January 2021

Reference of the PR19 final determinations: Leakage enhancement totex allowances – response to working paper

Ofwat

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Contents

1. Introduction

1.1 In September the CMA published its provisional findings in relation to the Anglian Water, Bristol Water, Northumbrian Water and Yorkshire Water price controls for 2020-2025 following a reference from Ofwat on request of each company.

1.2 In its provisional findings the CMA stated that it had insufficient information to provide a firm view on enhancement cost allowances for leakage reduction for the disputing companies.

1.3 Since the publication of the provisional findings we have submitted further information to the CMA, as have the disputing companies, through formal responses to the provisional findings, responses to CMA requests for information (RFIs) and during the hearings that took place in November and December 2020. As part of this process all parties have been provided with opportunity to comment upon the information submitted by others.

1.4 On 18 January 2021 the CMA issued a working paper consulting on the application of 'top-down' and bottom-up' approaches to setting efficient leakage enhancement cost allowances.

1.5 In the working paper the CMA proposes adopting an individual approach for each company tailored to its circumstances and the levels of evidence available. The CMA proposes this approach after considering the need for the companies' proposed levels of investment, including assessing efficiency and whether adequate optioneering has been undertaken. The quality of evidence available, the companies' existing leakage positions, the types of activities proposed and other factors including comparability with other disputing companies or the wider sector are all relevant factors which the CMA states it considered in making its proposals.

1.6 This document sets out our response to the CMA's working paper. We welcome this opportunity to comment on the final methodology and enhancement allowances for leakage. We agree with many of the CMA's proposals as set out in its leakage working paper which are consistent with the assessment approaches we used in our final determinations and take into account many of the points we have raised in earlier submissions. In the interest of brevity, we do not repeat all of our reasons for supporting the CMA's approach in this response. We instead focus on a relatively small number of substantive differences, primarily relating to the proposed allowance for Yorkshire Water. We also highlight a number of arguments to which we consider the CMA has not given sufficient consideration.

1.7 In section 2 we provide a high level overview of the difference in our position from the CMAs with regards to the leakage enhancement allowance figures. We also comment on our main points of substantive difference to the CMA's views in its leakage working paper regarding the overall approach. In section 3 we comment on the application of the approach to specific companies and highlight company specific issues to be considered when making final determinations.

1.8 We will also provide a response to any new issues or further arguments raised by the disputing companies, or other parties, in response to this working paper by the final submission deadline of 3 February.

2. Review of CMA approach

2.1 We generally support the methodological developments in leakage enhancement cost allowances the CMA has undertaken since the provisional findings. We recognise the challenge of setting allowances in this area with the limited data available. In light of this, it is reasonable to use a toolbox of approaches for calculating enhancement allowances, and to make an allowance on the basis of the most appropriate methods depending on individual circumstances of the company and the quality of evidence provided.

2.2 The CMA states its provisional high level view, that "it is reasonable that some of the companies may need to incur additional enhancement spend to move from the AMP6 targets based on SELL assessments, to the new targets of 15% or more below previous levels" hence "companies whose business plans identified that further enhancement allowances were needed to meet the ambitious leakage performance commitments, should be allocated an allowance for the efficient costs of these enhancements."[1]

2.3 In contrast, we consider that companies which are performing worse than an industry 'upper quartile' threshold[2] should not be given enhancement funding for leakage reduction, for reasons we explain in section 3.

2.4 This fundamental difference between our views leads to a difference in approach only in respect of Yorkshire Water. Yorkshire Water is a poor performer on leakage, and we consider that it should not receive enhancement funding to reduce leakage. The CMA considers that Yorkshire Water should receive an efficient enhancement allowance to reduce leakage because the company requested enhancement expenditure within its business plan.

2.5 Both the CMA and we agree that Anglian Water and Bristol Water – two high performing companies on leakage – should receive enhancement funding, and that Northumbrian Water should not (see Table 2.1).

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[1] Competition and Markets Authority, '[Water redeterminations 2020 working paper - Leakage Enhancement Totex Allowances]', January 2021, p.11, paragraph 39.

[2] In our final determinations we set the threshold on the basis of the industry upper quartile position at 2024-25 based on all companies delivering their PR19 performance commitments from their 2019-20 positions. We established the upper quartile threshold based on the geometric mean of leakage normalised in terms of both kilometres of main and property numbers. Note that for the four disputing companies our views in Table 2.1 do not change if the upper quartile threshold is based on the less challenging 2019-20 figures.

Table 2.1: Comparison of views on eligibility for leakage enhancement funding

Company	CMA view	Ofwat view
Anglian Water	Yes	Yes
Bristol Water	Yes	Yes
Northumbrian Water	No	No
Yorkshire Water	Yes	No

2.6 Since the PR19 final determinations the disputing companies have had ample opportunity to provide additional information regarding their leakage reduction proposals and associated costs. Despite this, the companies have not provided sufficient evidence to justify their proposed activities and costs.

2.7 As a consequence of this additional information our view has evolved on the appropriate levels of enhancement funding for companies performing better than upper quartile. Table 2.2 provides our current view of appropriate enhancement funding for the disputing companies.[3] This is the same level of funding as we set out in our responses to the provisional findings (and associated RFIs and replies to company responses).

Table 2.2: Efficient enhancement expenditure allowances by company – Ofwat's view

Company	Enhancement allowance, £m Error! Bookmark not defined.
Anglian Water	54.2. to 58.1
Bristol Water	4.59
Northumbrian Water	0
Yorkshire Water	0

2.8 We consider that the CMA has applied a logical approach in its use of methodologies for setting a leakage enhancement allowance. The CMA is addressing the three fundamental points of challenge in its assessment approach:

[3] As per the CMA approach in the working paper we present our view of allowances prior to any RPE or frontier shift adjustments.

- Considering whether the company's request for enhancement funding is justified in the context of its PR19 business plan or submissions to the CMA;

- Undertaking a unit cost comparison between the disputing companies and the wider sector. This identifies if a company is demonstrating higher or lower costs than its peers who are at comparable performance levels; and

- Scrutinising the detailed activity and cost build-up of a company's leakage reduction programme to determine if there is sufficient evidence to justify the need, adequate optioneering and demonstrate efficient costs.

2.9 We agree with CMA's approach to determining the appropriate method for calculating an allowance for each individual company through consideration of these points. For high performing companies demonstrating efficient unit costs in comparison to their peers, this can be a combination of top-down and bottom assessments. For companies with higher unit costs than their peers it is appropriate to instead focus on the bottom-up assessment. Where there is insufficient evidence provided to justify company costs, but an allowance is still considered appropriate then the use of sector-wide top-down benchmarks is the only viable option.

Top-down assessment

2.10 We acknowledge there is merit in using sector-wide data where appropriate to estimate the unit cost of reducing leakage. Comparing unit costs between companies recognises that there are similarities between companies in the techniques used to reduce leakage and the circumstances they face, even if there are limitations to this comparability. It also helps mitigate for the variable quality of data provided by some companies.

2.11 Regarding the calculation of leakage volume reductions which should be funded through an enhancement allowance, we agree several options merit consideration. We have two main challenges here.

- First, none of the options include the impact of spend in 2015-20 leading to a sustained reduction in leakage. Where companies invested late in 2015-20 in measures that would reduce leakage for several years it is not appropriate for this volume reduction to be included when calculating an allowance for 2020-25; and

- Second, the CMA appears to discount immediately several of the options for the volume reduction 'starting point'. It is of critical importance that the allowances for base and enhancement are consistent on this point. We agree that using the three-year average to 2019-20 as a starting point is generally appropriate for companies performing better than upper quartile and is consistent with the CMA's approach to the leakage base adjustment (which funds maintaining this performance level)[4]. However, for companies performing worse than upper quartile, it is important to understand fully the reasons for this poor performance, before dismissing alternatives, to avoid double funding. If poor performance within the three-year period is due to company actions (or inaction), then using an alternative option may be preferable as it demonstrates what the company can achieve. We note that Northumbrian Water has previously stated customers should not pay for it to reach upper quartile, and Yorkshire has also previously stated that customers should not fund all of the improvements to upper quartile.[5] The CMA's option 1, 'the full reduction in AMP7', if applied would imply customers pay for all of this improvement towards upper quartile performance, through the enhancement allowance.

Bottom-up assessment

2.12 In this process at this point in time we acknowledge there is merit in a bottom-up assessment being a material element of the analysis for the companies in receipt of an enhancement allowance, where there is sufficient confidence in the bottom-up data provided to effectively scrutinise and challenge it.

2.13 In addition to the reasons given by the CMA for adjusting company bottom-up enhancement claims,[6] we note two additional important challenges:

- The CMA's approach does not take into account that some of these costs contribute to improving performance on other performance commitments. Such costs should be funded partly through leakage funding, and partly through funding for the other performance commitments in question. In particular, we have already provided base funding for companies to meet their performance commitments relating to the water network and set

[4] Note we have proposed that the 2024-25 upper quartile is a more appropriate performance threshold to challenge companies against in terms of expectations of what should be delivered with the base allowance. The CMA indicates it may consider how it uses the 2024-25 upper quartile position in its final determinations in Annex 1 of the working paper.
[5] Yorkshire Water, Exhibit 66-048, 'Appendix 8f- Wholesale Cost Appendices', September 2018, p.91.
[6] Competition and Markets Authority, 'Water redeterminations 2020 working paper - Leakage Enhancement Totex Allowances', January 2021, p. 19, paragraph 71.

appropriate performance levels. These commitments will be impacted by activities undertaken to reduce leakage. For example, enhanced network automation and local attention to where and when leakage is happening can help avoid supply interruptions in the same area. Fully funding leakage improvements without adjustment for the overlap with other areas of performance therefore over-funds these other performance commitments, allowing companies to earn outperformance payments (or avoid underperformance payments). The bottom-up enhancement funding requests should therefore be scaled down to avoid double-funding other performance improvements; and

- Where companies have provided poor or minimal justification for their assumptions or for their choice of approaches and processes used to build up activity and cost profiles, this should be reflected in the extent of the cost challenge provided by the CMA. It is reasonable to expect a company to have produced a leakage business case, followed a documented process to identify the optimal levels of activities, challenged itself with respect to any assumptions it has made, considered what new technology and productivity improvements can bring, benchmarked itself against best practice, and to have validated and assured the data it submitted.

Interaction with base funding

2.14 The distinction between base and enhancement funding is an important one. But they cannot be viewed in complete isolation. We note that Annex 1 of the leakage enhancement working paper sets out adjustments the CMA is considering to its proposed base totex leakage allowances identified in its provisional findings for companies performing better than an upper quartile threshold.

2.15 The potential adjustments using two methods of normalisation and the year on which to base upper quartile appear reasonable and are consistent with our previous responses. The adjustment the CMA is considering regarding company revised calculations of their proposed base adjustment should be viewed in tandem with the final enhancement allowances given. If the CMA chooses to allow an increase in base funding for maintaining leakage compared to the provisional findings, it should give further consideration to the risk of double funding across base and enhancement. For example, where an efficiency challenge or a bottom-up challenge is applied to an enhancement funding request, the same logic can be extended to the base funding requests, as these are very likely to have been developed using similar data and assumptions by the company in question.

Treating these elements differently could risk inconsistency in the level of challenge applied.

3. Company specific comments

Anglian Water

3.1 We agree with the CMA's position that it is appropriate to make an enhancement expenditure allowance for Anglian Water to further reduce leakage levels beyond its three year average 2019-20 position.

3.2 Based on 2019-20 outturn performance, Anglian Water is the industry frontier performer (in terms of the geometric mean of the two normalisation measures[7]). However, the variance between Anglian Water and Bristol Water is minimal. Nevertheless, the unit cost for Anglian Water, identified by the CMA in the working paper[8], is more than double that of Bristol Water, whether it is expressed as a unit cost per unit of leakage reduction, unit cost per property or per km of mains. We do not consider that this marked difference in unit costs between comparable companies can be a reflection of a credible marginal cost curve.

3.3 The CMA recognises our previously detailed concerns with the evidence provided by the company to explain its high unit cost, stating that "Anglian did not fully explain this to us or demonstrate that it had fully reflected on the scale of its unit costs".[9] We consider the CMA's bottom-up assessment approach should continue to apply appropriate challenges to Anglian Water's costs for that lack of clarity.

3.4 In the working paper the CMA's bottom-up assessment of costs makes two adjustments to the allowance we proposed previously.[10] We discuss each adjustment in turn and identify specific points for the CMA to consider when coming to a final decision.

3.5 The CMA has assumed that only 20% of the costs of pressure sensors are in base, with 80% in enhancement, while we previously assumed 25 to 50% of these costs were included in base. In making a final determination for this cost element the following points should be considered:

[7] Normalised in terms of cubic meters of leakage per kilometre of mains per day and litres of leakage per property per day.
[8] Competition and Markets Authority, 'Water redeterminations 2020 working paper - Leakage Enhancement Totex Allowances', January 2021, p. 16, paragraph 62, Table 8 and p.30, paragraph 114, Table 11.
[9] Competition and Markets Authority, 'Water redeterminations 2020 working paper - Leakage Enhancement Totex Allowances', January 2021, p.20, paragraph 74.
[10] Ofwat, 'Reference of the PR19 final determinations: Costs and outcomes – response to provisional findings responses', November 2020, pp. 68-70.

- The company has not provided details of its proposed activity levels in terms of the numbers of new and replacement pressure sensors, how it has established optimal activity levels and how the proposals compare to its historical levels of replacement activity. In other areas such as metering, companies including Anglian Water provided detail of their historical rates of asset replacement and defined replacement activity elements as enhancement or base. The company has therefore not provided evidence to support a 20:80 split of costs between base and enhancement;

- In our final determinations we applied a 20% challenge in areas where companies provided insufficient evidence of optioneering even after determining an appropriate base enhancement split. We consider there is justification for the challenge applied to this element of the expenditure to reflect that the activity levels proposed have not been demonstrated to be optimal; and

- In addition to the optioneering challenge it is appropriate to account for the risk that a significant proportion of the expenditure is funded through the base allowance. Therefore, a challenge of greater than 20% in the range of 25-50% could be considered more appropriate.

3.6 The CMA has assumed a 50:50 split between base and enhancement for five activities which we considered to be fully included in the base allowance:

- Intelligent Network Systems - Automated Network Assets;

- DMA Splits;

- Intelligent Network Systems - Advanced Flow Sensing;

- ILPM - Leakage reporting software; and

- MADB/config log - DMA and meter management software.

3.7 The CMA states that it has reached this position on balance considering that some of Anglian Water's future activities will need to be undertaken to a higher specification than other companies to reflect its low level of leakage. We consider that the company has not provided sufficient evidence to support a 50:50 split of costs between base and enhancement and note the following points:

- The CMA's proposed approach to base totex leakage allowances in Annex 1 will result in an additional allowance for Anglian Water to maintain its lower leakage levels. Making enhancement allowances on the basis of higher specification replacement assets risks double counting the cost impact of the lower leakage levels;

- The DMA split activity represents ongoing network management activity undertaken by all companies which is allowed for through the base allowance. The DMA arrangements within an individual company's area reflect the historical network management decisions made by the company. We do not consider this activity to be enhancement or to be representative of Anglian Water needing to undertake activities to a higher specification than other companies;

- Two of the components relate to software upgrades, an ongoing maintenance activity undertaken by all companies included in the long-term base allowance. All companies have a wide range of software across their businesses which will require upgrade and replacement from time to time. We do not consider this to be an enhancement activity or that it is driven by Anglian Water's lower leakage position; and

- In addition, the company identifies that elements of the investment proposed will benefit performance areas beyond leakage such as supply interruptions. As we stated previously[11], such improvements are already funded through our final determination base allowance.

3.8 In summary, we consider Anglian Water has provided insufficient evidence to justify specific activity levels and efficiency of costs identified in its breakdown of proposed leakage activities. We expect the company to have used such information including consideration of base and enhancement elements in decision making as part of its business plan development. The company has focused principally on high level discussion of its unit cost and its general approach to costing. The limited information it provided during the redetermination process has not addressed our concerns and therefore it remains appropriate for the CMA to challenge the build-up and efficiency of costs

[11] Ofwat, '[Reference of the PR19 final determinations: Costs and outcomes – response to provisional findings responses]', November 2020, p. 69.

presented. In our view Anglian Water's enhancement allowance should be in the range £54.2 to £58.1 million.[12]

Bristol Water

3.9 We agree with the CMA's position that it is appropriate to make an enhancement expenditure allowance for Bristol Water to further reduce leakage levels beyond its three year average 2019-20 position.

3.10 In the working paper the CMA proposes an allowance based on the average of top-down and bottom-up assessments on the basis of considering the two approaches to be equally robust. We agree it is appropriate that the challenges and concerns highlighted through the bottom-up assessment are accounted for when coming to a final determination.[13]

3.11 A minor point relating to the Bristol Water calculations is that the reduction in three-year average leakage is expressed as 8.7 Ml/d in the working paper[14] but the company's response to RFI020 identified a reduction of 8.6 Ml/d.[15]

Northumbrian Water

3.12 We welcome the CMA's provisional view that no allowance is appropriate for Northumbrian Water. The company did not identify in its business plan that it required enhancement funding to reduce leakage. Nor did it make a claim for such an allowance in its Statement of Case. Instead the claim has been made at a very late stage in the CMA process, in response to the provisional findings, and after Northumbrian Water has seen allowances provisionally made for other companies. This appears to be an opportunistic approach without proper foundation in a funding need, and Ofwat submits that it is not an appropriate use of the CMA redetermination process. The disputing companies of course have a

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[12] As per the CMA approach in the working paper we present our view of allowances prior to any RPE or frontier shift adjustments.

[13] We proposed a 5% efficiency challenge to the company's costs in accordance with our PR19 methodology The detail of the challenges to Bristol Water's assumptions and efficiency of company costs from our bottom-up assessment are included in: Ofwat, 'Reference of the PR19 final determinations: Costs and Outcomes - response to CMA provisional findings', October 2020, pp. 116-117; Ofwat, 'Response to RFI020 (Q11)', November 2020, pp. 10-12; and Ofwat, 'Reference of the PR19 final determinations: Costs and outcomes – response to provisional findings responses', November 2020, pp. 70-74.

[14] Competition and Markets Authority, 'Water redeterminations 2020 working paper - Leakage Enhancement Totex Allowances', January 2021, p.23-24, paragraphs 88-89.

[15] Bristol Water, 'Response to RFI020', November 2020, pp. 1-2.

statutory right to a redetermination, and to seek to put forward arguments in support of their points. What companies should not be doing, however, is using the reference process as a forum in which to ask the CMA to reach a first determination on points which could have been raised during PR19 with Ofwat, but were not. We consider the approach taken by Northumbrian Water would undermine the integrity of the company's business planning and Ofwat's price determination processes, as well as undermining efficient process at the CMA. Accordingly, such a late claim should not be allowed without compelling evidence and reasoning for doing so. The current request for enhancement funding is neither credible nor supported by convincing arguments.

Yorkshire Water

3.13 Our position remains that an enhancement expenditure allowance for Yorkshire Water is not required and therefore is not in customers' best interests.

3.14 The CMA agreed with our final determination view that no company should be given enhancement funding when performing worse than upper quartile for the other three absolute upper quartile performance commitments (supply interruptions, internal sewer flooding, pollution incidents), and for Northumbrian Water for leakage. However, it made an exception for Yorkshire Water's leakage performance.

3.15 We consider making such an exception is inappropriate because the base allowance is sufficient for an efficient company to achieve upper quartile performance, as the CMA has acknowledged for other performance commitments. Yorkshire Water's customers should not be expected to pay more than customers of other companies for a poorer level of leakage performance, when its base cost allowance is on a benchmarked basis with companies that perform better.

3.16 In paragraphs 3.17 to 3.25 we discuss why an enhancement allowance is inappropriate when considering Yorkshire Water's business plan submission. Additionally, in paragraphs 3.26 to 3.38, we set out our proposed refinements to the CMA's approach to setting a leakage enhancement allowance for Yorkshire Water. We provide this in the event that the CMA disagrees with our reasoning for Yorkshire Water not receiving enhancement funding.

An enhancement expenditure allowance for Yorkshire Water is not appropriate

3.17 We highlighted in our previous submissions[16] and at the 2 December hearing that in its September 2018 business plan Yorkshire Water targeted a substantial reduction in leakage to 235 Ml/d by 31 March 2020. The company committed to make this reduction without additional customer funding and noted that such an approach "will ensure that the full cost of improving our current position to future upper quartile performance does not fall on customers in AMP7."[17]

3.18 There is therefore a direct parallel with Northumbrian Water's position. Both company business plans did not expect customers to fund the cost of reducing leakage to the upper quartile level. In our view this is a result of the companies acknowledging their responsibility to address their lower level of leakage performance with respect to the rest of the industry. We therefore consider that Yorkshire Water's investment in the 2018-20 period represents expenditure to help recover from previous underinvestment or underperformance.

3.19 In terms of 2019-20 outturn positions, Yorkshire Water did not meet its 235 Ml/d commitment and only managed to achieve a level of 269 Ml/d.[18] The company's outturn performance level in 2019-20 is worse than the lower quartile level when compared to the rest of the industry, while Northumbrian Water's performance is at the industry median.[19]

3.20 As we have previously set out, we consider it is not appropriate for customers to fund improvements in a company's performance to levels that are already being delivered by its peers. It is also important to note as the CMA has in the working paper[20] that delivery of Yorkshire Water's planned leakage performance commitment, a 15% reduction in the 2020-25 period, will result in the company achieving a performance level that remains below that of the 2019-20 industry median.

[16] Ofwat, 'Reference of the PR19 final determinations: Costs and Outcomes - response to CMA provisional Findings', October 2020, p. 102, paragraph A3.29.
[17] Yorkshire Water, Exhibit 66-048, 'Appendix 8f- Wholesale Cost Appendices', September 2018, p.91.
[18] The leakage figures here are expressed in terms of the historical leakage reporting method that was used by Yorkshire in its September 2018 business plan.
[19] Ofwat analysis of the geometric mean of three-year average leakage figures in 2019-20 normalised by property numbers and length of mains. These results can also be observed in the CMA's supporting analysis for tables 8-2 and 8-3 of its provisional findings.
[20] Competition and Markets Authority, 'Water redeterminations 2020 working paper - Leakage Enhancement Totex Allowances', January 2021, p.28, paragraphs 102.

3.21 Based on the company's business plan, our view is that it is reasonable to expect Yorkshire Water to deliver a leakage level of 235 Ml/d at no extra cost to customers during the 2020-25 period.

3.22 Due to Yorkshire Water updating the assumptions it made as part of the new leakage reporting methods in July 2020 it is necessary to convert the 235 Ml/d it expected to reach in 2019-20 into a value consistent with the company's updated reporting of its 2018 to 2020 performance. Our estimate is that this conversion results in a leakage level of 256 Ml/d.[21]

3.23 In Table 3.1 below we demonstrate that if Yorkshire Water delivers a reduction in leakage from its current levels (2018 to 2020 actuals) to an annual average level of 256 Ml/d over the 2020-25 period, then this is sufficient for the company to meet its PR19 performance commitment. Therefore, we do not consider that customers should fund meeting the company's PR19 performance commitment through enhancement expenditure. Such a position is consistent with the company's September 2018 business plan.

Table 3.1: Potential leakage reduction profile for Yorkshire Water if the company delivers a leakage reduction to 256 Ml/d from current levels over the 2020-25 period[22]

	Actual reported values			Forecast values				
	2017-18	2018-19	2019-20	2021-20	2021-22	2022-23	2023-24	2024-25
Annual average leakage reporting levels (Ml/d)	327.0	318.0	295.2	287.4	279.6	271.8	264.1	256.3
Three year average leakage levels (Ml/d)	n/a	n/a	313.4	300.2	287.4	279.6	271.8	264.1

[21] This conversion has been undertaken by converting the 234.6 Ml/d 2019-20 forecast leakage level from the company's September 2018 business plan consistently with the company's July 2020 reporting against the new leakage reporting methods. This uses the relationship included in Ofwat, 'Response to RFI025', November 2020.

[22] Leakage figures in the table are reported and forecast in terms of the new reporting methods. A straight-line reduction has been assumed from the 2019-20 annual average outturn position to 256.3 Ml/d in 2024-25.

	Actual reported values			Forecast values				
	2017-18	2018-19	2019-20	2021-20	2021-22	2022-23	2023-24	2024-25
Leakage reduction (three year term as percentage from 2019-20 level)	n/a	n/a	n/a	4.2%	8.3%	10.8%	13.3%	15.7%
Yorkshire Water leakage performance commitment levels (%)	n/a	n/a	n/a	3.4%	7.4%	9.4%	11.7%	15.0%

3.24 We recognise that Yorkshire Water revised its forecast for 2019-20 leakage levels in its April 2019 business plan. The company reduced the level of reduction to 269 Ml/d by 2019-20. The company attributed its revised position to the impact of the 'Beast from the East' (February-March 2018) and the hot weather in the summer of 2018.

3.25 We note that the 'Beast from the East' occurred six months prior to the company's business plan submission. We do not consider that these weather events should result in the customers having to fund the reduction in leakage to 256 Ml/d. We accept that addressing these events will have occupied the company's efforts to some extent but the allowances for PR14 included data for periods which had other challenging weather events and we expect and fund companies to have resilience plans for such scenarios.

Points for the CMA to consider if it makes an enhancement allowance to Yorkshire Water in its final determinations

3.26 As stated in paragraphs 3.13 to 3.25 we consider there is a compelling case for Yorkshire Water to receive no allowance for leakage enhancement expenditure. However, if the CMA choses to make an allowance our view is it should consider modifying how it applied its assessment approach. In particular our position is that there are further points to consider with respect to the volume of leakage reduction that is applicable for an enhancement allowance.

3.27 We support the CMA's view that Yorkshire Water has provided insufficient evidence to justify the enhancement costs it has proposed. We therefore consider it appropriate that the CMA calculates an allowance using a top-down approach of sector benchmarking due to this lack of evidence.

3.28 We agree with the CMA that there are a number of compelling reasons to apply a significant efficiency challenge to the company's unit costs. There is

- Insufficient information provided to demonstrate that adequate optioneering had taken place;
- A lack of evidence provided by the company to justify the costs it presented are efficient;
- Limited assurance for the assumptions the company made in modelling its costs;
- Limited evidence of consideration of the split of activities and costs between base and enhancement; and
- A request for unit costs that are higher than better performing companies. We discuss the point about high unit costs in more detail below.

3.29 In Table 3 of the working paper[23] the CMA demonstrates Yorkshire Water's request to be between 18 and 50% higher than Anglian Water's when considered on a per property or per kilometre of mains length basis. We have reviewed the costs requested by the 17 companies in their August 2019 submissions and Yorkshire Water has the second highest request on a per property and third highest on a per kilometre of mains basis. We do not consider this represents a credible position when considering Yorkshire Water's relative performance levels. Since the company is one of the poorest performers on a comparative basis, we would expect it to have one of lowest marginal costs in the industry, reflecting the greater opportunity to reduce leakage if it were efficient in its expenditure.

3.30 An allowance based upon the industry upper quartile requested cost per property or cost per kilometre of mains, instead of the cost per unit of leakage reduction can be considered. For Yorkshire Water, using the mains length and property

[23] Competition and Markets Authority, 'Water redeterminations 2020 working paper - Leakage Enhancement Totex Allowances', January 2021, p.10, paragraph 38, Table 3.

numbers for 2019-20 this would result in an allowance in the region of £20.6 to 20.8 million.[24]

3.31 We therefore consider the CMA's application of a unit cost of £0.6 Ml/d based on the industry upper quartile value is appropriate. We identified the unit cost of £1.2 Ml/d in our response to the provisional findings as a maximum unit cost that could be used in a calculation of the Yorkshire Water allowance. We recognised that further scrutiny of the evidence had the potential to justify use of a lower value.

3.32 On optioneering, in the working paper the CMA states that 'Ofwat acknowledged Yorkshire's statement that it had largely exhausted use of further pressure management options, which are recognised as very low-cost solutions.'[25] We would like to clarify and reiterate the points we raised with respect to Yorkshire Water's pressure management which the CMA might want to consider when making a final determination:

- The company states it has undertaken most of the simple pressure reduction in its region;
- The information provided indicates that the company has no remote controlled pressure valves and is in the upper quartile of companies for high operating pressures; and
- Bristol Water, which also reported significant coverage of pressure management valves in its network, was still able to identify cost effective pressure management schemes for AMP7.

3.33 Therefore, considering the points above, we considered there is potential scope in Yorkshire Water's region for more 'smart' pressure management schemes and that the company should provide further explanation of its position. [26]

[24] Ofwat analysis using the leakage enhancement requests for companies outside of the CMA processes in the Ofwat, 'Wholesale Water Enhancement feeder model: Supply demand balance', December 2019. Note the two companies that have higher cost per kilometre of mains than Yorkshire Water both submitted cost adjustment claims to explain their costs and accepted final determinations including a lower allowance than Yorkshire Water's request. One of the two companies was also the single company with the higher cost per property than Yorkshire Water.
[25] Competition and Markets Authority, 'Water redeterminations 2020 working paper - Leakage Enhancement Totex Allowances', January 2021, p.16, paragraph 60.
[26] Ofwat, 'Response to RFI020(Q11)', November 2020, p.4.

3.34 Regarding the volume of leakage reduction allowed for in the enhancement allowance, we note that in its consultation the CMA states that it considered carefully two options:

- Option 1: The full reduction in the AMP7 performance commitment, 47 Ml/d; and
- Option 2: Reduction from the 2019-20 position, 28.8 Ml/d.

3.35 The CMA proposes option 1 in its consultation. However, if the CMA does not agree with us that the company's September 2018 business plan ambition should be upheld, we consider there are a number of compelling reasons that the proposed volume of leakage reduction applicable for an enhancement allowance should be significantly lower. This would support a move to using the CMA's option 2 or an alternative approach that puts greater weight on the company's September 2018 ambition or its historical performance:

- As we have already stated, Yorkshire Water previously said that customers would not have to fund the improvements to upper quartile levels in full (see paragraphs 3.17 to 3.25;
- The reductions in leakage made by the Yorkshire Water in the 2018-20 period represent the company catching up with the performance levels of the rest of the industry. Therefore, consideration of the 2019-20 annual position as a representation of what customers have funded to date is a reasonable approach. Using the three-year average position risks customers paying twice for leakage improvements;
- The company does not need further investment to continue to benefit from equipment such as loggers installed in the 2018-20 period;
- The company has not been able to clearly explain and justify what it is able to deliver through its base expenditure allowance;
- The approach to base leakage adjustments for the upper quartile performing companies is based on maintaining an upper quartile position with the base allowance. Yorkshire Water is performing at levels considerably below upper quartile. On the basis of 2019-20 outturn data[27] Yorkshire Water is in the lower

[27] Ofwat analysis of the geometric mean of three-year average leakage figures in 2019-20 normalised by property numbers and length of mains. These results can also be observed in the CMA's supporting analysis for tables 8-2 and 8-3 of its provisional findings.

quartile of performers. It is logical therefore to expect at least some reduction to be achieved through the base allowance. Alternatively, it could be considered appropriate to reduce Yorkshire Water's base cost allowance making a symmetrical adjustment as we described in our PR19 methodology;[28]

- We consider the company has opportunity to reduce its leakage levels without spending additional money through increased management focus on leakage activities, following best practice approaches, building upon lessons learnt and the increase in capability from activities undertaken in the 2015-20 period;

- The SELL methodology is not a sufficient defence for poor leakage performance. SELL was not our only consideration when setting cost allowances at PR14. As we set out in the hearing on 2 December 2020[29], we asked companies to go beyond SELL at PR14, noting the concerns that we and the Environment Agency had regarding SELL by that point. These concerns included SELL not incentivising innovation or efficiency;

- Yorkshire Water's leakage performance has deteriorated across the past eight years. This indicates a sustained performance issue within management control which has not been driven by individual weather events such as 'the Beast from the East';[30]

- The company's performance will remain below the 2019-20 industry median if it delivers its performance commitment in the 2020-25 period; and

- If Yorkshire Water only maintained its 2019-20 position across the 2020-25 period it would achieve a 7% reduction in leakage.

3.36 We propose a number of alternative approaches to establishing a volume of leakage reduction that qualifies for enhancement expenditure and compare these to the approach taken by the CMA in its working paper in Table 3.2 below.

[28] If cost adjustments are made for companies such as Anglian Water and Bristol Water who are performing beyond the upper quartile performance level, then it could also be appropriate to adjust the allowances for lower performers such as Northumbrian Water and Yorkshire Water. We discuss this principal in Ofwat, 'Response to RFI020', November 2020, pp. 3-4, question 8 referencing the PR19 methodology, Ofwat, 'Delivering Water 2020: Our final methodology for the 2019 price review', December 2017, pp. 148-151.
[29] Competition and Markets Authority, 'Ofwat hearing', 02 December 2020, pp. 13-14.
[30] Ofwat, 'Reference of the PR19 final determinations: Costs and Outcomes - response to CMA provisional Findings', October 2020, pp. 98-101.

Table 3.2: Alternative approaches to establishing a leakage enhancement expenditure allowance for Yorkshire Water

Option	Description	Volume of leakage reduction identified, Ml/d	Allowance, £m (using unit cost of 0.6 £m/Ml/d)
A	CMA option 1 from working paper	47.0	28.2
B	CMA option 2 from working paper	28.8	17.2
C	Use the leakage level identified from our previous top-down analysis that recognised continuing benefits from the 2018-20 investment as a starting point[31]	23.9	14.3
D	Replace 2019-20 outturn level with those proposed in the September 2018 business plan level and recalculate the three year average	34.0	20.4
E	Replace 2018-20 outturn levels with those forecast in the September 2018 business plan level and recalculate the three year average	28.5	17.1

3.37 We consider there is merit in considering options B to E when coming to a final determination. Our view is that these options effectively challenge the company, acknowledging both its historical performance and its September 2018 business plan proposals and move towards ensuring customers only fund an appropriate volume of reduction.

3.38 As stated above, our view is that no allowance is made to Yorkshire Water, considering both its level of performance and the company's September 2018 business plan position. However, should the CMA choose to make an allowance, our preference from the options in Table 3.2 is option B. This is principally on the basis that it challenges Yorkshire Water to retain the performance it delivered by 2019-20 without additional customer funding.: The selection of option B is in keeping with the company's stated September 2018 business plan commitment for customers not to have to fund the improvements to upper quartile performance levels in full.

[31] In new reporting terms this was estimated as 290.3 Ml/d, Ofwat, 'Reference of the PR19 final determinations: Costs and Outcomes - response to CMA provisional Findings', October 2020, p. 103, paragraph A3.32.

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