<sup>462</sup> Response, paras. 97 and 449.

<sup>463</sup> FD Thames Company Specific Appendix (REP020).

proposal, and therefore no adjustment to the performance commitment was imposed. We therefore believe it is inappropriate for Ofwat to draw parallels between its interventions on ours and Thames Water's performance commitments.

### 6.6.1.2 Assumptions on customer preferences for type of interruption

551. Ofwat states that *"whilst customers tend to dislike unplanned supply interruptions more than planned supply interruptions, customers still dislike planned supply interruptions."*<sup>464</sup>
552. Whilst we agree that customers dislike planned interruptions there remain a significant difference between the impact of a planned interruption for which customers have received a warning and an unplanned interruption for which they have not been able to prepare.
553. Industry data on willingness to pay that has been shared shows that wtp for avoiding a planned interruption of 3-6 hours is about a quarter to a third that of avoiding an unplanned interruption.<sup>465</sup>
554. Thus the impact of unplanned interruptions is greater, and Ofwat's method of simply applying a proportion of total interruptions to its calculation to convert our performance target does not appropriately reflect customers' preferences.
555. We therefore consider it is inappropriate for Ofwat to intervene in our performance commitment measure, which differs from that of the rest the industry.

### 6.6.1.3 Appropriate historic data to use for calculation of target

556. Ofwat states that *"if we used an approach based on 2011/12 to 2013/14 data we would have intervened to set a tougher performance commitment of 6.1 minutes from 2017-18 to 2019-20 rather than 7.2 minutes"*.<sup>466</sup>
557. Whilst we acknowledge that such an approach would further reduce the target, we consider that this analysis further demonstrates the inherent problems in trying to use historic levels of planned activity to set a target for unplanned interruptions. The period from 2011/12 to 2013/14 saw Bristol Water undertake considerable levels of investment, specifically major programme of mains rehab, significantly higher than in previous years. This inevitably led to an increase in the level of planned interruptions, which were carefully managed and communicated to customers. As shown in Figure 6 Analysis of Bristol Water Base Costs, the level of investment planned for AMP6 is at a lower level, and so it is expected that the balance between planned and unplanned interruptions will return nearer to the historic average. For this reason it is more appropriate to use the longer 10-year time series for setting the target for this measure, as set out in our SoC.<sup>467</sup>

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<sup>464</sup> Response, para. 444.

<sup>465</sup> Accent comparative Willingness to Pay Report June 2014 (SOC406).

<sup>466</sup> Response, para. 451.

<sup>467</sup> SoC, p. 499.

558. To further demonstrate the volatility of the relationship between planned and unplanned interruptions in just one year to set a target, our recent data for 2014/15 shows that 89% of minutes lost in this year were due to unplanned interruptions. If Ofwat's approach of basing the calculation on a single year was applied to 2014/15 data rather than 2013/14 this would have resulted in a very different target. This supports our conclusion that it is more appropriate to use a longer time series for setting a target for this measure.

### 6.6.2 Negative Water Quality Contacts

559. In its Response, Ofwat uses analysis of recent performance to suggest that its Negative Water Quality Contact target is achievable if Bristol Water simply continues the trend seen since 2010/11.<sup>468</sup> Ofwat puts forward no evidence to support this suggestion.

560. Whilst this reduction is from a peak year of contacts in 2009/10, Ofwat's argument misses the key issues on this measure as set out in our SoC that makes a similar level of ongoing reduction unfeasible.<sup>469</sup> It is the composition of the various contacts included in this measure that causes the problem, as the level of taste and odour contacts are forecast to remain broadly constant over AMP6. This means that any reduction in contacts must come through those related to discoloured water.

561. To achieve Ofwat's target would require a 53% reduction in the level of discoloured water contacts from that received in 2013, the most recent year with audited data. Based on previous work, we estimate that renovation of 143km of specifically targeted trunk mains would only provide a 27% reduction.<sup>470</sup> This would represent a 244% increase from the 58.6km of trunk mains relined in AMP5 and as such is not a realistic level of activity without causing a disproportionate impact on customer bills. Our business plan proposes 30km of trunk main relining in AMP6.<sup>471</sup>

562. Ofwat has not provided comment in its Response on whether it considers the level of activity required to meet its target to be appropriate, in the interests of customers or practically deliverable.

563. Ofwat references its analysis of company-specific factors in FD14.<sup>472</sup> This analysis provides limited detail other than setting out Ofwat's conclusions, and the fact that all 24 proposed factors were rejected suggests that the assessment was taken to confirm a policy position rather than a fair assessment of each case on its merits.

564. For negative water quality contacts, Ofwat states in FD14 that it has rejected 6 of 7 proposed company-specific factors.<sup>473</sup> Whilst it accepted that source water types is a material factor outside of management control, it concluded that a uniform UQ performance level remained

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<sup>468</sup> Response, para. 459.

<sup>469</sup> See section 14.3.2.2.6 of SoC.

<sup>470</sup> As referred to in SoC para 2028.

<sup>471</sup> June Wholesale Plan (SOC002), p. 314.

<sup>472</sup> Response, paras 431 and 438.

<sup>473</sup> FD - A2 Outcomes (SOC329) table A2.6 p44.

appropriate, and therefore did not take into account the specific factors it acknowledged to exist.<sup>474</sup>

565. Ofwat's rejection of all proposed company specific factors shows its intention to impose industry-wide targets on this measure caused it to disregard genuine differences in company operating circumstances and subsequent impacts on reported performance. It also shows that Bristol Water is not alone in contesting Ofwat's targets for water quality contacts.

### 6.6.3 Mean Zonal Compliance

566. In this section we set out our views on two comments made by Ofwat in its response to our Statement of Case, on the impact of the new lead standard and the impact of small zones on reported performance.

#### 6.6.3.1 Funding to meet Lead Standard

567. Ofwat states that "BW was funded at PR09 to ensure compliance with new lead standard of 10 µg/l".<sup>475</sup>
568. This is not factually correct. Water in the network only contains very low levels of lead but this concentration increases as the water passes through lead communication (Company responsibility) and supply pipes (customer responsibility). Lead communication and supply pipes are prevalent within the Bristol Water area of supply. The concentration of lead seen at the customer tap (the point at which compliance against the lead standard is measured) can also increase if lead based solder was used historically at the property.
569. We proposed a PR09 Water Quality scheme to the DWI for the Company to replace both the lead communication and supply pipes if a sample taken at the customer's tap failed against the 10 µg/l standard.<sup>476</sup> This scheme was not supported by the DWI and consequently the only water quality associated lead pipe replacements undertaken in the AMP5 period were communication pipe replacements when we recorded a failure against the lead standard of 10 µg/l.<sup>477</sup> Lead pipe replacement is not intended to ensure compliance with the relevant standard at the individual property, let alone within the Bristol Water supply area as a whole. We therefore consider Ofwat's statement is incorrect.
570. We note from Ofwat's FD14 outcomes policy chapter that:

*"five companies, [of which Bristol Water was one], stated that the introduction of a more stringent lead standard in December 2013 has resulted in more water quality failures"*<sup>478</sup>

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<sup>474</sup> FD - A2 Outcomes (SOC329) p.50-51.

<sup>475</sup> Response, para. 465.

<sup>476</sup> PR09 FBP section B4 (REP032), p. 19.

<sup>477</sup> Our plan also included a scheme to upgrade Sherborne Treatment Works as a result of high levels of lead in the raw water. This scheme is complete, but does not address the risk of lead from customer's supply pipes.

<sup>478</sup> FD – A2 Outcomes (SOC329) p. 31.

571. This shows that Bristol Water is not alone in considering the impact of the change in lead standard will materially impact performance in AMP6.

### 6.6.3.2 Impact of Small Zones and Sampling Approach on Performance

572. Ofwat states that “small zones are not a material driver of performance” and “on this basis, we rejected it as a factor for which we should make a company-specific adjustment”.<sup>479</sup> Table 7 below shows that there is a wide spread in the population served by each of the 27 zones in our area, ranging from just 86 people to nearly 80,000.

Table 7 Distribution of Water Supply Zones in Bristol Water area

Measure	Water Supply Zones Population
Average	46,631
95%-ile	78,536
5%-ile	2,254
Min	86
Max	79,822

Source: Bristol Water analysis

573. The number of tests required for a particular zone is dependent on the population for the zone, with smaller cones requiring fewer tests. As a result, the variability of results in smaller zones is much bigger than for smaller zones.
574. The calculation of a mean average performance amongst these zones makes the impact of a failure in a small zone equal to that in a larger zone, even though the population potentially affected is much lower. Therefore, the size of zone where any failures occur is a material driver of reported performance.
575. Whilst we do not have the equivalent data from other companies to state categorically whether we are at greater risk of poor performance due to the configuration of water supply zones in our area, we consider that the analysis above shows the inherent problems with setting an industry target on this measure.
576. Performance can be impacted by several factors outside of management control for the reasons set out in our SoC,<sup>480</sup> including the size of zone, customer equipment (e.g. taps and supply pipes) and the requires sampling frequency for various parameters. Given this, we consider that further assessment of the cause of the reported performance being below the performance commitment should be undertaken before automatic application of any penalty.

## 6.7 Conclusions on performance commitments

577. For the reasons explained above, we do not consider that the points raised by Ofwat support its decision to intervene in the performance commitments proposed in our plan. We therefore continue to believe that our proposed performance commitments represent the

<sup>479</sup> Response, para. 466.

<sup>480</sup> SoC para. 2046.

most appropriate levels of service, and that the incentive framework set by the CMA should reflect the preferences of our customers.

## 7 Retail Household Price Control

578. In its Response Ofwat states:

*"We consider that, as Bristol Water's Board has accepted the final determination for household retail, and we have not identified any further materials, it would be appropriate not to make further interventions in the retail control."*<sup>481</sup>

579. We agree with Ofwat's position. If the CMA is satisfied that these issues do not deserve further scrutiny we do not intend to pursue the discussion.

580. It should be noted that in the event of any alteration to the allowed wholesale costs for Bristol Water, the allowed retail revenues should be adjusted accordingly by applying the 1% net margin to the revised wholesale costs.

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<sup>481</sup> Response, para. 126.

## 8 Retail Non-Household Price Control

581. In its Response Ofwat states that:

*“any request from Bristol to increase the allowed revenue in this area should be seen as unnecessary, as the company's Board clearly does not consider it to be required in order for them to meet their legal duties and sufficiently serve their customers/other stakeholders”<sup>482</sup>*

582. As with the Retail Household control, we have provided views on Retail Non-Household because it was included in the reference to the CMA. Again, if the CMA is satisfied that these issues do not deserve further scrutiny then we do not intend to pursue the discussion.

583. The Board accepted the Non-Household price control considering that control in the round. That should not be taken as acceptance of all of the decisions and allowances made within it, only that the Board considered that the difference between the Company's required revenues and those allowed by Ofwat was not sufficiently material to warrant a reference to the CMA.

584. We note that Ofwat has not commented on the issue that allowing insufficient costs for the establishment of the competitive market may adversely impact the new competitive arena.

585. We set out below our views on the key issues for the CMA to consider alongside those made in our earlier representations:

- input price pressure adjustments (see **Section 8.1**)
- inclusion of market opening costs within the Wholesale control (see **Section 8.2**); and
- the efficiency of Bristol Water's Non-Household Retail costs (see **Section 8.3**).

### 8.1 Input Price Pressure Adjustment

586. In its Response, Ofwat disputes that the issues covered by the Economic Insight report remain true for non-household, as we set out in our SoC, and states that we have not set out any evidence to support our claim.<sup>483</sup>

587. We consider that whilst the Economic Insight report makes explicit reference to the Household control, the content of the report and the conclusions it reaches should be considered equally applicable to the Non-Household control.

588. In addition to the Economic Insight report provided to support our DDR, in developing our retail business plan submissions we drew upon a report from First Economics.<sup>484</sup> This report

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<sup>482</sup> Response, para. 1331.

<sup>483</sup> Response, paras. 132 and 133, Presentation, Slide 43.

<sup>484</sup> Assessing Potential Changes in Retail Costs, 2015-2020 (A report prepared for Water UK, April 2013 (REP033)).

examined impacts on the retail business as a whole, rather than making specific reference to the Household control.

589. The key findings of this report are that:

- there is clear evidence of rising water industry retail costs;
- retail costs might be expected to increase by around 2-3% p.a. in nominal terms up to 2019/20; and
- cost increases of this magnitude would sit consistently with the experiences of other utility retail businesses and of non-utility retail/service businesses.

590. The report concludes that "*making no allowance for retail cost escalation is not a credible option*".

591. The report, which includes the analysis undertaken to reach the conclusions above, is supplied with this document.<sup>485</sup>

### 8.1.1 Impact of Inflation on New Entrants

592. We consider that Ofwat's position of refusing to allow input price adjustments to the Retail Non-Household control has not taken due account of the impact of inflation on new entrants' ability to enter the market.

593. Ofwat's policy decision effectively freezes cost levels at 2013/14. Whilst this is an unsustainable position for incumbent companies for the reasons set out in the First Economics report, it also presents a significant barrier to entry to the market for any potential new entrants. These new entrants would have to operate at a level of costs below those of incumbent companies in order to win customers through bill reductions. We do not consider this is a credible or fair constraint to be placing onto a newly developing market.

### 8.1.2 Inclusion of inflation within margin

594. Ofwat states that "*Input price pressures would be remunerated through the net margin*"<sup>486</sup> and that whilst we provided some evidence of the input price pressure we face we "*did not justify why the net margin was insufficient to remunerate the company for any expected input cost increases and associated input cost risks*".<sup>487</sup>

595. We consider that Ofwat's suggestion that the allowed 2.5% non-household retail margin includes an allowance for input price inflation is not correct.

596. The First Economics report explains that this concept is "*misconceived*", because there is no doubt that input costs will increase through inflationary pressure, and so an upfront allowance should be made, as "*to do otherwise would confer on incumbent companies near certain losses in the years ahead. It would also meant that the margins that are available to*

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<sup>485</sup> Assessing Potential Changes in Retail Costs, 2015-2020 (A report prepared for Water UK, April 2013 (REP033)).

<sup>486</sup> Response, para. 133.

<sup>487</sup> Initial Statement, p. 36.

*new entrants erode significantly over time. Neither of these outcomes would be consistent with Ofwat's statutory duties. We do not therefore consider it to be a credible option."*

### 8.1.3 Deduction of Input Price Pressure

597. In response to our statement on Ofwat's erroneous statement that it has deducted £0.756m for input price pressure when the figure should have been £0.726m, Ofwat states that it has quoted a figure of £0.756m

*"from the company's business plan 'Retail Non-Household Plan – June Submission.pdf' table 6."*<sup>488</sup>

598. For the avoidance of doubt we point out that the table referred to includes the line entries shown in Table 8 below. We have added the 'Total AMP6' column for clarity to show that the relevant years sum to £0.726m and trust that this issue is now concluded.

Table 8 - extract from Table 6 of June Retail Non-Household Plan

	2015/16 £m	2016/17 £m	2017/18 £m	2018/19 £m	2019/20 £m	Total AMP6 £m
<b>Input cost pressure net of efficiency challenge (includes inflation effects)</b>	0.065	0.090	0.156	0.190	0.225	0.726

Source: Bristol Water June Retail Non-Household Plan (SOC004), Table 6.

## 8.2 Inclusion of market opening costs within Wholesale control

599. Ofwat states that:

*"An explicit allowance was made through the wholesale controls for market set up costs".*<sup>489</sup>

600. Ofwat's allowance as stated in the FD14 is £0.4m over the period, or £0.08m per annum.<sup>490</sup>

601. We set out our forecast of these costs in SoC of £1.8m - £2.3m for set up costs, and £0.225m per annum ongoing costs.<sup>491</sup> This comparison shows that the large majority of market set up and operating costs have been excluded from both the Wholesale and Retail Non-Household controls.

602. Ofwat states that our estimate of costs are

*"not supported by evidence to justify the need, costs and benefits."*<sup>492</sup>

<sup>488</sup> Response, para. 135.

<sup>489</sup> Response, para. 136.

<sup>490</sup> Bristol Water Final Determination (SOC229), table AA1.6.

<sup>491</sup> SoC, paras. 2215 and 2216.

<sup>492</sup> Response, para 136, Presentation, Slide 43.

603. We find this statement surprising, as the whole intention of competitive market opening and separated Retail Non-Household price control is to provide benefits to eligible customers through competitive choice. It is unrealistic to expect that these benefits to customers could be delivered without some initial investment and preparation costs. We continue to consider that the most appropriate means of funding these costs should be through recovery from those customers who will be eligible to receive the benefits of retail competition.
604. In the Initial Statement, Ofwat states that "*as no company was able to sufficiently demonstrate that material new costs will be incurred, we considered that companies should be able to manage any new costs within the overall revenue allowance and therefore proposed to confine the review for the next non-household price control to issues around improved cost allocation and the associated revenue controls.*"<sup>493</sup>
605. The implication, therefore, is that Ofwat has pre-determined that the scope of the next periodic review in 2017 relating to the non-household retail price control will be limited in scope and the companies will not be entitled to make the case for new costs to be included within the price control. Indeed, at FD14 Ofwat stated:
- "For the avoidance of doubt, we are not proposing for the scope of the 2016 review to include new non-household retail cost claims from the companies. The costs we have set out in the company-specific appendices are expected to remain the basis of our controls throughout the period from 2015 to 2020."*<sup>494</sup>
606. As such, the fact that the retail non-household price control is only for two years provides little comfort with respect to our concerns regarding the impact of market opening costs that have not been properly funded by FD14.
607. Indeed, whilst the recent revisions to Licence Condition B.8.3 allow Ofwat to set the nature, form and level of the retail price controls at each periodic review (Licence B.8.3), we do not consider that it was intended that this would give Ofwat the discretion to exclude a significant component of a price control, such as the underlying costs, from the scope of a periodic review. We are concerned, therefore, that Ofwat considers that it is entitled, particularly at such an early stage, to make such significant decisions regarding what will, or will not, fall within the scope of that review.

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<sup>493</sup> Initial Statement, para. 37.

<sup>494</sup> Final price control determination notice: policy chapter A6 – non-household retail costs and revenues (REP051), p26. And Table A6.5, p. 60

We note that company submissions in favour of a 2017 review of the non-household retail price control generally expressed a preference and expectation that the review would include the underlying costs, but Ofwat rejected these suggestions (see Table A6.5).

### 8.3 The efficiency of Bristol Water's Non-Household Retail costs

608. Ofwat states that

*“the company is not upper quartile for metered customers; it is approximately average, therefore it would not have passed an equivalent assessment for non-household”<sup>495</sup>*

609. We are surprised that Ofwat appears to be assuming the result when it has not actually carried out any analysis that we are aware of. As an efficient household retailer with upper quartile costs we would expect a reasonable analysis to make a similar assessment on non-household costs, regardless of the balance of metered and unmetered customers.

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<sup>495</sup> Response, para. 134, Presentation, Slide 43.

## 9 RCV adjustments

### 9.1 2009/10 adjustment

610. FD09 was based on forecast capex for 2009/10. Actual capex may have turned out to be higher or lower than that assumed, and therefore Ofwat has included an adjustment to reflect the actual outturn expenditure. In addition, this adjustment is affected by any differences in outturn RPI for 2009/10 from the FD09 forecast, and also for any differences in outturn COPI for 2008/09 and 2009/10 being different to the FD09 forecast.
611. As a result of Bristol Water's determination not being finalised until 2010 as a result of its CC10 Redetermination, the adjustment for Bristol Water was based on actual outturn capital expenditure and outturn RPI. The only area where there is a difference for Bristol Water is in the outturn COPI for 2008/09 and 2009/10.
612. In FD14, Ofwat included an adjustment of -£0.9m for Bristol Water. Details of the calculation of this adjustment are set out in the RCV feeder model for Bristol Water.
613. Bristol Water considers that the RCV feeder model does not produce the correct adjustment in its case because the revised COPI estimates should lead to an increase in RCV.<sup>496</sup> This is because some of Bristol Water's actual expenditure during 2005-10 was excluded from the 2010 opening RCV as it was in excess of the investment ceiling. As well as being excluded from RCV, the capped expenditure was also excluded from the calculation of the outperformance adjustment which aimed to correct for differences between actual and FD04 capex. The updated values of COPI result in the investment ceiling being raised, and thus more of the actual expenditure being taken into account in the RCV.
614. In its response, Ofwat argues that the final COPI was lower than that used in the determination.<sup>497</sup> This is neither consistent with the published values of COPI, nor the COPI values used by Ofwat in its CIS feeder model for Bristol Water.
615. The table below shows the COPI included in the FD14, and actual outturn COPI. A complication is that the COPI series was rebased following FD10. As a result the outturn COPI has been estimated by comparing the change in outturn COPI compared to 2007/08 with the base year COPI (162.5) used in FD10.

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<sup>496</sup> SOC, para. 361.

<sup>497</sup> Response, paras. 476 and 478.

Table 9 COPI Outturn and FD10 forecast

	2007-08 (£m)	2008-09 (£m)	2009-10 (£m)
<b>COPI Included in FD10<sup>498</sup></b>	162.5	159.0	149.6
<b>FD09 COPI Rebased<sup>499</sup></b>	111.3	109.6	108.7
<b>Outturn COPI<sup>500</sup></b>	111.3	114.0	110.5
<b>Outturn COPI Rebased</b>	162.5	166.4	161.3

Source: CC10/Ofwat

616. Table 9 confirms the outturn COPI is higher than that included in FD10. As a result, the investment ceiling should be higher and a positive adjustment to RCV should be made.

617. This can be demonstrated by including the correct outturn COPI for 2008/09 and 2009/10 in the 2010 Final Determination Model and comparing the resulting RCV and out-performance adjustments that are calculated in the model. Details are set out below in Table 10.

Table 10 Impact of correcting COPI in 2010 FD Financial Model

Parameter	Cell Address	FD10 (£m)	FD10 updated for correct COPI <sup>501</sup> (£m)	Difference (£m)
<b>Opening RCV 2010</b>	Regulatory Capital Value!AB17	264.224	266.787	2.563
<b>Outperformance adjustment</b>	Capping and Outperformance!AB53	(1.123)	(0.956)	0.167
<b>NPV of Outperformance Adjustment</b>	Calc!AF1935	(5.041)	(4.291)	0.750
<b>Investment Ceiling</b>	Capping and Outperformance!AA38	100.056	101.492	1.436
<b>Expenditure Capped</b>	Capping and Outperformance!AA39	1.805	0.369	1.436

Source: Bristol Water/FD10 Financial Model

618. Table 10 shows that as a result of correcting the input COPI for 2008/09 and 2009/10:

- the opening RCV in 2010 is £2.563m higher;
- the outperformance adjustment is reduced by £0.167m pa, with a net present value of £0.75m in 2010; and
- therefore the 2009/10 adjustment should result in an RCV adjustment of £3.313m in 2007/08 prices.

619. To obtain the correct RCV adjustment for the redetermination two adjustments need to be made:

- the amount needs to be adjusted from 2007/08 prices to 2012/13 prices. This results in an RCV adjustment of £3.866m (£3.313m \* 244.7/208.6); and

<sup>498</sup> FD10 Financial model, Calc!Y75 to Calc!AA5.

<sup>499</sup> PR14 CIS Feeder Model for Bristol Water (SOC339), Calc!G28 to Calc!I28.

<sup>500</sup> PR14 CIS Feeder Model for Bristol Water (SOC339), Calc!G17 to Calc!I17.

<sup>501</sup> FD10 Financial Model - Obtained by changing cells input!Z647 to input!z650 to 166.4 (the outturn COPI for 2008/09) and cells input!AA647 to input!AA650 to 161.3 (the outturn COPI for 2009/10).

- it needs to be adjusted to reflect the return that was not obtained during AMP5. This increases the RCV adjustment further to £4.818m (£3.866m \* (1.045)^5) based on the FD10 post tax cost of capital of 4.5% (calculated from the vanilla cost of capital of 5.0%).

620. Therefore the correct adjustment for the difference between actual COPI and the COPI forecast at FD10 for 2008/09 and 2009/10 should be an RCV uplift of £4.818m.<sup>502</sup>
621. Ofwat's RCV feeder model does not calculate this adjustment correctly because it does not take into account whether or not expenditure was previously capped at FD10, and because it does not properly take into account the change in the COPI estimate between FD10 and the final confirmed numbers.

## 9.2 CIS adjustment

622. In the Response Ofwat notes:

*"As part of the final determinations we identified an issue with the way in which the indexation was undertaken as part of the PR09 CIS CRV adjustment. In the final determinations we highlighted the issue and stated that we could have taken a different approach to the treatment of indexation which would have resulted in a lower RCV. However we did not make an adjustment in final determinations as we considered that making an adjustment at that time would have risked creating regulatory [un]certainty."<sup>503</sup>*

623. Ofwat notified us of the CIS RCV issue on 20 March 2015, after the date of our submission of the SoC. In the FD14 documentation, Ofwat noted that Severn Trent Water had suggested alternative approaches to the calculation of the RCV adjustment due to indexation. However, Ofwat noted that a change to a different approach would have only resulted in a slightly different opening RCV for all companies.
624. The nature of the issue is set out in the 'Consultation on the PR14 reconciliation rulebook'<sup>504</sup> that Ofwat published on 25 March 2015. Ofwat's consultation will run concurrently to this redetermination process, with a 7 May 2015 deadline for submissions and the publication of a decision mid-July 2015. In this consultation document, Ofwat notes that the potential midnight adjustment to the RCV that it proposes to make across the industry is around 2% of RCV.

625. In the Response, Ofwat noted:

*"We consider that the most appropriate approach would be to use forecast RPI for both measures. This would mean that the RCV has been artificially inflated due to this issue. For Bristol Water the RCV is around £9.3 million higher than it would*

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<sup>502</sup> Note that this amount is different to that set out in Table 26 of the SOC, as the analysis presented there did not take into account the impact of the capping on the out-performance adjustment.

<sup>503</sup> Response, para. 513.

<sup>504</sup> <http://www.ofwat.gov.uk/content?id=c4d2a58d-d2ff-11e4-a8b0-2fd112cac76f>

*otherwise be. We are intending to consult on whether we remove the amount remaining in the RCV at the end of PR19, which would be consistent with our commitment to only make a forward looking adjustment. For Bristol Water the equivalent figure is £6.9m after taking account of the RCV run off (depreciation) during 2015-20 (all figures 2012/13 prices).<sup>505</sup>*

626. In accordance with our response to the CMA query on this matter, we have not had sufficient time to conclude on what we believe is the right approach, given the very technical nature of the subject. In addition, the correct outcome appears to depend upon which risks Ofwat intended companies should bear when setting its PR09 methodology. This does not appear to be set out in the consultation document, so we ask if Ofwat could provide this information.
627. Aligned to our overall approach to this re-determination, we would expect the outcome for Bristol Water to ensure that customers are not affected by any error in methodology, if that is what the consultation concludes.

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<sup>505</sup> Response, para. 515.

## 10 Financeability

628. In its Response to our SoC, in contrast to our view that we are not financeable under FD14, Ofwat made the following key statements in respect of financeability, each of which is considered in the following sections:

- it interprets the Finance Duty as ensuring that an efficient company with a notional capital structure is able to finance its functions. It considers the assessment of financeability should not review the actual impact of FD14 on the company. In addition, the Finance Duty does not require a particular credit rating or metric to be targeted or for there to be any headroom (see **Section 10.1**);
- Ofwat's assessment of PAYG is appropriate and is based on a level of operating expenditure that Ofwat believes is reasonable (following an exercise "*to provide a more accurate assessment*") (see **Section 10.2**); and
- that Bristol Water is financeable under FD14, in particular, concluding that Moody's [X] placing Bristol Water on negative outlook is not an indicator that FD14 is not financeable (see **Section 10.3**).

629. As we set out in the SoC, if an appropriate level of costs have been identified, and the right WACC set, then a determination is likely to ensure that a company is financeable. It is, however, important to understand how that financeability assessment will be applied in practice.

### 10.1 Finance Duty

630. We set out the difference in views between Ofwat and ourselves in relation to the Finance Duty in **Section 4.4.6** above. Two specific issues relevant to the financeability assessment raised in the Response are addressed in the following Sections:

- assessing financeability using the notional and the actual structure (see **Section 10.1.1**); and
- targeting credit ratings (see **Section 10.1.2**).

#### 10.1.1 Assessing financeability using the notional and actual structure

631. Ofwat states in the Response that we have "*questioned the use of the notional capital structure*"<sup>506</sup> and that we consider "*that financeability should be tested using [our] actual company structure*".<sup>507</sup>

632. We believe Ofwat has mis-understood our comments. In our SoC,<sup>508</sup> we accepted that a financeability assessment carried out for regulatory purposes would have reference to notional gearing and have used that approach ourselves. We provided assurance to Ofwat that our DDR (based on our view of totex and WACC) was financeable under a notional

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<sup>506</sup> Response, para. 363.

<sup>507</sup> Response, para. 79.

<sup>508</sup> SoC, para. 2268, 2318.

financing structure. In addition, KPMG assessed our financeability<sup>509</sup> under a notional financing structure in the document submitted in support of the SoC. It is worth noting that our actual debt structure is close to the notional structure.<sup>510</sup>

633. We have not, therefore, questioned the use of a notional structure as part of an assessment of financeability. We do, however, believe that it is also appropriate to perform financeability tests on a post-menu choice incentive basis<sup>511</sup> and using our actual structure<sup>512</sup> as well as on a notional basis in order to ensure that any penalty does not have unintended consequences and that remedies are achievable in practice. This is an additional part of the assessment of financeability that we proposed.
634. In our SoC, we set out that the remedies required to address the actual impact of FD14 are not achievable in practice.<sup>513</sup> This illustrates that these additional checks are required.
635. By only considering a notional structure, pre-financeability adjustments, Ofwat has not:
- identified that the totex menu choice<sup>514</sup> penalty is prohibitive and results in worse credit metrics than the baseline scenario.<sup>515</sup> In essence, the size and nature of the penalty is too great;
  - considered the practical ability of Bristol Water to meet the level of operating costs in its financial model (see Section 9.6.3.2 of the SoC); and
  - commented on the size or practicality of remedial action required to make FD14 financeable.
636. In contrast to Ofwat, Ofgem interprets its Finance Duty more broadly to take these considerations into account:
- "In principle, financeability is a real world question around whether or not a company has the cashflows and the underlying economics to sustain investor confidence and thereby maintain access to finance."<sup>516</sup>*
637. We conclude, therefore, that our proposed approach to assessing financeability is in line with regulatory practice, is consistent with the Finance Duty and aims to avoid unintended consequences.<sup>517</sup>

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<sup>509</sup> KPMG Financeability Report 2015 (SOC518), p24.

<sup>510</sup> SoC, para. 2267.

<sup>511</sup> SoC, para. 2439.

<sup>512</sup> SoC, para. 2268.

<sup>513</sup> Section 17.6 of SoC.

<sup>514</sup> The totex menu choice of 130 was made by Ofwat. Our actual menu choice position was 125, reflecting the reduction in scope of FD14, but does not take effect until AMP7.

<sup>515</sup> KPMG Financeability Report 2015 (SOC518), p44, Table 20.

<sup>516</sup> RIIO-ED1: Draft determinations for the slow-track electricity distribution companies Financial issues (REP017), para. 3.42.

<sup>517</sup> It is our assumption that Ofwat is not seeking for Bristol Water to be unfinanceable.

### 10.1.2 Targeting a credit rating

638. Ofwat states in the Response that it does *"not consider our financing duty requires us to target a particular level of credit rating"*.<sup>518</sup>
639. This marks a change in stance since Ofwat has set out target credit ratings for previous price controls. Indeed, in its discussion paper on financeability in 2011, Ofwat commented that *"the financeability assessment is a review of the project levels of a package of financial ratios against target levels that are consistent with those that the credit rating agencies and the capital markets consider consistent with those necessary to maintain a credit rating well within the investment grade range."*<sup>519</sup> Ofwat quoted metrics for PR09 and noted that it would *"target credit ratings consistent with an A-/A3 credit rating"*.<sup>520</sup>
640. Ofwat's comment that the target credit rating should be *"well within investment grade rating"* implies more than one notch within investment grade and an allowance for sufficient financial headroom against downside shocks.
641. In addition, Ofwat uses debt curves associated with A- and BBB rated corporate debt in setting its cost of debt allowance.<sup>521</sup>
642. Whilst the Finance Duty does not make specific reference to credit ratings, its application is linked to the requirement contained in Bristol Water's Licence that it must maintain an investment grade credit rating.<sup>522</sup> As such, targeting specific credit ratings would be consistent with the spirit of the Finance Duty.
643. In summary, Ofwat's position of not targeting a specific credit rating is inconsistent with previous price determinations and has resulted in a financeability assessment that it is inconsistent with the cost of debt allowance.<sup>523</sup>

## 10.2 Appropriateness of Ofwat's operating cost and PAYG assumptions

644. In the Response, Ofwat comments:

*"The PAYG level we set at final determinations is higher than proposed by Bristol Water in its business plan",*<sup>524</sup>

*"we carried out an exercise to allocate the costs that we had disallowed from totex between capital projects and operating costs to provide a more accurate assessment of the level of operational and capital expenditure within our allowed totex. This*

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<sup>518</sup> Response, para. 382.

<sup>519</sup> Financeability and financing the asset base (REP001), para 44 and table 1.

<sup>520</sup> Financeability and financing the asset base (REP001), para 44 and table 1.

<sup>521</sup> Response, para. 283.

<sup>522</sup> Licence, (SOC029).

<sup>523</sup> Given the metrics set out in The Response , page 108, Table A3.3 and SoC, page 569, Table 169.

<sup>524</sup> Response, para. 88.

*showed that while our intervention did result in a reduction in capital expenditure there was also a reduction in operating costs."*<sup>525</sup>

645. The above statements are based on Ofwat's view of operating costs. We set out in our SoC that the level of reduction in operating costs is unachievable in practice.<sup>526</sup> As noted in KPMG's supporting report, we believe FD14 implies an average PAYG ratio above 60%.<sup>527</sup> Due to the fixed nature of some operating costs, a lower totex allowance will imply a higher PAYG ratio.

646. Ofwat's review of operating costs appears to be limited to the adoption of the PAYG ratio in Bristol Water's business plan with adjustment for special factors. This is set out in FD14, as follows:

*"Our draft determination financeability modelling was based on the split of totex between opex and capex based on the company's business plan. However, as our interventions have impacted on the balance of opex and capex in the plan, we have taken account of the change in the balance between opex and capex in calculating ratios at final determination to ensure accurate calculation of the ratios".*<sup>528</sup>

647. It is not clear what adjustments Ofwat has made nor the basis for concluding the assessment is accurate.

648. Without having visibility of Ofwat's assessment, we cannot confirm or deny that its assessment of PAYG and operating costs is based on robust analysis.

## 10.3 Overall financeability under FD14

### 10.3.1 FD14 is not financeable

649. In the Response, Ofwat states *"we reject Bristol Water's arguments that the final determination is not financeable"*.<sup>529</sup>

650. In Table A3.3 of the Response, Ofwat sets out a variety of metrics and concludes that Bristol Water is financeable on this basis.<sup>530</sup> In respect of this table we note the following:

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<sup>525</sup> Response, para. 419.

<sup>526</sup> SoC, paras. 1080-1098.

<sup>527</sup> Ofwat appears to have incorrectly interpreted this statement and supporting table as the PAYG implied in the SoC.

<sup>528</sup> Bristol Water Final Determination (SOC229), p.61.

<sup>529</sup> Response, paras. 84 and 294. We note that Ofwat suggests that its financeability assessment indicates that our *"concerns appear to be due to [our] costs being in excess of efficient levels and the consequences for its menu incentives"* (Response, para. 84). As we have demonstrated, however, the issue is not that our costs are inefficient, but that they are not accurately predicted by Ofwat's models which leads to the false impression of inefficiency. We are not, therefore, suggesting that *"customers should pay higher charges due to inefficiency of service delivery"* as is implied by Ofwat (Response, para. 84).

<sup>530</sup> Response, Table A3.3, p.108. Indeed, Ofwat suggests that its assessment *"illustrates that Bristol Water is comfortably financeable, with ratios consistent with and in many cases better than other companies"* (Initial Statement, p. 62).

- the table does not include analysis of Net Debt/EBITDA, which we show exceeds target levels in three of five years of FD14 on a pre-financeability basis;
- Ofwat does not comment on the fact that AICR under Moody's calculation<sup>531</sup> hits the minimum level in the last year of the AMP; and
- the last column, entitled Bristol Water's stated target, includes figures that we do not recognise. We have only set out targets for metrics calculated on the same basis as rating agencies. Clearly the target would have to be amended to reflect a different basis of calculation.

651. Also, Ofwat has not commented on the analysis in our SoC that shows credit metrics post-financeability adjustments, using Ofwat's own calculations.<sup>532</sup> This shows that we are clearly not financeable under FD14 on a notional basis.

652. Ofwat comments on the rating agency views of FD14 as follows:

*"Bristol Water's credit rating is unchanged and the move to negative outlook appears to reflect the difference between its business plan and Ofwat determination of efficient cost allowances".<sup>533</sup>*

653. In respect of our financeability position under FD14, we note that Moody's [✂] made the following comments:

*Moody's: "unless the CMA price determination is significantly more favourable.....the company will likely fail to maintain.....a Baa1 rating"<sup>534</sup>*

[✂]

[✂]

654. We believe the above comments reflect FD14 as a whole and are not just focused on the wholesale totex gap. In fact, Moody's also refers specifically to the cost of debt allowance in its Credit Opinion.<sup>535</sup>

655. Given the above, we do not see how Ofwat can conclude that Bristol Water is financeable under FD14.

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<sup>531</sup> The fifth row of figures in Table A3.3 states "Ofwat calculation", but it appears to be based on Moody's methodology

<sup>532</sup> SoC, para. 2400.

<sup>533</sup> Response, para 87.

<sup>534</sup> Moody's Credit Opinion for Bristol Water, 16 Feb 2015 (REP005).

[✂]

[✂]

<sup>535</sup> Moody's Credit Opinion for Bristol Water, 16 Feb 2015, (REP005).

### 10.3.2 Moody's methodology

656. Ofwat also notes the following in respect of Moody's methodology and the preferred approach to assessing financeability set out in our SoC:

*"In their "Sector In-Depth" report dated 17 December 2014, Moody's stated that "We believe that changes in the speed of money will not in and of itself change a company's credit quality. On a net present value basis, the movements will be neutral. For Moody's Adjusted Interest Cover Ratio calculation, we reverse out speed of money adjustments by increasing regulatory capital charges by a corresponding amount. We believe this provides a more accurate picture of an entity's credit quality, as the immediate cash flow is a temporary rather than a permanent benefit, and revenues received now will reduce revenues receivable in the future. However, excess fast money can have positive implications for a company's liquidity position and offset immediate funding pressures (e.g., in the case of Bristol Water)."536*

*"it does not appear that the rate of PAYG would lead to Moody's considering it to be excessive. Further, Bristol Water is asking for a potential increase in its PAYG rates to improve financeability which leads us to believe that it does not see a significant risk that Moody's would make an adjustment to the calculation of its financial ratios to reflect the fact that it considers the current rate of PAYG excessive."537*

657. We believe that Ofwat has misinterpreted Moody's comments as evidenced by Moody's Credit Opinion for Bristol Water.<sup>538</sup> Moody's is clearly concerned that the PAYG ratio should not be used to cover permanent deficits.<sup>539</sup> Positive liquidity through excess fast money is noted as a short-term benefit and therefore is unlikely to offset permanent deficits in Moody's analysis.<sup>540</sup>
658. In ensuring a company is financeable it appropriate to ensure revenue allowances reflect achievable outcomes for a company.<sup>541</sup> [X] In our opinion, Moody's metrics are best met through setting revenue allowances based on cost levels that are achievable.
659. We do not understand how Ofwat can conclude that Bristol Water is not concerned about the adjustment to PAYG in Moody's AICR calculation. We have consistently provided Ofwat with calculations reflecting the PAYG adjustment throughout the PR14 process. We commented on Moody's PAYG adjustment in our December Submission,<sup>542</sup> June Submission,<sup>543</sup> the DDR<sup>544</sup> and the SoC.<sup>545</sup>

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<sup>536</sup> Response, para. 399.

<sup>537</sup> Response, para. 400.

<sup>538</sup> Moody's Credit Opinion for Bristol Water, 16 Feb 2015, (REP005).

<sup>539</sup> Moody's Credit Opinion for Bristol Water, 16 Feb 2015, (REP005).

<sup>540</sup> Moody's Credit Opinion for Bristol Water, 16 Feb 2015, (REP005).

<sup>541</sup> SoC, para. 2439.

<sup>542</sup> December Company Wide Plan (SOC053), p.111.

<sup>543</sup> June Company Wide Plan (SOC005), p.168.

<sup>544</sup> DDR Appendices Oct 2014 (SOC020), p.195.

## 10.4 Conclusions on financeability

660. In reply to Ofwat's Response we note that:

- we consider a financeability assessment should be performed on a notional structure. In addition, it is also appropriate to perform financeability tests on a post-menu choice incentive basis and using our actual structure so that unintended consequences can be avoided and that remedies are achievable in practice;
- we do not consider that FD14's PAYG ratio is appropriate, but do not have visibility of the analysis Ofwat has performed. We ask Ofwat to provide its analysis of operating costs and PAYG;
- the determination of appropriate and achievable levels of cost, WACC and other revenue allowances is the most important aspect of ensuring a company is financeable. [✂]
- our conclusion that we are not financeable under FD14 remains appropriate.

661. As set out in Section 17 of the SoC we would like the CMA to:

- reach a determination based on an assessment of each revenue building block;
- set PAYG, with reference to the natural level, so that bills are in line with customer preferences and short-term financeability issues are addressed where possible;
- assess financeability using credit rating metrics and target a credit rating of Baa1; and
- ensure that post-menu choice adjustments, such as the menu choice penalty, do not have unintended consequences.

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<sup>545</sup> SoC, para. 2280.

## 11 PR14 process and assurance

### 11.1 Introduction

662. This Section addresses and refutes the comments made by Ofwat in its Response in relation to our business planning process, engagement and assurance.
663. In the Response Ofwat states that it has *“reviewed evidence that casts substantial doubt on the claims made by Bristol Water about the strength of both its business planning processes and benchmarking analysis”*.<sup>546</sup>
664. The following specific concerns identified by Ofwat in the Response are considered in the sub-sections below:
- the content of the third party assurance reports (see **Section 11.2**),<sup>547</sup>
  - the provision of third party reports to Ofwat (see **Section 11.3**);<sup>548</sup>
  - the quality of our cost benchmarking analysis (see **Section 3.3 and Section 3.4**),<sup>549</sup>
  - the quality of our supporting evidence, and when it was made available to Ofwat (see **Section 11.4**);<sup>550</sup>
  - the quality of our customer engagement (see **Section 11.5**);<sup>551</sup> and
  - the quality of our engagement with Ofwat (see **Section 11.6**).
665. Ofwat also argues that its critical assessment of our business case for Cheddar Reservoir Two in itself *“raises significant questions as to whether Bristol Water’s business plan has been prepared in a way consistent with good practice”*.<sup>552</sup> This is dealt with in **Section 11.4** below.
666. Finally, in **Section 11.7** we address Ofwat’s criticisms based on the fact that Bristol Water is the only water company to reject FD14, and the implications that might be drawn from this.
667. Overall we believe the concerns set out by Ofwat in this respect are unjustified. We fully embraced the PR14 process, have responded to Ofwat’s queries promptly, made every effort to make sure that our processes were robust and responded where appropriate to the large amount of assurance received.

### 11.2 Third party assurance casts doubts on the business planning processes

668. In the Response Ofwat states that its reviews of our third party assurance reports *“indicated significant questions about the efficiency of Bristol Water’s business plan forecasts”*.<sup>553</sup>

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<sup>546</sup> Response, para.26.

<sup>547</sup> Response, para. 27.

<sup>548</sup> Response, para. 28.

<sup>549</sup> Response, para. 30.

<sup>550</sup> Response, para. 31.

<sup>551</sup> Response, para. 28.

<sup>552</sup> Response, para. 27.

669. In the following sub-sections we explain why this should not be a cause for concern for the CMA. To do this we provide details of:

- our overall approach to assurance in PR14, set in the context of Ofwat's historical approach, and Ofwat's requirements for PR14 (see **Section 11.2.1**);
- details of the general assurance carried out by Mott MacDonald (see **Section 11.2.2**);
- details of the assurance carried out by Mott MacDonald and ChandlerKBS (**CKBS**) in relation to costs (see **Section 11.2.3**);
- details of the assurance carried out by Mott MacDonald in relation to asset level models (**ALMs**) and the cross-asset optimiser (**CAO**) (see **Section 11.2.4**); and
- details of the assurance carried out in relation to Cheddar Treatment Works (**Cheddar TW**) (see **Section 11.2.5**).

### 11.2.1 Assurance in the context of PR14

670. Following the CC10 redetermination, we decided that our Periodic Review business planning processes needed more oversight to ensure that our approach for PR14 was consistent with recognised best practice and the requirements of the Regulator. As shown in the SoC, we instigated multiple levels of assurance and review for all components of our business planning.<sup>554</sup>

#### 11.2.1.1 Ofwat's historic approach to audit

671. Prior to PR14, Ofwat had a regimented approach to the audit of submissions. Companies were required to appoint external financial auditors (invariably a company's statutory financial auditor) and external technical auditors.

672. The technical auditor comprised a named Reporter who had to be approved by Ofwat and was bound by the Reporter Protocol.<sup>555</sup> The Reporter was supported by a team of technical experts with specific experience in the different areas covered by the business plan (e.g. asset modelling, supply demand balance etc.). The Reporter was appointed to audit the Annual Returns, Periodic Review Business Plans and other relevant regulatory submissions including the 'Principal Statement' used to set tariffs.

673. In previous periodic reviews Ofwat has required detailed commentaries to be submitted for all sections of the Business Plan, answering specific questions regarding process and data accuracy and providing information in specific formats, consistent across companies. Forms similar to the assurance summary sheets would have been the underpinning of those commentaries, but would not have been submitted themselves.<sup>556</sup>

674. As Ofwat set out in its Initial Statement, a key change in the Regulatory approach for PR14 was to strengthen the role of Board assurance. This resulted in a move from detailed specific reporting requirements and audit defined by Ofwat to an approach characterised by

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<sup>553</sup> Response, para. 157.

<sup>554</sup> SoC page 170 Table 34 External assurance and expert review. See also SoC, Sections 5.5 and 9.4.

<sup>555</sup> MD185 Reporters to Ofwat: Reporters Protocol, March 2003 ("**MD185 Reporters protocol**") (REP018).

<sup>556</sup> MM Assurance Report 2014 (SOC136), Appendix

stronger Board assurance. As a result this detailed reporting regime has been redefined by companies and their assurers. Our process aimed to continue the same rigour that Ofwat's historic process required, whilst allowing the assurance team to focus on the most material areas, as identified by their work and any specific requirements identified by the Board or the LEF.

### 11.2.1.2 Ofwat's current approach to assurance

675. In response to the Gray Review<sup>557</sup> and the challenge to reduce the regulatory burden, Ofwat changed its approach for PR14, placing the onus on Boards to own their own assurance and provide an assurance statement to Ofwat. Ofwat's methodology stated:

*"We also expect [Company Boards] to put in place any processes that they feel they need to be assured that they are submitting high-quality plans."<sup>558</sup>*

676. As well as focussing Boards on the assurance of their plans, this new approach was also intended to reduce the burden both on the Regulator, in terms of what it was required to read (the Reporter's reports were historically of a length equivalent to some companies' plans), and on companies and assurance providers in terms of what they were required to produce. Ofwat's assurance requirements in its methodology were deliberately broad and at a high level regarding what it expected in terms of assurance, allowing Boards to implement the level of assurance that they felt was appropriate.

677. Our Board considered that the level of inspection and challenge that had been required for previous price reviews remained appropriate for PR14, and required us to follow a similar process. The result was a strong assurance process that met the requirements of the Board, whilst complying with the guidance set by Ofwat. Less direct evidence of the process was required by Ofwat, but that did not equate to a reduction in the amount of scrutiny required to provide the level of assurance required by the Board.

678. Consistent with the requirements of our Board to maintain a strong level of assurance, we appointed Andrew Heather of Mott MacDonald as our Reporter at the start of AMP5 prior to Ofwat's decision to remove the Reporter protocol. The scope of his role is to provide detailed assurance<sup>559</sup> of the data and evidence supporting our Business Plan submissions, as well as providing an audit of our annual performance reporting. As the Reporter's assurance is to the Board and not to Ofwat, one of the most important elements of the process for the Board is the presentation that the Reporter makes in person prior to the Board's decision to sign off every submission. This presentation enables the Reporter to identify the key areas of concern, explain the materiality and impact, and for the Board to ask specific questions. The

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<sup>557</sup> Gray review of Ofwat and consumer representation 2011 (SOC057).

<sup>558</sup> Setting Price Controls - final methodology and expectations July 2013 (SOC063),p. 60.

<sup>559</sup> For us, assurance differs from audit in that the Reporter can focus on areas which are most material (whereas the historic audit approach for periodic reviews required coverage of all areas), has more freedom to make suggestions regarding potential improvements – a greater 'value added role' - and where improvements are suggested, the Company can decide how and when to make changes to processes. Where issues are material, or relevant to the data or interpretation of the information in the submission, the process remains the same as for audit.

Reporter made such a presentation to the Board ahead of our December Business Plan submission.<sup>560</sup>

679. Details of our general assurance process for PR14, as carried out by Mott MacDonald, are provided in **Section 11.2.2**.

### 11.2.2 Mott MacDonald Assurance

680. In its Response, Ofwat has made specific comments regarding the provision of the Mott MacDonald Assurance reports:<sup>561</sup>

*"Despite us previously requesting the full report, Bristol had previously released only the executive summary of a Mott MacDonald Assurance Report written in 2013".<sup>562</sup>*

681. As explained in **Section 11.3** below, we have no record of a request from Ofwat for the 'full' Mott MacDonald Assurance Report during the PR14 process.

682. We understand why, based on the Mott MacDonald report submitted with the DDR, Ofwat could have incorrectly concluded that we withheld information during the process. To be clear, however, this was not the case.

683. As at the date of the December Submission, only the Executive Summary of Mott MacDonald's report had been approved by its internal governance processes and provided to Bristol Water. We were therefore only able to submit the Executive Summary to Ofwat at that point.<sup>563</sup>

684. We considered the provision of the Reporter's Executive Summary to be an appropriate representation of the assurance received, as this included statements where the Reporter identifies what he considers to be the material issues that the Board should take into account when considering its own assurance.<sup>564</sup> That the Executive Summary did not include the issues Ofwat now interprets as being so key to its assessment of our plan indicates that the Reporter responsible for the assurance did not consider them to be as significant for the

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<sup>560</sup> MM December Plan Board presentation (REP034).

<sup>561</sup> This is a different issue to that raised in paragraph 9 of the Initial Statement where Ofwat comments: "*The independent third party assurance commissioned by Bristol Water was not submitted with the original business plan, and when Bristol Water did provide the reports (in response to specific information requests) it became clear that the assurance revealed a number of significant concerns with respect to the underlying efficiency associated with Bristol Water's costs forecasts.*" We believe that this comment relates to the cost assurance provided by ChandlerKBS and Mott MacDonald and is discussed in **Section 11.2.3**.

<sup>562</sup> Response, para. 183.

<sup>563</sup> In previous price reviews the Reporter was given an additional week to submit his report directly to Ofwat. Under the new assurance approach all documents have to be submitted to Ofwat as submissions from the company by the specified date and time.

<sup>564</sup> From MM December Plan Board presentation (REP034)), it can be seen that the Reporter flagged the issue of the 'must invest' schemes to the Board as he felt it was an area where Ofwat may challenge. The Company considered that (a) it wished to be transparent about its process, hence why the must invest schemes were overtly classified as such, rather than using a less visible method to ensure such schemes are picked and (b) that we had provided a full explanation of the process in the December Plan (see Wholesale Plan Section (SOC476) 184-187).

Board's assessment of the plan; their inclusion in the 'detail' section is to record findings for the company to note for future reference.

685. To support our DDR, in light of Ofwat's challenge on wholesale totex, Mott MacDonald collated all of its findings and the detailed assurance sheets for record purposes. We felt it would be useful to provide this full record to Ofwat so it could see the extent of the assurance process that we required and went through during the development of our plan.
686. In previous periodic reviews Ofwat required companies to provide a challenge/response log, in order for it to have comfort in the Board's assurance process.<sup>565</sup> Such a document was not requested by Ofwat at PR14 so was not produced at the time, but was produced by Mott MacDonald to support this process (see **Section 11.2.2.2** below).

#### 11.2.2.1 Our assurance process

687. By using challenges from the July 2013 assurance reviews,<sup>566</sup> Ofwat seems to have misunderstood the assurance process we have used and therefore misinterpreted the detail in the Mott MacDonald report submitted with the DDR.
688. For each assurance meeting, Mott MacDonald produces an 'Assurance Summary Sheet'. These identify the issues found during the assurance review and gives an indication of their significance.<sup>567</sup> They capture the team's view and inform the Reporter's opinion when he looks 'across the piece'. These are sent to the Bristol Water person responsible for responding on points of factual accuracy; ultimately these are finalised but there is no formal requirement for them to be submitted as part of the PR14 process. We were happy for the Reporter to include these in the report we submitted to Ofwat because they provided evidence of the depth of the assurance process.

#### 11.2.2.2 Challenge Log

689. In the presentation to the CMA Ofwat stated:

*"[Bristol Water's] third party assurance reports raised significant issues about its proposed costs of delivery and scope of its programme and it is unclear as to whether Bristol Water has taken appropriate substantive action in respect of these matters"*<sup>568</sup>

690. Ofwat's queries following the DDR suggested that rather than moving to an assurance process where assurers reported to the Board, Ofwat actually wanted to return to its historic practice of requiring a detailed review of audit findings.

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<sup>565</sup> MD185 Reporters protocol (REP018), section 4.3.5.

<sup>566</sup> Response Para. 160.

<sup>567</sup> Mott MacDonald Assurance Statement Cheddar TW query 172 (SOC547) provides a summary of Mott MacDonald's approach.

<sup>568</sup> Ofwat presentation, slide 16; Initial Statement, p. 9.

691. With this in mind, we asked the Reporter to collate his challenges and our responses into a challenge log as a means of simply evidencing our response to the Reporter team's challenges and recommendations. A copy is provided with this response.<sup>569</sup>

### 11.2.3 Mott MacDonald and ChandlerKBS review of costs

692. In the Initial Statement Ofwat comments:

*"The independent third party assurance commissioned by Bristol Water was not submitted with the original business plan, and when Bristol Water did provide the reports (in response to specific information requests) it became clear that the assurance revealed a number of significant concerns with respect to the underlying efficiency associated with Bristol Water's costs forecasts."<sup>570</sup>*

693. We believe that this comment relates to the cost assurance provided by ChandlerKBS (**CKBS**) and Mott MacDonald.

694. In order to investigate our response to the issue Ofwat has raised regarding the underlying efficiency of our costs, we have produced a time line of the key stages in the development of our costs and the assessment of the efficiencies.<sup>571</sup>

695. This timeline identifies that, as Ofwat says, we did not submit the ChandlerKBS reports with the June Plan; however, we submitted all the documents that Ofwat asked for immediately they were requested.<sup>572</sup>

696. Ofwat's comment also suggests that the assurance revealed a number of significant concerns with respect to cost efficiency. In our view, the assurance resulted in contradictory information, with Mott MacDonald indicating our costs were lower than its benchmark and CKBS indicating they were higher than its benchmark. We provided detailed disclosure of the findings in the June Plan.<sup>573</sup>

697. As a consequence, and in light of the feedback received from Ofwat, we undertook further assurance and third party review work to obtain some clarity around this issue.<sup>574</sup>

698. As a result of this work, for the schemes it reviewed, Mott MacDonald concluded:

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<sup>569</sup> Reporter Challenge Log (REP049).

<sup>570</sup> Initial Statement, p. 9.

<sup>571</sup> Cost Assurance Timeline (REP047).

<sup>572</sup> The Ofwat Query process requires that deadlines be met for submission of responses; this is usually 48hrs. We met the deadline for this submission, as shown in our log of Ofwat queries (REP032). What was submitted in shown in the detail of the query (REP036). We received 54 queries from Ofwat between December 2014 and November 2014. We responded to all but one query within 72 hours, and 74% of replies were within the very tight 48 hour deadline. The one query that was responded to in more than 72 hours related to the complex CIS RCV adjustment feeder model. This shows that we replied promptly to Ofwat's queries throughout the PR14 process.

<sup>573</sup> June Wholesale Plan (SOC002) p.78-84.

<sup>574</sup> SoC, Section 10.3.

*“Following our review of your cost estimates we discussed the issues in detail with you and were provided with supplementary information in response to our challenges. Our understanding is that you are planning to make the changes to the costs identified. On this basis, we consider that the costs we have reviewed are reasonable and comparable to the average of other companies’ costs.”<sup>575</sup>*

699. On Cheddar Reservoir Two, CKBS concluded:

*“We have reviewed the adjustments that you have made to the Cheddar 2 estimate and it is our opinion that the revised estimate of £120,478,254, at 3.1% variance from the ChandlerKBS estimate, is within a range that we would be comfortable in supporting as an appropriate assessment of the works involved at this stage of the design development.”<sup>576</sup>*

700. The early review of our AMP6 costs by CKBS indicated they were 19% higher than its benchmark costs. The early review was mainly of enhancement schemes. The reasons for the 19% variation were investigated and related to items that we believed needed to be included but were not in the CKBS cost. These amounted to 5.6%. In addition, changes that we made to trunk mains lining and growth main laying costs reduced the difference by a further 2% leaving a remaining variance of around 12%.<sup>577</sup>

701. It should be noted that all costs reviewed were before the application of any efficiency challenge, which we have applied at programme level.

702. Clearly at this stage of their development, the assessment of scheme costs is not a precise activity and a range of results is to be expected. We are now seeing that our costs before the application of any efficiency challenge are in line with the average costs from Mott MacDonald’s assurance work.<sup>578</sup>

703. The current levels of efficiency challenge we have applied to our costs are:

- Capital maintenance 10%
- Trunk mains lining 10%
- Enhancement schemes 12.5%
- Cheddar Reservoir Two 5%

704. Applying these to our cost estimates results in proposed costs that are significantly below Mott MacDonald’s benchmark and in line with CKBS’s and hence addresses the concerns that Ofwat believes exist.

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<sup>575</sup> Mott MacDonald Assurance Report 2014 (SOC136) p. F5.

<sup>576</sup> SoC, Section 10, para. 1250.

<sup>577</sup> SoC, Section 10.3.2.4.

<sup>578</sup> SoC, Section 10.3.2.3.

705. Ofwat also states in its Response that “*although Bristol Water had its plan reviewed by various independent experts this does not in itself create efficiency*”.<sup>579</sup> We consider this is a strange comment. At no stage have we suggested that the third party reviews created efficiency in and of themselves.

#### 11.2.4 Mott MacDonald assurance of asset level models and cross asset optimiser

706. In its Response, Ofwat has introduced criticism of our asset level models and cross asset optimisation approach:

*“Mott MacDonald said that ‘on the whole the investment plan is based on robust models and non-modelled process which compares reasonably with that of other water companies (though not yet best practice).’ (Appendix B pB29). We note that a comment of ‘compares reasonably with’ is not itself evidence of efficiency.”*<sup>580</sup>

707. It is important to understand that asset modelling is a dynamic process, with developments and improvements being made with new approaches and improved data. As the Reporter notes in the same report that Ofwat refers to:

*“Bristol Water has made significant progress during AMP5, and has developed more sophisticated forecasting tools. This step forward will also help in delivering AMP6 since it should allow ongoing re-prioritisation of the optimized element of the programme, leading to more efficient delivery. We recommend that the company continues to develop its asset and risk management and modeling during AMP6.”*<sup>581</sup>

708. As we explained in the SoC,<sup>582</sup> for AMP5 we developed a consistent approach across our asset groups for assessing the impacts on service of deterioration. The intention of this approach was to be able to optimise investment against service using customer's willingness to pay, applying affordability and performance constraints, which is what our approach does.
709. For some of these asset groups, the impacts on service were difficult to quantify, so end of life models were used (e.g. operational structure). For others, the granularity of the impact of specific assets in specific locations was difficult to determine, so average impacts were assumed (e.g. distribution mains). For other groups it was possible to identify the specific links between asset performance and service (e.g. treatment works). Thus our asset level modelling had different approaches depending on the availability, quality and granularity of the data and the degree to which the asset impacted on service levels. This was an improvement on our PR09 approach which only had models for a subset of the asset groups, relying on a ‘named scheme’ approach (whereby specific solutions are identified and costed) for more of the asset base.

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<sup>579</sup> Response, para. 29.

<sup>580</sup> Response, para. 159.

<sup>581</sup> MM Assurance Report 2014 (SOC136) p. B128.

<sup>582</sup> SOC, Section 7.6.3.

710. Mott MacDonald does not have material concerns on our approach as we have responded to its findings where required. However, Ofwat has pulled out specific text from the June 2013 Assurance Summary Sheets<sup>583</sup> as evidence of “more significant concerns”.<sup>584</sup> In particular, Ofwat notes:

*“Maintenance – ‘the process has developed significantly since PR09 but future improvements should focus on modelling service rather than end of asset life and improving the forward look element of risk analysis of named schemes, to extend beyond addressing current or near-term risks (section 3.3.8 p18).’”<sup>585</sup>*

711. As noted above, the assurance process allows the Reporter to provide more advice as to where improvements can be made. This comment is an indication of how the modelling can be improved. Taken in the context of the overall findings, this is not an expression of a ‘significant concern’.

712. Ofwat combines eight pages of comment from the assurance team and presents it as the following quotation:

*“Asset level models – ‘Most models are driven by either asset failure, performance or predicted end of life assets not service. Investment is mainly not risk-driven as cost and service are not targeted which means that there is an inherent assumption that all assets are required and need to be maintained.’ Appendix B p B94-B102.)”<sup>586</sup>*

713. Reading the full eight pages is likely to provide the reader with a more rounded view than Ofwat’s summary implies. As noted above, our asset level models do model service, but in some cases the assets do not directly impact on service. For example, a structure, such as a concrete tank, may require maintenance. Failure to undertake maintenance, however, is very unlikely to lead to a service impact for a considerable time. However, the whole life costs of such an approach that neglects maintenance will be much higher. The sophistication suggested by the Reporter is something that forms part of the on-going development of our modelling programme. More detailed responses are provided in the Challenge Log.<sup>587</sup>

714. Ofwat notes in its Response:

*“Uncertainty – ‘it is being included in the asset models and named schemes and can influence the outcomes of the optimiser but at the time of the review little information was available on the robustness of the whole process’. (ref Appendix B, pB38)”<sup>588</sup>*

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<sup>583</sup> MM Assurance Report 2014 (SOC136) Appendices.

<sup>584</sup> Response, para. 160.

<sup>585</sup> Response, para. 160.

<sup>586</sup> Response, para. 160.

<sup>587</sup> REP049 Reporter Challenge Log

<sup>588</sup> Response, para. 160.

715. When we submitted the Business Plans in December 2013 and June 2014, information on the uncertainty analysis was presented as part of the Business Plan.<sup>589</sup>

716. Ofwat goes on to note:

*“Cross asset optimiser – ‘The approach is reasonable but depends on the options presented to it. A significant proportion of the investment (£144m or 41% in total, 21% is quality and growth) is not challenged by the optimiser, being passed through as ‘must invest’. We reviewed a sample of five ‘must invest’ schemes and considered that more could have been left open to the optimiser.’ (Overview of findings p17)”<sup>590</sup>*

717. We are surprised that Ofwat has identified this as an issue as this was fully detailed and explained in our December Submission.<sup>591</sup>

718. The issue was discussed with the Board as part of its assurance meeting with the Reporter.<sup>592</sup> In the report, the Reporter goes on from the quotation above to say:

*“The inclusion of a scheme as must invest does not mean that it would have been excluded by the optimiser, but we felt that the list could have been shortened, leaving the optimiser free to select the schemes in line with the plan scenario.”<sup>593</sup>*

719. We have continued to improve the information around the ‘must invest schemes’ and a further 10% of the programme which was ‘must invest’ now has cost benefit ratios, leaving 30% of the programme as ‘must invest’. All companies will have some must-invest schemes where benefits are not quantifiable, although only Ofwat would have visibility of the extent of this elsewhere. In summary, we note again that the Reporter did not have material concerns regarding our approach. Ofwat has again highlighted an area that Mott MacDonald identified for continual improvement.

720. This information has not been shared with Ofwat before since Ofwat did not raise it as an issue until its Response, as indicated by its opening comment *“Further consideration of the detail...”*<sup>594</sup>

721. We asked the Reporter to consider Ofwat’s use of his comments in terms of accuracy and context. The Reporter’s response<sup>595</sup> agrees with the comments we have made above and this is supported by the Challenge Log.<sup>596</sup>

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<sup>589</sup> Sensitivity Buildings (SOC427); Sensitivity Distribution Mains (SOC428); Sensitivity Line of Works (SOC429); Sensitivity Meters (SOC430); Sensitivity Operational Structures (SOC431); Sensitivity Pumping Stations (SOC432); Sensitivity Raw Water Res (SOC433); Sensitivity RW Mains (SOC434); Sensitivity Service Reservoirs (SOC4350); Sensitivity Treatment Works (SOC436), Sensitivity Trunk Mains (SOC437); Sensitivity Zonal (SOC438); and CAO and UA process summary (SOC364).

<sup>590</sup> Response, para. 160.

<sup>591</sup> December Wholesale Plan (SOC476), p. 185-187.

<sup>592</sup> MM December Plan Board presentation (REP034).

<sup>593</sup> MM Assurance Report 2014 (SOC136), p. 18.

<sup>594</sup> Response, para. 160.

<sup>595</sup> Reporters Letter – Comments on Ofwat’s Response, 10 April 2015 (REP035).

### 11.2.5 Cheddar TW algae removal

722. In its Initial Statement, Ofwat expressed specific concerns regarding the assurance process supporting the identification of the solution for the algae problem at Cheddar Reservoir.
723. A timeline for the identification of the Cheddar algae solution and the associated assurance is provided with this Reply.<sup>597</sup>
724. We first discussed the Cheddar algae scheme with Ofwat following the RBR. At a meeting with its Wholesale Cost Team Ofwat flagged that, based on our December Submission, it considered that we could avoid expenditure in AMP6 and simply monitor the situation. As this had been a key challenge from the Reporter, which we considered we had responded to in the December Submission narrative, we revisited this for the June Submission, making careful and specific reference to this issue.
725. Ofwat first raised an issue with the assurance of the Cheddar algae scheme in its DDR query 172 (SOC548); we discuss this in Section 10.5.2 of our SoC. In summary, Ofwat's challenge related to the justification for the need for a solution:

*"Please set out how you have responded to Mott MacDonald's challenge on the need to deliver the Cheddar WTW raw water deterioration scheme in AMP6".<sup>598</sup>*

726. In its Response (paras 183 - 185) Ofwat states:

*"On reviewing the full report during draft determination representations we became concerned that it might be more appropriate to address the algal issues at Cheddar treatment works through monitoring in AMP6, with a view to adopting a capital solution in AMP7."<sup>599</sup>*

727. Ofwat also states:

*"We asked Bristol Water how it had responded to Mott MacDonald's challenges (query 172). Bristol responded to us with additional information and set out optioneering to justify why it has chosen the preferred capital intervention. However, we did not consider that the information provided clear empirical evidence to address the key points originally raised by Mott MacDonald."<sup>600</sup>*

728. As indicated in the Reporter's letter regarding this query, the empirical evidence demonstrating the need was clearly presented within the Water is Good to drink section of the December and June submissions.<sup>601</sup>

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<sup>596</sup> Challenge log (REP044).

<sup>597</sup> Cheddar Algae Removal Timeline (REP044).

<sup>598</sup> DDR BRL Wholesale query 172 (SOC548).

<sup>599</sup> Response para. 183.

<sup>600</sup> Response para. 184.

<sup>601</sup> Reporters Letter – Comments on Ofwat's Response (REP035).

729. Ofwat appears to have changed its position regarding our response from its stated position in the FD14 when it said:

*"As part of its response to the draft determination Bristol Water provided a report by Mott MacDonald, which had been completed in 2013 and questioned the need for rebuilding the Cheddar WTW. In the light of this report we expected Bristol Water to have responded with a full strategic options appraisal for Cheddar WTW that showed how it had fully tested the need for a capital solution. We queried Bristol Water as to how it had responded, **but it only pointed to narrative in its business plan** and did not provide a full strategic options appraisal. We did not regard this response as being consistent with the evidence we required to be confident that the scheme is in customers' best interests."<sup>602</sup> (emphasis added)*

*"We acknowledge that it is likely that Bristol Water will need to deal with changes in the quality of its raw water. This is consistent with DWI support for the need to act. However it is not clear that Bristol Water has identified the optimal solution."<sup>603</sup>*

730. In his letter regarding Ofwat's DDR query, the Reporter confirmed that the matters raised by Ofwat in its query had been resolved prior to submission of the December Business Plan.<sup>604</sup>
731. Ofwat appeared to ignore the Reporter's statement that the issues Ofwat was focussing on had been resolved and continued to refer to them as issues in the FD14, making interventions based on that interpretation.
732. We believe that Ofwat has failed to take into account the evidence we provided, and has presented a selective view of the feedback we received from the Reporter, whose comments it has referred to out of context.

### 11.3 Withholding third party assurance reports

733. In its Initial Statement, Ofwat states that "*the independent third party assurance was not submitted*".<sup>605</sup>
734. In the Response, Ofwat suggests that it had concerns regarding our assurance from the start of the process, i.e. at the RBR:

*"Bristol Water commissioned third party assurance reports, referred to in the plan as supporting the proposals, however these actually raised significant issues about the proposed cost of delivery and scope of programme. These reports were not submitted alongside the business plan. They were instead submitted following a number of requests from us during the risk based review process."<sup>606</sup>*

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<sup>602</sup> Bristol Water Final Determination (SOC229), p.69.

<sup>603</sup> Bristol Water Final Determination (SOC229), p.72.

<sup>604</sup> MM Cheddar TW query 172 (SOC547).

<sup>605</sup> Initial Statement, p.9.

<sup>606</sup> Initial Statement, p21.

735. Review of our log of queries received from Ofwat reveals no evidence of such a request from Ofwat.<sup>607</sup> We have also reviewed records of our meetings and conversations with Ofwat during the process but these do not detail the requests Ofwat refers to.<sup>608</sup> We are, therefore, not clear which reports Ofwat believes we submitted as part of the RBR as we have no record of making any submissions of this nature until queries received after the June Submission.
736. As explained in **Section 11.2.2**, below, we supplied all of the assurance reports that were available at the time of the submission of the December Business Plan so there would have been no additional material to provide had we received the requests at the time of RBR.
737. Where Ofwat has specifically identified its concerns, we have shown that we have responded to all material points raised through our assurance process.

### 11.4 Quality of Bristol Water's supporting evidence

738. Ofwat has made repeated assertions that the evidence provided by Bristol Water in support of its Business Plan was neither sufficiently compelling nor of sufficient quality.<sup>609</sup> These comments have been made in respect of evidence relating to:
- the level of totex;<sup>610</sup>
  - special cost factor claims;<sup>611</sup>
  - a three year glide path for customer bills;<sup>612</sup>
  - the performance commitment for supply interruptions;<sup>613</sup>
  - the serviceability penalty;<sup>614</sup>
739. Ofwat has also suggested that some of the information was not provided in sufficient time for it to be taken into account.<sup>615</sup>
740. As explained in our SoC,<sup>616</sup> our plan has been subject to significant levels of scrutiny and challenge from third parties, including the LEF and our various assurance providers. The Board has provided its Board Assurance Statement based on its own scrutiny of the

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<sup>607</sup> Log of Ofwat Queries (REP032).

<sup>608</sup> Following the June submission, Ofwat made requests for the ChandlerKBS reports which we had used for benchmarking purposes; whilst being a third party report, these were not part of our formal assurance process, in the same query it requested the Mott MacDonald report which had been submitted in December; we provided them immediately and at first request (Ofwat query BRL-WHO-001) At DDR Ofwat asked us to explain how we had responded to Mott MacDonald's challenges for Cheddar algae removal (Ofwat query DDR BRL Wholesale query 172 (SOC548)).

<sup>609</sup> Initial Statement, pp. 8, 9, 11, 18, 21, 40; Response, para. 9.

<sup>610</sup> Response, para. 9; Initial Statement, p. 12.

<sup>611</sup> Initial Statement, pp. 10, 11, 22.

<sup>612</sup> Initial Statement, p.40.

<sup>613</sup> Response, paras. 97, 98.

<sup>614</sup> Response, para. 102.

<sup>615</sup> Initial Statement, p. 8, 11.

<sup>616</sup> SoC section 5.5.9.

submissions and assurance support, including personal interfaces with the Reporter and other reviewers.

741. One of the key aspects of the risk-based review was that it linked the level of engagement between companies and the regulator to the quality of each company's plan, i.e. that company's perceived as having poor quality plans were required to have more engagement.<sup>617</sup>
742. Ofwat identified three criteria against which governance was assessed:
- 15.1a - Board assurance that their business plan is of high quality
  - 15.1b - Is the assurance that the Board has given supported by data and evidence from elsewhere in the plan?
  - 15.2 - Extent to which the Board has given adequate assurance that its outcomes are consistent with relevant statutory requirements?
743. Our plan was assessed as 'A – Exceptional' for both 15.1a and 15.2, but for 15.1.b, which Ofwat introduced during its RBR assessment process, we were assessed as 'C - more evidence required'.
744. Ofwat's supporting comment in the RBR is:
- "The Board assurance of BRL's plan meets our expectations, conforms to our guidance and is supported by comprehensive and exceptional evidence. There is also comprehensive and exceptional evidence that the Board has provided assurance with regard to the relevant statutory obligations. However, the assurance that the board has given about the quality of its plan is not fully supported by evidence from elsewhere in plan. **This is because a lack of persuasive evidence in relation to wholesale costs, specifically Cheddar Reservoir Two.** On balance, the overall score for this company is Acceptable (B)."*<sup>618</sup> (emphasis added)
745. Thus it seems that from its initial assessment, Ofwat considered that by virtue of including Cheddar Reservoir Two, the quality of evidence in support of our wholesale costs was called into question and the assurance of our plan could not be considered as reasonable.
746. This was echoed by Ofwat at the initial CMA hearing when comments were made that as Ofwat considered we had provided an unconvincing justification for Cheddar Reservoir Two, Ofwat had started to "worry about the veracity of [our] whole plan".
747. Ofwat also argues that its critical assessment of our business case for Cheddar Reservoir Two in itself "raises significant questions as to whether Bristol Water's business plan has been prepared in a way consistent with good practice". We do not believe that including a scheme which formed a key part of our published Water Resources Management Plan could be considered inconsistent with good practice. That Ofwat did not raise its objections to

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<sup>617</sup> Initial Statement, p. 7.

<sup>618</sup> Letter from Brown to Garcia, Release of company information and next steps March 2014 (SOC400).

Cheddar Reservoir Two as part of the consultation process suggests that it is Ofwat's processes that should be called into question.<sup>619</sup>

748. Whilst Ofwat had carried out deep dives into the cost exclusion cases (which at the time of the RBR for us only included Cheddar Reservoir Two), Ofwat admitted in September 2014 that it had still not looked at the detail of our plan,<sup>620</sup> Given this, it is hard to understand what assessment it had carried out to identify that our evidence was not persuasive at this point, beyond its review of Cheddar Reservoir Two and the key enhancement schemes included as cost exclusion cases.
749. It is worth noting that whilst Ofwat has published the conclusions of its assessment of evidence against its specified criteria, it has not published details of the underlying analysis. Neither has it provided a sufficiently detailed explanation of why it reached this decision, thereby limiting our ability to effectively challenge its conclusions.
750. We have observed that Ofwat has taken a similar stance throughout the PR14 process, with Ofwat repeatedly stating that the evidence we have provided has been of insufficient quality to meet its high evidential bar, with little further detail as to why that was the case.
751. Ofwat has not, however, explained why our evidence was not seen as being sufficient, robust or persuasive – all of which are subjective assessments.
752. We have concerns that Ofwat did not inspect our evidence until late in the process<sup>621</sup> and then when it did it became distracted by historic comments made by our external assurers, convinced that they invalidated the evidence we had provided.<sup>622</sup> We discuss this in **Section 11.2**.

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<sup>619</sup> Ofwat has made no comment regarding the specific assurance of the Water Resources Management Plan, which was separately assured by Atkins whose reports were submitted to Ofwat along with the Business Plan to which they related.

<sup>620</sup> 2 September 2014 Meeting with Wholesale Cost Team.

<sup>621</sup> See Footnote 46 above.

<sup>622</sup> The query regarding Cheddar algae removal (SOC547) illustrates this.

- Following the DDR Ofwat received our response to its query 172 (SOC548), which we believe answered its challenges,
- Ofwat included reference to this area in Sonia Brown's letter to Luis Garcia (REP007).

*"Following your representations, we have issued several queries on how Bristol has responded to the challenges posed by your external advisers on aspects of your wholesale cost proposals.*

*Where other companies have faced similar challenges from their advisers (e.g. on the scope, timing or efficiency of their totex proposals) they have highlighted these challenges in their submission and have explained how the company has responded. This approach has helped us to navigate their representations more clearly and builds confidence that these matters have been considered fully as part of their representations. In comparison, we are concerned that our team has identified some challenges posed by your advisers only as a result of our detailed review of your supporting information or through our query process."*

- Mott MacDonald wrote to us directly following our sharing of this letter with them stating categorically that we had responded to the issues it had raised in the assurance summary statement for July 2013 to its satisfaction;
- Ofwat continued to consider this an issue into the FD14.

## 11.5 Quality of Bristol Water's customer engagement

753. Ofwat sets out how customers' views fed into the PR14 process in its Initial Statement:

*"Effective engagement is vital to establish a legitimate and fair price regime and ensure customer-buy-in. To do this, companies need to undertake good quality engagement with their customers and properly reflect this in the plans they submit to us. We then need to be confident that the company has done this in a robust way, otherwise we intervene."*<sup>623</sup>

754. Ofwat made a specific criticism of the quality of our customer engagement in its Initial Statement but does not go on to explain in detail what the alleged weaknesses are:

*"there were substantive weaknesses in the customer engagement used to support the proposed totex"*.<sup>624</sup>

*"the customer engagement process undertaken to support the proposals was superficial and the conclusions were not sufficiently robust to support the levels of totex that the company was proposing as necessary and appropriate"*.<sup>625</sup>

755. We are surprised by this entirely new criticism from Ofwat regarding our customer engagement process. At the RBR, Ofwat had assessed this element of our business plan as acceptable "(B)"<sup>626</sup> - where a company has demonstrated that it is has robustly addressed stakeholder's expectations, and we have received sufficient and convincing evidence to support companies' proposals". This was also acknowledged in Ofwat's Response.<sup>627</sup>

756. The customer engagement process was extensive and covered the following:

- customer priorities for their water service;
- customers' willingness to pay for different levels of service for different service measures;
- customers acceptability and preference for different service and bill packages;
- customers acceptability of a preferred plan;
- customers' views on incentives; and
- customers' views on long term bill profile, incentives and performance targets for water poverty and easy to contact.<sup>628</sup>

757. The results of this engagement directly shaped the business plan in terms of its investment proposals, service levels and bill impacts. The scope and amount of totex included in our plan was acceptable to 92% household customers in phase 2 of our acceptability research.<sup>629</sup>

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<sup>623</sup> Initial Statement, p. 64.

<sup>624</sup> Initial Statement, p. 9.

<sup>625</sup> Initial Statement, p. 21.

<sup>626</sup> Setting Price Controls, Pre-qualification decisions March 2014 (SOC176), p26

<sup>627</sup> Response, para. 7.

<sup>628</sup> SoC, Section 6.

758. As we set out in our DDR, customers do not know how much the outcomes will cost to deliver.<sup>630</sup> The key issue, therefore, is not the level of totex itself, but whether it is a reasonable estimate of the efficient costs of delivering the plan outcomes. This is not an issue over quality of customer engagement as Ofwat seems to be implying but a disagreement over costs. This is covered extensively in our SoC Sections 9, 10 and 11 and also here in **Sections 2 and 3**.
759. The LEF has had complete oversight of all our PR14 related customer research. It has helped develop the stimulus material used in the customer research and ensured the results were reflected in our business plan throughout its development. All research was carried out to the standards of the Market Research Society Code of Conduct. We therefore believe our customer research is as robust as that conducted by the rest of the industry.
760. The LEF has written separately to the CMA but we understand that it is concerned Ofwat's headline comment risks undermining the extensive process that has been conducted and that Ofwat's conclusions are not consistent with the LEF's experience of Bristol Water's customer engagement process.<sup>631</sup>
761. In terms of the role of customer engagement in its decision making process, Ofwat states:
- "Customer engagement was a key factor in helping us to decide which companies' business plans we need to challenge so that we could protect customers. But it was not the only factor. Plans needed to be well-evidenced, deliver required outcomes, including legal obligations, and be cost-effective to result in a draft determination resembling the company's business plan."<sup>632</sup>*
762. At the RBR in April 2014, Ofwat's assessment of companies' customer engagement and willingness to pay evidence was only one of three tests for the area of outcomes and only one of 15 tests overall (8 were assessed at the RBR stage).
763. Since companies submitted their business plans in December 2013, Ofwat has moved further away from its original policy of taking a "*proportionate approach to assessing business plan proposals depending on customer support for the plan, whether proposals would have a significant impact on service levels or customer bills and the assurance provided by the company and customer challenge group (CCG)*".<sup>633</sup> Instead it has made regulatory decisions that threaten the legitimacy of the engagement process companies have gone through with their customers.
764. For instance, In January 2014, Ofwat issued its risk and reward guidance in which it suggested an ODI upside of more than 1.0% was reasonable.<sup>634</sup> Ofwat concluded that the

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<sup>629</sup> Our plan actually included an initial reduction of 4.5% in bills. Therefore the acceptability research was actually undertaken at a slightly higher level of bills than we proposed.

<sup>630</sup> Bristol Draft Determination Representation October 2014 (SOC048), p. 10.

<sup>631</sup> LEF Report to the CMA April 2015 (SOC630), p7.

<sup>632</sup> Initial Statement, p.66.

<sup>633</sup> Ofwat' customer engagement policy statement August 2011 (SOC065), p6.

<sup>634</sup> Ofwat Risk and Reward Guidance Jan 2014 (SOC079), p. 51.

lack of customer and CCG support for financial rewards was a result of the way in which the discussion had been framed and therefore disregarded the available evidence of customer views on this issue.

765. Bristol Water's customer research on incentives found customers did not support the principle of financial rewards paid for through higher customer bills.<sup>635</sup> Although it did accept the rewards we proposed were appropriate if Ofwat required them, CCWater carried out its own research into customers' views on incentives following Ofwat's risk and reward guidance and found customers' views were negative towards rewards.<sup>636</sup> The LEF continues not to support financial rewards for outperformance.<sup>637</sup>
766. In its DD14, Ofwat also adjusted the performance commitments for five performance measures (interruptions to supply, water quality contacts, drinking water quality compliance, internal sewer flooding and pollution incidents) to an upper quartile level for all non-enhanced companies following a horizontal comparison.
767. The performance commitments within Bristol Water's business plan were a result of the direct engagement we carried out with our customers in the willingness to pay research and the acceptability research. By altering the performance commitment to an upper quartile level, Ofwat has disregarded the results of our customer research and set levels of performance that customers may not be willing to pay for and/or are beyond the level that customers currently find to be acceptable. The LEF comments on this in its draft determination representation.

*"The LEF confirms that such performance and associated investment is not aligned with the views of Bristol Water's customers including their willingness to pay".<sup>638</sup>*

768. Ofwat has also raised the issue of customer and CCG's access to comparative information as a potential area of weakness of our customer engagement.

*"The CCG process was not a negotiated settlement. In fulfilling our duty to make determinations we used comparative information, which the CCGs would not have available to them, such as efficient costs. The horizontal checks that we carried out on outcomes, once we had the information to do so, enabled the CCGs to challenge the companies further before they contemplated their additional representations on our draft determinations."<sup>639</sup>*

*"Bristol Water's customer testing of business plan scenarios is not a sufficient condition for a business plan to be considered robust, particularly as customers do*

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<sup>635</sup> Blue Marble Rewards and Penalties research Nov 2013 (SOC186) and Blue Marble Updated workshop findings May 2014 (SOC399).

<sup>636</sup> CCWater Outcome and Delivery Incentives in the Water Industry, March 2014 (REP029).

<sup>637</sup> LEF report to the CMA April 2015 (SOC630), p. 7.

<sup>638</sup> LEF report to Ofwat Oct 14 (SOC198), p. 12.

<sup>639</sup> Initial Statement,, p. 66.

*not appear to have been provided with good information on relative efficiency and quality of service".<sup>640</sup>*

769. We believe Ofwat is taking a very narrow view by commenting only on the lack of comparative cost data available to customers when considering the acceptability of the business plan proposals. Bristol Water is not alone in not having access to comparative cost data - this is applicable to all companies and therefore we would be very surprised if any other company had incorporated this into the acceptability research it conducted. Our acceptability research met all the criteria set by CCWater in its guidance 'Expectations for companies' acceptability testing of business plans'.<sup>641</sup> Ofwat did not publish any equivalent guidance.
770. That said, where possible we did provide relative industry performance data for customers to aid their decision making. We provide more details on this in **Section 6** above.
771. Furthermore we held a meeting on 11 September 2014 with the LEF to review the DD14 once Ofwat had made its horizontal comparisons. At this meeting, the LEF did challenge us further on the interventions Ofwat had made to our performance measures. The LEF report to Ofwat on DD14 confirms it had reviewed Ofwat's interventions in light of the comparative information but remained supportive of the performance commitments in our June Submission (apart from the deadband for mean zonal compliance).

*"The LEF is supportive of the Company's arguments in its representations with the exception of its proposed deadband on mean zonal compliance because of the potential negative impact on customers."<sup>642</sup>*

772. Ofwat has also used the results of our phase 1 acceptability customer research to conclude that *"there is no strong case for Cheddar 2 by itself"*.<sup>643</sup> This is a misunderstanding of the research, since the packages referred to by Ofwat contained building Cheddar Reservoir Two. More details are given in **Section 2.5.4**.

## 11.6 Quality of Bristol Water's engagement with Ofwat

773. Ofwat states that:

*"Bristol Water was the only company that we offered to have further engagement with beyond our standard process on wholesale costs, as set out in the letter to Bristol Water from Sonia Brown of 10 October 2014"*<sup>644</sup>

774. We understand that throughout the PR14 process up to 6 August 2014, the level of engagement between Ofwat and Bristol Water was similar to other.

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<sup>640</sup> Response, para. 28.

<sup>641</sup> CCWater expectations for acceptability testing 2013 (SOC185).

<sup>642</sup> LEF report to Ofwat Oct 14 (SOC198), p. 5.

<sup>643</sup> Jacobs, p. 4.

<sup>644</sup> Final Price Control Determination Notice: Company Specific Appendix - Bristol Water (SOC229), p21.

### 11.6.1 Engagement post RBR

775. On receiving the RBR, we were concerned at the size of the wholesale totex gap compared to our Business Plan as well as other points raised by Ofwat. Whilst we were keen to discuss these issues with Ofwat at the earliest opportunity, it was focused on 'enhanced' companies initially.
776. In April 2014, similar to other companies, we were able to discuss these differences with Ofwat in workshops at its offices. We also had company specific meetings during May 2014. During these meetings, Ofwat suggested we should use the cost exclusion mechanism to explain any differences. Our relationship with Ofwat at these workshops was quite amicable.
777. In June 2014, following Ofwat's specific request across the industry, we provided detailed comments and views on Ofwat's econometric modelling.<sup>645</sup>
778. In our June Submission, we responded to the wholesale totex issues identified at RBR, specifically through the inclusion of Cost Exclusion Cases. These were intended to bridge the totex gap.

### 11.6.2 Engagement post 6 August 2014

779. On 6 August 2014, Ofwat published 'Protecting customers where there are very material differences between companies' re-submitted plans and Ofwat's wholesale cost assessment'<sup>646</sup> which detailed the issues for three companies' price controls:
- Bristol Water – water;
  - United Utilities – wastewater; and
  - Thames Water (Thames Tideway Tunnel).
780. Ofwat provided this information in advance of DD14 in order to *"give those companies affected as much time as possible to review the relevant parts of their plans relating to these price controls ahead of the deadline for re-submitting evidence for our final determinations in December 2014."*<sup>647</sup>
781. Whilst the 6 August 2014 publication allowed us three additional weeks to review the issues identified, we were not able to meet with Ofwat to discuss them until after the publication of DD14, the same as other companies. Until this point, we had not received any additional communication or queries<sup>648</sup> from Ofwat specifically in relation to the wholesale cost difference.
782. In the period between DD14 and the DDR we requested a number of meetings with Ofwat, which were held at Ofwat's offices. During these meetings we were keen to find ways to

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<sup>645</sup> Response to Ofwat's PR14 Cost Models, 3 June 2014 (REP054).

<sup>646</sup> IB17/14 Protecting Customers August 2014 (SOC070).

<sup>647</sup> IB17/14 Protecting Customers August 2014 (SOC070).

<sup>648</sup> Ofwat confirmed in an email on 10<sup>th</sup> November that queries were only issued for technical questions about submissions or if Ofwat had identified further evidence referenced in a submission but not provided.

overcome the differences that remained, particularly as the cost exclusion process had not had a material impact on bridging the totex gap and that Ofwat had not reacted to the modelling points raised. At these meetings, Ofwat was keen to ensure it was following the same process for all companies and was clear that it could not “co-create” solutions. The meetings largely consisted of us providing evidence with Ofwat responding with high level feedback. Examples of this feedback included:

*“Bristol needs to explain the unique characteristics that are not covered by the models”<sup>649</sup>; and*

*“Bristol should show trends and why they are different to others”<sup>650</sup>*

### 11.6.3 Engagement post DDR

783. On Friday 3 October 2014, the day we submitted the DDR, Ofwat telephoned asking that we attend a meeting in London on Monday 6 October 2014. At this meeting, Ofwat set out that it was prepared to confidentially maintain dialogue with Bristol Water, solely in relation to wholesale totex.
784. On 10 October 2014, Ofwat sent Bristol Water a letter<sup>651</sup> that set out four questions on wholesale totex which it wished to use as the basis for continued dialogue. In the letter, Ofwat made clear that information and discussions may be made public. In addition, Ofwat formally rejected the suggestion in our DDR that we explore ways to facilitate constructive engagement, such as mediation.<sup>652</sup> The letter was posted on Ofwat’s website.
785. The subsequent meetings were structured for Bristol Water to provide information to Ofwat, which would question the information provided. During these meetings, it was clear that Ofwat was not satisfied with the information we were providing. We asked if Ofwat could expand on the four questions to help make it clearer how to respond, bearing in mind that we considered many of the issues had been addressed in detail in our DDR, but Ofwat felt the questions were already clear and therefore provided no further explanation.
786. We were transparent throughout these meetings that we had engaged Oxera to perform further modelling work. As set out in **Section 3.4.1**, we were not able to provide the modelled output to the timescales that Ofwat originally requested due to the process involved. We provided access as soon as it was complete.
787. On 5 November 2014, at our request, a further meeting was held at Ofwat’s offices attended by two non-executive members of our Board in addition to executive members. Jonson Cox and Cathryn Ross attended for Ofwat in addition to the price review team. At the start of the meeting, Ofwat set out that this was the last opportunity for dialogue. Ofwat expressed concern that there were gaps in our submissions, which showed a lack of openness and

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<sup>649</sup> Bristol Water notes of meeting on 18<sup>th</sup> September 2014.

<sup>650</sup> Bristol Water notes of meeting on 18<sup>th</sup> September 2014.

<sup>651</sup> Letter from Ofwat on further engagement October 2014 (SOC297).

<sup>652</sup> In Appendix 9 of the DDR (SOC020), we requested that Ofwat confirm its willingness to participate in a form of constructive engagement to help resolve differences.

transparency and suggested that we had wasted time. Our non-executive board members set out that this was not the process that they had observed through the series of discussions at Board meetings on PR14. The meeting then focused on Bristol Water providing information to support our submissions.

788. We appreciated the additional opportunity of engagement that Ofwat offered. However, the limitations placed on the nature and period of each engagement meant that they were of limited effectiveness. The analysis that Ofwat has now, subsequently, set out in the Response was not made available during this engagement.

#### 11.6.4 Summary of quality of engagement with Ofwat

789. Despite Bristol Water having a significant cost difference to Ofwat at RBR, Ofwat has only now provided any details of some of its concerns in the Response. Arguably, Ofwat now appears to have only become focused on Bristol Water from September 2014, which gave little time for concerns to be overcome. The high level comments made by Ofwat during extra meetings did little to assist resolving differences. We are somewhat disappointed that Ofwat has chosen to accuse Bristol Water of following a poor process, rather than trying to find appropriate ways to understand the causes behind the differences of opinion regarding the totex gap.

#### 11.7 17 out of 18 companies accepted FD14

790. Bristol Water was the only company that chose to reject one of its FD14 price controls. This point is noted by Ofwat in various places in the Response.<sup>653</sup> In particular, Ofwat asserts that the fact that 17 out of 18 companies accepted their final determinations indicates that they were happy with, and accepted, the methodology used to reach FD14 and its specific components. Implicit in this is a suggestion that Bristol Water has acted unreasonably in rejecting its wholesale price control and that it is the only water company that has any objections to the process or its results. For instance, Ofwat states *“we are confident that our models’ forecast is appropriate as is evidenced by the fact that all companies except Bristol accepted their result by accepting our final determinations.”*<sup>654</sup>
791. This is, however, too simplistic as an explanation. In deciding to accept their final determinations, the other 17 WoCs and WaSCs would have looked at FD14 as a package, and weighed the potential gains that might arise from a redetermination against the costs such a process entails. These include the direct financial costs, as well as the impact on management time and the inevitable delay to commencing the AMP6 programme. As such, whilst it is technically true that 27 of the 28 wholesale price controls were accepted,<sup>655</sup> in reality each of these price controls would not have been looked at in isolation by the water companies, but instead would have been assessed as a package along with the other price controls relevant to each company, as well as the other revenue building blocks such as WACC, etc. and may have taken into account the impact of the RCV CIS (see **Section 9**

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<sup>653</sup> See, for instance, Response para. 13.

<sup>654</sup> Response, para. 260.

<sup>655</sup> Response, para. 20.

below).<sup>656</sup>,<sup>657</sup> For most companies, losses in some areas would have been balanced by gains in others. This was not, however, the case for Bristol Water.

792. It is also clear that the decision to accept FD14 does not automatically equate to acceptance of all aspects of Ofwat's methodology.<sup>658</sup> Companies submitted critical comments regarding Ofwat's cost assessment approach, and its modelling in particular, in June 2014.<sup>659</sup> Our understanding is that companies still hold these concerns, despite having chosen to accept FD14. It is too simplistic, therefore, to rely on this basic statistic as support for any proposition regarding the success of the process, or the support of the companies for each individual component of Ofwat's methodology.<sup>660</sup>
793. Ofwat states that its cost thresholds and projections "*accurately reflect the revised business plans of 17 out of the 18 water companies – and as illustrated in [Figure 1] Bristol Water is the only exception to this pattern*".<sup>661</sup> The implication is, therefore that the model works for 17 companies, so the fact that Bristol Water is an outlier is not the fault of the model, but is instead indicates that "Bristol Water has a relatively high cost plan and the scope to make very significant efficiency savings".<sup>662</sup> As we have demonstrated, however, the model is not accurate for all other companies – for some it actually favourably overestimates the amount of totex required which was, undoubtedly, a factor when making a decision, in the round, whether to accept or reject FD14. Also, even a simple model will generally always get the average costs right – what matters is whether it gets it right for companies at the end of the

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<sup>656</sup> This is consistent with how FD14 has been characterised by Sonia Brown in an interview in the Water Report, February 2015: "*it's important to say that PR14 is a package, it has to be viewed as a whole in order to make sense of it*" (REP003), p. 8.

<sup>657</sup> It is true that the Bristol Water board made acceptance/rejection decisions in respect of each price control individually. Bristol Water chose to accept the retail price controls, however, in the context of having first decided to reject the wholesale price control and knowing that the terms of reference to the CMA were likely to cover the entirety of FD14 based on Ofwat's expressed preference and interpretation of the periodic review rules. If the position were clearer that each individual price control is capable of redetermination on a stand-alone basis, then there is a definite possibility that more companies would have sought redetermination of at least one of their price controls. See also Section 15 of the SoC. In any event, Bristol Water's acceptance of the retail price controls as a package does not mean that Bristol Water agrees with each of the individual components, as demonstrated in **Section 11.7** above (see also Sections 14 and 15 of the SoC).

<sup>658</sup> For instance, in relation to outcomes, Ofwat notes that "*Overall however, the majority of responses from companies included some challenge to the underlying principles of UQ targets based on our comparative analysis*" (FD14 Chapter A2 (SOC329), Section A2.3.2). This demonstrates all the issues that companies raised with outcomes in their responses to DD14. It is safe to assume that any such concerns not addressed in FD14 would still stand, but that they clearly did not have sufficient impact by themselves to merit rejection of FD14.

<sup>659</sup> See also Section of the SoC.

<sup>660</sup> In the Response, Ofwat notes that "*15 of the 16 non-enhanced companies accepted the upper quartile challenge made in our comparative assessments (they were either already proposing upper quartile performance commitments or they accepted our interventions). Bristol Water is the only company that has not accepted our interventions following our comparative assessments.*" (Response, para. 96). Ofwat also notes that "*all the other 15 non-enhanced companies accepted or proposed upper quartile performance commitments for supply interruptions from 2017-18 to 2019-20, either through our interventions or through their own business plan targets*" (Response, para. 97). Similarly, "*all the other 15 non-enhanced companies accepted or proposed upper quartile performance commitments for negative water quality contacts and mean zonal compliance from 2017-18 to 2019-20, either through our interventions or through their own business plan targets*" (Response, para. 98).

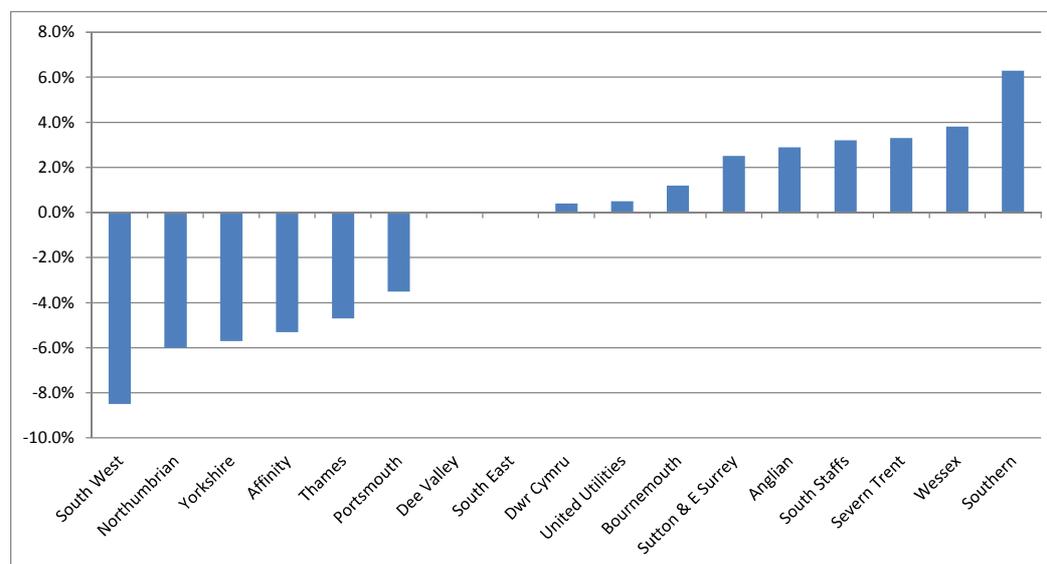
<sup>661</sup> Response, para. 36.

<sup>662</sup> Response, para. 51.

spectrum. Given that Ofwat has been unable to demonstrate that our plan is relatively high cost, or that we have substantial in-built inefficiencies, other than by pointing to the model, the model in itself must be called in to question.

794. In summarising its approach to cost assessment, Ofwat states that “the combination of these approaches has allowed us to successfully establish cost thresholds and make projections for 17 out of 18 water companies”.<sup>663</sup> It is worth noting, however, that analysis of the actual menu choices made by companies, rather than the implied menu choice, as set out in Figure 17 below, indicates that only two companies have opted for a menu choice of 100, with the remainder selecting a menu choice for wholesale water that is reflective of their business plan as opposed to their final determination allowances.

Figure 17 Absolute variance of the menu choice to the wholesale water cost baseline for companies that have accepted FD14



Source: Bristol Water analysis<sup>664</sup>

795. This implies that each of these companies, despite accepting FD14, do not believe that Ofwat’s cost allowance is an accurate prediction of what they are likely to spend during the period.

796. Ultimately, it must be remembered that rejection of regulatory price controls and referral for redetermination is simply part of the process provided for in the WIA '91 and the Licence.<sup>665</sup> It is unfortunate that for the second price control in a row Bristol Water has been put in a position where a redetermination was unavoidable, but that does not mean we were wrong to reject the wholesale price control, or that other companies are wrong not to accept it. The nature of the redetermination means that our case should be assessed on its

<sup>663</sup> Response, para. 162.

<sup>664</sup> Bristol Water has been excluded from this chart as it has not accepted FD14.

<sup>665</sup> The same is equally true for other industries still subject to price controls in one form or other. The recent request for redetermination of multiple energy price controls is a good example of this.

merits, and not by reference to the choices of other companies which may be influenced by a variety of factors to which we are not party.

### **11.8 Conclusions on PR14 process and assurance**

797. In conclusion, we believe that Ofwat's criticisms detailed in this Section are neither warranted nor borne out by evidence.

## Appendix 1: Refinancing of Bristol Water plc 2003-2005

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### 1 Introduction

1. In its Response Ofwat makes reference to the loans Bristol Water has made to its Holding Company.<sup>666</sup> It goes on to say that *"The interest received from loans to the holding company is not relevant to our calculation of notional cost of embedded debt, as we assume that companies do not make loans to holding company. However, the interest received is clearly relevant to an assessment of Bristol Water's actual cost of embedded debt."*<sup>667</sup> Here we set out the nature of the loan and the associated borrowings to demonstrate it is not relevant to our embedded debt cost.

#### 1.1 Summary

2. A new financing arrangement was put in place in 2003 to provide a better mix of debt with a longer maturity profile appropriate to the long-term nature of the assets being financed. The new financing was based on a ringfenced structure which enabled a substantial increase in the gearing of the ringfenced business.<sup>668</sup> RBS had introduced its credit wrapped Artesian financing vehicle to allow small WoCs to access longer term bond financing rather than accessing bond markets directly and in smaller more efficient tranches.
3. Changes to the Licence to facilitate this were agreed with Ofwat which came into force in February 2004.<sup>669</sup> They were broadly similar to those agreed by other companies who had significantly increased gearing levels through financial restructuring prior to this.<sup>670</sup>

#### 1.2 Structure of the Reply

4. This section is structured as follows:
  - borrowings raised (see **Section 2**);
  - premia (see **Section 3**);
  - what borrowings were used for (see **Section 4**);
  - intercompany loan interest and dividends (see **Section 5**);
  - gearing evolution (see **Section 6**); and
  - return of capital to shareholders (see **Section 7**).

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<sup>666</sup> Response, para. 66. para. 294.

<sup>667</sup> Response, para. 294.

<sup>668</sup> Bristol Water Holdings plc Report and Accounts 2003 (REP023), Operating and Financial Review p.2.

<sup>669</sup> The modifications principally concerned the ringfencing of the regulated water business, the management and conduct of the business and the role of the ultimate parent. The modifications were broadly similar to those agreed by other companies who had significantly increased gearing levels through financial restructuring. An example of one of the changes was the requirement for three independent non-executives to sit on the board of the company.

<sup>670</sup> Bristol Water Holdings plc Report and Accounts 2003 (REP023), Operating and Financial Review, p. 3, Amendments to licence of appointment.

## 2 Borrowings raised

5. The following borrowings were raised under the Artesian finance bond programmes

Table 1 Artesian Finance

			Interest rate	£m	Repayable
ARTESIAN FINANCE PLC <sup>671</sup>	07-May-03	Indexed linked	3.635% + RPI	15.0	30 Sept 2032
ARTESIAN FINANCE II PLC	07-May-03	Fixed rate	6.01%	30.0	30 Sept 2033
ARTESIAN FINANCE PLC	12-Feb-04	Indexed linked	3.635% + RPI	26.0	30 Sept 2032
ARTESIAN FINANCE II PLC	12-Feb-04	Fixed rate	6.01%	27.5	30 Sept 2033
ARTESIAN FINANCE PLC	13-Jun-05	Indexed linked	3.635% + RPI	50.1	30 Sept 2032
				<b>148.6</b>	

Source: Bristol Water

6. Three other water companies had used the Artesian Finance plc bond programme prior to us taking out the borrowings in 2003.

## 3 Premia

7. The financing incurred net costs of issue in 2003/04, and net premium in 2005/06:

Table 2 Costs and Premia relating to Artesian borrowings

	2004	2006
	£m	£m
Prof fees and exp	1.7	0.5
Gilt lock costs	1.2	0.6
Premia	-2.2	-6.8
Net premium/costs	<b>0.7</b>	<b>-5.7</b>

Source: Bristol Water plc Annual Report and Accounts 2004 note 11 and 2006 note 13

8. These are amortised over the life of the loans in financial statements.

9. The gilt locks provided a hedge against adverse movements in gilt yields between the dates when the additional borrowings were priced and the dates when they were drawn down.

10. In order to reflect changes in market conditions since the Artesian programme was initiated, the actual cash received in respect of the loans drawn was higher than the principal, the excess being treated in financial statements as a premium and amortised on a straight line basis over the lives of the loans. On an accounting basis, the effective rate of interest on the loan drawn in 2005/06 was 3.25%.<sup>672</sup> This does not reflect the ongoing cash position.

<sup>671</sup> Artesian Loan Agreement 7 May 2003 (REP039). Copy of Facility Agreement, £15m Facility Agreement Bristol Water Core Holdings Limited and Artesian Finance PLC dated 7 May 2003.

<sup>672</sup> Bristol Water plc Annual Report and Accounts 2006 (REP025), Note 13.

## 4 Use of funds

11. Specific use of funds raised by the refinancing are shown in the table below. The majority of the funds were used directly within the regulated business.

**Table 3 Allocation of funds from refinancing**

		£m	
<b>2003/04</b>	Repayment of unsecured bank loan May 2003 <sup>673</sup>	20	£45m drawn May 2003
	Finance ongoing capital programme <sup>674</sup>	25	
	Loan to Holding company <sup>675</sup>	47	£53.5m drawn Feb 2004
	General operational use	6.5	
<b>2005/06</b>	Loan to Holding company <sup>676</sup>	21.5	£50m drawn in June 2005
	Additional one-off contribution of £7m to the final salary pension scheme <sup>677</sup>	7	
	Additional pension scheme contribution in relation to restructuring <sup>678</sup>	1.5	
<b>2005/06-2006/07</b>	Capital expenditure and debt maturities <sup>679</sup>	15.1	
<b>2006/07-2010/11</b>	Additional pension scheme contributions of £1m pa for four years, and £0.9m in 2010/11 <sup>680</sup>	4.9	
		148.5	£148.5m

Source: Bristol Water plc and Bristol Water Holdings plc Annual Reports and Accounts

## 5 Inter company loan interest and dividends

12. The loans to the holding company bear interest at a similar rate to the underlying Artesian loans, and are repayable when the Artesian loans are repayable. As Ofwat states, the interest receivable is not relevant to the notional cost of embedded debt, and was accepted as a factor not for inclusion at the previous price review.
13. A dividend is paid up to Bristol Water Holdings UK Limited from Bristol Water plc, to fund the interest payments to Bristol Water plc on the inter-company loans. The principal activity of Bristol Water Holdings UK Limited is that of a holding company for Bristol Water plc, the principal trading subsidiary.
14. Bristol Water plc's dividend policy is to pay an annual level of ordinary dividends comprising:

<sup>673</sup> Bristol Water Holdings plc Report and Accounts 2003 (REP023), Operating and Financial Review.

<sup>674</sup> Bristol Water Holdings plc Report and Accounts 2003 (REP023), Operating and Financial Review.

<sup>675</sup> Bristol Water plc Annual Report and Accounts 2004 (REP024), Note 14.

<sup>676</sup> Bristol Water plc Annual Report and Accounts 2006 (REP025), Chairman's statement p. 3.

<sup>677</sup> Bristol Water plc Annual Report and Accounts 2006 (REP025), Note 21(a).

<sup>678</sup> Bristol Water plc Annual Report and Accounts 2006 (REP025), Note 21 (b).

<sup>679</sup> Bristol Water plc Annual Report and Accounts 2006 (REP025), Chairman's statement p. 3.

<sup>680</sup> Bristol Water plc Annual Report and Accounts 2006 (REP025), Note 21 (a).

- a base level reflecting the cost of capital allowed by Ofwat in the 5-year determination of price limits, adjusted to reflect actual gearing levels and where appropriate actual performance relative to Ofwat's assumptions, and
- an amount equal to the post-tax interest receivable from Bristol Water Holdings UK Limited, a UK parent company in respect of inter-company loans.<sup>681</sup>

The dividends payable in respect of the inter-company loan are not included in the price review in parallel with the interest receivable to which they relate.

**Table 4 Details of inter company loans and dividends**

Date of loan <sup>682</sup>	Value £m <sup>683</sup>	Interest rate <sup>684</sup>	Interest received pa £m	Interest received 2014/15 post tax £m	Dividends paid 2014/15 £m	Cost of related Artesian loans 2014/15 £m	Repayable <sup>685</sup>
<b>12 Feb 2004</b>	47.0	6.042%	2.8	2.2	2.2	2.8	30 Sept 2033
<b>13 Jul 2005</b>	21.5	5.550%	1.2	0.9	0.9	1.3	30 Sept 2032
	68.5		4.0	3.1	3.1	4.1	

Source: Bristol Water plc Annual Report and Accounts, 2014/15 figures calculated from Bristol Water's management accounts.

## 6 The evolution of the company's gearing

**Table 5 Net debt (excluding preference shares) as a proportion of RCV since 2009-2014**

		2014 <sup>686</sup>	2013 <sup>687</sup>	2012 <sup>688</sup>	2011 <sup>689</sup>	2010 <sup>690</sup>	2009 <sup>691</sup>
<b>RCV</b>	£m	411	389	354	310	272	265
<b>Net debt / RCV</b>	%	68	62	54	58	70	76

Source: Bristol Water plc Annuals Reports and Accounts

<sup>681</sup> Bristol Water plc Regulatory Accounting Statements 2014 Related Party Transactions note (SOC046), p. 25.

<sup>682</sup> Bristol Water plc Annual Report and Accounts 2006 (REP025), Note 8.

<sup>683</sup> Bristol Water plc Annual Report and Accounts 2006 (REP025), Note 8.

<sup>684</sup> Bristol Water plc Annual Report and Accounts 2006 (REP025), Note 8.

<sup>685</sup> Bristol Water plc Annual Report and Accounts 2006 (REP025), Note 8.

<sup>686</sup> Bristol Water plc Annual Report and Accounts 2014 p31 Financial KPIs (SOC046).

<sup>687</sup> Bristol Water plc Annual Report and Accounts 2014 p31 Financial KPIs (SOC046).

<sup>688</sup> Bristol Water plc Statutory Accounts 2012 p7 Key Financial Highlights (REP057).

<sup>689</sup> Bristol Water plc Statutory Accounts 2012 p7 Key Financial Highlights (REP057).

<sup>690</sup> Bristol Water plc Statutory Accounts 2010 p1 Financial Highlights (REP056).

<sup>691</sup> Bristol Water plc Statutory Accounts 2010 p1 Financial Highlights (REP056).

Table 6 Net debt (excluding preference shares) as a proportion of RCV since 2003-2008

		2008 <sup>692</sup>	2007 <sup>693</sup>	2006 <sup>694</sup>	2005 <sup>695</sup>	2004	2003
<b>RCV</b>	£m	276	260	235	229	208 <sup>696</sup>	183 <sup>697</sup>
<b>Net debt / RCV</b>	%	71	68	71	61	67 <sup>698</sup>	41 <sup>699</sup>

Source: Bristol Water plc Annual Report and Accounts, Regulatory Accounts

15. Immediately prior to the refinancing, our net debt to RCV (gearing) was 41%, well below the notional gearing assumption of 62.5% used for PR14. Whilst, as set out in Section 0, some of the proceeds of the Artesian loans were used to increase gearing, the table above illustrates that Bristol Water was financed with a high level of equity funding beforehand. We therefore believe it is appropriate to include the cost of the Artesian funds in embedded debt calculations.
16. As at 31 March 2014 our gearing at 68% was below the industry average of 70%, and sat firmly in the middle of the range which was between 56% (South West Water) and 81% (Portsmouth and South East Water).<sup>700</sup> This demonstrates we are not an outlier in terms of gearing nor as a result of the refinancing that took place.

## 7 Returns to shareholders

17. The intercompany loans to the holding company were used, with other cash balances, to finance return of capital and value (i.e. not all return was of capital nature) to shareholders and move to a more typical gearing structure:

Table 7 Inter company loans and returns to shareholders

Inter company loan	Return value
<b>2003/04</b>	£47m
<b>2005/06</b>	£21.5m
<b>Total</b>	£81m

Source: Bristol Water plc Annual Report and Accounts 2004 (REP024), Chairman's statement, and 2006 (REP025) Chairman's statement, Amendments to licence of appointment.

<sup>692</sup> Bristol Water plc Annual Report 2008 p1 Financial Highlights (REP055).

<sup>693</sup> Bristol Water plc Annual Report 2008 p1 Financial Highlights (REP055).

<sup>694</sup> Bristol Water plc Annual Report and Accounts 2006 p1 Financial Highlights (REP025).

<sup>695</sup> Bristol Water plc Annual Report and Accounts 2006 p1 Financial Highlights (REP025).

<sup>696</sup> Bristol Water plc Regulatory Accounts 2004 p40 Note C10 (REP024).

<sup>697</sup> Bristol Water plc Regulatory Accounts 2004 p40 Note C10 (REP024).

<sup>698</sup> Bristol Water plc Annual Report and Accounts 2004 p2 Chairmans Statement (REP024).

<sup>699</sup> Bristol Water Holdings plc Report and Accounts 2003 Operating and Financial Review p10 (REP0237).

<sup>700</sup> Industry datashare 2014 (SOC542).

## Appendix Two – Request to Ofwat for supporting evidence

Text from Bristol Water request email dated 31 March 2015

*"We have attached a list setting out the key arguments in Ofwat's Response for which it would be helpful to identify the relevant sources of underlying evidence. If you could, therefore provide accurate references for each of these points it would be greatly appreciated. Please either direct us to the relevant published materials, or where appropriate provide a copy of the underlying analysis or data referred to or relied upon in the text. For clarity, in most cases we have highlighted the relevant text in bold. In the interests of time, we have deliberately confined the list to main arguments pertinent to the CMA's review."*

Page	Para	Statement/quotation from Ofwat Response	Why a priority?	What material is expected?
6	19	the benchmarking models we adopted have been <b>subject to an extensive testing and selection process, and have been verified</b> by our expert consultants and advisors as robust	One of Bristol Water's ('BW') central arguments concerns the robustness of Ofwat's models. Ofwat does not specify what evidence it is relying on to demonstrate the strength of the testing and selection process, or the expert reports which verify the models as being robust.	Please specify the materials on which Ofwat relies in making this assertion. Please provide details of testing, selection and verification process carried out, including relevant reports from expert consultants and advisors that are not already in the public domain.
7	19	<b>the wisdom and expertise of Jacobs, PwC, CEPA and our academic adviser (Dr Andrew Smith of the University of Leeds)</b> , which we have drawn on extensively in both developing and implementing our approach to wholesale cost assessment	This also relates to the robustness of the models and the cost assessment approach. Ofwat does not provide a reference to the expert advice received from each of the named advisors and which it has drawn on extensively.	Please specify the materials containing expert advice from the named advisors on which Ofwat has relied. Please provide details of the advice from these experts, in original form, as provided to Ofwat, if not already in the public domain.
8	22	In relation to the sustainability of our cost projections there is <b>strong evidence</b> that our allowances for costs are consistent with longer-term efficient levels	Ofwat's central argument is that BW is inefficient based on its evidence from its econometric model. This is intrinsically linked to Ofwat's assertion that its cost-projections are consistent with efficient costs. Ofwat has not, however, indicated what the 'strong evidence' is on which it relies, nor where it can be	Please provide details of the evidence on which Ofwat relies in whatever form it takes.

			found, which limits our ability to respond effectively to this assertion. We do not consider that the text following this assertion in the Response addresses this point.	
10	34	We have adopted a <b>rigorous and transparent approach to model selection and testing</b> , which has involved <b>validation by CEPA, PwC and our academic advisor (Dr Andrew Smith)</b>	Again, this is relevant to the arguments regarding the robustness of the econometric models. Ofwat has not specified the evidence regarding selection, testing and validation by the named third party experts on which it relies.	As with the previous requests regarding para. 19, please specify the materials on which Ofwat relies and, if not already available, provide copies. We consider that it is also important for Ofwat to provide copies of any communications between Ofwat, CEPA, Prof. Smith, and PwC, regarding the adequacy of the model generally and specifically as regards how it assessed BW.
11	39	Bristol Water has also suggested that excluding certain companies from the dataset and re-estimating models reveals that the model coefficients are not stable. We question the validity of this test (in particular given the small dataset) but in any case it is more important to evaluate the stability of the models' predictions rather than individual coefficients. <b>Tests show that across the industry our forecasts were stable when compared to the average forecasts obtained through the exclusion of single companies from the sample (an average absolute difference of 0.6% from current predictions, with a standard deviation of 0.5%).</b>	This concerns outputs of the econometric modelling, and is relied upon by Ofwat to support the proposition that the models are robust. No details of the tests on which Ofwat is relying have been provided, which limits our ability to assess the accuracy of this assertion.	Please provide the analysis and test data underpinning these conclusions.
11	39	For Bristol Water <b>the average prediction</b> was only 1.4% higher than its forecast derived from the model estimated on the basis of the full set of	This concerns outputs on econometric modelling. No supporting evidence is provided or referenced for this statement, which limits our	Please provide the analysis and test data underpinning these conclusions regarding the average prediction for

		companies;	ability to assess the accuracy of this assertion.	Bristol Water.
19	74	<b>We interpret</b> this financing duty as requiring that we ensure that an efficient company with a notional capital structure is able to finance its functions.	Financeability and cost of capital are key arguments in our SoC. Central to this is the interpretation of the Finance Duty. Ofwat has not provided or referenced a supporting explanation setting out the basis for this interpretation, which clearly deviates from the plain wording of the WIA '91. Understanding the legal basis on which Ofwat's interpretation of the statutory wording is based would be helpful, particularly with regards to the focus on 'an efficient company with a notional capital structure'.	Please provide evidence to support this interpretation of the Finance Duty.
22	94	Our estimates of totex are based <b>on estimates of historical efficiency, with the best companies delivering both cost efficiency and relatively high levels of service</b>	Ofwat's central argument is that BW is inefficient based on its evidence from its econometric model. This argument is now being developed further to suggest that high efficiency on costs and upper quartile performance go together, yet Ofwat has not provided any evidence to support this assertion.	Please provide the supporting analysis that demonstrates that low cost high efficiency companies consistently deliver upper quartile performance.
26	110	We collected further information from all companies on actual expenditure split between each serviceability indicator in a query we issued on 31 October 2014. This broadly supported our approach, but we noted that in some cases our draft determination methodology might result in disproportionately large values. <b>We altered our calculation to address this issue.</b>	This relates to the serviceability penalty argument. No supporting evidence is provided or referenced regarding the information gathered from the companies or the resulting alteration in the calculation. This limits our ability to challenge this approach.	Please provide the information gathered as part of this query, along with details of the alteration to the calculation.
26	111	We also investigated whether there were alternative approaches to determine a further adjustment for	This relates to the serviceability penalty argument. No supporting evidence is provided or referenced regarding the	Please provide the information gathered as part of this query, along with details of why Ofwat

		<p>proportionality. We issued a follow-up query on 14 November inviting all companies and key stakeholders to provide views. From this we agreed that the underlying volatility of an indicator could be used as a mitigating or attenuating factor in the calculation of serviceability shortfalls, but only if there was strong evidence of a heightened level of volatility for relevant indicators. As a result, we applied a volatility factor for three indicators including water interruptions greater than 12 hours. Our approach within the final determination has therefore taken account of the volatility of the interruption greater than 12 hours indicator and has reduced the scale of any shortfall applied.</p>	<p>information gathered from companies and key stakeholders, or how it supports Ofwat's decision regarding the use of volatility factors. This limits our ability to challenge this approach.</p>	<p>reached these conclusions regarding the use of volatility factors.</p>
36	147	<p>mains age data does not appear robust, judging from some of the movements in average age between PR09 and PR14 data across companies.</p>	<p>This is a challenge both to the inclusion of mains age as an alternative variable to Ofwat's econometric modelling and the robustness of our business planning. Ofwat has not provided a reference to or details of the data on which it relies in making this assertion.</p>	<p>Please provide the underlying data on which Ofwat relies in making this assertion, and an explanation of why it has reached the conclusion that the data is not robust.</p>
36	147	<p>mains age is not typically a statistically significant driver of costs if added to our cost models</p>	<p>This is a challenge both to the inclusion of mains age as an alternative variable to Ofwat's econometric modelling and to the robustness of our business planning. Ofwat has not provided a reference to or details of the data on which it relies in making this assertion.</p>	<p>Please provide the underlying data on which Ofwat relies in making this assertion, and an explanation of why it has reached the conclusion that mains age is not a statistically significant driver of costs.</p>
36	148	<p><b>Our analysis using industry data from PR09</b> Business Plans shows that Bristol has a broadly average number and size of upstream assets, however its gross replacement cost per asset is very high compared to</p>	<p>Ofwat argues that BW is inefficient and is criticising BW's approach to costs benchmarking based on its asset base. Ofwat has not provided details of the industry data on which it is relying to</p>	<p>Please provide the underlying data on which Ofwat relies in making this assertion, and details of the analysis referred to.</p>

		the industry average – and Gross modern equivalent asset value (GMEAV) is the driver the company has used.	make the assertion regarding the comparative gross replacement cost, or of the analysis it carried out.	
36	149	At the draft determination <b>we tested</b> whether the proportion of upstream assets drives differing levels of spend across companies (as this is not explicitly taken into account in our modelling). <b>We used regression analysis to examine</b> the extent that the efficiency scores from our historical modelling of costs could be explained by the proportion of upstream assets (it was not practicable to test this variable directly in our modelling as we did not have a sufficient data to match our existing panel datasets).	Ofwat argues that BW is inefficient and is criticising BW's approach to costs benchmarking based on its asset base. Ofwat has not provided details of the testing and regression analysis it has carried out, nor the data on which it was based.	Please provide a copy of the analysis referred to, and the underlying data.
17	A1.2	Regionally adjusted GMEAV in figure A1.2	This is relevant to the benchmarking debate. No supporting explanation is provided or referenced that effectively enables us to understand the information presented.	Please explain what regionally adjusted means and what adjustments are made to the underlying data.
36	153	We cross checked this analysis using industry data from PR09 business plans on GMEAV and maintenance spend, which was the last time we collected detailed GMEAV information. <b>Our analysis shows that GMEAV is not necessarily an accurate guide to asset replacement needs or costs.</b>	This relates to the benchmarking debate. Ofwat has not provided details of its analysis, or the data on which it is based, to support its assertion.	Please provide a copy of the analysis and the underlying data.
53	218	But it is important to be clear that <b>our efficiency challenge has been applied in a way that replaces rather than adds to Bristol's own efficiency challenge.</b> It leads to a relatively modest reduction in the allowance for un-modelled claims of £3.4 million relative to Bristol Water's revised	This relates to the central arguments regarding the efficiency challenge. It is not clear on what basis Ofwat has calculated the impact of the efficiency challenges to reach the figure of £3.4m, or why it considers that its efficiency challenge replaces Bristol Water's rather than being	Please provide a copy of the analysis and calculations evidencing this.

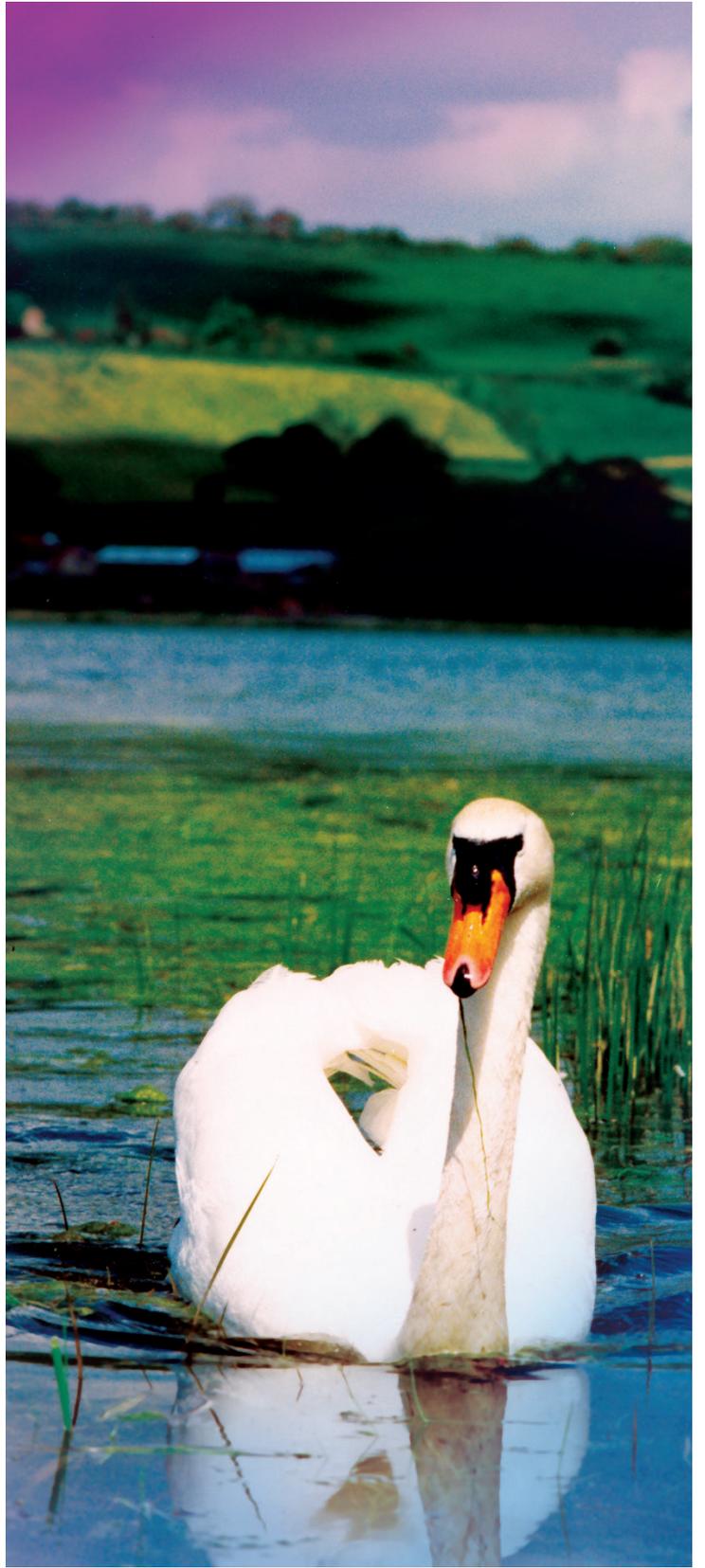
		business plan.	cumulative. Without this information, we cannot properly test this assertion.	
63	260	The development of our modelling suite drew on the expertise of CEPA, our academic advisor Dr. Andrew Smith and our own internal staff. Our models have been tested extensively by CEPA and PwC and have been <b>separately assured by PwC.</b>	One of BW's central arguments concerns the robustness of Ofwat's models. PwC's assurance of the models is part of Ofwat's defence of its modelling approach, yet no supporting evidence is referenced for this statement, and we are not aware of any reports from PwC regarding assurance of the model having been made publicly available.	Please provide a copy of the assurance reports from PwC regarding the models.
113	420	The level of wholesale operating expenditure we calculated for each year is c.£40 million in 2012/13 prices, <b>this compared with total operating expenditure £40.1million in 2013/14 and £42.7 million in 2014/15 (all in 2012/13 prices).</b>	There is large totex gap between Ofwat and BW. A key part of the arguments relating to this gap focus on the right allowance for opex. Here Ofwat states its view of BW's opex without giving any explanation or explanatory reference as to how it has reached the figures quoted. In order to respond properly in the context of the debate over opex, BW would like to understand how Ofwat has calculated these figures.	Please provide the underlying data and calculations that support the estimate of total operating expenditure of £40.1million in 2013/14 and £42.7 million in 2014/15 (all in 2012/13 prices).
119	444	Planned and unplanned supply interruptions are related. A company can avoid unplanned interruptions by carrying out more maintenance which can involve more planned supply interruptions. <b>Whilst customers tend to dislike unplanned supply interruptions more than planned supply interruptions, customers still dislike planned supply interruptions.</b>	The serviceability penalty is one of BW's main issues. No supporting evidence is provided or referenced for the assertion regarding customer preferences and the relative reaction to planned supply interruptions.	Please provide details of the evidence on which Ofwat relies in making this assertion.

## Appendix Three - Index of Reply supporting documents

REP Reference Number:	Short Name:	Full Name:
REP001	Financeability and financing the asset base	Water Today, Water Tomorrow: Financeability and financing the asset base – a discussion paper
REP002	PR14 Investor Conference Call on FD's	Ofwat, 2014 price review investor conference call on final determinations 12 December 2014
REP003	The Water Report February 2015	The Water Report February 2015
REP004	Notice of Reference	Ofwat, Notice of Reference for Bristol Water under the WIA: Determination of Price Controls for the period from 1 April 2015
REP005	Moody's Credit Opinion for Bristol Water, 16 Feb 2015	Moody's Credit Opinion for Bristol Water, 16 Feb 2015
REP006	Blue Marble incentives research May 2014	Blue Marble incentives research May 2014
REP007	Letter from Sonia Brown to Luis Garcia (6 Nov 2014)	Letter from Sonia Brown to Luis Garcia (6 Nov 2014)
REP008	LEF report to the CMA April 2015	Bristol Water's Local Engagement Forum, Statement to the Competition and Markets Authority on Bristol Water's 2015-2020 Business Plan, April 2015
REP009	RIIO-ED1 Draft Determination	RIIO-ED1: Draft determinations for the slow-track electricity distribution companies Financial issues
REP010	Recommendation to Ofwat's board, Southern Water DD	Recommendation to Ofwat's board, Southern Water DD
REP011	email from Sonia Brown to Luis Garcia 11th Sept 2014 @ 18:44	email from Sonia Brown to Luis Garcia 11th Sept 2014 @ 18:44
REP012	OBR March 2015 Economic and Fiscal Output	OBR March 2015 Economic and Fiscal Output
REP013	Ofwat's initial submission to the CC on South Staffordshire /Cambridge Water 2012	Ofwat's initial submission to the Competition Commission on South Staffordshire Water PLC/Cambridge Water PLC, 25 January 2012
REP014	South Staffordshire Water /Cambridge Water, CC Merger Inquiry 2012	South Staffordshire Water PLC/Cambridge Water PLC, Merger Inquiry final report, Competition Commission, 31 May 2012
REP015	South East Water Limited/Mid Kent Water Limited, Competition Commission 2007	South East Water Limited/Mid Kent Water Limited, Competition Commission, 1 May 2007
REP016	Shortfall Calculator	Shortfall Calculator
REP017	First Economics Report	First Economics, Assessing Potential Changes in Retail Costs, 2015-2020 (A report prepared for Water UK, April 2013).
REP018	MD185 Reporters protocol	MD185 Reporters to Ofwat: Reporters Protocol, March 2003
REP019	FD UU Company Specific Appendix	PR14 Final Determination United Utilities Company Specific Appendix
REP020	FD Thames Company Specific Appendix	PR14 Final Determination Thames Company Specific Appendix
REP021	DD UU Company Specific Appendix	PR14 Draft Determination United Utilities Company Specific Appendix
REP022	DD Thames Company Specific Appendix	PR14 Draft Determination Thames Company Specific Appendix
REP023	Bristol Water Holdings plc Annual Report and	Bristol Water Holdings plc Annual Report and

	<b>Accounts 2003</b>	Accounts 2003
REP024	<b>Bristol Water plc Annual Report and Accounts 2004</b>	Bristol Water plc Annual Report and Accounts 2004
REP025	<b>Bristol Water plc Annual Report and Accounts 2006</b>	Bristol Water plc Annual Report and Accounts 2006
REP026	<b>Oxera, Quantifying the impact of Bristol Water's special factors within Ofwat's framework, November 2014</b>	Oxera, Quantifying the impact of Bristol Water's special factors within Ofwat's framework, November 2014
REP027	<b>supporting data comparing upper quartile performance and costs</b>	supporting data comparing upper quartile performance and costs
REP028	<b>Bristol Water Strategic Direction Statement 2007</b>	Bristol Water Strategic Direction Statement 2007
REP029	<b>CCWater Outcome and Delivery Incentives in the Water Industry, March 2014</b>	CCWater Outcome and Delivery Incentives in the Water Industry, March 2014
REP030	<b>Ofwat queries involving 3<sup>rd</sup> Party Evidence</b>	Ofwat queries involving 3 <sup>rd</sup> Party Evidence
REP031	<b>Board Assurance report for August 2014 data submission</b>	Board Assurance report for August 2014 data submission
REP032	<b>Log of Ofwat Queries</b>	Log of Ofwat Queries
REP033	<b>Assessing Potential Changes in Retail Costs, 2015 to 2020</b>	Assessing Potential Changes in Retail Costs, 2015 to 2020: A report prepared for Water UK, April 2013
REP034	<b>MM December Plan Board presentation</b>	MM presentation to BW Board on December Plan – November 2013
REP035	<b>Reporters Letter – Comments on Ofwat's Response</b>	Reporters Letter – Comments on Ofwat's Response, 10 April 2015, 10 April 2015
REP036	<b>Ofwat query BRL-WHO-001</b>	Ofwat query BRL-WHO-001
REP037	<b>Funding for Lending Scheme</b>	Bank of England and HM Treasury FLS, 1 August 2012
REP038	<b>Consultation on the PR14 reconciliation rulebook March 2015</b>	Consultation on the PR14 reconciliation rulebook March 2015
REP039	<b>Artesian Loan Agreement - 7 May 2003</b>	Artesian Loan Agreement - 7 May 2003
REP040	<b>PR09 BW FBP Section B4</b>	PR09 Bristol Water Final Business Plan Section B4
REP041	<b>Intervention Modelling Assurance Timeline</b>	Intervention Modelling Assurance Timeline
REP042	<b>Cost Assurance Timeline</b>	Cost Assurance Timeline
REP043	<b>Cheddar Algae Removal Timeline</b>	Cheddar Algae Removal Timeline
REP044	<b>Reporter Challenge Log</b>	Reporter Challenge Log
REP045	<b>Bristol Water PR14 Document Guide</b>	Bristol Water PR14 Document Guide
REP046	<b>Draft price control determination notice</b>	Setting Price Controls for 2015-2020 – Draft price control determination notice August 2014
REP047	<b>Scottish Power Letter</b>	Scottish Power Letter – Avonmouth Proposals, March 2015
REP048	<b>Listing of Particulars of the Cumulative Irredeemable Preference Shares</b>	Listing of Particulars of the Cumulative Irredeemable Preference Shares, 27 October 1992
REP049	<b>Oxera's response to Ofwat's reply to Bristol Water's SoC</b>	Oxera's response to Ofwat's reply to Bristol Water's SoC - Cost assessment 13 April 15
REP050	<b>Letter from Mike King [✂]</b>	Letter from Mike King [✂], 22 March 2013
REP051	<b>Final price control determination notice: policy chapter</b>	Final price control determination notice: policy chapter A6 – non-household retail costs and revenues
REP052	<b>Performance data 2013-14</b>	Performance data 2013-14 from Ofwat website
REP053	<b>Bristol Water's efficiency, Oxera report</b>	Bristol Water's efficiency: An assessment of

		relative operating expenditure efficiency for water services, Oxera report, April 2010
<b>REP054</b>	<b>Response to Ofwat's PR14 Cost Models</b>	Response to Ofwat's PR14 Cost Models, 3 June 2014
<b>REP055</b>	<b>Bristol Water Annual Report 2008</b>	Bristol Water Annual Report 2008
<b>REP056</b>	<b>Bristol Water plc Statutory Accounts 2010</b>	Bristol Water plc Statutory Accounts 2010
<b>REP057</b>	<b>Bristol Water plc Statutory Accounts 2012</b>	Bristol Water plc Statutory Accounts 2012



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