

December 2019

# PR19 final determinations

**South West Water – Cost efficiency  
final determination appendix**

## **PR19 final determinations: South West Water – Cost efficiency final determination appendix**

## About this document

This document is a cost efficiency appendix to 'PR19 final determinations: South West 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 South West 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
Isle of Scilly. Claim relates to taking over operation and enhancement of water & wastewater services to the islands	41.3	41.3	We fully accept this claim. See 'South West final determination' for further information.
Alderney new water treatment works	38.3	18.2	South West Water provides sufficient evidence in its August 2019 representation concerning the long term trend in raw quality challenges for us to remove our 20% challenge and accept their claim. We maintain the principle and application of our deep dive efficiency. See 'South West Water final determination' for further information.
Knapp Mill new water treatment works	72.6	34.5	South West Water provides sufficient evidence in its August 2019 representation concerning the long term trend in raw quality challenges for us to remove our 20% challenge and accept their claim. We maintain the principle and application of our deep dive efficiency. See 'South West Water final determination' for further information.
UV treatment wastewater base costs	13.6	0.0	We do not make an allowance as we consider this claim is fully covered by our wastewater base modelled allowance. See 'South West Water final determination' for further information.
Growth modelling – water	8.7	0.0	We reject these claims as the company does not provide sufficient and convincing evidence to justify the need for an adjustment to its growth allowance above the allowance it receives from our base econometric models. See 'South West Water final determination' for further information.
Growth modelling - wastewater	20.1	0.0	

## 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 South West Water.

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

Enhancement cost	Company view in August 2019 (after reallocations)	Our final determination allowance	Rationale for decision
Improving taste / odour / colour	7.8	7.4	We assess this expenditure with a deep dive approach. We allow the proposed costs but continue to apply the company deep dive efficiency factor to set an efficient allowance.
Meeting lead standards	4.0	4.0	We use a benchmark model to make allowances for these costs. South West Water is more efficient than our benchmarks and we allow the full amount requested.
Supply and demand side enhancements: Total	15.2	3.9	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 assess the remaining expenditure the company submits in the supply-demand balance through a shallow dive approach and apply the company specific efficiency challenge. See the 'South West Water final determination' for further details.
Investment to address raw water deterioration	83.1	68.2	South West Water view is based on water treatment works at Knapp Mill and Alderney we describe in Section 1, five other water treatment works and on catchment management scheme costs. See 'South West Water final determination' for further information.
Metering (excluding new connections) for meters requested by optants, customers and businesses	11.7	8.6	We use a unit cost model to make allowances for these costs. South West Water is more efficient than our benchmark and we allow the requested costs. We assess expenditure associated with replacement of basic meters with smart meters through a deep dive. We reallocate some expenditure from the 'Clean Water Service Other' freeform line into this assessment which is why the allowance appears higher than the requested amount. The company's costs are significantly higher on a per meter basis than those presented by other companies and therefore we make an allowance based upon the average cost we observe from other companies proposals. See the 'South West Water final determination' for further details.
Resilience	54.5	38.8	We use our deep dive approach and challenge the need, cost efficiency and/or optioneering of the proposed investments. See 'South West Water final determination' for further information.
Security	3.2	3.2	We use a benchmark model to make allowances for these costs. South West Water is more efficient than our benchmarks and we allow the full amount requested.
Total clean water WINEP	12.6	11.2	We use our shallow dive approach to set allowances, applying the company specific efficiency challenge only, for ecological improvements at abstractions, eels regulations, invasive non-native species and water framework directive measures programmes, although for South West Water challenge is set to zero. We use our deep dive approach to set allowances for in the drinking water protected area programme. We find insufficient evidence of solution optioneering and efficient costs. We apply an optioneering challenge and the deep dive company specific efficiency challenge.
Aggregated free form lines	34.3	9.0	We disallow the expenditure for the management of the water capital programme (£4.8 million) and for new service reservoirs (£3.9 million), as they are driven by growth and therefore we assume they are included within our modelled base allowance. We assess expenditure for leakage (£8.4 million) and valve maintenance (£2.9 million) within supply

			<p>demand balance and undertake our assessment in the supply demand balance feeder model. We reallocate the expenditure requested for meter replacements (£5.0 million) to the metering feeder model and make a partial allowance there. We disallow the expenditure for water treatment works improvement (£7.3 million) as we consider this to be part of the base expenditure allowance.</p> <p>We make an allowance for the Isles of Scilly (£9 million), see table 1.</p>
<b>Total water enhancement</b>	<b>226.4</b>	<b>154.3</b>	

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

<b>Enhancement cost</b>	<b>Company view in August 2019 business plan (after reallocations)</b>	<b>Our final determination allowance</b>	<b>Rationale for decision</b>
First time sewerage (s101A)	1.0	1.0	We use a benchmark model to make allowances for these costs. South West Water is more efficient than our benchmarks and we allow the full amount requested.
Sludge quality and growth	5.2	0.0	We assess this expenditure with a deep dive approach and disallow the requested cost. See 'South West Water final determination' for further information.
Resilience	4.8	3.7	We have not identified any new evidence and retain draft determination allowances. See 'South West Water final determination' for further information.
Security	0.1	0.1	We use a benchmark model to make allowances for these costs. South West Water is more efficient than our benchmarks and we allow the full amount requested.
Aggregated free form lines	35.9	7.8	We disallow the proposed cost for downstream thinking (£9.7 million), management and general investments (£5.2 million), maintaining the serviceability of sewage treatment works (£4.3 million) and maintaining the serviceability of sewage pumping stations (£8.8 million) since we consider this expenditure to be included within our modelled base allowance. We make a £7.8 million allowance for the Isles of Scilly, see table 1.
Total WINEP/NEP in the round allowance	145.2	145.2	For WINEP the company is allowed its requested costs after reallocations. We consider these costs are efficient as they are less than our modelled allowance after adjustments for a catch-up efficiency and frontier shift.
<b>Total wastewater enhancement</b>	<b>192.3</b>	<b>157.7</b>	

### 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
Isle of Scilly	Water Resources	0.01	0.01	We allow the expenditure the company requests relating to the Isles of Scilly.
Isle of Scilly	Water Network Plus	0.2	0.2	We allow the expenditure the company requests relating to the Isles of Scilly.
Raw water deterioration	Water Network Plus	0.2	0.2	The investments relate to early start on Knapp Mill programme which the company provides additional evidence for. We accept it is efficient to start early.
Resilience	Water Network Plus	0.3	0.3	
Maintaining the long term capability of assets	Water Network Plus	0.5	0.5	

**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 ~ Schemes to increase storm tank capacity	Wastewater Network Plus	0.1	0.1	This investment enables early start on WINEP schemes and hence we allow the transition expenditure requested.
WINEP / NEP ~ Storage schemes to reduce spill frequency at CSOs, storm tanks, etc.	Wastewater Network Plus	0.5	0.5	This investment enables early start on WINEP schemes and hence we allow the transition expenditure requested.
WINEP / NEP ~ Chemicals monitoring / investigations / options appraisals	Wastewater Network Plus	0.2	0.2	This investment enables early start on WINEP schemes and hence we allow the transition expenditure requested.
WINEP / NEP ~ Investigations	Wastewater Network Plus	0.4	0.4	This investment enables early start on WINEP schemes and hence we allow the transition expenditure requested.
WINEP / NEP ~ Nutrients (P removal at activated sludge STWs)	Wastewater Network Plus	0.1	0.1	This investment enables early start on WINEP schemes and hence we allow the transition expenditure requested.
WINEP / NEP ~ Nutrients (P removal at filter bed STWs)	Wastewater Network Plus	0.1	0.1	This investment enables early start on WINEP schemes and hence we allow the transition expenditure requested.
Isle of Scilly wastewater projects	Wastewater Network Plus	0.3	0.3	We allow the expenditure the company requests relating to the Isles of Scilly.

## 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 South West 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 name	Company’s PR19 cost estimate (£m)	Our allowed adjustment (£m)
WINEP/NEP ~ Eels Regulations (measures at intakes)			
7SW200133	Bolham Weir	0.03	0.03
7SW200318	Cowsic	0.04	0.04
7SW200330	Dart at Littlehempston	0.04	0.04
7SW200412	Exe at Sawdust Pool	0.04	0.04
7SW200604	Kennal	0.03	0.03
7SW200682	Lopwell Dam Intake	0.04	0.04
7SW200788	North Bridge Intake	0.04	0.04
7SW200789	North Bridge Intake 1	0.04	0.04
7SW200790	North Bridge Intake 2	0.04	0.04
7SW200949	River Bray at Leehamford	0.04	0.04
7SW200955	River Tavy at Tavy Cleave	0.04	0.04
7SW201235	West Dart	0.04	0.04
WINEP/NEP ~ Water Framework Directive			
7SW1000041	Fernworthy – Fishbank Release	0.01	0.01
WINEP/NEP ~ Nutrients (P removal) at ASPs or filter bed STWs			

Unique ID	Scheme name	Company's PR19 cost estimate (£m)	Our allowed adjustment (£m)
7SW200085	Belstone Sticklepath STW	0.27	0.27
7SW200138	Bow STW	1.28	1.28
7SW200145	Bradworthy STW	0.19	0.19
7SW200163	Bridgerule STW	0.31	0.31
7SW200264	Christow STW	1.23	1.23
7SW200274	Chudleigh STW	1.54	1.54
7SW200278	Chulmleigh STW	1.23	1.23
7SW200286	Churchinford STW	0.33	0.33
7SW200319	Crediton (Lords Meadow) STW	2.11	2.11
7SW200368	Dunkeswell STW	1.37	1.37
7SW200454	Fraddon STW	1.05	1.05
7SW200459	Frogpool STW	0.63	0.63
7SW200545	Hemyock STW	0.26	0.26
7SW200567	Holsworthy (Derriton) STW	1.80	1.8
7SW200602	Kenn & Kennford STW	0.54	0.54
7SW200606	Kilkhampton STW	0.82	0.82
7SW200634	Lanner St Day STW	2.04	2.04
7SW200822	Offwell STW	0.41	0.41
7SW201006	South Molton STW	2.22	2.22
7SW201147	Teign Village STW	0.91	0.91
7SW201243	Willand STW	0.59	0.59
7SW201246	Wilmington STW	0.46	0.46
7SW201251	Winkleigh STW	0.59	0.59
7SW201263	Witheridge STW	0.23	0.23
WINEP/NEP ~ Reduction of sanitary parameters			
7SW200633	Lanner St Day STW	2.74	2.74
WINEP/NEP ~ Chemicals removal			
7SW200861	Pelynt STW (CIP2 T1)	1.87	1.87
WINEP/NEP ~ Storage schemes in the network to reduce spill frequency at CSOs, etc			
7SW300188	Fraddon STW SO	0.21	0.21
7SW200453	St Columb Road SPS EO	0.50	0.50
WINEP/NEP ~ Isles of Scilly Wastewater Projects (under HD_INV driver)			
7SW200591	Isles of Scilly SAC Investigation	0.08	0.08
WINEP/NEP ~ Isles of Scilly Wastewater Projects (under U_IMP1 driver)			

Unique ID	Scheme name	Company's PR19 cost estimate (£m)	Our allowed adjustment (£m)
7SW200593	Isles of Scilly STW improvement - St Mary's	7.39	7.39

As explained in 'South West Water final determination' we are not allowing the reinstated metaldehyde product substitution costs in the raw water deterioration 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	£0.35m	Up to £0.35m 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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December 2019

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