

PR19 final determinations

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

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

About this document

This document is a cost efficiency appendix to 'PR19 final determinations: Wessex 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 Wessex 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
Wastewater flooding programme	84.6	6.6	The company claims additional expenditure to proactively manage sewer flooding and to improve its performance for internal sewer flooding and external sewer flooding. We do not allow enhancement expenditure relating to common performance commitments but make a partial allowance for the requested Drainage and Wastewater Management Plans expenditure. See 'Wessex Water final determination' for further information.
Sewage treatment works capacity programme	58.8	0.0	Wessex Water claims additional expenditure for investments in its sewage treatment works to meet demand from population growth. We continue to reject this expenditure. The company provides insufficient evidence to demonstrate that its circumstances are sufficiently different to other water companies to warrant different treatment of costs. The company also provides insufficient evidence to demonstrate that our allowance is insufficient over the long term. We make a modelled base plus allowance which includes for growth at sewage treatment works, and we allow increased growth allowances for Wessex Water because it is a high growth rate company.
Reducing leakage by a further 15%	25.3	0.0	Wessex Water claims additional expenditure to achieve a step change in leakage reduction. We do not find that the company presents evidence of unique circumstances and assess this claim in line with our policy on funding leakage reduction costs for final determination. See the 'Wessex Water final determination' for further information.
North Bristol sewerage strategy	47.2	44.7	This cost adjustment claim relates to completion of the North Bristol sewerage strategy, which Wessex Water claims to be an atypical infrastructure project not covered by our base cost allowance. At the draft determination we

			accepted the need for investment and made a partial allowance. The company has not raised substantive issues in its representation and we retain our draft determination assessment.
Pollution reduction strategy	15.6	0.0	The company claims additional expenditure for a further reduction in the number of pollution incidents as part of its pollution reduction strategy, We continue to reject this claim on the basis that we do not allow enhancement expenditure to meet the pollution incident common performance commitment levels. See the 'Wessex Water final determination' for further information.
Bristol (Avonmouth) sewage treatment works	44.2	0.0	Wessex Water claims additional expenditure for investments in its Bristol (Avonmouth) sewage treatment work to meet demand from population growth. We reject the need for adjustment and do not make an allowance. See the 'Wessex Water final determination' for further information.

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
Meeting lead standards	11.3	11.3	We use a benchmark model to make allowances for these costs. Wessex Water is more efficient than our benchmarks and we allow the full amount it requests.

Supply and demand side enhancements: Total	28.2	2.9	We do not allow enhancement costs for leakage reduction, because the company's stretching performance commitment level does not go beyond the forecast upper quartile threshold. We allow the remaining request within the 2020-25 supply-demand balance enhancement component in full because the unit cost is lower than the efficient industry benchmark. See the 'Wessex Water final determination' for further details.
Investment to address raw water deterioration	12.1	11.3	We apply an efficiency challenge as we find insufficient evidence that the proposed costs are efficient.
Metering (excluding new connections) for meters requested by optants, customers and businesses	11.2	10.9	As at draft determination we make an allowance for metering based on our unit cost model. At final determination we apply the frontier shift to the model output which results in a minor reduction in the allowance.
Resilience	5.3	0.9	We use our deep dive approach and challenge the need of the proposed investments. See 'Wessex Water final determination' for further information.
Security	13.8	12.7	We use a deep dive approach to make allowances for security costs. We allow costs in full for the company's Security and Emergency Measures Direction (SEMD) costs as the company has spent below the benchmark. We apply a 10% challenge for its non-SEMD security costs. The company provides evidence of the need for this investment but we find insufficient evidence that the proposed costs are efficient.
Total clean water WINEP	18.9	17.5	We use our shallow dive approach to set allowances, applying the company shallow dive efficiency factor only, for ecological improvements at abstractions, invasive non-native species, drinking water protected areas and water framework directive measures programmes. The shallow dive efficiency factor for Wessex Water is zero and we allow the requested cost in full. We use our deep dive approach to set allowances for eels regulations and the water investigations programme. For the eels programme we find insufficient evidence of solution optioneering, and for investigations insufficient evidence that costs are efficient. We apply an optioneering challenge and the company deep dive efficiency factor respectively.
Aggregated free form lines	18.6	0.5	Wessex Water requests free form expenditure for a partnership working scheme (£0.528 million) and for investments in enhanced supply interruptions (£13.9 million). We make a partial allowance for partnerships working. While the investment delivers benefits for customers and the environment, the company provides no evidence of how the investment

			<p>costs have been determined or how their efficiency has been assessed. Therefore, we apply the company specific efficiency challenge and allow £0.502 million. As at draft determination, we reject the investment for enhanced supply interruptions since we do not allow enhancement expenditure relating to the supply interruptions common performance commitment levels.</p> <p>The company requests £4.2 million to develop strategic regional water resource solutions and we allow this in full. This allowance is recorded separately to the other enhancement expenditure in our models because it is outside of cost sharing. See 'Wessex Water final determination' and the 'Strategic regional water resource solutions appendix' for further information.</p>
Total water enhancement	119.4	67.9	

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)	5.3	3.9	We use a benchmark model to make allowances for these costs. Wessex Water is less efficient than our benchmarks and we do not allow the full amount requested.
Sludge quality and growth	4.2	4.1	We use a benchmark model to make allowances for these costs. Wessex Water is less efficient than our benchmarks and we have not allowed them the full amount requested.
Resilience	2.6	2.5	We use our deep dive approach and challenge the cost efficiency of the proposed investment. See 'PR19 final determinations: Wessex Water final determination'.
Total WINEP/NEP in the round allowance	406.4	384.1	We derive our allowance from the output of cost benchmarking models except where we conduct a shallow or deep dive. Our shallow dive assessments allow the costs in full for programmes relating to chemical investigations and nitrogen removal. We assess the requested costs for conservation drivers, wastewater investigations and UV disinfection using a deep dive assessment and allow the cost in full as the evidence is sufficient. As we were not able to develop a robust cost benchmarking model for the sanitary parameters model we allow

			<p>the costs in full. We challenge a number of areas where we find the company to be inefficient, including the network and sewage treatment works storage schemes and the company's flow to full treatment programme.</p> <p>We subsequently determine our view of efficient costs at a programme level by summing all the allowances for the individual lines and making an adjustment to account for catch-up efficiency and frontier shift. The company's allowance is the lesser of our programme level view and its requested investment. See 'Wessex Water final determination' for further information.</p>
Aggregated free form lines	109.0	46.5	<p>We discuss the requested expenditure for pollution reduction, North Bristol sewerage strategy and Bristol (Avonmouth) sewage treatment works in Table 1.</p> <p>Wessex Water requests expenditure for its partnership working scheme (£2 million). We make a partial allowance for this investment. The company provides no evidence of how the investment costs have been determined or how their efficiency has been assessed. Therefore, we apply the company deep dive efficiency factor and allow £1.9 million.</p>
Total wastewater enhancement	527.6	441.1	

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).

Tables 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
WINEP / NEP ~ Invasive non-native species	Water Resources	0.03	0.0	We find a lack of evidence on the need to incur this investment early. Therefore we disallow the related transition expenditure.
WINEP / NEP ~ Drinking Water Protected Areas (schemes)	Water Resources	0.02	0.0	We find a lack of evidence on the need to incur this investment early. Therefore we disallow the related transition expenditure.
WINEP / NEP ~ Water Framework Directive measures	Water Resources	0.1	0.0	We find a lack of evidence on the need to incur this investment early. Therefore we disallow the related transition expenditure.
WINEP / NEP ~ Investigations	Water Resources	0.5	0.0	We find a lack of evidence on the need to incur this investment early. Therefore we disallow the related transition expenditure.

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 / NEP ~ Conservation drivers	Wastewater Network Plus	0.2	0.0	We find a lack of evidence on the need to incur this investment early. Therefore we disallow the related transition expenditure.
WINEP / NEP ~ Event Duration Monitoring at intermittent discharges	Wastewater Network Plus	0.7	0.0	We find a lack of evidence on the need to incur this investment early. Therefore we disallow the related transition expenditure.
WINEP / NEP ~ Bridgwater IUDM scheme to increase flow to full treatment	Wastewater Network Plus	1.0	1.0	We allow this transition expenditure as it relates to early delivery of the Bridgwater IUDM scheme.
WINEP / NEP ~ Chemicals monitoring / investigations / options appraisals	Wastewater Network Plus	0.6	0.0	We find a lack of evidence on the need to incur this investment early. Therefore we disallow the related transition expenditure.
WINEP / NEP ~ Investigations	Wastewater Network Plus	1.9	1.9	The investment relates to tightened ammonia consents in 2019/20 and thus efficient to bring forward.
WINEP / NEP ~ Nutrients (N removal)	Wastewater Network Plus	2.3	2.3	The investment relates to a catchment management scheme which was chosen instead of building a nitrogen removal plant. We consider it efficient to bring forward.
WINEP / NEP ~ Nutrients (P removal at activated sludge STWs)	Wastewater Network Plus	0.2	0.0	We find a lack of evidence on the need to incur this investment early. Therefore we disallow the related transition expenditure.
WINEP / NEP ~ Nutrients (P removal at filter bed STWs)	Wastewater Network Plus	2.6	2.6	The investment is related to a scheme to be delivered in the first year of the period 2020-25, thus allowed to meet early requirements.
WINEP / NEP ~ Reduction of sanitary parameters	Wastewater Network Plus	0.2	0.2	The investment is related to a scheme that has requires phosphorus removal to be delivered by 2021 and Ammonia removal by March 2025. The company will do the construction work at the same time and thus the investment is allowed to meet early requirements.

WINEP / NEP ~ UV disinfection (or similar)	Wastewater Network Plus	8.0	8.0	The investment relates to WINEP UV disinfection with regulatory date of 2021, and thus allowed to meet early requirements.
WINEP / NEP ~ Catchment Nutrient Balancing	Wastewater Network Plus	2.2	2.2	The investment relates to Catchment Nutrient Balancing which we support a trial for before the start of the period 2020-25.

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

Unique ID	Scheme category / name	Company's totex unit rate (£m)	Our allowed totex unit rate (£m)
WINEP/NEP ~ Chemicals removal			
7WW200777	Shepton Mallet STW (CIP2 T1)	0.85	0.726
WINEP/NEP ~ Reduction of sanitary parameters			
7WW300211	Shepton Mallet STW	3.71	3.171
7WW201045	Yeovil Pen Mill STW	8.01	6.845
7WW201046	Yeovil Pen Mill STW	0.00	0.000
WINEP/NEP ~ Nutrients (P removal) at ASPs or filter bed STWs			
7WW200084	Bishops Lydeard STW	1.08	$21.247 + 0.0979A + 0.551B + 1.2937C$ <p>where:</p> <p>A is the population equivalent served (in '000)</p> <p>B is the no. of STWs being enhanced, and</p> <p>C is the no. of STWs being enhanced where the proposed P</p>
7WW200093	Blagdon STW	3.83	
7WW200184	Charfield STW	1.33	
7WW200189	Charlton Horethorne STW	0.86	
7WW200265	Crewkerne STW	1.61	
7WW200324	East Chinnock STW	0.61	
7WW200394	Glastonbury STW	3.96	
7WW200421	Hardington Mandeville STW	0.61	
7WW200457	Holdenhurst STW	8.42	

Unique ID	Scheme category / name	Company's totex unit rate (£m)	Our allowed totex unit rate (£m)
7WW200492	Iwerne Minster STW	0.91	consent limit is <0.5mg/l
7WW200506	Kinson STW	4.27	
7WW200516	Langport STW	2.13	
7WW200414	Leyhill STW	0.9	
7WW200577	Martock STW	1.88	
7WW200594	Mere STW	1.23	
7WW200598	Merriott STW	1.33	
7WW200603	Milborne Port STW	1.19	
7WW200612	Milverton STW	0.97	
7WW200626	Nether Stowey STW	1.18	
7WW200639	North Nibley STW	0.74	
7WW200668	Palmersford STW	5.79	
7WW200767	Shaftesbury STW	3.99	
7WW200776	Shepton Mallet STW	3.56	
7WW200819	South Petherton STW	1.49	
7WW200840	Stogursey STW	0.82	
7WW200915	Trent STW	0.91	
7WW200991	Wickwar STW	0.95	
7WW201017	Wiveliscombe (Hillsmoor) STW	0.94	
7WW201021	Wiveliscombe (Styles) STW	0.9	
7WW201032	Wotton under Edge STW	1.54	
7WW201034	Wrington STW	1.11	
7WW201055	Yeovil Without STW	0.99	
Alternative WINEP	Cranborne STW	1.21	
	Ilchester STW		
	Sparkford STW		
	Sturminster Newton STW		
	Thornford STW		
	Catchment Nutrient Balancing – Dorset Stour	3.35	
	Catchment Nutrient Balancing - Parrett	11.95	

Notes for the avoidance of doubt:

- 1) Should we need to apply the formula in the 'Our allowed unit totex rate (£m)' column, we will apply it at the programme level, not scheme level. This means that the totex recovered for customers will be the cost produced by the formula when the values for the variables assumed at final determination are used minus the cost produced by the formula when the values for the variables eventually confirmed are used.
- 2) References in the formula in the 'Our allowed unit totex rate (£m)' column to the "entire WINEP P removal programme" mean all the phosphorus (P) removal schemes in the final WINEP to be released by the Environment Agency following ministerial confirmation of the programme expected in December 2021, and not the "Alternative WINEP" which comprises Wessex Water's proposed P removal programme for the 2020 to 2025 period.

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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