WSX56 - Supplementary tables commentary

Business plan
2025-2030

Wessex Water
YTL GROUP

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WSX56 - Supplementary tables commentary

CONTENTS

This supporting document is part of Wessex Water's business plan for 2025-2030.

Please see 'WSX00 – Navigation document' for where this document sits within our business plan submission.

More information can be found at wessexwater.co.uk

1. SUP1A.

1.1. Section 1 – SUP1A.1 to SUP1A.9

1.1.1. Residential customers (average)

For lines 1 to 3, please refer to the commentary for lines 10 and 11. The same data is used to produce the data in these lines; the only difference is that this data is split by service i.e., water only, wastewater only and water and wastewater (dual service). These lines need to equal the sum of lines in lines 10 and 11 and are referenced in more detail below.

1.1.2. Business customers (average)

For lines 5 to 7, please refer to the commentary for lines 13 and 14. The same data is used to produce the data in these lines; the only difference being is that this data is split by service i.e., water only, wastewater only and water & wastewater (dual service). These lines need to equal the sum of lines in lines 13 and 14 and are referenced in more detail below.

1.2. Section 2 – SUP1A.10 to SUP1A.16

1.2.1. Residential properties billed (average)

New connections increase the number of residential properties each year. The number of new connections will be decreasing due to declining new population forecasts in WRMP24 and by ONS. In addition, NAV activity is increasing which is reducing the increase in new connections. New connections are all assumed to be measured. We have also accounted for our metering strategy in the rate of switches and hence properties moving from unmeasured to measured.

1.2.2. Residential properties void (average)

For water, this is the sum of household measured and unmeasured voids as per the Lines 34.7FP and 35.1FP of the business plan version of WRMP24 Planning Table 3c: DYAA – Final Plan. This is the WRMP base year value (2020/21) that has been applied to each forecasted year.

For waste, this is as per the Voids PC for 2022/23, which was 1.72%. This percentage has been applied to each year's forecast of the total number of voids.

1.2.3. Business properties billed (average)

New business is based on the volume of new residential properties. This drives an increase in total businesses. Table CW7 also provides information on business moving from unmeasured to measured.

1.2.4. Business properties void (average)

For water, this is the non-household voids as per Line 33FP of the business plan version of WRMP24 Planning Table 3c: DYAA – Final Plan. This is the WRMP base year value (2020/21) that has been applied to each forecasted year.

For waste, this is based on historic trends since market opening (excluding Covid-19) we are assuming a consistent 8% of properties are voids.

1.3. Section 3 – SUP1A.17 to SUP1A.18

1.3.1. Resident population - Water

Forecast is taken from the business plan version of WRMP24 forecasts. This is the sum of the Total Resources Zone Population (Line 41FP in the business plan version of WRMP24 Planning Table 3c: DYAA – Final Plan), the unconnected population, and the inset appointment population. The values obtained from this calculation are then converted to an average figure which is the sum of half of the current year and half of the previous year.

1.3.2. Resident population - Wastewater

Forecast based on existing figures and adding on new connections numbers, assuming 2.2 people per new household.

1.3.3. Non-resident population - Wastewater

Forecast growth projection based on extrapolation of average historical (regional) growth rate (refer to commentary for CWW.7). There are a limited amount of detailed catchment re-assessments undertaken in any given year which could lead to step changes. An annual 0.25% increase is thus considered proportionate given overall population forecast projections and the materiality of non-resident wastewater population to overall numbers.

1.4. Section 4 – SUP1A.19 to SUP1A.21

Forecasted Household population figures are taken from the business plan version of WRMP24 Planning Table 3c: DYAA – Final Plan. The household resident and non-resident populations (SUP1A.19) are the sum of their respective SUP1A.20 and SUP1A.21 lines.

Resident household measured population (SUP1A.20) is the Measured Household – Population, Line 39FP in the business plan version of WRMP24 Table 3c, less the non-resident household measured population. Resident household unmeasured population (SUP1A.21) is Unmeasured Household – Population, Line 40FP in the business plan version of WRMP24 Table 3c, less the non-resident household unmeasured population.

The non-resident population is forecasted using the same methodology as the APR. This is the medium Visiting Friends and Relatives - Population Estimate for the Wessex Water supply area, as per the 2016 report by Edge Analytics, multiplied by the proportion of the respective household or non-household population.

2. SUP1B.

2.1. SUP1B.3, SUP1B.6 & SUP1B.11

2022/23 data only - Following the May 2023 guidance – 'PR24 Final Methodology submission table guidance – section 10: Supplementary tables. Version 3 states that 'Cattle Troughs' are now included in this table. 109 cattle troughs have been added to line 3 – Water – Unmeasured – No meter. This means that this figure will not match the

APR data table equivalent Table 4R. This also effects the totals in line 3 and lines 6 and 11. All totals will vary from the APR by 109.

2.2. SUP1B.1 - Total new residential properties connected in year

All new residential properties connected will be measured. For the remainder of AMP7, new properties have either basic meters or AMR meters (split based on historical data). For AMP8, all new properties will be fitted with an AMI meter (active). Volumes of new properties are affected by an increase in NAV activity. For more information, see the commentary for table DS4.

2.3. SUP1B.2 - Total number of new business properties connections

All new business properties connected will be measured. For the remainder of AMP7, new properties have basic meters. For AMP8, all new properties will be fitted with an AMI meter (active). Volumes of new properties are affected by an increase in NAV activity. For more information, see the commentary for table DS4.

2.4. SUP1B.3 - Residential properties billed at year end

Totals are calculated based on new connections and using table CW7 for meter upgrades and customers moving from unmeasured to measured.

2.4.1. Unmeasured residential properties billed at year end

There are a small number of unmeasured billed properties which have a meter. These properties are charged based on the rateable value of their property and not the volume of water used. These properties reflect customers which were previously on a measured charge (but were able to revert back to unmeasured charges via the current money back guarantee policy for meter optants) and/or those which are on the unmeasured consumption monitor survey (which is used for our water balance estimation of unmeasured household consumption). This number is not expected to change significantly in the future, so we have used the 2022/23 actual figures for the 2023/24 to 2029/30 forecast numbers.

2.5. SUP1B.4 - Residential properties unbilled at year end

As per APR Table 4R - we do not have any residential properties unbilled at year end and we do not have any properties which are uneconomic to bill. Therefore, we do not expect this number to change in the future, so we have kept this number zero for the 2023/24 to 2029/30 forecast numbers.

2.6. SUP1B.5 - Residential void properties at year end

As per the Voids PC for 2022/23, which was 1.72%. This percentage has been applied to each year's forecast of the total number of voids.

2.7. SUP1B.6 - Total connected residential properties at year end

This is a calculated line.

2.8. SUP1B.7 - Business properties billed at year end

Totals are calculated based on new connections and using table CW7 for meter upgrades and customers moving from unmeasured to measured.

2.9. SUP1B.8 - Business properties unbilled at year end

As per APR Table 4R - we do not have any business properties unbilled at year end and we do not have any properties which are uneconomic to bill. Therefore, we do not expect this number to change in the future, so we have kept this number zero for the 2023/24 to 2029/30 forecast numbers.

2.10. SUP1B.9 - Business void properties at year end

Based on historic trends since market opening (excluding Covid-19) we are assuming a consistent 8% of properties are voids.

2.11. SUP1B.10 -Total connected business properties at year end

This is a calculated line.

2.12. SUP1B.11 -Total connected properties at year end

This is a calculated line.

3. SUP11.

3.1. CPIH assumptions used for RPE calculations – SUP11.1

Inflation assumptions are as per PD1.

3.2. Real price effect – Wholesale – SUP11.2-6

3.2.1. Labour

We have extended the time series of analysis established by Ofwat as part of the PR19 labour reconciliation. Current OBR wage growth forecasts are not materially different from CPIH forecasts and consider based on this information an ex-ante adjustment for a labour RPE to be zero. For completeness, our labour entries for SUP11 includes the forecasts from extending the PR19 labour reconciliation approach.

3.2.2. Energy

Forecast energy prices have been informed by a WaterUK industry study with Cornwall Insight (June 2023) and Wessex specific management costs. Supporting calculations, alongside Cornwall Insight's report and analysis can be found in the following annexes to our plan:

- WSX08 – Annex A8 – Energy costs supporting file for CAC6 and Energy RPE [Excel]
- WSX08 – Annex 9 Cornwall Insight (June 2023) Water UK Delivered Electricity Cost forecasts [pdf]
- WSX08 – Annex 10 Cornwall Insight (June 2023) Water UK Delivered Electricity Cost forecasts [excel]

3.2.3. Chemicals

Forecast chemical prices have been informed by econometric analysis of key drivers of chemical cost movements, related to the mix of chemicals we use. This analysis has been undertaken by Economic Insight (August 2023) and their report forms an annex to our plan:

- WSX08 – Annex 11 - Economic Insight (August 2023) – Chemical RPEs at PR24

We rely on a different mix of chemicals in our supply and waste functions, as such our RPE forecasts are different, as set out below.

Table 1 - RPE forecasts - chemicals

Real price effect - Chemicals	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
Real change in input price - chemicals, water network plus	-6.23%	-3.92%	3.36%	3.18%	3.15%	3.10%	3.10%
Real change in input price - chemicals, wastewater network plus	-7.49%	-5.80%	1.10%	0.95%	0.92%	0.88%	0.88%
Real change in input price - chemicals, bioresources	-6.97%	-5.09%	1.36%	1.37%	1.37%	1.37%	1.37%

For the purposes of completing SUP11, which captures RPEs at a wholesale level, we have weighted the above by expenditure weights.

3.2.4. Materials, plant and equipment

Forecast materials, plant and equipment prices have been informed by a review of relevant material, plant and equipment cost indices provided by ChandlerKBS (August 2023). The Materials, plant and equipment RPE forecast included in SUP11 has been informed by the BCIS Civil Engineering Cost Index 1191. ChandlerKBS report forms an annex to our plan:

- WSX08 – Annex 12 – ChandlerKBS (September 2023) – Inflation Review

3.2.5. Other

We have used the 'Other RPE' category to report the above-inflationary cost pressures related to business rates.

The only other area we have assessed is business rates. Supply business rates are calculated using a tenants share approach and depend heavily on the expected RCV and WACC, both of which are increasing significantly from current levels. Waste business rates are set with reference to the contractor's test, and again will increase as

more assets are created. In relation to existing assets, the Valuation Office Agency will be updating its cost guide prices in 2026 and 2029 as part of its triennial valuation cycle. We have already seen large increases at 2023 and further substantial increases are expected at each of these dates for all waste water assets.

We also expect further costs increases as a result of the Non-Domestic Rating Bill currently going through Parliament. Over 2025-30 this will increase our expected rates bill significantly over inflation.

Our respective forecasts are set out below.

Table 2 - RPE forecasts – Wholesale business rates

Real price effect - Wholesale business rates	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
Real change in input price - business rates, water	-32.73%	0.00%	0.00%	36.46%	0.00%	0.00%	19.27%
Real change in input price - business rates, wastewater	22.62%	6.92%	9.73%	35.21%	17.67%	14.22%	10.21%

For the purposes of completing SUP11, which captures RPEs at a wholesale level, we have weighted the above by expenditure weights. The Uniform Business Rate (UBR) revaluation on the supply side in 2026-27 and 2029-30, gives rise to the peaks in the profile observed.

3.3. Real price effect – Retail – SUP11.2R-6R

For labour we have used the OBR average hourly earnings growth (Mar/23 publication) to inform the labour Input Price Inflation (IPI). This is consistent with the analysis established by Ofwat as part of the PR19 labour reconciliation. The OBR forecasts extend as far as 2027/28 and we have assumed the last two years of AMP8 to be equal to the average of the OBR forecasts for 2025/26 to 2027/28.

For energy we have used the same forecast as for wholesale energy. We have expressed this in IPI not RPE terms as per the table guidance.

We have not included any other retail input cost pressures.

3.4. Wholesale base expenditure weights – water (SUP11.7-12), wastewater N+ (SUP11.13-18) and bioresources (SUP11.19-24)

The wholesale RPEs set out in SUP11.2-6 are applicable to c98% of our wholesale water cost base, c97% of our wholesale wastewater cost base and just less than 100% of our bioresources cost base.

We have not included service charges in the base expenditure for which the above RPE categories are applicable.

3.5. Wholesale enhancement expenditure weights – water (SUP11.25-30), wastewater N+ (SUP11.31-36) and bioresources (SUP11.37-42)

We have assumed the expenditure weights for enhancement are the same as base.

3.6. Retail weights – SUP11.49-54

The retail RPEs set out in SUP11.2R-6R are applicable to c.100% of our retail cost base.

3.7. Frontier shift assumptions – SUP11.55-62

We have taken the midpoint estimate of the frontier shift assumptions for wholesale and separately retail as recommended by the Economic Insight report which was produced for a consortium of water companies (April 2023). Their report forms an annex to our plan:

- WSX08 – Annex 13 – Economic Insight (April 2023) – Productivity and Frontier Shift at PR24

We have applied these equally to base and enhancement expenditure.

We recognise the dynamic efficiencies achievable in the retail control from forthcoming initiatives, including an upgrade to the billing system (Falcon).

4. SUP12.

4.1. Summary

Document WSX30 direct procurement for customers assessment summarises the position regarding the strategic resource options (SRO's) that have been assed as suitable for DPC and also details the application of Ofwat's DPC tests on the remainder of the investment programme.

This data table commentary provides further information on the strategic resource options being developed in conjunction with South West Water through the RAPID gated process. We have not carried out any further analysis and the appropriate information from that separate assessment has been included in the SUP12 table commentary.

In addition, the assessment of the AMP8 investment plan has not identified any individual driver for a project that meets the requirements, but in taking a programme and multi-AMP assessment the Poole Nutrients programme does meet the £200m whole life totex criteria. However, in our assessment, due to the integrated nature of existing treatment works, the logistical and land constraints and uncertainties around land and planning conflicting with already extended regulatory target dates, it does not meet the construction or operations and maintenance risk tests. On this basis we are not proposing this programme as suitable for DPC and this document provides further information on this Poole Nutrients programme.

This table contains data with impacts post RPE and frontier shift. For more information on how this is applied, please see commentary in SUP11.

4.2. SRO – Poole Water Recycling and Transfer

4.2.1. West Country South sources & transfers, now renamed Poole water recycling and transfer

1. In July 2021 South West Water received approval to progress the Roadford pumped storage scheme under their Green recovery initiative. Furthermore the gate one report showed that transferring the water from Roadford in Devon to Southern Water was not viable. Therefore at gate one the Roadford element and its associated transfer was stopped.
2. The scheme was renamed at gate one as Poole effluent recycling and transfer.
3. As part of the same package, in April 2022 the WCRWG provided evidence to RAPID that the water provided by the scheme was required in-region and that further work on the potential transfer to Southern water should cease. This was agreed by RAPID in May 2022. The subsequent gate two submission concentrated on a shared in-region option to transfer the water to Wessex Water and Bournemouth Water.
4. The Poole scheme was selected as a shared scheme in both Wessex Water's and South West Water's draft WRMPs.

This strategic resource option scheme has reached gate two. Poole water recycling and transfer have received the final decisions from RAPID and are now progressing towards gate three.

The work to gate two has shown that the scheme is technically feasible and deliverable subject to resolving outstanding risks and environmental concerns. The parallel WRMPs have also identified the need for new water resources in the region. The objectives of the further phases of work in gate three and gate four are to reach a point where construction can commence. The principal activities required include: further technical development, environmental monitoring and assessment, pre-planning activities in the run up to planning applications, obtaining consents, land acquisition and running a DPC procurement exercise.

5. PR19 allowances

At PR19 Ofwat made allowances for three strategic resource options (SROs) to follow a gated process overseen by RAPID, with four solution partners, the schemes were as follows:

- West Country North sources & transfers
- West Country South sources & transfers
- West Country - Southern Water transfer

And the partners were:

- Wessex Water (WSX)
- South West Water (SWB)
- Bristol Water (BRL)
- Southern Water (SRN)

A total of £14.4m (@ 2017/18 prices) was allocated, equivalent to £17.0m (@ 2022/23 prices).

Each SRO had three partners with different share percentages.

The original intention was that the SROs would be construction ready by 2025-30 with all gates completed within the AMP. Each gate was allocated a percentage of the total allowance for the SRO i.e. gate one 10% , gate two 15% etc.

6. Changes during AMP7

All the SROs have now passed gate two. In addition to the technical changes described above there were changes to the funding arrangements during the process that are summarised below:

Gate 1

- The West Country South sources & transfers and the West Country - Southern Water transfer SROs were merged at the gate one decision point and renamed as Poole effluent recycling & transfers. The gate two allowances were revised by adding the previous allowances and multiplying by 50%.
- Mendip quarries SRO was added into the process after a gate one submission. As a new entrant it does not receive a gate one allowance.

Gate 2

- For the Cheddar two source and transfer and Poole effluent recycling & transfers SROs it was agreed that Southern Water would cease as a solution partner as of 31 March 2022. Their share percentage was pro-rated to the remaining partners, applicable from 1 April 2022.
- It was agreed that underspend from previous gates can be carried forward to the next gate.
- In the final decision documents from Ofwat for the Cheddar two source and transfer and Poole effluent recycling & transfers SROs it has been agreed that the allowances for gate three are increased.
- The timelines for all the SROs are now extended so that one of the gate three dates and all of the gate four dates are in AMP8.

7. Position at end of gate two as at August 2023

As of August 2023 the current position is that:

- Two SROs - Cheddar two source and transfer and Poole water recycling & transfers – have received their final gate two decision. In both cases the expenditure at gate two was considered to be efficient and allowed in full.
- The Mendips quarries SRO submitted its gate two reports on 17 July 2023. The draft and final decisions are expected from RAPID on 12 October 2023 and 18 January 2024 respectively. It is expected that RAPID will allow the expenditure in full, subject to providing an updated of the actual expenditure at the time of representations on the draft decision.

Table 1 below summarises the position at the end of gate two.

Table 3 – Financial summary at end of gate two

SRO	Gate one + Gate two @ 2022/23 prices		
	Allowance	**Actual expenditure**	**Variance**
Original three SROs allowed at PR19:			
Poole water recycling & transfers, formerly West Country South sources & transfers	**1.59**	**1.45**	**0.14**

Share percentages

As mentioned above there have been some changes to the company share percentages as the schemes have progressed. Table 2 below sets out the position.

Table 4 – Solution partner shares

SRO	SWB	WSX	SRN	BRL	Comments
Gate one					
West Country South sources & transfers	47.3%	26.4%	26.4%	-	As PR19 FD
	£0.277m	£0.154m	£0.154m		
Gate two to 31 March 2022					
Poole water recycling and transfer	41.1%	29.5%	29.5%	-	Revised following merging of 2 SROs as agreed with RAPID
	£0.118m	£0.085m	£0.085		
Gate two revised from 1 April 2022					
Poole water recycling and transfer	58.2%	41.8%	-	-	SRN dropped out, pro rata balance
	£0.339m	£0.243m			
Gate three and four					
Poole effluent recycling and transfer	58.2%	41.8%	-	-	
Gate 3 (AMP7)	£4.235m	£3.037m			
Gate 4 (AMP8)	£11.688m	£8.382m			Includes Land purchase and early Capex works

With regards to the suitability of this SRO to be procured by DPC, this is reviewed in detail in the RAPID gate 2 documents, see link below. The scheme is potentially suitable for DPC and this will be reviewed as part of the Gate 3 submission.

https://www.wcwrg.org/siteassets/document-repository/regional-strategic-options/poole-sro---gate-2_annex-8---procurement_nov-22.pdf

4.2.2. Project Description

Poole Water Recycling and Transfer SRO, was promoted by the West Country Water Resources Group (WCWRG) to provide a resource to South West Water (SWW) and Wessex Water (WSX). The scheme will divert final effluent from WSX Poole sewage treatment works to the River Stour via a new pipeline, water recycling plant and a wetland.

The additional water discharge to the river will then be re-abstracted at Longham lakes from where it will integrate with Bournemouth Water's (BW) existing supply system. The solution provides multiple environmental benefits in addition to providing a drought resilient water resource. The discharge will improve flows along approximately 15km of the River Stour when natural flows are low in dry summers, facilitate a reduction from the River Avon and divert effluent from entering Poole Harbour.

Both SWW (BW) and WSX have forecasted a need for the new resource in their Water Resources Management Plans, to mitigate likely sustainability reductions to existing abstractions.

The likely construction start date will be 2030 with a proposed in use date in 2035.

4.2.3. Business Plan References

Further information about this SRO project and the DPC assessment can be found in the following documents:

Table 5 – Business plan references

Appendix reference	Document title
WSX29	Direct Procurement for Construction assessment
WSX49	Costs Wholesale Water – tables commentary; Data table CW3 section 1.2
WSX12	Water Resources strategy & investment, section 2.11
WSX14	Water Networks Plus strategy & investment, section 2.3

4.2.4. Whole-life Totex

The methodology for the development of the Whole-life Totex can be found in the Poole SRO RAPID Gate 2 submission – Annex 7 – cost estimation issued to RAPID in November 2022. RAPID were issued this information as part of the submission. This information can be provided on request as it is not available on any public access websites.

Total AMP8 Project Development Costs
The total value of works (22/23) is £20m across SWW & WW (58%/42%) and is split into the below categories:

Design Development	£5.5m
Land Purchase	£5.4m
Early CAPEX	£9.1m

4.2.5. Total Construction Costs

Pipeline & Pump station @ Poole WRC -	£10.3m
Pipeline to new WRP –	£28.1m
WRP & Wetland –	£92.3m
Longham Lakes Abstraction -	£6m
Key Risks	£9.7m
Optimism Bias	£35.3m

4.2.6. Annual Opex

For more detailed breakdown of the Annual Opex and assumptions please see the RAPID gate 2 documents for Poole SRO Annex 7. A short summary of the assumptions is detailed below.

The Opex cost estimate was produced from combining ChandlerKBS' CID data and Wessex Water rates for power and chemical costs. The estimate was based on modelled historical data and assumptions that can be affected by many different factors including operating regimes and raw water quality.

The Opex Cost estimate utilised asset capacities to derive fixed and variable Opex values.

The Fixed Opex costs were calculated for the annual operation and capital maintenance costs of the assets irrespective of flow through the assets. Fixed Opex costs were derived on the following basis:

- A base rate of 3% of MEICA Capex
- Labour costs as a proportion of the MEICA cost per annum.

The Variable Opex cost per megalitre was calculated utilising the capacity diver of the individual assets to derive costs for power, chemical, labour, maintenance, and other costs.

Supporting information was provided by in-house engineering teams to identify the anticipate power and chemical usage for each asset based on maximum and minimum outputs. Unit rates from CID were applied to the power and chemical usage. This information was used to adjust the CID opex models to suit the forecast operating regime of each site.

The base date of the CID formulae and unit rates used to derive the Variable Opex Costs was Q3 2021 (these have been uplifted to 2022/23) to align with the Capex and Fixed Opex costs.

The estimated Variable Opex Costs is estimated to be	£618Ml
Poole WRC pump station / pipeline –	£225Ml
Pipeline to WRP –	£0
WRP and Wetland -	£374Ml
Longham abstraction -	£18Ml

4.2.7. Asset Type

More detail can be found in the RAPID Gate 2 submission for Poole SRO – Annex 2.
poole-sro---gate-2_annex-2---concept-design-report_nov-22.pdf (wcwrg.org)

Poole WRC pumping station
250kW x3 pumps, wet well 6x4x3m deep, MCC, 500kVA generator.

Pipeline from Poole WRC to new WRP
600mm DI, 7Km
Water Recycling Plant – 30Ml/d
Flow Buffering
Chemical conditioning
Ballasted Clarification
Rapid Gravity Filtration
Advanced Oxidation
Granular Activated Carbon Filtration
Backwash water
Sludge Treatment
Transfer to Wetland

Wetland
~5ha of Wetland to convey ~ 30Ml/d from the WRP to the River Stour

Longham Abstraction – 25Ml/d
Screen chamber
Wet well
MCC
Pipework
Roads / hardstanding

4.2.8. Total AMP8 DPC related costs

Due to the maturity of the industry in this arena this area is underdeveloped, an allowance of ~ £400-500k to complete the DPC staged process through Gate 3 & 4 of the RAPID gated process has been allowed for.

A detailed summary of the proposed procurement of Poole SRO can be found in the RAPID Gate 2 – Annex 8 – Procurement document, issued to RAPID in November 2022.

https://www.wcwrg.org/siteassets/document-repository/regional-strategic-options/poole-sro---gate-2_annex-8---procurement_nov-22.pdf

4.3. SRO – Cheddar Two Source and Transfer

4.3.1. West Country North sources & transfers, now renamed Cheddar two source and transfer

1. The scheme was renamed at gate one as Cheddar two source and transfer.
2. At gate one it was agreed that the scheme could not be delivered by 2027, which was Southern Water's deadline for a solution for their Hampshire zone, and the scheme was moved from the accelerated timeline to the standard timeline.
3. In April 2022 during the gate two period the WCRWG provided evidence to RAPID that the water provided by the scheme was required in-region and that further work on the potential transfer to Southern Water should cease. This was agreed by RAPID in May 2022. The subsequent gate two submission concentrated on an in-region option to transfer the water to Wessex Water, as an option to be assessed in Wessex Water's WRMP decision making.
4. However the scheme was not selected in Wessex Water's draft WRMP. The gate two work was also caried out prior to the drought in South West Water during summer 2022. Subsequently it has been identified that the scheme may have a role in providing additional supplies to the Devon area. This is mentioned further in the section below on current proposals.

This strategic resource option scheme has reached gate two. Cheddar two reservoir and transfer have received the final decisions from RAPID and are now progressing towards gate three, with a check point approval in January 2024 with RAPID to confirm approval to continue through to Gate 3.

The work to gate two has shown that the scheme is technically feasible and deliverable subject to resolving outstanding risks and environmental concerns. The parallel WRMPs have also identified the need for new water resources in the region. The objectives of the further phases of work in gate three and gate four are to reach a point where construction can commence. The principal activities required include: further technical development, environmental monitoring and assessment, pre-planning activities in the run up to planning applications, obtaining consents, land acquisition and running a DPC procurement exercise.

5. PR19 allowances

At PR19 Ofwat made allowances for three strategic resource options (SROs) to follow a gated process overseen by RAPID, with four solution partners, as follows:
The schemes were:

- West Country North sources & transfers
- West Country South sources & transfers
- West Country - Southern Water transfer

And the partners were:

- Wessex Water (WSX)
- South West Water (SWB)
- Bristol Water (BRL)
- Southern Water (SRN)

A total of £14.4m (@ 2017/18 prices) was allocated, equivalent to £17.0m (@ 2022/23 prices).

Each SRO had three partners with different share percentages.

The original intention was that the SROs would be construction ready by 2025-30 with all gates completed within the AMP. Each gate was allocated a percentage of the total allowance for the SRO i.e. gate one 10% , gate two 15% etc.

6. Changes during AMP7

All the SROs have now passed gate two. In addition to the technical changes described above there were changes to the funding arrangements during the process that are summarised below:

Gate 2

- For the Cheddar two source and transfer and Poole effluent recycling & transfers SROs it was agreed that Southern Water would cease as a solution partner as of 31 March 2022. Their share percentage was pro-rated to the remaining partners, applicable from 1 April 2022.
- It was agreed that underspend from previous gates can be carried forward to the next gate.
- In the final decision documents from Ofwat for the Cheddar two source and transfer and Poole effluent recycling & transfers SROs it has been agreed that the allowances for gate three are increased.
- The timelines for all the SROs are now extended so that one of the gate three dates and all of the gate four dates are in AMP8.

7. Position at end of gate two as at August 2023

As of August 2023 the current position is that:

- Two SROs - Cheddar two source and transfer and Poole water recycling & transfers – have received their final gate two decision. In both cases the expenditure at gate two was considered to be efficient and allowed in full.
- The Mendips quarries SRO submitted its gate two reports on 17 July 2023. The draft and final decisions are expected from RAPID on 12 October 2023 and 18 January 2024 respectively. It is expected that RAPID will allow the expenditure in full, subject to providing an updated of the actual expenditure at the time of representations on the draft decision.

Table 4 below summarises the position at the end of gate two.

Table 6 – Financial summary at end of gate two

SRO	Gate one + Gate two @ 2022/23 prices		
	Allowance	**Actual expenditure**	**Variance**
Original three SROs allowed at PR19:			
Cheddar two source and transfer, formerly West Country North sources & transfers	1.53	1.39	0.13

8. Share percentages

As mentioned above there have been some changes to the company share percentages as the schemes have progressed. Table 5 below sets out the position.

Table 7 – Solution partner shares

SRO	SWB	WSX	SRN	BRL	Comments
Gate one					
West Country North sources & transfers	-	29.6%	29.6%	40.9%	As PR19 FD
		£0.150m	£0.15m	£0.207m	
Gate two to 31 March 2022					
West Country North sources & transfers	-	29.6%	29.6%	40.9%	As original %s
		£0.086m	£0.086m	£0.119m	
Gate two revised from 1 April 2022					
Cheddar two source and transfer	-	42.0%	-	58.0%	SRN dropped out, pro rata balance
		£0.249m		£0.344m	
Gate three and four					
Cheddar two source and transfer	-	42.0%	-	58.0%	
Gate 3 – AMP7		£2.994m		£4.137	
Gate 4 – AMP 8		£26.325m		£36.366m	

With regards to the suitability of this SRO to be procured by DPC, this is reviewed in detail in the RAPID gate 2 documents submitted in November 2022 - see link below. The scheme is potentially suitable for DPC and this will be reviewed as part of the Gate 3 submission.

https://www.wcwrg.org/siteassets/document-repository/regional-strategic-options/cheddar-sro---gate-2_annex-8---procurement_nov-22.pdf

4.3.2. Project Description

Cheddar 2nd Source and Transfer SRO, was promoted by the West Country Water Resources Group (WCWRG) to provide a resource to South West Water (SWW) and resilience to Wessex Water (WSX). The scheme will involve the construction of a second reservoir at Cheddar, that was previously granted planning permission (now lapsed) and to fill it from Cheddar Springs and the river Axe, under Bristol Waters existing licenses. Water would then be treated at either a new or upgraded WTW before being transferred via a new pipeline to the south west of WSX's region (Bridgwater). Resilience and capacity improvements within the WSX Somerset Supply zone would enable the additional water to be utilised in this area enabling capacity to be freed up at WXS's Maundown WTW, this additional water would then be transferred via a new pipeline to SWW Wimbaball Supply Zone, assisting with the SDB needs for this region.

An additional benefit of the Cheddar 2 source and transfer is the conjunctive benefit that is realised, enabling Bristol Water to increase its transfer to Wessex Water. This additional water enables WSX to meet its Upper Hampshire Avon license capping needs.

SWW have forecasted a need for the new resource in their Water Resources Management Plan, to mitigate likely sustainability reductions to existing abstractions and WXS have stated the benefits for additional resilience and capacity.

The likely construction start date will be 2030 with a proposed in use date in 2035.

4.3.3. Business Plan References

Further information about this SRO project and the DPC assessment can be found in the following documents:

Table 8 – Business plan references

Appendix reference	Document title
WSX29	Direct Procurement for Construction assessment
WSX49	Costs Wholesale Water – tables commentary; Data table CW3 section 1.2
WSX12	Water Resources strategy & investment, section 2.11
WSX14	Water Networks Plus strategy & investment, section 2.3

4.3.4. Whole-life Totex

The methodology for the development of the Whole-life Totex can be found in the Cheddar SRO RAPID Gate 2 submission – Annex 7 – cost estimation issued to RAPID in November 2022. RAPID were issued this information as part of the submission. This information can be provided on request as it is not available on any public access websites.

4.3.5. Total AMP8 Project Development Costs

The total value of works (22/23) is £62.7m across SWW & WW (58.2%/41.8%) and is split into the below categories:

Design Development	£4.7m
Land Purchase	£19.4m
Early CAPEX	£38.6m

4.3.6. Total Construction Costs

Raw Water (spring water) pumping station & pipeline to reservoir	£0.7m
Cheddar two reservoir	£229.8m
Raw water pipeline for River Axe preliminary treatment works	£2.3m
Raw water pipeline & pumping station to WTW	£10.8m
New WTW	£59.4m
Pipeline & pumping stations to WW service reservoir	£90m
Key Risks	£49.1m
Optimism Bias	£147.1m

4.3.7. Annual Opex

For more detailed breakdown of the Annual Opex and assumptions please see the RAPID gate 2 documents for Cheddar SRO Annex 7. A short summary of the assumptions is detailed below.

The Opex cost estimate was produced from combining ChandlerKBS' CID data and Wessex Water rates for power and chemical costs. The estimate was based on modelled historical data and assumptions that can be affected by many different factors including operating regimes and raw water quality.

The Opex Cost estimate utilised asset capacities to derive fixed and variable Opex values.

The Fixed Opex costs were calculated for the annual operation and capital maintenance costs of the assets irrespective of flow through the assets. Fixed Opex costs were derived on the following basis:

- A base rate of 3% of MEICA Capex
- Labour costs as a proportion of the MEICA cost per annum.

The Variable Opex cost per megalitre was calculated utilising the capacity diver of the individual assets to derive costs for power, chemical, labour, maintenance, and other costs.

Supporting information was provided by in-house engineering teams to identify the anticipate power and chemical usage for each asset based on maximum and minimum outputs. Unit rates from CID were applied to the power and chemical usage. This information was used to adjust the CID opex models to suit the forecast operating regime of each site.

The base date of the CID formulae and unit rates used to derive the Variable Opex Costs was Q3 2021 to align with the Capex and Fixed Opex costs.

The estimated Variable Opex Costs is estimated to be **£737M**

Raw Water (spring water) pumping station & pipeline to reservoir	£0
Cheddar two reservoir	£0
Raw water pipeline for River Axe preliminary treatment works	£0
Raw water pipeline & pumping station to WTW	£37.5m

New WTW	£229m
Pipeline & pumping stations to WW service reservoir	£400m

4.3.8. Asset Type

More detail can be found in the RAPID Gate 2 submission for Cheddar SRO – Annex 2 & 4

cheddar-sro---gate-2_annex-2---concept-design-report_nov-22.pdf (wcwrg.org)
cheddar-sro---gate-2_annex-4---water-quality-and-treatment_nov-22.pdf (wcwrg.org)

A brief summary has been detailed below:

Cheddar two reservoir	9400Ml
Raw water pipeline & pumping station to WTW	600mm dia. DI - 6.3Km & 36ml/d pumping station
New WTW	36Ml/d
Settlement Reservoir	
DAF clarification	
RGF primary filtration	
GAC absorbers	
UV	
Chlorine disinfection	
Final water conditioning & phosphate dosing	
Waste water treatment stream	
Pipeline & pumping stations to WW service reservoir	600mm dia. DI ~ 49Km & 35Ml/d pumping station

4.3.9. Total AMP8 DPC related costs

Due to the maturity of the industry in this arena this area is underdeveloped, an allowance of ~ £400-500k to complete the DPC staged process through Gate 3 & 4 of the RAPID gated process has been allowed for.

A detailed summary of the proposed procurement of Cheddar SRO can be found in the RAPID Gate 2 – Annex 8 – Procurement document, issued to RAPID in November 2022

https://www.wcwrg.org/siteassets/document-repository/regional-strategic-options/cheddar-sro---gate-2_annex-8---procurement_nov-22.pdf

4.4. SRO – Mendip Quarries

4.4.1. New solution

The PR19 final determination appendix and RAPID's subsequent guidance documents, a facility to enter new solutions during the process was provided. In recognition of the growing need for additional water resources in the West Country a potential new solution was identified in 2021. At our instigation the new solution was also highlighted in a gap analysis undertaken for RAPID in 2020. Following positive dialogue with RAPID it was agreed that the new solution would enter the gated process with a gate one submission in December 2021.

1. Mendip quarries changes

There have not been any changes to the scope of the project. The core scheme presented in the gate two submission in July 2023 is for an in-region use. Potential transfers out of region are treated as future opportunities only.

This strategic resource option scheme has reached gate two. Mendip Quarries will receive the final decision from RAPID in October 2023, we are progressing towards gate three on a “no regrets” basis in the interim.

The work to gate two has shown that the scheme is technically feasible and deliverable subject to resolving outstanding risks and environmental concerns. The parallel WRMPs have also identified the need for new water resources in the region. The objectives of the further phases of work in gate three and gate four are to reach a point where construction can commence. The principal activities required include: further technical development, environmental monitoring and assessment, pre-planning activities in the run up to planning applications, obtaining consents, land acquisition and running a DPC procurement exercise.

2. PR19 allowances

At PR19 Ofwat made allowances for three strategic resource options (SROs) to follow a gated process overseen by RAPID, with four solution partners, as follows:
The schemes were:

- West Country North sources & transfers
- West Country South sources & transfers
- West Country - Southern Water transfer

And the partners were:

- Wessex Water (WSX)
- South West Water (SWB)
- Bristol Water (BRL)
- Southern Water (SRN)

A total of £14.4m (@ 2017/18 prices) was allocated, equivalent to £17.0m (@ 2022/23 prices).

Each SRO had three partners with different share percentages.

Mendip Quarries SRO was not part of the PR19 submission and has therefore not been funded within PR19.

The original intention was that the SROs would be construction ready by 2025-30 with all gates completed within the AMP. Each gate was allocated a percentage of the total allowance for the SRO i.e. gate one 10% , gate two 15% etc.

3. Changes during AMP7

All the SROs have now passed gate two. In addition to the technical changes described above there were changes to the funding arrangements during the process that are summarised below:

Gate 1

- Mendip quarries SRO was added into the process after a gate one submission. As a new entrant it does not receive a gate one allowance.

Gate 2

- The Gate two documents were submitted to RAPID on the 17th July with a draft decision in Oct 2023.
- The timelines for Gate 3&4 submissions both extend into AMP8.

Table 3 below summarises the position at the end of gate two.

- The Mendips quarries SRO submitted its gate two reports on 17 July 2023. The draft and final decisions are expected from RAPID on 12 October 2023 and 18 January 2024 respectively. It is expected that RAPID will allow the expenditure in full, subject to providing an updated of the actual expenditure at the time of representations on the draft decision.

Table 7 below summarises the position at the end of gate two.

Table 9 – Financial summary at end of gate 2

SRO	Gate one + Gate two @ 2022/23 prices		
	Allowance	**Actual expenditure**	**Variance**
New solution:			
Mendips quarries	5.92	2.48	3.43

4. Share percentages

As mentioned above there have been some changes to the company share percentages as the schemes have progressed. Table 8 below sets out the position.

Table 10 – Solution partner shares

SRO	SWB	WSX	SRN	BRL	Comments
Gate two					
Mendip quarries	50%	50%	-	-	New solution
	£1.24m	£1.24m			
Gate three and four					
Mendip quarries	50%	50%	-	-	
	£16.02m	£16.02m			

With regards to the suitability of this SRO to be procured by DPC, this is reviewed in detail in the RAPID gate 2 documents submitted on 17th July 2023 see link below. The scheme is potentially suitable for DPC and this will be reviewed as part of the Gate 3 submission.

Mendip Quarries SRO gate two – Procurement Strategy (wcwrg.org)

4.4.2. Project Description

Mendip Quarries SRO, was promoted by the West Country Water Resources Group (WCWRG) to provide a resource to South West Water (SWW) and Wessex Water (WSX). The concept of the project is to re-purpose a quarry in the Mendip Hills for use as a reservoir (currently proposed at Torr Quarry). Mineral extraction is expected

to be completed in 2040, and the studies have shown that it has a large potential storage volume and beneficial geological setting. The scheme will abstract and treat river water from the River Avon and transfer it for storage within Torr Quarry, when needed the water would be abstracted and treated. One stream would be treated to potable water standards and transferred to a WSX service reservoir and the other treated to raw water discharge standards to be transferred to the River Stour in Dorset for subsequent downstream abstraction and treatment to potable water standards to an existing water treatment works supplying Bournemouth Water.

The reservoir would have a useable capacity of 28.5 Million m3. It would provide an estimated 1-500 yr DYAA of 46Ml/d and a DYCP DO of 106Ml/d.

SWW have forecasted a need for the new resource in their Water Resources Management Plan, with WSX forecasting a need in a more constrained scenario, to mitigate likely sustainability reductions to existing abstractions.

The likely construction start date will be 2033 with a proposed in use date in 2042.
Further information about this SRO project and the DPC assessment can be found in the following documents:

Table 11 – Business plan references

Appendix reference	Document title
WSX29	Direct Procurement for Construction assessment
WSX49	Costs Wholesale Water – tables commentary; Data table CW3 section 1.2
WSX12	Water Resources strategy & investment, section 2.11
WSX14	Water Networks Plus strategy & investment, section 2.3

4.4.3. Whole-life Totex

The methodology for the development of the Whole-life Totex can be found in the Mendip Quarries SRO RAPID Gate 2 submission – Annex 5 – cost estimation issued to RAPID on 17th July 2023.

RAPID were issued this information as part of the submission. This information can be provided on request as it is not available on any public access websites.

4.4.4. Total AMP8 Project Development Costs

The total value of works (22/23) is £32.1m across SWW & WW (50%/50%) and is split into the below categories:

Design Development	£26.2m
Land Purchase	£5.9m
Early CAPEX	£0m

4.4.5. Total Construction Costs

Torr Quarry	£455.1m
Stour Transfer	£121.3m
WSX Transfer	£84.3m
Key Risks	£198.5m
Optimism Bias	£207.8m

For more information on the build up of these number please refer to the Mendip Quarries SRO Gate 2 – Annex 5 Cost Estimation - RAPID submission on the 17th July 2023

4.4.6. Annual Opex

For more detailed breakdown of the Annual Opex and assumptions please see the RAPID gate 2 documents for Mendip Quarries SRO Annex 5 – Cost Estimating. A short summary of the assumptions is detailed below.

The Opex cost estimate was produced from combining ChandlerKBS' CID data and Wessex Water rates for power and chemical costs. The estimate was based on modelled historical data and assumptions that can be affected by many different factors including operating regimes and raw water quality.

The Opex Cost estimate utilised asset capacities to derive fixed and variable Opex values.

The Fixed Opex costs were calculated for the annual operation and capital maintenance costs of the assets irrespective of flow through the assets. Fixed Opex costs were derived on the following basis:

- 1.5% of MEICA Capex
- 0.5% of civil Capex
- Full time equivalent staffing regime
- General site power usage

The Variable Opex cost per megalitre was estimated for the individual assets to derive costs for power, chemical, labour, maintenance, and other costs.

Supporting information was provided by in-house engineering teams to identify the anticipate power and chemical usage for each asset based on maximum and minimum outputs. Unit rates from CID were applied to the power and chemical usage. This information was used to adjust the CID opex models to suit the forecast operating regime of each site.

The base date of the CID formulae and unit rates used to derive the Variable Opex Costs was Q3 2020 to align with the Capex and Fixed Opex costs.

The estimated Variable Opex Costs is estimated to be	**£943Ml**
Torr Quarry	£576Ml
Stour Transfer	£214Ml
WXS Transfer	£153Ml

4.4.7. Asset Type

Details on the main assets and key characteristics can be found in the Mendip Quarries RAPID Gate 2 submission (17th July 2023), link provided below:

mendip-quarries-sro---gate-2---main-report.pdf (wcwrg.org)

4.4.8. Total AMP8 DPC related costs

Due to the maturity of the industry in this arena this area is underdeveloped, as this project is following a later timeline the intention is to learn from the other projects following the DPC procurement route and develop an efficient procurement team in AMP8 with a view to procuring the contract late in AMP8. An allowance of ~ £600k to complete the DPC staged process through Gate 3 & 4 of the RAPID gated process has been allowed forecast for in AMP8.

A detailed summary of the proposed procurement of Mendip Quarries SRO can be found in the RAPID Gate 2 – Annex E – Procurement and Commercial Strategy document, issued to RAPID in July 2023

Mendip Quarries SRO gate two – Procurement Strategy (wcwrg.org)

4.5. Poole Nutrients

4.5.1. Project Description

Poole Harbour is a designated 'transitional water body' and 'protected area' under the Water Framework Directive (WFD). The intertidal habitats and coastal waters of the Harbour are of international nature conservation importance with the site designated as a Special Protection Area (SPA) under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations, HR). Under Article 6(3) of the HR, Poole Harbour needs to comply with specific Conservation Objectives for the SPA. Poole Harbour is also designated as a Ramsar site which are afforded the same provisions under the HR, the harbour is also nationally designated as a Site of Special Scientific Interests (SSSI) The nutrient contribution to Holes Bay (and therefore Poole Harbour) from Poole Water Recycling Centre (WRC) is therefore to be reduced; with the ultimate desired outcome being that Poole Harbour obtains favourable status.

Major improvements to the treatment process at Poole WRC are to be delivered to ensure the quality of effluent discharged meets significantly tightened permit requirements. A feasibility study has been completed in AMP7 to identify a preferred option to be delivered to enable phosphorus to be reduced to 0.25mg/l (currently no limit) and nitrogen to 5mg/l (from the existing 10mg/l).

The current site is effectively land-locked, it is not possible to enhance the existing 3 treatment streams (BAFF Plant, Eastern and Western Works) and there is no space for an additional stream without significant risk to ongoing compliance. Additional land will be required outside the site boundary and due to the scale and complexity of the proposals, requiring land purchase, consideration of environmental and third-party issues (e.g. planning), forthcoming legislation etc, the scheme cannot be delivered in a single AMP and is due to be completed by March 2033 (this date is currently being discussed with Defra). Figure 1 below illustrates the issues with the confirmed nature of the site.

Figure 1 – Aerial view of Poole WRC

Lytchett Minster WRC also has N & P reduction drivers related to the same catchment. The existing site will be converted to an SPS and the existing permit FPF will be pumped to Poole, where the enhanced treatment facilities at Poole WRC will be sized to accommodate the additional loads, though noting that this did not form part of the previous feasibility study.

Preliminary work is underway with design to follow; and construction is due to start by Spring 2027. Construction activities are expected to continue for 6 years in total, due to the scale and complexity of the scope which requires a phased approach to uprate existing process units while still maintaining compliance, and demolition of existing assets to create additional space on site before a new treatment stream can be provided. Figure 2 below shows an indicative timeline for delivery of the scheme, which is reliant on unhindered progress being made on land purchase and obtaining planning permission.

Figure 2 – Indicative timeline for delivery

Stage	Activity	Duration (months)	AMP7		AMP8					AMP9				
			Yr 4	Yr 5	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
			2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
1	**Outline Design**													
1.1	Preliminary work (inc. sampling and surveys)	12												
1.2	Land Purchase	27												
1.3	Outline Design	15												
1.4	Planning Permission (EIA)	15												
2	**Procurement**													
2.1	Prepare Tender Documentation (Process Contracts)	6												
2.2	'Find a Tender (FTS)' Period	15												
2.3	Award Contracts	3												
3	**Detailed Design**													
3.1	Detailed Design	21												
3.2	Procurement	63												
4	**Pre-Construction**													
4.1	Licence and permits	6												
4.2	Mobilisation (Compound set-up)	3												
5	**Construction & Commissioning**													
5.1	Site preparation - Storm Tanks	3												
5.2	Storm Tank construction and commissioning	12												
5.3	Demolition of Storm Tanks Nos.4 & 5	6												
5.4	Eastern Works - upgrades and commissioning	12												
5.5	Western Works - Demolition	12												
5.6	Relocation of compound and set-up	3												
5.7	Upgrades of sludge stream	42												
5.8	New wastewater sidestream	48												

4.5.2. DPC Assessment

The project triggers the £200m whole life totex value as defined in the guidance from Ofwat, but there are significant uncertainties associated with third-parties, complex construction interfaces and maintenance of a functioning large-scale WRC (with associated compliance risk) that mean it cannot be ring-fenced as a discrete activity from the operation of the remainder of the site.

Other complexities include the alignment with the closure of Lytchett Minster WRC and the transfer of these flows into Poole as the most cost-effective way of delivering the Nutrient improvements across the sites. The Total cost of the Lytchett Minster Nutrient project s £20m capex.

4.5.3. Business Plan References

Further information about this SRO project and the DPC assessment can be found in the following documents:

Table 12 – Business plan references

Appendix reference	Document title
WSX29	Direct Procurement for Construction assessment
WSX16	Wastewater Networks Plus strategy & investment, section 6.2 (specifically 6.2.7)
WSX17	Annexes - Wastewater Networks Plus strategy & investment, Annex A1-5 & A2-2.2

4.5.4. Whole-life Totex

Confirm how whole-life totex has been calculated and list any material assumptions

This project is subject to substantial uncertainty about the timing, the solution and the cost.

The delivery programme means that we have already advised Defra, the Environment Agency and Ofwat that this combined project cannot be delivered by March 2030, with an earliest delivery date being March 2033, dependent on the rapid progress of land purchase. The periodic review cycle enables the land purchase, design development and enabling works all to be completed (subject to land purchase timeline) by 2030, with the design development confirming the exact nature of the future solution that will be delivered in AMP9 along with a more detailed cost estimate.

The whole-life cost has been calculated by taking the full year opex impact of the project and multiplying this by the average asset life of the project and adding this to the total capital cost including land purchase.

4.5.5. Total AMP8 Project Development Costs

A feasibility study completed in AMP7 identified a preferred process option. Further development is now underway as part of the outline design stage to identify sampling and survey requirements as well as commencing negotiations on land purchase.

Costs for the development of outline and detail design are on a percentage basis, using historic data from other, recent large schemes that have been completed or are in progress.

Table 13 – AMP8 project development costs

Project stage / scope	Capex (£k)
Outline design stage: Preliminary work (inc. sampling and surveys) Design development Planning Permission (incl. EIA) Prepare procurement tender packages	19,650
Land Purchase	20,850
Detail design stage: Design development	16,950
Early procurement (engagement of process contractor and tertiary stage supplier)	8,000
Total	**65,450**

4.5.6. Total Construction Costs

Table 14 – Total construction costs

Project stage / scope	Capex (£k)
Construction support and project management	4,800
Compound / site set up	1,200
Site preparation - Storm Tanks Storm Tank construction and commissioning Demolition of Storm Tanks Nos.4 & 5	11,350
Eastern Works - upgrades and commissioning	6,700
Western Works - Demolition	1,000
Upgrades of sludge stream	9,900
New wastewater sidestream	83,800
Total	**118,850**

4.5.7. Annual Opex

Table 15 – Breakdown of annual opex

Project stage / scope	Opex (£k)
Labour	220
Power	740
Maintenance	500

Chemicals (ferric, poly, methanol)	660
Sludge	220
Total	**2,340**

4.5.8. Asset Type

The outline scope of the scheme (feasibility stage) is given in Table 10 below. These details are subject to amendment once the implications of the Lytchett Minster WRC transfer have been fully considered:

Table 16 – Outline scope

Item	Scope description
Storm Tank	Storm PS - below ground concrete, 7m dia. x 5m deep with 4 No. submersible pumps 12,000m^3 rectangular concrete tank, consisting of 6 No. cells (2,000m^3 each) Tank mixing for each cell
Primary Tanks	3 no. lamellas within RC structure (220m^2) installed at high-level to allow gravity flows into new ASP. Desludge and recirculation pumps.
Secondary Treatment	Activated Sludge Plant: • 24,500m^3, consisting of 6 No. aeration lanes, including: • Pre-Anaerobic Tank • Pre-Anoxic Tank • Aeration Tank • Anoxic Tank • Re-aeration Tank With associated pipework, mixers, SAS & Recycle pumps Magnetite System: Recovery – 6 no. Magnetic Drum Separator Units included in odour-controlled building, allowing a gravity discharge into the Surplus Sludge Transfer Tank and Magnetite Remix. Feed - SAS flow to Magnetite system Assumed on plinth shared with RAS pumps Final Settlement Tanks: 3 no. 34m diameter tanks, with RAS Pumps
Tertiary Stage	Feed PS - below ground concrete, 3m dia.x 3m deep with 3 No. submersible pumps

Item	Scope description
	High-rate multi-media filters with clean and dirty backwash water tanks. Including base slab, drainage and steelwork for access Backwash Pumping Station - below ground concrete, 3m dia. x 3m deep with 2 No. submersible pumps UV unit - 2 No..concrete channels with 8 No. banks per channel separated by concrete slab for installation of electrical kiosk
Dosing	30 m^3 methanol storage tank, dosing pumps and ancillaries 4 no. ferric storage tanks (25 – 40 m^3), dosing pumps and ancillaries Poly storage, dosing pumps and ancillaries
Sludge Thickening	Pre-Thickening Tanks: 2 no. (700 – 1,250m^3), covered and with odour-controlled extraction Tank mixing (pump) with nozzles and pipework 6 No. Thickener feed pumps Sludge Thickeners: 6 no. thickeners (2 x Primary Sludge, 4 x Secondary sludge), to be placed into odour-controlled building 6 No. Thickened sludge pumps and connecting pipework to Digester Feed tank 2 no. standard 'big bag' poly system
Sludge Digestion	Feed Tank: 1 no. 819 m^3, with tank mixer, chopper pump and 2No. Digester feed pumps Primary Digester: 1 no. 3,100m^3 tank with covers, mixer and 2 no. Secondary digester feed pumps as well as boiler, heat exchanger and ancillaries Secondary Digester: 1 no. 1,550m^3 tank with covers, mixer and 2 no. Centrifuge feed pumps
Sludge Dewatering	2 no. sludge centrifuges, to be placed into odour controlled building. Return liquor PS - below ground concrete, 2.4m dia. 2m deep with 2 No. submersible pumps. Precast valve chamber with drain into sump. 2 x 1 x 1.5m Cake storage hardstanding (250m^3), to be covered and odour controlled.

Item	Scope description
Gas System	1 no. CHP unit in containerized acoustic enclosure with segregated control and monitoring area. Including intercooler, jacket water radiator and gas booster. 1 no. gas flare to replace existing with increased capacity. 1 no. gas holder – double membrane to replace existing.

4.5.9. Total AMP8 DPC related costs

No costs have been included for DPC as we do not regard this project as suitable for DPC delivery.

5. SUP14.

5.1. SUP14.1 and SUP14.2

In the development of our PR24 business plan we have engaged with 55,558 household customers and 1,550 non-household customers between April 2019 and August 2023. As per the reporting guidance these numbers include those customers that have engaged with us in the bespoke and continuous insight projects that comprise our ongoing customer engagement strategy (as documented in WSX04 – summary of our customer research). These customers have participated in a range of engagement methods to express their views including focus groups, online questionnaire surveys, depth interviews, and feedback surveys.

It excludes the 484,000 customers that we have had day-to-day interactions with since April 2019 in the form of wider customer contacts and complaints – the insight from which has also helped shape the development of our business-as-usual activities and this plan.

For PR09 and PR14 we engaged with around 24,000 and 140,000 household customers respectively – although these figures include some day-to-day interaction and the reporting approaches followed for those price reviews are not consistent with the requirements for PR24.

Further details of the customer segments that we have engaged with, and the variety of methodological approaches used can be found in supporting appendix WSX04 – summary of our customer research.

5.2. SUP14.3 to SUP14.32

These lines present the outputs from the quantitative phase of the affordability and acceptability testing of our plan with customers.

In collaboration with Pennon we jointly commissioned Blue Marble Research to undertake the affordability and acceptability testing across the full Wessex Water wastewater region which includes the Bristol Water and Bournemouth Water supply areas.

We have followed the most recent version of the guidance first issued by Ofwat and CCW on 13 December 2022: Guidance for water companies: testing customers' views of the acceptability and affordability of PR24 business plans. We have not made any deviations from the prescribed sampling and method in both the qualitative and quantitative stages. We made some minor changes to the questionnaire that were largely requested by our CCG:

- Included one reminder to customers for the quantitative survey – CCG recommendation – took a consistent approach across the three company areas to ensure consistency
- Included age bands in questions – CCG recommendation – agreed with Ofwat
- Question labelling where the prescribed method did not include this detail
- Small (functional) edits to avoid ambiguity especially relevant to clarify which company given the combined nature of the research we did.
- Printed/paper version of the survey needed additional signposting to aid routing.

The stimulus setting out our plan underwent cognitive testing following a recommendation from our CCG. This led to changes to the stimulus that were agreed with Ofwat and led to industry-wide guidance amendments.

The quality control and analysis of survey responses was undertaken in accordance with the guidance for example to remove online survey 'speeders' (those that may have clicked through too quickly without considering their responses).

Further information on our affordability and acceptability testing is contained in Blue Marble's report which is published on our website alongside all our other research: customer insight webpage and in our business plan main narrative and supporting appendix WSX04 – summary of our customer research.

The plan that was tested is not the final pan that are submitting for PR24. Our affordability and acceptability testing was undertaken on a version of our plan that included investments to meet statutory obligations relating to storm overflows, nutrient removal, pollution reductions, demand reduction, and increasing affordability support which would have a combined impact to increase average bills by around 40% by 2030. In response to amended guidance from Government and regulators in summer 2023, as well as customer feedback, we amended our plan to include a smaller investment programme with a smaller bill increase for 2025-30 of 29%. This PR24 plan will still see us achieve the same goals and outcomes over the long term and is financeable and deliverable.

There was no time to retest the revised plan with a second round of affordability and acceptability testing but we are confident that if presented to customers would have resulted in an improvement in both the acceptability and affordability ratings.

Fieldwork

The fieldwork was conducted over the following periods for the different supply areas:

- Wessex Water supply area: 18th July 2023 to 29th August 2023
- Bristol Water and Bournemouth Water supply areas: 28th July 2023 to 6th September 2023. NB - Research in the Bristol Water and Bournemouth Water supply areas ran to a different fieldwork schedule due to the later confirmation of the Pennon business plan details.

Data table structure and lines completed

The data table is split into six blocks to report affordability and acceptability metrics by customer segments for the plan for customers in the following categories:

1. **Water only customers (water bill only and water only business plan)** – *not relevant for Wessex Water, these cells have been left blank in the SUP14 data table.*
2. **Water only customers (whole bill and both business plans)** – *not relevant for Wessex Water, these cells have been left blank in the SUP14 data table.*
3. **Water and wastewater customers (whole bill and whole business plan)** – *this represents Wessex Water's dual supply (water and waste) area, these cells have been completed in the SUP14 data table.*
4. **Wastewater only customers (wastewater bill and wastewater only business plan)** – *this represents Wessex Water's waste only areas (i.e., Bristol Water's and Bournemouth Water's supply areas), we have completed the acceptability rows of this block. We have not completed the affordability rows in this table as this block is intended only for customers who are billed separately for their wastewater services which we did not test; the affordability information for our wastewater only customers are reported in block 5.*
5. **Wastewater only customers (whole bill and both business plans)** – *this represents Wessex Water's waste only areas (i.e., Bristol Water's and Bournemouth Water's supply areas), we have completed the affordability rows because this block is intended for results where the whole bill impact has been tested with customers which is what we did in the joint testing with Pennon. We have not completed the acceptability rows in this table as these results would include customer views on non-Wessex Water. The acceptability of our plan to wastewater only customers are reported in block 4.*
6. **All customers (weighted combination)** – *all rows have been completed for this block. The data is the weighted combination of the blocks above, weighted by number of customers served.*

For ease, how we have populated the blocks is summarised in the table below:

Table 17 – Summary of data tables completed

Block	Block name	Affordability	Acceptability
1	Water only customers (water bill only and water only business plan)	Intentionally blank	Intentionally blank
2	Water only customers (whole bill and both business plans)	Intentionally blank	Intentionally blank
3	Water and wastewater customers (whole bill and whole business plan)	✓	✓
4	Wastewater only customers (wastewater bill and wastewater only business plan)	Intentionally blank	✓
5	Wastewater only customers (whole bill and both business plans)	✓	Intentionally blank
6	All customers (weighted combination)	✓	✓

Each of the six blocks are split by the following customer segments:

- Household customers
- Household with vulnerable
- Households struggling
- Non-household customers
- Household and non-household

Each block contains the following lines:

- Affordability (6 lines)
  - Customers who **have struggled to pay** at least one of their HH or NHH bills (2 lines: number and %)
  - Customers expecting to find it **difficult to pay** their proposed water and sewerage for the years 2025-30 (2 lines: number and %)
  - Customers expecting to find it **easy to pay** their proposed water and sewerage for the years 2025-30 (2 lines: number and %)
- Acceptability (4 lines)
  - Customers responding that the proposed business plan is **unacceptable** (2 lines: number and %)
  - Customers responding that the proposed business plan is **acceptable** (2 lines: number and %)

Weighting

To report the affordability and acceptability results in % the data has been weighted at three levels:

- To match to the actual profile of household bill payers within each of the three water supply areas for the following dimensions
  - Gender (using targets based on information from 2021 Census data for the local authorities covered by the water companies)
  - Age (using targets based on information from 2021 Census ONS population estimates for local authorities; data for 18-34s was adjusted using a national ONS data set which tracks the proportion of adults living at home with parents, as a proxy for % responsible for paying the bill.
  - Index of multiple deprivation (IMD) based on postcode look up via https://imd-by-postcode.opendatacommunities.org/imd/2019

- To weight the overall number of household and non-household bill payers within each of the three water supply areas to reflect their respective water use (as specified in guidance from Ofwat)
  - Volume of water use of HH and NHH customers (provided for Wessex supply areas by Wessex Water and Bournemouth and Bristol supply areas by South West Water)
  - This used the APR Table 10b for 2022-23, and excludes leakage volumes

- To weight the overall customer numbers (household and non-household) to be proportionate for each of the three water supply areas
  - Overall customer proportions for Wessex Water versus Bristol Water vs Bournemouth water supply areas (derived from counts of all customers from the water companies' records)

Wider context of results

The customer engagement for this plan, including the affordability and acceptability testing has been undertaken during a challenging period for the water industry and customers. The reputation of the water sector has experienced an erosion of trust with some customers and communities which is observed not only in media headlines, but also in our own continuous monitoring of customers' views and some bespoke research projects. Most customers continue to report high satisfaction with the services we provide, but many are very worried about their finances and household budgets are increasingly squeezed with the cost-of-living crisis. Customers are naturally concerned about the affordability of water bills now and in the future.

The affordability and acceptability results presented in SUP14 and described in the sections below are lower than we have seen in previous price reviews – we must remember they're set within the context of the challenges the water industry is facing with regard to customer perception and the ongoing pressures on household finances from the cost-of-living crisis.

Post testing, we made further changes to our plan in response to changing guidance from Government and regulators resulting in a reduced investment programme and a lower bill increase. There was no time to retest it, but we are confident that if presented to customers it would have resulted in an improvement in both the acceptability and affordability ratings.

5.2.1. Block 1: Water only customers (water bill only and water only business plan)

This block of the data table is not relevant for Wessex Water, these cells have been left blank.

5.2.2. Block 2: Water only customers (whole bill and both business plans)

This block of the data table is not relevant for Wessex Water, these cells have been left blank.

5.2.3. Block 3: Water and wastewater customers (whole bill and whole business plan)

This block includes all household and non-household survey respondents in the geographic area where Wessex Water provides both water and sewerage services. The total number of respondents (unweighted) are:

- Household customers n=746, of which 305 are households with vulnerable customer and 62 are households struggling financially.
    - We note that the number of customers defined as struggling financially is a relatively small base size for statistical analysis and so the results for this group need to be interpreted with some caution.
- Non-household customers n=229

Key points of note:

- 28% of water and wastewater household customers say they have struggled to pay at least one of their bills, illustrating how widespread bill affordability issues are at the moment.
    - This is, as we would expect, much higher for households struggling financially (85%)
    - Non-household customers have also been struggling to pay at least one bill – at 42% this is a higher level than households in the Wesssex Water supply area.
- 46% of water and wastewater household customers say it will be 'difficult' to afford the proposed water bill, after seeing their bill profile to 2030.
    - This is notably higher for households struggling financially (78% say it will be 'difficult'), but only slightly higher for those households with a vulnerable customer (51%).
    - Non-households are a less likely to think it will be difficult (28%).
- Meanwhile only a small minority of households say it will be 'easy' to afford the proposed water bill (15%)
    - This is even lower for households struggling financially (at just 5%).
    - It is much higher for non-households (48%).
- Amongst water and wastewater customers the % finding the whole business plan unacceptable is 25% for household customers and 21% for non-household customers

    - Households struggling stand out as the group most likely to reject the plan – 36% finding it unacceptable.
- Amongst water and wastewater customers the % finding the whole business plan acceptable is 60% for household customers and 76% for non-household customers.
    - With struggling households giving a lower rating than households in general (47%).
    - Vulnerable households give a very similar score to households in general (also 59%).
    - These figures compare with ratings of in excess of 90% of households and non-households finding the plan 'acceptable' in the Wessex Water PR19 research.

5.2.4. Block 4: Wastewater only customers (wastewater bill and wastewater only business plan)

This block includes all household and non-household survey respondents in the geographic area where Bristol Water and Bournemouth Water provide water supply and Wessex Water provides sewerage services. The total number of respondents (unweighted) are:

- Household customers n=1,189, of which 474 are households with vulnerable customer and 133 are households struggling financially.
- Non-household customers n=209.

For this block we include only the data for acceptability of the wastewater only business plan (SUP 14.21 and 14.22) which was covered in the survey questionnaire but not data for the wastewater only bill affordability (SUP 14.19 and 14.20) which was not asked in the survey. We undertook joint research with Pennon Group in our joint areas which allowed us to take a more complex but more meaningful approach to be able to test whole bill affordability with customers. Only whole-bill affordability (water services plus sewerage services) was included in the survey for sewerage only customers of Wessex Water and this is reported in block 5 (lines SUP14.23-25).

Key points of note:

- Amongst wastewater only customers of Wessex Water, the % finding the wastewater only business plan unacceptable is 32% for household customers and 22% for non-household customers.
    - Households struggling are somewhat more likely to reject the plan – 40% finding it unacceptable.
- Amongst wastewater only customers the % finding the wastewater only business plan acceptable is 57% for household customers and 70% for non-household customers.
    - With struggling households giving a somewhat lower rating than households in general (49%).
    - Vulnerable households give a very similar score to households in general (58%).

5.2.5. Block 5: Wastewater only customers (whole bill and both business plans)

For this block in the SUP14 tables we exclude wastewater-only customer views on the combined business plans (Wessex Water plus Bristol/Bournemouth Water plans), as plan acceptability for these customers will be based on their acceptability of the wastewater-only plan shown in Block 4 (SUP 14.21 and 14.22). However, this data was collected in the survey and we also summarise this below for context.

As for Block 4, this block includes all household and non-household survey respondents in the geographic area where Bristol Water and Bournemouth Water provide water supply and Wessex Water provides sewerage services. The total number of respondents (unweighted) are:

- Household customers n=1,189, of which 474 are households with vulnerable customer and 133 are households struggling financially.
- Non-household customers n=209.

Note that all wastewater only customers saw their combined water and wastewater bill profile to 2029-30, adding together their bill amounts for Wessex Water with their bill amounts for Bristol Water / Bournemouth Water.

Key points of note:

- 30% of wastewater-only household customers say they have struggled to pay at least one of their bills, similar to the level for Wessex Water water and wastewater customers shown in Block 3.
    - This is much higher for households struggling financially (84%), again mirroring the picture for customers in Block 3.
    - 38% of non-household wastewater only customers say they have been struggling to pay at least one bill – again this is similar to the level for NHH water and sewerage customers. The underlying financial situation in the different supply regions is very similar.
- 46% of wastewater-only household customers say it will be 'difficult' to afford the proposed whole water bill, after seeing their bill profile for water plus wastewater services to 2030.
    - This is notably higher for these households struggling financially (83% say it will be 'difficult'), but only slightly higher for those households with a vulnerable customer (50%).
    - Wastewater-only non-households are less likely to think it will be difficult (37%) – although this is indicatively a little higher than the NHH level for water and wastewater NHH customers.
- Meanwhile only a small minority of households say it will be 'easy' to afford the proposed water bill (16%) – a similar proportion as seen for water and wastewater customers.
    - This is even lower for households struggling financially (at just 5%).
    - It is higher for non-households (34%) – although not as high as seen for NHH water and sewerage customers.

The following data is not included in the SUP14 tables, but is described here for context:

- Amongst wastewater only customers the % finding the whole business plan unacceptable (including both the Wessex Water elements and the Bristol Water / Bournemouth Water plan elements) is 20% for household customers and 16% for non-household customers.
    - These are indicatively slightly lower levels of unacceptability than seen for the whole Wessex Water plan amongst water and sewerage customers.
    - Households struggling are *not* notably more likely to reject the plans – 21% finding it unacceptable; this is a slightly different picture to acceptability of the Wessex Water whole plan amongst water and wastewater customers who are struggling, who were more likely to find the plan unacceptable.
- Amongst wastewater-only customers the % finding the combined business plans acceptable (including both the Wessex Water elements and the Bristol Water / Bournemouth Water plan elements) is 63% for household customers and 77% for non-household customers. This score of 63% acceptability is slightly higher than the score of 57% acceptability for the wastewater-only Wessex Water plan amongst these same customers.
    - Struggling wastewater-only households give a directionally lower acceptability rating for the combined Wessex Water and Bristol Water / Bournemouth Water plan than households in general (55% vs. 63%).
    - Vulnerable households give a very similar score to households in general.

5.2.6. Block 6: All customers (weighted combination)

This block combines all survey respondents presented in the blocks above, a total of 2,373. It includes all household and non-household survey respondents in the geographic area where Wessex Water provides sewerage services. This includes the areas where water is supplied by Wessex Water, the area supplied by Bristol Water, and the area supplied by Bournemouth Water. The total number of respondents (unweighted) are:

- Household customers n=1,935, of which 779 are households with vulnerable customer and 195 are households struggling financially
- Non-household customers n=438

For the plan acceptability reported in this block we combine the data for acceptability of the whole Wessex Water business plan for water and wastewater customers (SUP 14.16 and 14.17) with acceptability of the wastewater plan only for wastewater customers (SUP 14.21 and 14.22).

Key points of note:

- Combining all water and wastewater and water only customers, 46% of the household customers say it will be 'difficult' to afford the proposed water bill, after seeing their bill profile to 2030.
    - This is notably higher for households struggling financially (81% say it will be 'difficult'), but only slightly higher for those households with a vulnerable customer (50%).
    - Non-households are less likely to think it will be difficult (32%).
- Meanwhile only a small minority of all households say it will be 'easy' to afford the proposed water bill (16%).
    - This is even lower for households struggling financially (at just 5%).
    - It is notably higher for non-households (41%)
- Combining scores for the whole Wessex Water plan (for water and wastewater customers) with scores for the wastewater only plan (for wastewater only customers), amongst all customers surveyed the % finding the business plan unacceptable is 29% for household customers and 21% for non-household customers.
    - Households struggling stand out as the group most likely to reject the plan – 39% finding it unacceptable.
- Combining scores for the whole Wessex Water plan (for water and wastewater customers) with scores for the wastewater only plan (for wastewater only customers), amongst all customers surveyed the % finding the business plan acceptable is 58% for household customers and 73% for non-household customers.
    - With struggling households giving a lower rating than households in general (48%).
    - Vulnerable households give a near-identical score to households in general (58%).

When we combine household and non-household customers the % finding Wessex Water's plans unacceptable is 27%, and the % finding the plans acceptable is 62%.

6. SUP15.

6.1. Summary

Water is an essential service, and everyone should be able to afford to pay for it now and in the longer term. No one should have to ration what they use based on their ability to pay- no one should be in water poverty. Our tailored assistance programme, TAP, is one of the most extensive, innovative, and mature affordability support programmes across the water industry. Through this award-winning programme, we offer a range of schemes and low-rate tariffs to help customers afford their ongoing water charges and repay their debts along with practical help to reduce water and energy bills. Each customer is offered a tailored solution to meet their individual financial circumstances.

We encourage engagement with customers who are financially vulnerable and build relationships of mutual trust with debt advice agencies/partners. It is important that we support a holistic approach to debt management, offering these tailored solutions to meet individual circumstances and receiving a sustainable and affordable level of payment of whatever size to no payment at all.

We are currently supporting 60,000 customers across our region through TAP with just under 55,000 on social tariffs. The significant but essential investment we have planned between 2025-2030 will add increased pressure on customers as bills are regrettably going to rise. We need to make sure that during these times when household finances are being constantly squeezed through the cost-of-living crisis, water continues to be affordable for all. So, our goal is to eradicate water poverty across our region - no one will spend more than 5% of their disposable income on water by 2030. And for those in the most hardship who are least able to pay we will go even further.

To do this we will:
• Increase the number of households that we support with their bill, through social tariffs and WaterSure, to 140,000
• Continue to work with a wide range of partners across our region to raise awareness of the support we can offer and reach customers who need us most
• Continue to fund our debt advice partners so they can increase the number of clients they can see
• Make it as easy and quick as possible to apply for the support we offer and use data to automatically apply bill reductions where we can
• Help customers to save water and energy by fitting smart meters and providing water efficiency support
• Fund local community projects through the Wessex Water Foundation aimed at improving access to services and building financial capability

This commentary provides an in depth look at the affordability measures we have in place, that are driven by these aims along with our underlying outcome of removing all customers from water poverty by the end of AMP8.

6.2. WaterSure inclusion in APR table 2N

We have historically included WaterSure in APR table 2N when referring to “social tariffs”. For SUP15 we have separated WaterSure out and not included it when referring to social tariffs for historic reporting and all forecasts. Where we refer to commentary from historic APR tables, please note that this may also include WaterSure.

6.3. Commentary for APR table linked lines

For APR table linked entries up to 2022-23, please refer to the relevant APR table commentary from our historic submissions.

6.4. Rounding figures leading to misleading results

We have noticed that rounding some figures expressed in millions can lead to some misleading results. For instance, there are some occasions where total bill reduction rounds to £0.000 despite there being a significant figure in that line in the context of the small number of customers on a water only tariff for instance. A specific example is line 7 for water only customers in 2020-21, where the average discount is £0.000 when line 6 is rounded to 3 decimal places but £53.035 when it is not rounded.

6.5. 1. /A1

Forecast customer numbers reflect the extra 100,000 which we aim add to our tariffs and this aligns with our goal of removing all customers from water poverty by the end of AMP8.

6.6. 2. /A1

Forecast customer numbers reflect the ongoing trend of steady WaterSure growth we have historically observed.

6.7. 3. /A1

Forecasts are equivalent to our business plan residential customer number forecasts, less SUP15.1.

6.8. 6. /A1

Total bill reduction in bills for WaterSure customers increases gradually between 2020-21 and 2023-24. Customer number growth was subdued early in AMP7 because of the covid-19 pandemic (please see our historic APR social tariff narrative for more detail). There has also been a drop in average discounts for customers on WaterSure in 2023-24 as a result of customers using less water, likely as a result of the wet summer and the cost of living crisis.

For 2024-25 onwards we forecast for total bill reduction to increase more sharply in line with the trend of larger bill increases.

6.9. 8. /A1

We forecast a modest increase in money collected to fund social tariffs in 2023-24, driven by increases in numbers of customers on social tariffs and offset by lower household consumption (with customers' using less water due to a wetter summer and the cost-of-living crisis).

For 2024-25 onwards we forecast sharper increases in money collected in line with social tariff customer growth and our forecast bill increase profile.

6.10. 10. /A1

We are not planning to forgo any revenue to subsidise social tariffs for the remainder of AMP7 or for AMP8.

6.11. 11. /A1

Forecasts reflect the level of cross subsidy driven by of our social tariff customer number forecasts and discounts. We forecast for average discounts for discount for low-income pensioner customers to stay at the same level in real terms, because it is a flat discount from the bill. We forecast for Assist customer discounts to increase in real terms. This is because our Assist tariff increases in line with inflation year on year, whilst our average bills are expected to increase above inflation, widening the gap (and discount) between Assist and our bills.

6.12. 12. /A1

Our latest social tariff research concluded in June 2023. We have used the median willingness to contribute (WTC) as this best represents the level that most of our customers are happy with. We recognise that the level of support reflected in our charges (line 11) exceeds the maximum contribution supported by engagement during 2026-27 for sewerage only customers and during 2028-29 for dual service customers. We believe strongly in the outcome of removing all customers from water poverty and plan to carry out further customer research during AMP8 to gain the support required to achieve this outcome.

6.13. 13. / A2.

We are pleased to have reached our amp target of 7% of households on the PSR early. We are now forecasting 11.2% by the end of the current amp and 21.8% by 2030. Whilst we took a decision not to automatically add anyone of pensionable age to our register as not all will see themselves as vulnerable or in need of extra support we are pleased with our growth. We have been able to reach 7.46% as of 1 September 2023 via a combination of staff sign-ups, working with partners, increased communication, and data shares with both energy distributors and fire service. We expect to increase our data shares over the coming years with the other fire service in our region and receive energy supplier data. This will be combined with targeted communication and partnerships to ensure that those who need our help receive it. An example of targeted partnership work is our relationship with Kidney Care UK who have explained to us that there are over 200,000 people living with chronic kidney disease in our region of whom 1,643 are on home dialysis. We are working with them to reach more customers and close the gap.

6.14. 14 - 18. / A2.

For lines 14-18 we have forecast based on current numbers in the following areas:

- Customers receiving services through the SAR/PSR: (a) support with communication
- Customers receiving services through the SAR/PSR: (b) support with mobility and access restriction
- Customers receiving services through the SAR/PSR: (c) support with supply interruption
- Customers receiving services through the SAR/PSR: (d) support with security
- Customers receiving services through the SAR/PSR: (e) support with 'other needs'

All needs and services are recorded at customer level in the Priority Services Register. However we have reports that identify service(s) required by each household. These are then grouped into the five Ofwat categories above. To provide this data we have categorised our needs codes and services as follows:

- **Communication** - Cognitive impairment including: Dementia, Blind, Mental Health, Partially sighted, Hearing impairment, Unable to communicate in English, Additional presence preferred, Speech impairment, Unable to answer door, Developmental condition, **also those who wanted support with written communication needs.**
- **Mobility access mobility and access restrictions** - Blind, Hearing impairment, Physical impairment, Temporary post hospital, Dialysis- feeding pump and automated feed, Unable to answer door, Heart/lung

ventilator, Stair lift/hoist/electric bed, Nebuliser and apnoea monitor, Oxygen Concentrator/ Oxygen Use, restricted hand movement, Careline/telecare, Partially sighted,

- **Supply interruption** – Dialysis- feeding pump and automated feed, Poor sense of smell/ taste, Water dependent, Unable to answer the door, Cognitive impairment- inc Dementia, Nebuliser and apnoea monitor, Heart/ lung ventilator, Oxygen Concentrator, Stair lift/hoist/ electric bed, Physical Impairment, Developmental condition, Mental Health, Temp- post hospital, Chronic serious illness, Oxygen use, Restricted Hand movement, Blind, Families with children under 5, Medically dependant- showering/ bathing,
- **Security** – **those with a password**
- **Support with other needs** – Temporary- Life change, Temporary- young adult, Pensionable Age, Medicine refrigeration.

6.15. 19./ A2.

We will continue to attempt to contact PSR customers as per the PR19 guidance. We will aim to reach at least 90% of customers every two years despite the increase in the volume of customers on our register. Over time customers will be able to self-serve and update their own details.

6.16. 20. /A2

We will continue to attempt to contact PSR customers as per the PR19 guidance. We have been pleased to contact over 50% of those customers registered in years 2 and 3 of the amp. We will continue to aim to speak with at least 55% of those customers every two years. Over time customers will be able to self-serve and update their own details.

6.17. 21. /B1

Actuals are from the ONS dataset and forecasts are equivalent to the 2021-22 actual in line with the guidance.

6.18. 23-24. /B2

drainage tariff early in AMP8. Our planned smart metering rollout will facilitate effective innovative tariff trials and we plan to trial a rising block or similar water efficiency tariff trial later in the AMP, when the rollout of smart metering has progressed significantly. We do not yet know if either of these trials will be successful and accepted for widespread adoption, so we have only included the trial customer numbers in these lines.

We have split the tariff trial between income deprived and non-income deprived customers using the IMD score in SUP15.21.

6.19. 25. /B2

We do not consider that innovative tariffs will lead to customers saving money on average, but to a fairer distribution of charges. Therefore, this line is zero for all years.

6.20. 27. /B3

Customer numbers up to 2022-23 reflect actuals from our billing system, forecasts beyond this are based on historic trends and our aim to target more income deprived households.

In-home water efficiency activities were put on hold for the first two years of the AMP due to the Covid pandemic preventing us from going into homes for non-emergency works. As a result, we are not able to report savings from water efficiency visits for these financial years, meaning overall assistance provided was lower. We then launched our Home Check service in April 2022 focusing on customers with daily household water use over 500 litres. Forecasts are based on average savings for 22-23. We are currently developing partnerships with a housing association which we hope will enable us to increase support to low-income households. As such we have forecast an increase in the number of income deprived households being supported in this way during the next AMP period.

6.21. 28. /B3

Average discounts up to 2022-23 reflect actual data from our internal systems. Forecasts are based on historic values uplifted by real increases in household volumetric rates.

6.22. 29. /B3

Customer numbers up to 2022-23 are calculated by matching customers moved to a meter to ONS household deprivation data at the postcode level. Forecast customer numbers are calculated by applying the forecast proportion of income deprived households in line 21 to business plan forecasts of meter switchers from CW6 & CW7.

6.23. 30. /B3

Bill reductions up to 2022-23 use data from our billing system matched to ONS household deprivation data at the postcode level. Forecasts are based on historic averages profiled by bill increases.

6.24. 32. /B4

We do not offer financial hardship funds and so this section of the table is showing as 0 customers. We offer customers help to repay their debt and a debt support scheme Restart. Restart rewards the customer for paying their bill and importantly leads to a change in behaviour. In year one the customer pays their current year charges and any notional contribution towards their debt, and we write off an equivalent amount. In year two the customer again pays their current year's charges plus any notional amount towards their debt and then we clear the remaining balance, however large. At the end of the two years the customer is back on track with more than 89% continuing to engage and pay for their ongoing water. We believe it's essential that customers receive holistic debt advice and budgeting support along with income maximisation. It is never just about water; customers generally have multiple debts to multiple creditors. These trusted third parties are far better able to determine a sustainable offer of payment, however small, based on true ability to pay.

6.25. 33. /B4

As per 31./A2 we do not offer financial hardship funds and so this section of the table is showing as £0.000.

6.26. 34. /B4

We do not have a scheme that specifically writes off charges during the application period for Universal Credit, so this section of the table is showing 0 customers. If a customer is struggling to pay because they are waiting for Universal Credit or any other reason, we discuss their situation with them and provide tailored assistance. The

customer might automatically go on to our reduced bill Assist and be asked to seek independent advice. We might provide our debt support scheme Restart. They may just want a payment break or a flexible payment plan.

6.27. 35./B4

As per 34 /B4 we do not have a scheme that specifically writes off charges during the application period for Universal Credit, so this section of the table is showing £0.000.

6.28. 36./B4

Entries up to 2022-23 reflect actual data from our billing system, forecasts beyond this are based on historic trends profiled in line with bill increases.

6.29. 37./B4

Entries up to 2022-23 reflect actual data from our billing system, forecasts beyond this are based on historic trends profiled in line with bill increases.

6.30. 38./B4

This line reflects our Flexi Plan support provided to customers to assist with managing payments in a way that works for them. Customer numbers originate from our billing system and forecasts are profiled in line with bill increases.

6.31. 39./B4

Flexi Plan does not reduce bills, just manages the payments, so entries are 0 for all years.

6.32. 41./B5

We currently do not keep a record of customers assisted with advice on income maximisation and managing debts that have not gone on to have support with their water bill and so have left this section of the table blank. We signpost customers to debt advice partners to support them with income maximisation, budgeting, and holistic debt advice. They then support the customer to apply for help. We receive around 2,300 accepted applications from our partners per year to our schemes and all customers will have completed a standard financial statement and received income maximisation and debt advice. These customers will have gone on to receive a reduced bill. We do not ask our partners currently to provide details of our customers they have supported that they have not then needed to apply for a scheme. We could ask them to provide this for us going forward but are very aware of the pressures these charities are under and do not want to overburden them with requests for data. We have had mixed responses when approaching the subject some could provide data to us others would need to introduce new processes and system changes. One great example though was from South Bristol Debt Advice Centre who have supported 930 customers between 2020 and 2023 of whom just over 200 went on to need a lower water bill. If we were to assume a similar picture across all 37 debt advice partners we could predict over 2000 customers receiving support per year.

6.33. 42./B5

Entries up to 2022-23 reflect actual data from our billing system, forecasts beyond this are based on historic trends profiled in line with bill increases.

6.34. 43./B5

We do not and do not plan to assist customers struggling to pay their bills through any other measures that do not reduce their bills.

6.35. 45./B6

Entries up to 2022-23 reflect our actual average bills, entries beyond this are in line with our business plan submission.

6.36. 48./B6

The number of customers below the water affordability threshold in our region is forecast based on the April 2021 CEPA report "Quantitative analysis of water poverty in England and Wales"[1] (adjusted for real bill increases), and we consider this to be the upper band of number of customers in water poverty.

6.37. 49./B6

We plan to remove all customers from water poverty by the end of AMP8 by utilising the package of targeted affordability measures reported within SUP15. This is reflected in line 49 with 0 customers in water poverty in 2029-30.

6.38. 51./B7

We currently fund 37 organisations to provide this support to our customers. Since 2020 we have had a commitment in place to receive at least 2,300 successful applications for TAP each year from our debt advice partners. As a result, the number of customers supported by TAP is increasing year on year. In addition, we fund community-based projects. Our total funding in 2022-23 was around £400,000 per year including debt advice funding and our Wessex Water Foundation Community Fund which supports organisations whose projects:

- Support people in financial difficulty or those who lack access to services.
- Take place in areas of multiple deprivation or rural isolation.
- Help build stronger, more resilient communities.
- Help people manage or avoid debt, including raising awareness of Wessex Water and other utility affordability schemes.
- Educate and support people of all ages to take steps to build financial capability, money management, and household budgeting skills.

In 2022-23, we predicted an increase in demand for debt advice organisation services due to the cost-of-living crisis and many are still struggling to get back to full capacity post-Covid, so we injected an additional £160,000 into the sector. This is funding 7 new projects which are a mix of additional debt adviser training courses, funding more adviser roles and hours, establishing new cost of living adviser roles and funding presence in warm spaces and

[1] https://www.water.org.uk/news-views-publications/publications/quantitative-analysis-water-poverty-england-and-wales

other outreach. We will continue to provide funding via the Wessex Water Community Foundation using outperformance payments.

Table 18 – Core fundings for debt advice, community funding and cost of living funding

Year	Core Funding for debt advice	Community Funding	Cost of living	Totals
2020/21	£214,578	£2,412		£216,990
2021/22	£212,407	£26,230		£238,637
2022/23	£223,766	£20,825	£158,165	£402,756
	£650,751	**£49,467**	**£158,165**	**£858,383**
NB 2020/21 Emergency funding covid				

6.39. 54./B7

As we have not had and do not plan for any other measures to support affordability for customers struggling to pay, we do not plan to collect any revenue from customers.

6.40. 56-57./B7

We have not received and do not expect to receive any contributions from charitable trusts or other third parties to fund all measures to support affordability for customers struggling to pay.

6.41. 59-60.

Baseline doubtful debt including affordability support measures is in line with RET1.3. We add to this the additional doubtful debt we would expect in the absence of affordability measures. Our view is that all income from our Assist tariff would otherwise be a doubtful debt. In addition, we have included additional revenue as a result of our Restart scheme, which encourages customers to pay more than they otherwise would over a number of years.