

Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited

Summary of provisional findings report

Notified: 30 September 2015

1. On 8 June 2015 the Competition and Markets Authority (CMA) referred the completed acquisition by Pennon Group plc (Pennon) of Sembcorp Bournemouth Water Investments Limited (BWIL) for a phase 2 investigation and report. The reference was made under section 32(b) of the Water Industry Act 1991 (WIA).
2. If we find that a water merger has taken place we must decide whether the merger has prejudiced, or may be expected to prejudice, the ability of the Water Services Regulation Authority (Ofwat), in carrying out its functions by virtue of the WIA, to make comparisons between different water enterprises.
3. Pennon owns South West Water Limited (SWW). BWIL is the parent company of Bournemouth Water Limited (BW). Both SWW and BW are water enterprises operating in the South West of England and southern England respectively. SWW provides water and sewerage services whilst BW supplies water services only. In the year to 31 March 2015 SWW had a turnover of approximately £518 million, of which almost all came from regulated activities. BW had a turnover of approximately £46 million last calendar year of which around £45 million came from regulated activities.
4. Under section 33 of the WIA, the CMA is required to make a phase 2 merger reference unless the value of the turnover of the water enterprise taken over does not exceed or, as the case may be, would not exceed £10 million, or if the only water enterprises belonging to the acquirer are enterprises each of which has a turnover the value of which does not exceed or would not exceed £10 million. On 16 April 2015 Pennon acquired the entire issued share capital of BWIL. We consider that a water merger has taken place.
5. Pre-merger there were 18 water companies in England and Wales and so the merger would reduce that number to 17. In 2014/15 the combined turnover of water companies in England and Wales was approximately £5.8 billion. When separated by wholesale and retail activities, the majority of activity across the

industry – around 90% – is at the wholesale level. Water is a highly regulated industry. Of interest to us in this inquiry is Ofwat’s regulation of price controls and setting of performance targets. The last price control determination (which also set various performance targets) – known as PR14 – was in 2014 which set regulatory outcomes for 2015 to 2020. Therefore, the merger’s impact on the setting of price controls and performance targets will not be felt until 2020.

6. Ofwat makes comparisons between water companies for several purposes. These purposes are to:
 - set wholesale price controls;
 - set retail price controls (for households and non-households);
 - monitor and set performance targets for wholesale quality of service (through outcome delivery incentives (ODIs));
 - monitor and incentivise improvement in retail quality of service (through the service incentive mechanism (SIM)); and
 - spread best practice and to undertake monitoring and enforcement activities.
7. We have considered how the merger may impact on Ofwat’s ability to make comparisons between water companies in each of these areas.
8. We note that Ofwat does not oppose this merger provided that the CMA could secure what Ofwat viewed as appropriate remedies. Ofwat submitted to us that the merger would lead to a prejudicial impact on its ability to make comparisons between water enterprises but in its view that prejudice is not so great as to lead it to oppose the merger. However, we are mindful that in the absence of a finding of prejudice to Ofwat’s ability to make comparisons between water enterprises the CMA is unable to consider the question of remedies.
9. We have taken a two-part approach to our assessment. First, we assessed the impact of the merger on Ofwat’s ability to make comparisons between water companies and whether that impact is likely to be adverse. Second, we have considered whether any adverse impact either individually or in combination with any other adverse impact(s) is significant enough to amount to prejudice. The level of any customer detriment is only one factor in our assessment of whether any adverse impact is significant enough to amount to prejudice.

10. We considered what would be the situation that would prevail in the absence of the merger, which we refer to as the counterfactual situation, and against which we assessed the effect of the merger. We found that this would be the regulated water industry with the existing number of comparators (18), with SWW and BW operating independently.
11. When examining setting wholesale price controls, ODI and SIM we have used both a 'static' approach and a 'forward-looking' approach in our analyses. On the household retail benchmark we have only used a 'forward-looking' approach, due to the changes Ofwat intends to make to setting retail price controls. The static approach considers the impact of the merger using the regulatory framework that Ofwat used in PR14 and, where appropriate, the rankings of SWW and BW have been used to determine a new ranking for the merged entity. The forward-looking approach takes account of information relevant to how the merger parties may perform in future price determinations – which could be changes in their comparative rankings (based either on probabilities of past ranking changes or current business plan forecasts) or known modifications in Ofwat's price determination approach. For non-household retail price controls, given the upcoming reforms and uncertainty surrounding future regulation in this area, we have not undertaken an in-depth merger assessment.
12. The static approach in all of our assessments reveals a purely hypothetical impact. Nevertheless it provides a useful cross-check and comparison with the results of the forward-looking analysis, on which we have placed greater weight. This is especially important given that across all of the ways in which Ofwat uses comparators, at least one of SWW or BW were ranked highly in PR14 (and in the case of wholesale price setting, BW and SWW were the top two ranked water companies in terms of wholesale cost efficiency).
13. Further, wherever appropriate we have used a mix of quantitative and qualitative evidence in our assessment. We have used quantitative evidence in all of our analysis apart from assessing the merger impact on comparisons for ongoing monitoring, enforcement and to identify and spread best practice, where we have relied on qualitative evidence.
14. We look at each of these in turn.

Setting wholesale price controls

15. Ofwat makes extensive use of comparisons between water companies in setting wholesale price controls. At the last price review, PR14, Ofwat used econometric models to assess the relative performance of the 18 water companies in order to estimate wholesale cost efficiency and to set efficiency

challenge targets for each water company. In this way Ofwat sets wholesale cost allowances for each company.

16. Ofwat used econometric modelling as part of the process of setting wholesale price controls to estimate each water company's relative wholesale cost efficiency level in order to determine a level of efficiency performance for each water company. In PR14 the efficiency benchmark level was set at the upper quartile (UQ) level. It is by comparison with this benchmark level that other water companies' relative efficiencies are calculated. These relative efficiencies are then used in setting water companies' expenditure allowances for the next five years.
17. We considered whether the merger may adversely impact on Ofwat's ability to make comparisons between water companies in setting wholesale price controls in two ways. The first is that the merger may result in a reduction in precision of Ofwat's modelling in that it no longer allows Ofwat to make as effective comparisons between water companies' efficiency levels. We call this the precision effect. The second is that the merger may lead to the loss of a particularly valuable comparator which harms Ofwat's ability to set a demanding efficiency challenge for the rest of the industry. In terms of Ofwat's formal cost modelling, the loss of a valuable comparator is likely to lead to the lowering of the efficiency benchmark which Ofwat uses to incentivise industry performance. We call this the benchmark effect.
18. Ofwat told us that if the precision in its overall econometric estimate was reduced, this might lead to water companies challenging the model and requesting a specific adjustment to their cost allowance (and Ofwat would be more susceptible to accepting cost adjustments that made price determinations less demanding).

The precision effect

19. There are two main ways in which the merger may have an adverse impact on the precision of Ofwat's econometric modelling.
20. The first is the loss of independent data points for statistical analysis, in this case going from 18 water companies to 17. This results in an inherent loss in precision. A standard principle of statistical theory is that fewer data points will lead to less precise econometric estimates.
21. The second is that SWW or BW may have specific characteristics which make them particularly useful for Ofwat in modelling wholesale costs. If BW's or SWW's data provide useful variation in certain variables which helps Ofwat to identify key determinants of wholesale costs across companies, and some of

this variation is lost as a result of the merger, this may result in a loss of precision in Ofwat's models. On the other hand, if the merger does not lead to a significant loss in variation, or if the variation is driven by company-specific factors which are less important in estimating cost drivers for the industry as a whole, then we consider that the merger is less likely to lead to a significant loss in precision.

22. We have looked at four main methods to estimate the statistical loss in precision:
 - The General Approach, which measures the loss in precision related to a loss of data points. This approach does not take account of the specific parties to the merger.
 - The Specific Approach, which measures the loss in precision by re-estimating Ofwat's models under a simulation of the specific merged entity, thereby taking account of the parties to this merger.
 - Bootstrapping, which measures the loss of precision by using Ofwat's models to estimate outcomes under different random simulations of the current data set.
 - Our own Qualitative Approach which looks at the theoretical statistical reduction in precision that may arise from the loss of BW's independent observations.
23. In measuring any reduction in precision, we are seeking to identify the scale of the change in the accuracy of Ofwat's models. The scale of any loss in precision that we identify under these approaches does not have a direct and measurable effect on the outcome of Ofwat's comparative regulation.
24. Pennon submitted that precision around the UQ estimate would worsen by 2.9% to 8.4% across three of Ofwat's input models but be more precise in one of those models (by 20%). Ofwat estimated that the merger would lead to a reduction in precision of 7.5% around the overall wholesale cost estimate and a 4.7% reduction in the precision of the UQ benchmark. For the reasons given in this report we consider that these estimates have their limitations.
25. We also undertook our own analysis, recognising that it too has limitations. That analysis found that the merger is likely to lead to a reduction in statistical precision. Although there are analytical difficulties in quantifying the effect, we consider that an estimate of a 4% diminution in precision (which is based on our own analysis) is the most reasonable estimate available to us. This estimate is calculated from a 0.18 percentage point reduction in precision from 5.08% to 4.9% around Ofwat's econometric totex estimate. Therefore,

we consider that under the General Approach, the merger has an adverse impact on the precision of Ofwat's econometric wholesale benchmarking models. The level of additional imprecision as a result of the merger estimated according to our General Approach is around £350,000 for the average water company (or £6.3 million across the industry as a whole) in Ofwat's overall econometric wholesale cost estimate. To set this in some context, we note that revenues attributable to wholesale activity accounts for approximately £5.2 billion per year.

26. We examined BW's characteristics under our Qualitative Approach. The evidence indicated that although the merger will lead to some loss in variation in Ofwat's data in four variables (ie some adverse impact), any resulting loss in precision will be small.
27. We recognise that Ofwat's approach to wholesale cost benchmarking will continue to evolve in subsequent price controls. It may develop new cost models, and could choose to use different efficiency benchmarks in the future. However, in the absence of certainty over Ofwat's future approach, we consider that looking at the impact of the merger on Ofwat's current approach to wholesale benchmarking is the most appropriate basis for our analysis. But in the event that Ofwat did want to set a more stringent benchmark in the future, Ofwat told us that the decision would be based on a range of factors, of which precision was only one.
28. In our provisional findings we have not placed weight on results of the Specific Approach because of the econometric limitations discussed in this report. Likewise, because of the technical econometric concerns that we have identified on bootstrapping we have not relied on those results.
29. We consider that the evidence we have received suggests that the increased imprecision in Ofwat's models is unlikely to affect either Ofwat's ability to set stretching cost benchmarks or its susceptibility to certain water companies' requests to account for specific cost factors. Although we consider that the merger will result in some adverse impact we do not think that it is significant.

The benchmark effect

30. At Ofwat's most recent price review BW and SWW were ranked first and second respectively in Ofwat's wholesale cost efficiency rankings. We explored evidence as to whether BW or SWW can be expected to remain in the UQ group of water companies at the next price review.

31. Under the static approach we found that the merger results in a 0.654 percentage point worsening in the industry UQ efficiency target, relative to the pre-merger level.
32. Under the forward-looking approach our analyses of the benchmarking effect show that the results are sensitive to the starting rankings of SWW and BW in the analysis. We received submissions from Pennon that business plan forecasts used by Ofwat in PR14 provided the best indication of the future rankings of water companies. Ofwat, by contrast, submitted that historical rankings based on operating expenditure and capital expenditure data provided the better indication of how rankings might change in the future. Therefore, a key question for us has been whether we use rankings based on business plans, historical rankings changes or a third method to mitigate the risk of business plans being an inaccurate predictor of future rankings by applying the changes probabilities to business plan rankings. We carefully considered the evidence on this. We were persuaded by the evidence of the impact of Ofwat's supply-demand balance model on BW's future efficiency ranking (which meant that BW would be ranked outside of the UQ). In the circumstances of this inquiry we consider it appropriate to take account of that effect, which led us to place considerable weight on business plans.
33. Of the options available to us, our preferred method is the one that uses business plans with a changes matrix applied to it. Under this method our analysis shows that the merger is likely to lead to a small adverse impact. Although any change in the future UQ threshold cannot be estimated, our analysis showed the magnitude of customer detriment arising from the merger to be around £9 million over 25 years.
34. We have also applied some weight to the business plan method. It showed no adverse impact resulting from the merger.
35. We consider that neither of the above methods reveals the true impact of the merger, which is likely to lie somewhere between the two. That is, an impact that is either not adverse or adverse but small.
36. Given this evidence we do not consider that the merger will lead to a significant adverse impact with respect to the wholesale benchmark effect.
37. Considering the precision and benchmarking effects together we therefore provisionally find therefore that the merger is likely to result in some adverse impact on the setting of wholesale price controls but we do not think that impact is significant.

Setting retail price controls

38. For retail price controls in PR14 Ofwat has used an average cost to serve (ACTS) threshold to set retail price controls separately for both metered and non-metered households. The ACTS was based on benchmarking analysis across all the water companies.
39. Ofwat told us that it was unlikely to use an ACTS measure in the next price determination but would rather replace it with an efficient cost to serve (CTS) target (for example, a UQ or at the frontier). However, the importance of comparisons remains irrespective of where Ofwat chooses to set the benchmark.
40. A merger is able to change the industry ACTS – or an efficient CTS measure – and as such lead to a different benchmark being set. In PR14, for serving metered household customers SWW was ranked third and BW 11th, and for unmetered customers BW was ranked 12th and SWW 15th. Both Pennon and Ofwat submitted that the merger would not result in any adverse impact on Ofwat’s ability to set a demanding benchmark.
41. We undertook our analysis using a range of assumptions on how the current poorer performing water companies are likely to converge to the performance levels of the top performers. We find that the merger is likely to result in a more stringent price control (that will benefit customers). We therefore provisionally find that the merger is unlikely to result in an adverse impact on Ofwat’s ability to set household retail price controls.
42. We also considered whether the merger might affect the precision of Ofwat’s retail benchmark. Following the merger, the threshold would be based on a CTS measure across 17 rather than 18 water companies, and as a result we would expect the variance around the threshold to increase. We consider that the reduction in any precision in the benchmarks is mainly characterised by how much more susceptible 17 data points are to random error compared with 18 data points. We consider that this impact does not have a material effect on the precision of a CTS threshold.

Outcome delivery incentives

43. In PR14 water companies developed a set of outcomes that reflected what their customers needed, wanted and could afford (based on customer surveys and input from each water company’s customer challenge group). These outcomes would then be the subject of performance commitments (PCs) and ODIs, which could be either financial or reputational. Since ODIs were based on what each water company’s customers want in terms of performance

improvements, they are bespoke to each company with relatively few common ODIs across water companies.

44. At PR14 Ofwat carried out a comparative analysis on the ODIs and PCs that were most common across the industry. Ofwat told us that it used comparative assessment to identify UQ performance targets for three ODIs in regulating the provision of water:
 - the duration of supply interruptions;
 - the number of contacts from customers regarding water quality; and
 - compliance with DWI water quality standards (known as 'mean zonal compliance').
45. We have therefore focused our analysis on these three ODIs which we call the common ODIs.
46. A merger will bring two water companies that previously had separate management, under common management. This will lead to two water companies that previously reported each of their ODIs separately, reporting the same ODIs on a combined basis, which could affect the outcome of the ODI benchmarking by changing the benchmarks, and as such may lead to water companies receiving a less demanding determination, relative to the counterfactual case in which SWW and BW do not merge.
47. Pennon submitted that it was not appropriate to attempt to quantify the impact of a merger on the ODI benchmarks. We disagreed. In the circumstances of this inquiry, we are of the view that quantification is appropriate. Ofwat has chosen to set the benchmark at the UQ threshold for the common ODIs and we consider it appropriate to quantify any impact in order to aid our assessment on whether the impact of the merger on Ofwat's ability to make comparisons is, or may be expected to be, adverse and significant enough to amount to prejudice.
48. Our analysis did not find any adverse impact resulting from the merger on mean zonal compliance. Although both BW and SWW were in the UQ in mean zonal compliance at PR14, all water companies achieved very similar average scores between 2011/12 and 2013/14. As a result the merger is unlikely to lead to any effect on the benchmark.
49. We analysed the remaining two ODIs using two separate assumptions on convergence in performance.

50. Ofwat submitted that the impact on ODIs beyond 2025 was too uncertain to model (because of uncertain rates of convergence and subsequent expected future rankings, and because of uncertainty over what the future threshold level will be). We agreed. Therefore, our analysis has been restricted to the next price determination period (2020 to 2025).
51. BW is currently a top performer in these two ODIs (whereas SWW is not).
52. Allowing for some convergence in performance of the bottom-performing company closing 35% of the gap to the UQ by 2020 for water supply interruptions and closing 50% of the gap for water quality contacts, suggests that the scale of the potential detriment (which would be within PR19) is around £23 million in total (over five years).
53. Furthermore, SWW and BW will continue to report on their ODI performance separately for the remainder of the PR14 period. We consider that the continuation of separate reporting, and the evolving nature of outcome and quality of service regulation through ODIs, mean that although Ofwat is concerned that BW and SWW will not be fully independent after integration, Ofwat would not fully lose the value of BW as a separate comparator for the next price review period (which is the period during which we have sought to quantify the effect).
54. Given these mitigating factors, our provisional finding is that the merger will adversely impact on Ofwat's ability to make comparisons for the purpose of setting ODI targets but given the mitigating factors, we were not persuaded that the adverse impact was likely to be significant.

Service incentive mechanism

55. The SIM is an incentive mechanism designed to improve retail quality of service by rewarding or penalising water companies based on their overall performance relative to other water companies.
56. Comparisons between water companies are therefore critical to the operation of the SIM. A merger will lead to two water companies that previously reported their SIM scores separately, reporting a single combined SIM score. This will reduce the number of data points available for comparisons and, in most instances, will lead to a change in the spread of the water companies in the industry and as such a change in the standard deviation (on which the reward and penalty system is based).
57. Ofwat assumed a high degree of convergence performance after 2020 and so assumed in its submissions that the SIM would be replaced after 2025 and so we have not made any analysis involving time periods after then.

58. BW has been a consistently good performer under the SIM. Ofwat submitted that BW had performed well on the SIM since 2011/12 whereas over this period SWW had been ranked below the UQ.
59. Our analysis found that by combining BW and SWW into a single entity, based on the static approach, the merger would result in the removal of a high-performing company with a resultant detriment to customers of around £6 million over three years (based on the existing schedule of rewards and penalties).
60. However, our analysis has found that there has been a considerable level of convergence in SIM scores over recent years. Taking account of expected future convergence (and allowing some time for integration of SWW and BW to take place) we expect that the merger will lead to an adverse impact of £1.9 million over three years (the sensitivity analysis that we applied around that showed the merger's impact could range from no detriment at all to an adverse impact of around £3.8 million over three years) which in our provisional finding is small.

Spreading best practice

61. In addition to setting price controls and performance targets, Ofwat also uses comparisons between water companies in informal, qualitative terms. Ofwat provided a number of examples of how it uses comparisons to spread best practice. It told us that it does so in three areas:
 - **Ongoing monitoring:** a qualitative assessment of how water companies are performing in the context of Ofwat's duties including financial performance and resilience.
 - **Enforcement:** where Ofwat can draw on performance within the industry as support in addressing poor performance against regulatory requirements.
 - **Spreading best practice:** the use of reviews of individual company plans and activities, in particular high-performing water companies, to propose new approaches to regulation across the industry. During the course of our inquiry we have heard about a number of areas where BW or SWW have been identified as being at the frontier of industry best practice. For example, BW's customer relationship management and SWW's customer research.
62. We have examined whether, by reducing the number of comparators available to Ofwat (and hence potentially reducing the availability of examples

of best practice upon which Ofwat can draw and/or company-specific factors that generate best practice), the merger might harm Ofwat's ability to identify and spread best practice across the industry.

63. We considered that, as BW is a small water-only company (WoC) (albeit a well-managed one) facing relatively unique circumstances in its local market, the ability of other, generally significantly larger, water companies to apply lessons learned from it in their own areas is fairly limited. We note that Ofwat identified examples of where it was able to use good practice from BW in providing incentives to other small companies to provide high-quality information.
64. During our inquiry we also saw evidence that innovation was taken forward at the instigation of water companies themselves upon seeing their position in league tables published by Ofwat, in addition to specific initiatives instigated by Ofwat. We also noted that BW will continue to report separately, at least during the current determination period, and so will continue to be available as a comparator until 2020.
65. Given the evidence we provisionally find that there are a number of factors suggesting that the loss of an independently owned comparator of the scale of BW would only have a small impact. In addition:
 - the spreading of operational best practice involves a number of methods of which the use of comparators is only one;
 - any best practice specific to small water companies will impact only a very small proportion of the overall industry; and
 - spreading of best practice was driven by water companies themselves and/or industry organisations as well as Ofwat.
66. We therefore provisionally find that the loss of BW as an independently owned comparator, and the consequent reduction in the number of independently owned comparators from 18 to 17, would not result in an adverse impact regarding Ofwat's ability to encourage good practice or assess qualitative aspects of submissions made by water companies during future price reviews. We provisionally find that the merger would not adversely impact Ofwat's ability to monitor performance or enforce regulatory provisions.
67. Overall, we provisionally find that the adverse impacts that we have identified in our inquiry are not significant enough, either individually or in combination, to amount to prejudice to Ofwat's ability to make comparisons between water enterprises under the Enterprise Act 2002 (the Act). We therefore provisionally conclude that the merger between Pennon and BWIL has not

prejudiced, and may not be expected to prejudice, the ability of Ofwat in carrying out its functions by virtue of the WIA to make comparisons between different water enterprises.