

December 2019

PR19 final determinations

**Yorkshire Water – Cost efficiency
final determination appendix**

PR19 final determinations: Yorkshire Water – Cost efficiency final determination appendix

About this document

This document is a cost efficiency appendix to 'PR19 final determinations: Yorkshire Water final determination'. This document provides further details of the company specific issues related to cost allowances and is structured as follows:

- Section 1 provides a summary of our decisions on the company's cost adjustment claims;
- Section 2 provides a summary of our decisions on the company's enhancement proposals, by enhancement area;
- Section 3 provides our decision on costs proposed by the company under the transition programme;
- Section 4 provides our decision and unit cost adjustment related to the WINEP/NEP uncertainty mechanism.

Further information on our assessment and our approach can be found in the 'Securing cost efficiency technical appendix' and the various excel feeder models that we have published.

1. Cost adjustment claims

Table 1 summarises our consideration and allowances for the cost adjustment claims submitted by the company. For completion we include all claims that were part of our draft determination decisions, as well as additional or revised claims the company submitted in its representation to the draft determination. We give further details in our published cost adjustment claim feeder model for Yorkshire Water.

Table 1: Cost adjustment claims and our allowed totex adjustments, 2020-25 (£ million of 2017-18)

Description of Claim	Value of company claim	Our allowed adjustment	Rationale for decision
Bioresources handling and treatment due to WINEP	35.6	35.6	<p>The company argues it will incur an atypical and large expenditure to accommodate additional sludge produced due to growth and WINEP sewage treatment requirements. At draft determination, we partially accepted the need for investment to accommodate the additional sludge arising as a result of the large phosphorus removal element of the company's WINEP programme. We allowed costs to install dewatering and handling equipment (£18.23m and £16.82m respectively), but not the proposed investment in treatment capacity which is only required beyond the 2020-25 period.</p> <p>At draft determination, we also allowed £0.5m to enable the company to prepare for and actively engage with the bioresources market for the additional sludge treatment capacity it requires beyond 2025.</p> <p>Yorkshire Water amended the requested cost in its representations to the draft determination and accepts our draft determination allowance. Our final determination allowance is unchanged from the draft determination.</p>

2. Enhancement assessments

Our approach to assessing enhancement expenditure is detailed in our publication ‘Securing cost efficiency technical appendix’. We generally assess enhancement expenditure separately for each enhancement category, as defined by the individual enhancement cost lines in company business plan tables. We assess multiple lines together where there is a potential for costs to be apportioned differently by companies and where there is some synergy between programmes.

Our preferred method of assessment is benchmarking analysis. Where the investment area does not lend itself to statistical modelling we rely more on the evidence provided by companies in their business plans. We follow a risk-based process of having a lighter touch (‘shallow dive’) assessment for low materiality costs and a more thorough assessment of the evidence (‘deep dive’) of high materiality costs.

Tables 2 and 3 summarise our consideration and allowances for the enhancement expenditure cost lines submitted by the company. We give further details in our published enhancement feeder models for Yorkshire Water.

Table 2: Assessments of water enhancement expenditure, 2020-25 (£ million of 2017-18)

Enhancement cost	Company view in August 2019 business plan (after reallocations)	Our final determination allowance	Rationale for decision
Improving taste / odour / colour	17.0	12.8	We use a deep dive approach and challenge the cost efficiency to make an allowance. See ‘Yorkshire Water final determination’ for further information.

Meeting lead standards	12.5	11.1	We use a benchmark model to make allowances for these costs. Yorkshire Water is less efficient than our benchmarks and we do not allow the full amount requested.
Supply and demand side enhancements: Total	0.3	0.0	In its representation to the draft determination the company no longer requests enhancement funding in leakage for meeting a 15% performance commitment level. We remove short term supply-demand balance enhancement on the grounds of insufficient need as the company forecasts a surplus in its water resources management plan.
Investment to address raw water deterioration	61.4	50.6	We find insufficient optioneering and breakdown of scheme costs to justify the efficient allocation of base and enhancement costs for three of the five schemes, and apply bespoke challenges to set an efficient allowance. See 'Yorkshire Water final determination' for further information.
Metering (excluding new connections) for meters requested by optants, customers and businesses	22.1	22.1	We use a unit cost model to make allowances for these costs. Yorkshire Water is more efficient than our benchmark and we allow the requested costs
Security	0.6	0.0	Yorkshire Water's PR19 security costs are immaterial. We consider that such expenditure does not provide a material enhancement to service and is now part of the company's

			'business as usual' programme of work. This expenditure should be funded from the company's base allowance.
Total clean water WINEP	49.3	46.2	<p>We use our shallow dive approach to set allowances, applying the company shallow dive efficiency factor only, for ecological improvements, non-native invasive species and water framework directive measures.</p> <p>We do not allow the reinstated metaldehyde product substitution costs in the drinking water protected areas model. We consider it very likely that the ban will eventually be applied and allow an appropriate safeguard under the WINEP uncertainty mechanism for catchment management schemes in case it is not.</p>
Aggregated free form lines	0.4	0.0	<p>The company has removed its request for enhancement funding for upper quartile performance in response to our draft determination.</p> <p>The company requests £0.4 million to undertake strategic studies as part of the Water Resources North regional group. It does not consider that its potential regional solutions are developed enough to pass through the gated process or be construction ready in 2025-30 (which is the purpose of this funding programme). We reject the request as Yorkshire Water has not demonstrated any unique or company specific circumstances that justify an allowance for this component. We consider these costs are associated with normal</p>

			operating activities included within base allowance for the provision of an efficient and secure supply-demand balance in order to meet statutory obligations.
Total water enhancement	163.6	142.8	

Table 3: Assessments of wastewater enhancement expenditure, 2020-25 (£ million of 2017-18)

Enhancement cost	Company view in August 2019 business plan (after reallocations)	Our final determination allowance	Rationale for decision
First time sewerage (s101A)	1.0	1.0	We use a benchmark model to make allowances for these costs. Yorkshire Water is more efficient than our benchmarks and we allow the requested costs.
Sludge quality and growth	35.6	35.6	We assess this investment as a cost adjustment claim. See Table 1 above.
Resilience	28.6	0.0	We use a deep dive approach to make allowances for wastewater resilience enhancement investments. We assess the proposed investment as a cost adjustment claim to the company's base allowance rather than enhancement costs and make a partial allowance of £16.4 million. See 'Yorkshire Water final determination' for further information.
Security	0.3	0.3	We use a benchmark model to make allowances for these costs. Yorkshire Water is more efficient than our benchmarks and we allow the requested costs.
Aggregated free form lines	0.0	0.0	The company has removed its request for enhancement funding relating to meeting the pollution incident common performance commitment levels in response to our draft determination. We reallocate the remaining £40.5m to standard WINEP lines and assess it there.
Total WINEP/NEP in the round allowance	891.6	725.8	We derive our allowance from the output of cost benchmarking models except where we conduct a shallow or deep dive. Yorkshire Water reallocated an amount of base capital maintenance costs to

			<p>the phosphorus removal enhancement programme. We have accepted the company's arguments and re-evaluate our model accordingly. This results in a significantly higher allowance for the programme. In addition we increase to our allowance is due to the company's representation on the impact of legislative drivers.</p> <p>Our shallow dive assessments allow the costs in full for the investment relating to chemical investigations. We assess the requested costs for wastewater investigation using a deep dive assessment and apply a cost challenge as there is insufficient evidence that a range of options have been considered. As we were not able to develop a robust cost benchmarking model for the Sanitary parameters model we allow the costs in full.</p> <p>Further we determine our view of efficient costs at a programme level by summing all the allowances for the individual lines and making an adjusted to account for catch-up efficiency and frontier shift. The company's allowance is the lesser of this view and their requested investment. See 'Yorkshire Water final determination' for further information.</p>
Total wastewater enhancement	957.0	762.7	

3. Transition expenditure

The transition programme allows companies to bring forward planned investment from 2020-25 to 2019-20, where it is efficient to do so and/or to enable the company to meet statutory deadlines early in the next regulatory period. Although the expenditure is incurred in 2019-20, for the purpose of cost performance incentives we consider it as expenditure incurred in the following regulatory period (2020-25).

Table 4 and 5 set out our allowances under the transition programme for wholesale water and wastewater. We allow costs when reasonably justified in order to make efficient use of resources to minimise whole life costs, where it is efficient or in customers' interests to bring forward an investment, or to enable companies to meet early statutory deadlines.

For the avoidance of doubt, a disallowance of a proposed expenditure in Table 4 or 5 should not be interpreted as a disallowance of the expenditure from our 2020-25 cost allowance; only as a disallowance under the transition programme.

Table 4: Transition expenditure in wholesale water price controls 2019-20 (£ million of 2017-18 CPIH deflated)

Description of expenditure	Control	Requested expenditure	Allowed expenditure	Rationale
Reservoir Safety programme	Water Resources	2.6	0.0	We disallow this transition expenditure because the investment has no early delivery date in the next regulatory period to be met.
Lead Programme	Water Network Plus	2.5	0.0	We disallow this transition expenditure because the investment has no early delivery date in the next regulatory period to be met.
Drinking Water Quality schemes at Tophill Low, Chellow and Fixby	Water Network Plus	1.6	1.1	We accept the investigations and design work related to the DWI supported water quality schemes to ensure early delivery in the next regulatory period. However, the company does not clearly evidence why it would be efficient to incur the enabling base expenditure in advance and we do not allow this element.

Table 5: Transition expenditure in wholesale wastewater price controls 2019-20 (£ million of 2017-18 CPIH deflated)

Description of expenditure	Control	Requested expenditure	Allowed expenditure	Rationale
WINEP Programme expenditure related to investigations and phosphorus removal schemes	Wastewater network plus	8.1	7.8	We accept the investment relating to investigations and an early start on phosphorus removal schemes with delivery dates in 2021. However, the company does not clearly evidence why it would be efficient to incur the base expenditure in advance and we do not allow this element.

4. WINEP uncertainty mechanism

Our totex allowance for companies includes an allowance for environmental obligations set out in the Water Industry National Environment Programme (WINEP). Some of the requirements in WINEP are not expected to be confirmed until December 2021 at the earliest, which is after we make our final determinations in December 2019. Unconfirmed requirements in WINEP are known as ‘amber’ schemes. Where we make an allowance for amber schemes, we use a mechanism to adjust our totex for schemes which are later confirmed as not required.

Table 6 sets out the adjustments we will make for each scheme in Yorkshire Water’s WINEP programme that is currently unconfirmed, if the scheme is confirmed as not required for the period 2020-25. We will make the adjustments at the end of the control period. Our adjustments are based on the company’s totex estimates (after reallocations) as adjusted by our company specific efficiency factor or, in the case of wastewater schemes, by the ratio of our final totex allowance for the WINEP programme to the company’s estimate (after reallocations).

Table 6 also includes the adjustments we will make should there be a reduction in the need for bioresources handling and dewatering facilities resulting from WINEP ‘amber’ schemes not going ahead. We accept the company’s reasoning that, should they be needed, such true-ups be made on a site by site basis and that for sites with dual obligations under the Urban Waste Water Treatment and Water Framework Directives both would have to be removed for the investment to be removed and returned to customers. For the avoidance of doubt the rates presented per site are in addition to those per km LORI or per kgP/day removed presented earlier in the table.

Table 6: WINEP uncertainty mechanism – cost adjustments for unconfirmed WINEP schemes included in our final determination (£ million in 2017-18 prices)

No of lines in WINEP / Unique ID	Scheme category / name	Company’s totex unit rate	Our allowed totex unit rate
WINEP/NEP ~ Water Framework Directive Measures			
7YW200063, 7YW200064, 7YW200070,	Fish passage (WFD_IMPg)	£39,732 per km LORI	£37,745 per km LORI

No of lines in WINEP / Unique ID	Scheme category / name	Company's totex unit rate	Our allowed totex unit rate
7YW200071, 7YW200073			
7YW100093, 7YW200060, 7YW100089, 7YW100098(x3), 7YW100091, 7YW200072	Heavily modified water bodies (WFD_IMP_WRHMWB)	£85,010per km LORI	£80,760 per km LORI
WINEP/NEP ~ P removal schemes (including those with a sanitary driver)			
7YW200790, 7YW200846, 7YW200872	Transfer schemes (Bishop Wilton, Ingbirchworth, Kirk Smeaton)	£1,581,221 per kgP/day removed	£1,287,218 per kgP/day removed
11 lines (covering 11 sites)	U_IMP2 driven	£616,675 per km LORI	£502,014 per km LORI
28 lines (covering 27 sites)	WFD_IMPm,g driven	£339,470 per km LORI	£276,351 per km LORI
80 lines (covering 39 sites)	U_IMP2 and WFD_IMPm,g driven	£956,145 per km LORI	£778,365 per km LORI
WINEP/NEP ~ Storage schemes in the network			
7YW200640, 7YW200641, 7YW300066, 7YW300067,	Sanitary improvements (intermittent discharges)	£725 per m3	£590 per m3

No of lines in WINEP / Unique ID	Scheme category / name	Company's totex unit rate	Our allowed totex unit rate
7YW300068, 7YW300069, 7YW300070, 7YW300057, 7YW200635			
7YW200638, 7YW300061, 7YW300059, 7YW200637, 7YW300636, 7YW300062, 7YW300060	Continuous discharge transfer	£3,603,273 per km LORI	£2,933,301 per km LORI
Reduction in investment requirements associated with removal of WINEP phosphorus reduction requirements			
7YW200911, 7YW200863	Aldwarke STF	£2.40m per site	£2.40m per site
7YW200911, 7YW200850	Blackburn Meadows STF	£0.52m per site	£0.52m per site
7YW200916, 7YW200818	Bradford Esholt STF	£0.52m per site	£0.52m per site
7YW200917, 7YW200805	Calder Vale STF	£1.40m per site	£1.40m per site
7YW200923, 7YW200803	Dewsbury STF	£3.22m per site	£3.22m per site
7YW200931, 7YW200819	Knostrop E&R facility	£3.50m per site	£3.50m per site

No of lines in WINEP / Unique ID	Scheme category / name	Company's totex unit rate	Our allowed totex unit rate
7YW200934	Lundwood STF	£0.80m per site	£0.80m per site
7YW200937, 7YW200857	Old Whittington STF	£0.92m per site	£0.92m per site
7YW200938	Sandall STF	£0.96m per site	£0.96m per site
7YW200948, 7YW200861	Woodhouse Mill STF	£1.26m per site	£1.26m per site
7YW200801, 7YW200802, 7YW200954, 7YW200930	Huddersfield STF	£1.31m per site	£1.31m per site
7YW200943, 7YW200860	Staveley STF	£3.03m per site	£3.03m per site
7YW200947	Wombwell STF	£0.71m per site	£0.71m per site
7YW200945, 7YW200823	Sutton STF	£0.76m per site	£0.76m per site
7YW200918, 7YW200822	Castleford STF	£0.69m per site	£0.69m per site
7YW200928, 7YW100121	Harrogate South STF	£0.84m per site	£0.84m per site
7YW200953, 7YW200795	Neiley STF	£0.69m per site	£0.69m per site
7YW200955, 7YW200816	Keighley STF	£11.52m per site	£11.52m per site

Note: LORI is Length of river improved. It includes 'in class' improvements subject to a *de minimus*. Where more than one determinand contributes to a length improved, each determinand's contribution to length improved is counted separately.

As explained in 'Yorkshire Water final determination', we are not allowing the reinstated metaldehyde product substitution costs in the drinking water protected areas cost model as we consider it very likely that the ban on the use of this pesticide will eventually be applied. However, in view of the uncertainty we will use a cost adjustment mechanism to make the necessary adjustments for catchment management schemes if the ban is not implemented. The details are set out in Table 7.

Table 7: Uncertainty mechanism – cost adjustments for unconfirmed requirements excluded from our final determination (£ million of 2017-18)

Unique ID	Scheme	Company's totex unit rate	Our allowed totex unit rate
WINEP/NEP ~ Water Framework Directive Measures			
N/A	Metaldehyde product substitution costs	£1.496m	Up to £1.496m max

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We regulate the water sector in England and Wales.

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