

29 March 2024

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Department for the Environment, Farming and Rural Affairs

By electronic copy only

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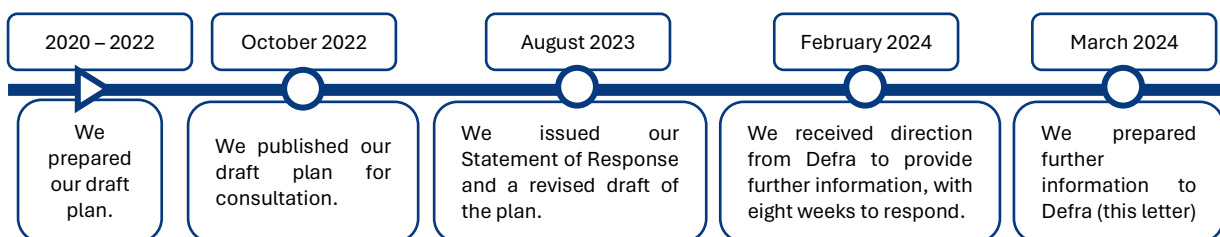
Opening hours: Fri-Mon 8am-6pm

Dear Martin,

## Draft WRMP: Further information provided in support of our Statement of Response

Thank you for your letter considering Defra's response to our Statement of Response (SOR) following consultation of our draft Water Resources Management Plan and our associated revised draft. We understand from your correspondence there are five issues requiring further information in order for your department to conclude its review of our revised draft plan and finalise your recommendation for us to publish the plan.

As your letter outlines, any further information forms part of our SOR and should therefore be published in the same manner as the SOR and made available to those who gave representations in the consultation. We have therefore presented the further information as part of this letter and will make this response available with our SOR. Therefore, for those reading this letter on a public channel, a brief timeline of the most recent process to update our revised draft plan is provided below.



We have set out the details of your letter and responded in turn with further information or our actions to address the issues raised.

We look forward to receiving details of your further consideration to our plan in due course, and we will continue to assist your department and the Environment Agency with further matters as required.

Your sincerely

**Tom Kelly**

**Wholesale Director  
SES Water**

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## Issue 1: Inclusion of baseline bulk transfer in tables

### Defra comment

New Appointments and Variations (NAVs) are required to produce a statutory WRMP. This means that incumbents should ensure alignment with the NAV company plans, and that transfers to each NAV should be described in the plan and contractual volumes should be set out consistently over planning tables. SES Water has not included NAV companies and their transfer volumes in Table 1 of the planning tables and should add this information before publishing its final WRMP24.

There are also other discrepancies in baseline bulk supplies between plans from SES Water and other incumbent water companies. Full details of these are provided in the Statement of Response Review Annex that will be provided by the Environment Agency. The company should ensure that reporting of all transfers between companies are aligned and correctly reported before publishing its final WRMP24.

### SES Water response and actions

We have worked with the Environment Agency to clarify the details of this issue and we now understand there is Environment Agency concern that water supplied to New Appointments and Variations (NAVs), may also be included in their own plans and growth projections. As such, an explicit line of sight between the plans is required.

In discussion with the Environment Agency, we propose to enter the contractual volumes of our NAV arrangements as a separate line in our WRMP table. This will be captured in both Table 3, as a detailed line for the Water Resource Zone, and in Table 1, as a summary of the arrangement. We will also reflect the property numbers being served by the NAV arrangements in the supplementary notes to Table 1.

For reference, we currently operate three supply arrangements with two NAV operators, as follows:

#### Leep Networks

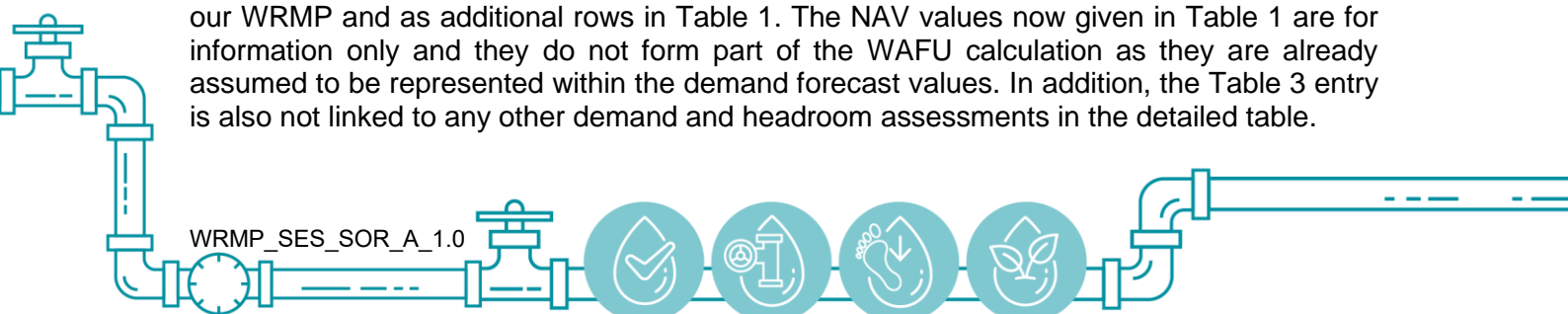
Site – Courtyard Gardens. This is formed of a housing development in Oxted, contracted at 0.11 MI/d.

Site – Park View. This is formed of a housing development in Epsom, contracted at 0.27 MI/d

#### Independent Water Networks

Site – Lodge Farm. This is formed of a housing development in Effingham, contracted at 0.14 MI/d.

As these agreements became effective between 2021 and 2022 and our demand forecast for WRMP24 was originally developed in 2020, the demand from the NAV is assumed to be accounted for in our baseline demand forecast through our population growth forecasts and were not separately listed as transfers in Table 1 of the planning tables. We have added clarification text and values on contractual supply rates to these two NAVs in Paragraph 52 of our WRMP and as additional rows in Table 1. The NAV values now given in Table 1 are for information only and they do not form part of the WAFU calculation as they are already assumed to be represented within the demand forecast values. In addition, the Table 3 entry is also not linked to any other demand and headroom assessments in the detailed table.



We set out in our SOR that future growth has been considered as part of our population and demand forecasting. Our current NAVs take the form of relatively small housing developments and we anticipate future NAVs will also take the form of housing and service facilities – reflecting the expected growth from our forecasting work. We understand the Environment Agency is satisfied with this approach and that our plan captures the level of future consumption we will need to supply to support growth in our resource zone. Forthcoming WRMP annual reviews will capture any further NAV arrangements as we may be requisitioned to supply to ensure ongoing sight of water supply and consumption trends.

With regard to our baseline bulk transfers supplied to other companies, we have reviewed the details captured in our plan and taken this opportunity to ensure consistency across company data tables. In line with our discussion with the Environment Agency, the contractual supply rates will be referenced in Table 1, and we will continue to provide the operational rates in Table 3. We have provided a brief overview of the relevant details, as follows:

### **North Sussex Areas**

This bulk supply to Southern Water is formed of two phases, with the second phase acting as an extension of the first phase. We will amend Table 1 to reflect the contractual maximum daily flow of 1.6 MI/d, and provide the assessed rate of 1.3 MI/d in Table 3.

From 2025/26, we anticipate this bulk transfer will be increased to supply Southern Water with a maximum flow of 4.0 MI/d. This is currently represented as a 4.0 MI/d potable water export option in Table 3. Whilst this remains an option it will not be referenced in Table 1.

### **Rusper (Orltons Lane)**

Our (revised) draft plan also references a particularly small transfer to Southern Water at Rusper, accounting for about 0.001 MI/d. Since submitting the revised plan (August 2023) this transfer became non-operational in October 2023, following work by Southern Water in the area and it does not feature in the Table 1. We are therefore in the process of confirming the cessation of this transfer, and we propose to update Section 4D of our WRMP for accuracy.



## Issue 2: Leakage unit cost considerations

### Defra comment

The company has not provided adequate evidence and narrative regarding leakage unit cost considerations. Unit costs still appear to be significantly above the industry median of 3.0 £m/MI/d quoted in Ofwat's consultation response. The total cost of SES Water's leakage reduction for AMP8 is £40.7m or about £9.9m/MI/d. Before publishing its final WRMP24 the company should provide further evidence and narrative regarding leakage unit cost considerations, with separate breakdowns for AMP8 and AMP9 approaches. The high leakage unit costs should be evidenced and justified as efficient. However, this should not affect the company's ambition regarding delivery of leakage reduction.

### SES Water response and actions

We note the concerns presented in this issue and have digested the further information provided in the supplementary information annex. We believe there are several points to cover in response to this issue, which we have responded to in turn:

1. The reference to £40.7m in the issue (as above) which we believe has been incorrectly interpreted from our revised draft WRMP (rdWRMP).
2. The total leakage costs presented in our leakage strategy.
3. Providing additional context to our business plan submission so that there is a better line of sight between the two plans.

#### 1. The reference to £40.7m in the issue (as above) which we believe has been incorrectly interpreted from our rdWRMP.

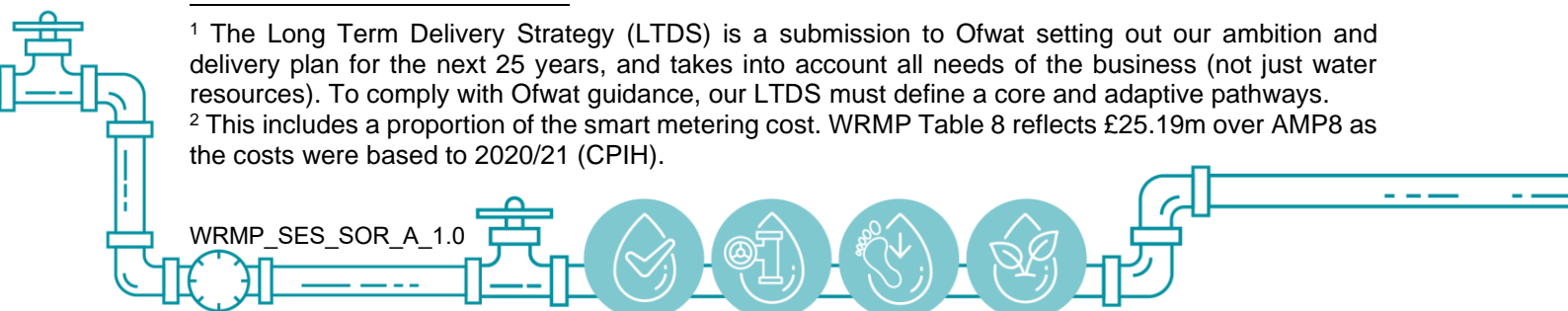
The further information annex provided by the Environment Agency sets out that Ofwat (who has recorded this issue) has interpreted Table 38 of our rdWRMP. This table provides an overview of the various demand management strategies considered when developing the plan, and is set out in low, medium, high and high+ profiles to align with the adaptive plan requirements of both the WRMP and the Long Term Delivery Strategy (LTDS)<sup>1</sup>.

Following the introduction of the Environmental Improvement Plan (February 2023) and related water sector interim targets, we needed to ensure the high+ demand reduction scenario formed part of our plan, otherwise we would not be able to achieve the policy targets.

We believe this issue has in part been raised because the costs associated with the medium scenario have been reviewed. To confirm, the high+ scenario is recorded as £26.9m in our rdWRMP submission<sup>2</sup>. Our business plan submission sets out that our whole leakage strategy is £33.9m, and we have provided further information on this in our Point 3 response (below).

<sup>1</sup> The Long Term Delivery Strategy (LTDS) is a submission to Ofwat setting out our ambition and delivery plan for the next 25 years, and takes into account all needs of the business (not just water resources). To comply with Ofwat guidance, our LTDS must define a core and adaptive pathways.

<sup>2</sup> This includes a proportion of the smart metering cost. WRMP Table 8 reflects £25.19m over AMP8 as the costs were based to 2020/21 (CPIH).



## 2. The total leakage costs presented in our leakage strategy.

Using the values presented in our business plan, for consistency with further assessments by Ofwat, we will use this section to distil the cost elements. At this stage, we believe there may have been some confusion in the interpretation of the data submitted.

Table 1 below outlines the total anticipated cost of leakage in the next business plan period (AMP8/PR24, 2025-30) which we have entered in our business plan submission to Ofwat<sup>3</sup>. This total cost includes the costs to *maintain* leakage levels and the costs to *reduce* leakage levels, so that we are consistent with Ofwat's business plan guidance<sup>4</sup>. If we consider both elements of cost when calculating leakage reduction, we derive the unit cost figure of £9.7m/MI/d.

Table 1 Total leakage costs captured in our business plan (PR24) proposals.

Leakage activity	AMP8 total cost (£m), PR24 CW19	AMP8 benefit (MI/d)	Unit cost £/MI/d, PR24
Active leakage control (ALC)	26.1	1.0	26.1
Asset renewal	0.0	0.0	
Pressure management	7.3	2.0	3.7
Smart metering	0.5	0.5	1.0
<b>Total</b>	<b>33.9</b>	<b>3.5</b>	<b>9.7</b>

To ensure clear explanation surrounding leakage costs, we consider that it is not appropriate to interpret the calculation using both the maintenance and reduction costs of leakage. The true cost per MI/d should be based only on the cost to *reduce* leakage. Table 2 therefore sets out this element in particular – the costs to reduce leakage – and demonstrates that we are within a reasonable tolerance of the quoted median of £3m/MI/d.

Table 2 Costs of reducing leakage in AMP8 as captured in our business plan (PR24) proposals.

	AMP8 reduction cost (£m), PR24 CW19	AMP8 benefit (MI/d)	Unit cost £/MI/d, PR24
ALC	4.3	1.0	4.3
Asset renewal			
Pressure management	6.8	2.0	3.4
Smart metering	0.5	0.5	1.0
<b>Total</b>	<b>11.6</b>	<b>3.5</b>	<b>3.3</b>

Repeating this approach to calculate AMP9's anticipated leakage activities derives a unit cost of reducing leakage in the five-year period of £23m/MI/d, as summarised in Table 3 below:

<sup>3</sup> LTDS and PR24 submissions submitted on 03 October 2023.

<sup>4</sup> Ofwat guidance for business plan table CW19.



Table 3 Costs of reducing leakage in AMP9 as captured in our business plan (PR24) proposals.

	Projected AMP9 reduction costs (£m), PR24	AMP8 benefit (Mld)	Unit cost £/Ml/d PR24
ALC	2.0	1.5	1.3
Asset renewal	60.0	1.0	60.0
Pressure management			
Smart metering	0.0	0.2	0.0
<b>Total</b>	<b>62.0</b>	<b>2.7</b>	<b>23.0</b>

We recognise the considerable increase in anticipated unit costs from AMP8 to AMP9. This is owing to asset renewal replacing pressure management as one of our interventions, with the latter expected to be an exhausted option by 2030. It is acknowledged across the industry that asset renewal is a relatively expensive option to reduce leakage, due to the cost benefit ratio, but which we will need to initiate to progress our ambition of reducing leakage by 38% by 2035<sup>5</sup>.

We consider we have a distinct advantage over others when delivering our asset renewal plan because our *DMA Asset Health* programme has yielded real examples of where strategically targeted water mains renewal can reduce leakage. Our current data outlines that on average, a 1 km of mains renewal will yield a 0.01 Ml/d leakage saving. Therefore, to achieve our target 1.00Ml/d reduction in AMP9 we need to renew 100km of pipe in the five-year period. Based on framework contractor rates we have calculated that we will need £60m of investment in AMP9 for leakage reduction through mains renewal.

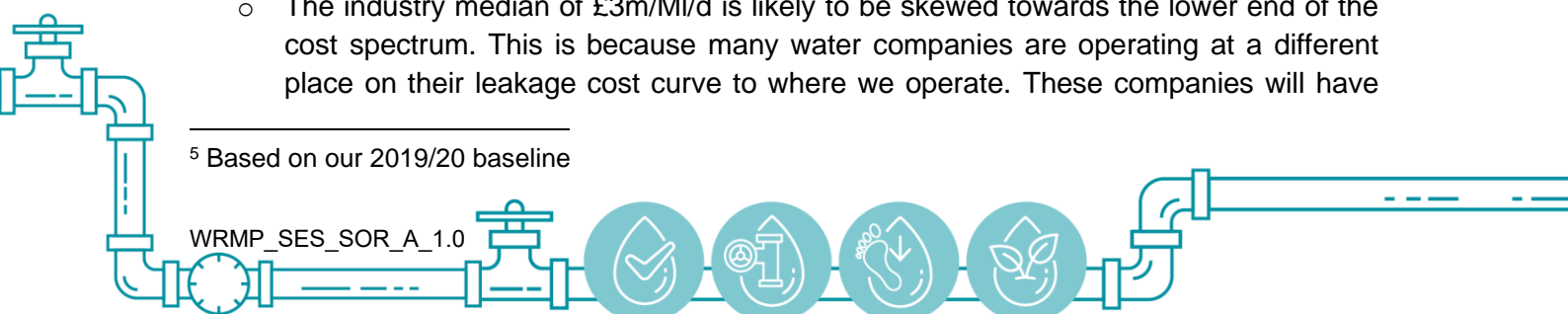
We realise that this is a large cost and indeed comparatively expensive compared to other leakage intervention types. However, with our ambitious plans to continue to reduce leakage we currently have no choice but to make this proposal given where we are on our leakage reduction journey and with the current technologies available.

By deferring asset renewal for leakage reduction to AMP9 we will use AMP8 to gain better understanding of the benefits to leakage from smart metering, and we will also have completed our DMA Asset Health programme. We also have faith that the industry will have developed innovations capable of reducing the cost of water mains renewal. With these considerations in mind, we plan to do a full review of unit costs and intervention strategy ahead of the next price review (PR29).

We provide the following more general comments to give confidence in our calculation of unit costs and why we believe our cost to reduce leakage is both realistic and ambitious in the context of leakage reduction in the sector.

- Having successfully reduced leakage in line with targets in AMP7 we have a well founded understanding of the cost to deliver the different intervention types.
- Our unit cost estimates are made on sound evidence base using AMP7 costs (2021/22 baseline) and we have used independent specialist consultants to work with us to derive our projected future costs.
- The industry median of £3m/Ml/d is likely to be skewed towards the lower end of the cost spectrum. This is because many water companies are operating at a different place on their leakage cost curve to where we operate. These companies will have

<sup>5</sup> Based on our 2019/20 baseline



cheaper intervention options available to them. For example, companies who still have widescale pressure management possibilities available beyond AMP8 will naturally have lower unit costs.

- Our ALC costs for the benefits gained are in line with the industry average. The higher figure in AMP8 is being driven by our proposed investment in our smart network, building on our successes in AMP7 and investing for the future.
- The calculated leakage benefits possible from smart metering can (and have in our narrative) been described as conservative. This means that there is a reasonable chance of outperforming against the leakage savings quoted in our plan. This being the case, the other more expensive interventions can be reduced which will bring down the average unit cost. We will have the opportunity to review this situation throughout AMP8 and reassess the need for such extensive asset renewal interventions.

### **3. Providing additional context to our business plan submission so that there is a better line of sight between the two plans.**

As part of Point 1, we have outlined our leakage strategy is recorded as £26.9m in our rdWRMP submission; and our business plan submission (particularly the CW19 table which records all leakage costs) derives an AMP8 value of £33.9m.

Whilst the WRMP focuses on leakage activities to reduce the total demand from our system, our business plan takes into account further strategies to fully maintain our business operation and network. As such, our business plan submission includes the costs associated with our smart network and our DMA Asset Health programme which we must undertake as part of our overall leakage and asset management strategy.



### Issue 3: Uncertainty of climate change impacts through the adaptive plan

#### Defra comment

SES Water's rdWRMP now adequately describes the development of the climate change scenario and assessment of deployable output impact. The company's description of WRSE's approach to climate change uncertainty in the adaptive plan also aligns with WRSE.

SES Water explains that the uncertainty of climate change impacts on source yield has been removed from the target headroom profile for the final set of adaptive branches from 2039-40. These branches branch out based on the lower, median and upper quartile climate change scenarios. However, this means that climate change uncertainty is not presented in the planning tables from 2040 onwards, and the sizes and profiles of climate change impact from 2040 are not available for assessment for the company's water resource zones. The company should clearly set out the climate change profiles post 2040 to help customers and stakeholders understand the impact the climate change scenario has on the options likely to be selected under each adaptive pathway.

To provide further clarity on the climate change uncertainty, the company should:

- Provide the climate change impact on source yield as time series profiles for each water resource zone, for all climate change scenarios used in the adaptive branches from 2040 onwards in the final WRMP24.
- Work with the Environment Agency to improve data presentation and provision for climate change impact and uncertainty for WRMP29.

#### SES Water response and actions

Calculated climate change impact on our source yield (deployable output) is illustrated as a time series of the three climate change scenarios used in the adaptive planning branches in Figure 9 of our rdWRMP. This represents the climate change impact on our Bough Beech reservoir source yield and not on our groundwater yields. Climate change impacts on our groundwater source yields for different climate models have been calculated and are presented in Appendix A. However, we describe in Section 3C *Impacts of climate change on supply* of our plan that, due to the complexity of dynamically representing groundwater source deployable outputs in the conjunctive use model and their limited sensitivity to climate change (Figure 8), they were fixed in the model throughout the planning horizon without any profiling of climate change impact.

The raw uncertainty of the impact of climate change on source yields is presented as a time series in Figure 5.2 of Appendix F Headroom Assessment.

Together with the regional companies we will work with the Environment Agency to improve the data presentation and provision for climate change impact and uncertainty as part of the next planning round (WRMP29).





## Issue 4: Best value assessment

### Defra comment

SES Water has presented a comparison between the options selected for the Least Cost Plan, Best Value Plan and Best Environmental and Social Plan. It has not presented the best value scores for individual options and the aggregated percentage values for the programmes. The scores provide important evidence for the selection of the candidate best value plan and should therefore be clearly presented. The company should present the best value metric scores for individual options. Full details are provided in the Statement of Response Review Annex provided by the Environment Agency.

### SES Water response and actions

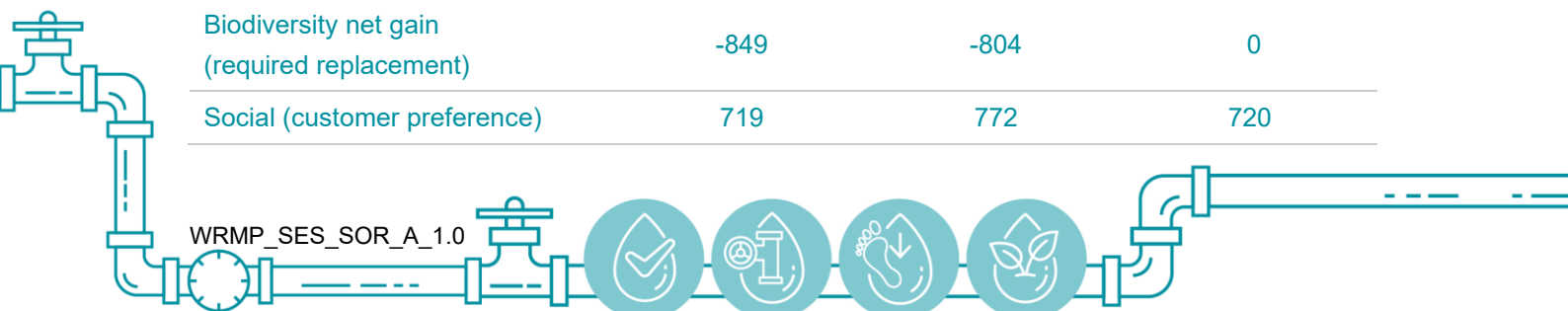
We appreciate that the comparison made between the plans has been acknowledged. This particular issue has been referenced across the regional group and companies, and we have therefore considered this together. We intend to revise the comparison made in our plan to reflect our company specific scores for each of the best value metrics.

Each company plan reflects the regional plan to ensure that we are together providing the best value for all our customers across the southeast in providing a secure and resilient supply of water that meets demand whilst protecting the environment. As such, the best value plan at our company level provides a more cost effective plan than the least cost plan – largely owing to best value options being pursued by other companies that reduces their reliance on our surplus water resource. This is discussed in our plan. As such, we believe providing the best value assessments at plan level is sufficient and proportionate to respond to this issue.

We therefore propose to update Table 46 of our plan to provide the disaggregated values of each metric across the plan programmes – the least cost, best environmental and social value, and the best value plan. A copy of Table 46 from our plan is provided below, detailing the updates metrics in blue where these were previously denoted as regional values.

Table 4 Proposed update to Table 46 from our rdWRMP

Metric	Least cost plan values	Best environmental social plan values	Best value plan values
Cost (STPR) (£m)	£544.0	£542.0	£534.0
Regional cost (STPR) (£m)	£19,052	£19,383	£19,255
Emissions (capital)	11,291	10,442	1,084
Emissions (operational)	293,483	293,483	293,483
Environmental (SEA environmental benefit)	2,137	2,482	2,407
Environmental (SEA environmental disbenefit)	3,568	3,670	2,806
Environmental (natural capital)	-13,128	-13,020	0
Biodiversity net gain (required replacement)	-849	-804	0
Social (customer preference)	719	772	720



Metric	Least cost plan values	Best environmental social plan values	Best value plan values
Reliability	0.449	0.457	0.458
Adaptability	0.137	0.137	0.141
Evolvability	0.415	0.418	0.434
<b>*Indicative bill impact (£) at 2035</b>	<b>£81.77</b>	<b>£80.81</b>	<b>£43.90</b>



## Issue 5: Monitoring plan

### Defra comment

We recognise that SES Water has now included a monitoring plan, however this needs more development for the final plan. The Environment Agency expect the monitoring plan to include thresholds, triggers, and the potential actions to manage key risks, including those identified through sensitivity testing. Stakeholders and regulators need to be able to see how key risks are being managed within the planning cycle and what alternative action could be taken and when. This is particularly important given the transfers that SES Water provides to other companies in the WRSE region, and the risk to the supply demand balance of SES Water, and other companies, if the demand management strategy does not deliver the anticipated demand reductions set out in the preferred plan.

SES Water should ensure that its monitoring plan covers the points set out in the adaptive planning supplementary guidance. This is especially important for the demand management strategies given the reliance in the early years of the plan on the savings from demand management to ensure security of supply.

SES Water should explain the feedback mechanism from company level monitoring into the regional plan. We would recommend working with WRSE so that there is consistency between the regional and company level monitoring plans.

### SES Water response and actions

We are particularly encouraged from our discussions with the Environment Agency that our approach to develop a monitoring plan across the local (company), intermediate (neighbouring) and regional impacts and associated decision making is appropriate.

We have worked with the regional companies and group to further develop the monitoring plan based on the requirements you have referenced. This is based on forthcoming supply demand balances being recorded each year (which aligns with our Annual Review process) and defined triggers. To monitor ongoing water resource requirements across the region, and ensure each company is aware of any emerging risks or changes, we are proposing to use headroom – the amount of water a company has over the forecast supply demand balance position for each water resource zone. Being a composite measure that brings together the supply and demand forecasts, coupled with the programme delivery of each company's schemes and activities, headroom should appropriately reflect the actual position companies are in on an annual basis.

As such, where the actual headroom in a zone falls below target headroom, action would be required to improve the resource situation. If actual headroom is higher than target headroom, then no immediate action beyond the plan in place is required, but we should continue to monitor our ongoing work and the levels of performance that sit within the specific supply or demand metrics.

More specifically, we understand your department and the Environment Agency seek details of our monitoring plan that demonstrates how we will determine if and when alternative options to those set out in our current plan may be required to maintain the supply demand balance, in the event that various metrics vary from our current forecasts. Selection and implementation of these options will need sufficient lead in time not to risk continued security of supply.



We have already set out that the key areas for us to monitor are:

*Table 5 Combined components of our monitoring plan, collated from sections of our rdWRMP and recent work with the regional group.*

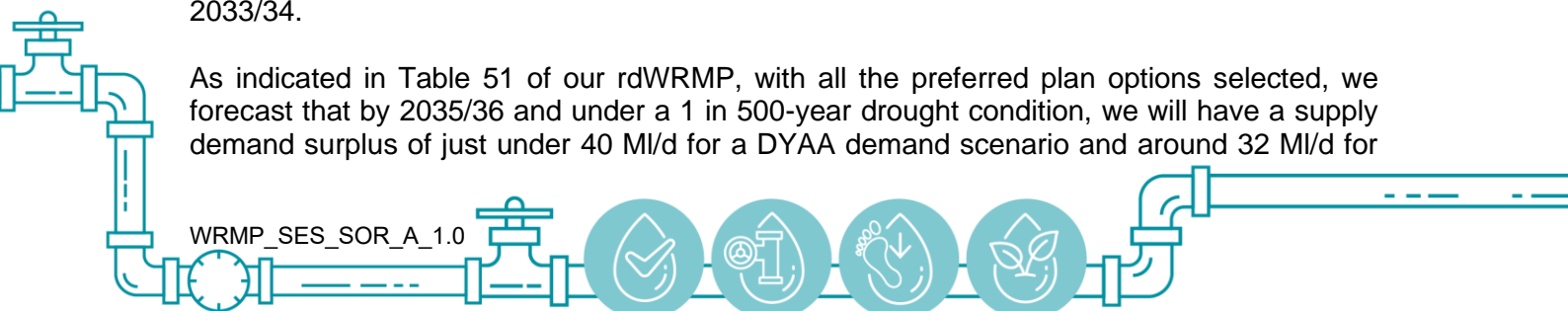
	External factors	Company specific monitoring and performance
Demand factors	Population growth to assess adaptive pathway.	Distribution input (DI) to assess overall trend and projection against forecast DI.
Climate change	Actual climate change (through global temperature record) to assess adaptive pathway.	Experienced weather and outage to monitor impacts of climate change on our supply network and operation.
Supply	Our profile of environmental destination (reductions in abstraction) which will be updated circa 2027 which, coupled with our next deployable output assessment for WRMP29, may change our supply forecast and adaptive pathways.	
Headroom	To review the supply and demand components together we propose to monitor actual headroom and where it falls below target headroom, action would be required to improve the resource situation.	

We had also considered outlining a more prescribed series of monitoring tailored to our specific area of risk – our proposed bulk transfers to neighbouring companies. However, we understand from our discussion with the Environment Agency that our monitoring plan is not required to include details surrounding the alternatives neighbouring companies would need to pursue in the event we were unable to fulfil a transfer. We have therefore set out further information below to consider whether we are vulnerable to not fulfilling the proposed bulk exports.

Our rdWRMP forecasts a supply demand balance surplus which allows us to offer additional bulk supplies to some of our neighbouring companies in the future. However, our plan also includes ambitious demand (and localised abstraction) reductions over the planning horizon to align with the requirements of the Environmental Improvement Plan. If these demand reduction forecasts are not met for whatever reason, there is a potential risk that we may have insufficient surplus. This would mean that those neighbouring companies, whose own plans assume we will be able to provide the indicated export amounts, would need to develop alternative options to offset the reduction in our exported supplies. Establishing such alternative options is likely to require lead-in time and therefore we will annually monitor progress with our demand reduction options to allow us to provide such lead-in time for alternative options should these be required. We will measure progress against established thresholds and schedule review points with those neighbouring companies expecting to receive our exports.

With the exception of our 4 MI/d export to be provided to Southern Water between 2025/26 to 2030/2031 (which we forecast we can meet under a 1 in 200-yr drought condition with demand restrictions in place, see Table 51), the first of any supply or export options selected in any of our alternative plans is the 10 MI/d export to Southern Water from Outwood to Turners Hill in 2033/34.

As indicated in Table 51 of our rdWRMP, with all the preferred plan options selected, we forecast that by 2035/36 and under a 1 in 500-year drought condition, we will have a supply demand surplus of just under 40 MI/d for a DYAA demand scenario and around 32 MI/d for



DYCP demand scenario. This surplus assumes we have achieved the 23.74 MI/d of demand reductions by 2034/35 when compared to 2021/22 indicated in Table 48 of our Plan. Considering a worst-case scenario of not having achieved any of these demand reductions by 2035/36, we would still forecast a DYAA surplus of 16 MI/d (i.e. 40 minus 24 MI/d) and a DYCP surplus of 8 MI/d (i.e. 32 minus 24 MI/d). This suggests we should still be able to provide the 10 MI/d export to Southern Water proposed in 2033 under a DYAA scenario even if we didn't manage to make any demand reductions compared to 2021/22. We would need to have made only 2 MI/d demand savings by 2033/34 compared to the forecast c. 22 MI/d (if linearly interpolated) to be able to provide the 10 MI/d export to Southern Water under a DYCP demand scenario.

Whilst we are fully committed to targeting demand reductions in line with the Environmental Improvement Plan, this exercise demonstrates that we expect to be relatively resilient to being able to provide the exports identified in our plan. Nevertheless, the supply demand calculation has multiple dependencies, each of which holds inherent uncertainty. Whilst this uncertainty is accounted for by headroom allowance and adoption of an adaptive planning approach, continued monitoring of key underlying metrics is vital to validate our supply demand forecasts, facilitate corrections and inform decision-making annual and adaptive planning milestones.

