Tables	Expenditure Summary – Scenario A		
Table	**Table 1a - Additional network storage / conveyance / containment**	AMP8	AMP9+
Lines	Additional grey storage / containment volume to be delivered in the network (enhancement)		
	Number of individual schemes		
	Projected spend on grey network storage - capex		
	Projected spend on grey network storage - opex		
	Projected spend on grey network storage - totex		
Data Owner	Steve Rosser		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance (often different for AMP7 and AMP8 hence 2 columns)

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 1a – Additional network storage / conveyance / containment

Scenario 1b

1A	Additional network storage / conveyance / containment TRADITIONAL GREY INTERVENTIONS	Description	Units	2025-26	2026-27	2027-28	2028-29	2029-30	Total AMP8 (2025-2030)	2030-31	2031-32	2032-33	2033-34	2034-35	AMP9 (2030-35)	AMP10 (2035-40)	AMP11 (2040-45)	AMP12 (2045-50)	Total 25 yr
	Interventions to reduce the risk of sewer flooding in a storm including storage, or other containment, to reduce spill frequency at storm overflows (network only)	Additional grey storage / containment volume to be delivered in the network (enhancement)	1000m3	5	11	16	21	53	105	5	10	15	20	50	100	38	0	0	244
		Number of individual schemes	nr	12	23	35	46	116	232	7	14	22	29	72	144	166	0	0	542
		Projected spend on grey network storage - capex	£m	£19	£38	£57	£76	£191	£382	£19	£38	£57	£76	£190	£380	£145	£0	£0	£907
		Projected spend on grey network storage - opex	£m	£1.77	£1.99	£2.34	£2.79	£3.93	£12.82	£4.68	£5.43	£6.18	£6.94	£7.66	£30.89	£11.31	£11.31	£11.31	£77.64
		Projected spend on grey network storage - totex	£m	£21	£40	£60	£79	£195	£395	£24	£43	£63	£83	£198	£411	£156	£11	£11	£985

1. Overall summary

The total amount of network storage in our DWMP plan is 243,924m^3 of storage across 542 schemes. This includes some storage to help mitigate future flood risk, but the majority is the storage required to reduce spills from storm overflows. The amount of storage required is heavily loaded in AMP8+9, totalling ~84% of the total required in the network. The rest is delivered in AMP10, this reflects the plan to deliver environmental improvements early, prioritising bathing waters and schemes that will reduce ecological harm in AMP8 and AMP9.

2. Line specifics

Scenario 1b:

Table 1a Line 1 – As outlined in the data table, grey network storage is estimated to be 105,496 m^3 in AMP8, 100,310m^3 in AMP9 and 38,118 m^3 in AMP10 reflecting the front-end loading and condensed 15-year delivery of the plan to improve environmental impact from storm overflows sooner. The breakdown within each AMP is calculated by targeting 5% in the first year and then incrementally increases by 5% each year until year 5, where 50% of the total AMPs storage is targeted.

Table 1a Line 2 – The total number of schemes is 542 and the breakdown across the AMP's, in most part mirrors the patterns shown in the storage requirements in the sense that the majority is front loaded and the breakdown across the AMP's is calculated in the same way.

Table 1a Line 3 - Projected capex spend on grey network storage takes the same profile as storage values reflecting the front-end loading of the plan to improve environmental impact from storm overflows. The value assigned per m^3 of storage is £3,718.27 across the 25 year investment period. Approximately 84% of the investment is planned to occur in AMP8 and AMP9, reflecting the goal to deliver environmental improvements early and all investment by the end of AMP10 to complete overflow works within 15 years. Projected capex totals at £907m across 25 years.

Table 1a Line 4 – Projected Opex spend increases throughout the AMPs as additional storage is delivered, with £12.82m in AMP8, £30.89m in AMP9 and projections of around £11m in AMP10 onwards.

Table 1a Line 5 – Totex is the automated sum of both the Capex and Opex.

Scenario 1a:

Table 1a Line 1 – As outlined in the data table, grey network storage is estimated to be 105,496 m^3 in AMP8, 78,956m^3 in AMP9, 26,940m^3 in AMP10, 19,118m^3 in AMP11 and 13,567m^3 in AMP12 reflecting the front-end loading of the plan to improve environmental impact from storm overflows.

Table 1a Line 2 – The total number of schemes is 541 and the breakdown across the AMP's follows a similar front end loaded pattern to the above grey storage requirements. AMP10 is an exception with a slightly higher number of schemes than AMP 9, this is due to larger schemes being accelerated to earlier AMPs.

Table 1a Line 3 – Projected capex spend on grey network storage takes the same profile as storage values reflecting the front-end loading of the plan to improve environmental impact from storm overflows. Similarly, to scenario 1b, capex totals at £906m across the 25 years.

Table 1a Line 4 – Projected opex follows a similar pattern to above, with an increase in expenditure each year, totalling at £178.2m.

Table 1a Line 5 – Totex is the automated sum of both the Capex and Opex.

Scenario 2:

Table 1a Line 1 – See scenario 1b

Table 1a Line 2 – See scenario 1b

Table 1a Line 3 – See scenario 1b

Table 1a Line 4 – See scenario 1b

Table 1a Line 5 – See scenario 1b

Scenario 3:

Table 1a Line 1 – See scenario 1b

Table 1a Line 2 – See scenario 1b

Table 1a Line 3 – See scenario 1b

Table 1a Line 4 – See scenario 1b

Table 1a Line 5 – See scenario 1b

Scenario 4:

Table 1a Line 1 – See scenario 1b

Table 1a Line 2 – See scenario 1b

Table 1a Line 3 – See scenario 1b

Table 1a Line 4 – See scenario 1b

Table 1a Line 5 – See scenario 1b

Scenario 5:

Table 1a Line 1 – See scenario 1b

Table 1a Line 2 – See scenario 1b

Table 1a Line 3 – See scenario 1b

Table 1a Line 4 – See scenario 1b

Table 1a Line 5 – See scenario 1b

Scenario 6:

Table 1a Line 1 – See scenario 1b

Table 1a Line 2 – See scenario 1b

Table 1a Line 3 – See scenario 1b

Table 1a Line 4 – See scenario 1b

Table 1a Line 5 – See scenario 1b

3. RAID - Risks Assumptions Issues Dependencies

1, Investments attributed within Table 1a are as identified for the WINEP plan.

2, The extent of storage is as predicted from hydraulic modelling simulations, and also relationships identified from SOEP.

Tables	Expenditure Summary – Scenario A		
Table	**Table 1b - Upstream surface water separation / removal or other network storage**	AMP8	AMP9+
Lines	Permeable area inflow removed from entering the network or stored in environment (enhancement)		
	Number of individual schemes		
	Projected spend on grey network storage - capex		
	Projected spend on grey network storage - opex		
	Projected spend on grey network storage - totex		
Data Owner	Steve Rosser		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 1b – Upstream surface water separation / removal or other network storage

Scenario 1b

1B	Upstream surface water separation / removal or other network storage BLUE / GREEN SEPARATION & STORAGE	Description	Units	2025-26	2026-27	2027-28	2028-29	2029-30	Total AMP8 (2025-2030)	2030-31	2031-32	2032-33	2033-34	2034-35	AMP9 (2030-35)	AMP10 (2035-40)	AMP11 (2040-45)	AMP12 (2045-50)	Total 25 yr
	Additional blue/green interventions (including associated enabling works) to remove impermeable area inflow from entering the storm/foul/combined network.	Permeable area inflow removed from entering the network or stored in	Hectares	18	35	53	70	176	352	33	65	98	130	325	651	445	0	0	1448
		Number of individual schemes	nr	5	10	15	20	49	99	19	19	18	19	19	94	91	0	0	284
		Projected spend on green network schemes - capex	£m	£11	£22	£32	£43	£108	£216	£11.0	£21.9	£32.9	£43.8	£109.5	£219	£150.0	£0.0	£0.0	£585
		Projected spend on green network schemes - opex	£m	£0.35	£0.39	£0.46	£0.55	£0.78	£2.53	£0.92	£1.07	£1.21	£1.36	£1.51	£6.07	£2.24	£2.24	£2.24	£15.32
		Projected spend on green network schemes - totex	£m	£11	£22	£33	£44	£109	£218	£12	£23	£34	£45	£111	£225	£152	£2	£2	£600

1. Overall summary

The total amount of impermeable area inflow removed from entering the network or stored in environment is 1447.5Ha. This includes some SuD's features to help mitigate future flood risk through attenuation. The number of schemes required to accommodate the total hectarage is 284. This has been calculated based upon feasibility work undertaken for the DWMP. In this study multiple schemes were designed to meet the hectarage required to reduce flood risk to less than 5% properties at risk for both Falmouth and Sidmouth. We then worked out an average hectarage per scheme, 1.65Ha and used this across all AMPs. Approximately 69% of separation will occur in AMP8 and9 with the remainder being completed in AMP10.

2. Line specifics

Scenario 1b:

Table 1b Line 1 – As outlined in the table above, the blue/green separation and storage is estimated to be 352Ha in AMP8, ~651Ha in AMP9 and ~445Ha in AMP10 reflecting the front-end loading of the plan to improve environmental impact and condensing the programme to 15 years to realise the benefits sooner.

Table 1b Line 2 – A total of 284 schemes will be delivered evenly across the AMPs; In AMP8, 99 schemes will be delivered, 94 schemes in AMP9 and 91 in AMP10. All schemes will have been delivered by AMP10 due to accelerated delivery leaving AMP's 11 and 12 at 0.

Table 1b Line 3 - £216m, £219m and £150m are the projected capex expenditures for AMPs 8,9 and 10 respectively. This signifies the front end loaded nature of the plan which will accelerate the realisation of environmental improvements from storm overflows with high capex. Capex spend across the 25 years averages £404,000 per Ha.

Table 1b Line 4 – Projected Opex spend is £2.53m in AMP8, £6.07m in AMP9 and £2.24m in AMP10-12.

Table 1b Line 5 - Totex is the automated sum of both the Capex and Opex

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Scenario 1a:

Table 1b Line 1 – Blue/green separation and storage is estimated to be 352Ha in AMP8, 411.5Ha in AMP9, 228.5Ha in AMP10, 239.4Ha in AMP11 and 217.2Ha in AMP12 reflecting the front-end loading of the plan to improve environmental impact.

Table 1b Line 2 – The total number of schemes to be delivered is 284 across the 25 years, with a higher delivery of schemes in AMP8 followed by even delivery across remaining AMPs.

Table 1b Line 3 – Projected capex spend mirrors the above pattern and is greater in AMP8, then consistent across remaining AMPs. Projected capex total is £584m.

Table 1b Line 4 – Opex is totalling at £13.45m over the 25-year period.

Table 1b Line 5 – Totex is the automated sum of both the Capex and Opex.

Scenario 2:

Table 1b Line 1 – Blue/green separation and storage is estimated to be 467 Ha in AMP8, with a total of 2,023 Ha across the 25 years.

Table 1b Line 2 - The total number of schemes to be delivered is 1,226 across the 25 years.

Table 1b Line 3 - Projected capex spend mirrors the above pattern and the projected capex total is £1,850m.

Table 1b Line 4 – Opex is totalling at £15.32m over the 25-year period.

Table 1b Line 5 – Totex is the automated sum of both the Capex and Opex.

Scenario 3:

Table 1b Line 1 – Blue/green separation and storage is estimated to be 557 Ha in AMP8, with a total of 2,473Ha across the 25 years.

Table 1b Line 2 - The total number of schemes to be delivered is 1,499 across the 25 years.

Table 1b Line 3 - Projected capex spend mirrors the above pattern and the projected capex total is £2,840m.

Table 1b Line 4 – Opex is totalling at £71m over the 25-year period.

Table 1b Line 5 – Totex is the automated sum of both the Capex and Opex.

Scenario 4:

Table 1b Line 1 – Blue/green separation and storage is estimated to be 667 Ha in AMP8, with a total of 3,023 Ha across the 25 years.

Table 1b Line 2 - The total number of schemes to be delivered is 1,832 across the 25 years.

Table 1b Line 3 - Projected capex spend mirrors the above pattern and the projected capex total is £4,050m.

Table 1b Line 4 – Opex is totalling at £87m over the 25-year period.

Table 1b Line 5 –Totex is the automated sum of both the Capex and Opex.

Scenario 5:

Table 1b Line 1 – Blue/green separation and storage is estimated to be 667 Ha in AMP8, with a total of 3,023 Ha across the 25 years.

Table 1b Line 2 - The total number of schemes to be delivered is 1,832 across the 25 years.

Table 1b Line 3 - Projected capex spend mirrors the above pattern and the projected capex total is £4,050m.

Table 1b Line 4 – Opex is totalling at £87m over the 25-year period.

Table 1b Line 5 – Totex is the automated sum of both the Capex and Opex.

Scenario 6:

Table 1b Line 1 – Blue/green separation and storage is estimated to be 667 Ha in AMP8, with a total of 3,023 Ha across the 25 years.

Table 1b Line 2 - The total number of schemes to be delivered is 1,832 across the 25 years.

Table 1b Line 3 - Projected capex spend mirrors the above pattern and the projected capex total is £4,050m.

Table 1b Line 4 – Opex is totalling at £87m over the 25-year period.

Table 1b Line 5 – Totex is the automated sum of both the Capex and Opex.

3. RAID - Risks Assumptions Issues Dependencies

Risk- The unit costs for Surface Water Separation, are as estimated in the WINEP submission January 2023 (SWS £300k/Ha). Further work will be required in future to confirm unit rate per Ha for SWS.

Risk - The estimation of surface water area removal is based on model predictions and spill frequency (as per SOEP). Further hydraulic analysis will be required to confirm quantity of surface water removal.

Risk- Storm overflow investment identified for WINEP January submission has been adopted within the DWMP. Surface water estimation for a proportion of storm overflows are based on SOEP equations related to EDM spill frequency. Calculated area for surface water removal can occasionally be greater than the impermeable area as recorded within hydraulic models.

Assumption - The WINEP submission included investments in the order of £557m to reduce inflows in addition to surface water separation. This investment has been targeted to identify and eliminate non-urban rainfall induced inflows. This has been excluded from Table 1b.

Tables	Expenditure Summary – Scenario A		
Table	**Table 1 - Planning Objectives delivered by Tables 1A and 1B (multiple benefits)**	AMP8	AMP9+
Lines	Reduced number of category 1-3 pollution incidents		
	Improvement in WwTW compliance		
	Percentage of properties at risk of sewer flooding in a 1 in 50 storm		
	Storm overflow average spill reduction		
	Reduced number of overflows spilling 10 or more per year		
	Reduction in high priority overflows causing ecological harm per year		
	Reduction in overflows causing ecological harm per year		
	Storm overflows - designated bathing waters (coastal and inland)		
	Reduction in sewer collapses		
	Reduction in households with internal sewer flooding		
	Coastal Resilience		
	Serious Pollution		
	Nutrient Reduction		
	Flooding 1 in 10		
	DWF compliance		
Data Owner	Steve Rosser		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance (often different for AMP7 and AMP8 hence 2 columns)

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 1 – Planning Objectives delivered by Tables 1A and 1B (multiple benefits)

Planning Objectives delivered by Tables 1A and 1B (multiple benefits)	Reduced number of category 1-3 pollution	nr	1.08	2.16	3.24	4.32	5.33	5.33	5.2884	5.2668	5.2452	5.2236	5.202	5.202	5.082	5.292	5.157	5.157
	Improvement in WwTW compliance	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Percentage of properties at risk of sewer flooding in a 1 in 50 storm	%	0.03%	0.07%	0.10%	0.14%	0.17%	0.17%	0.20%	0.24%	0.24%	0.27%	0.27%	0.27%	0.44%	0.61%	0.85%	0.85%
	Storm overflow average spill reduction	nr	0.41	0.81	1.22	1.62	2.03	2.03	3.56	5.09	6.63	8.16	9.69	9.69	11.90	11.90	11.90	11.90
	Reduced number of overflows spilling 10 or more per year	nr	1	2	4	6	12	12	18	32	52	79	147	147	348	348	348	348
	Reduction in high priority overflows causing ecological harm per year	nr	6	18	37	62	122	122	126	134	145	159	195	195	195	195	195	195
	Reduction in overflows causing ecological harm per year	nr	6	18	37	62	122	122	126	134	145	159	195	195	195	195	195	195
	Storm overflows - designated bathing waters (coastal and inland)	nr	5	14	27	45	89	89	90	93	97	102	116	116	122	122	122	122
	Reduction in sewer collapses	nr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Reduction in households with internal sewer flooding	nr	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0
	Coastal Resilience	nr	4.77	9.54	14.31	19.08	21.942	21.942	33.39	43.884	53.424	62.01	70.596	70.596	101.124	131.652	164.088	164.088
	Serious Pollution	nr	0.24	0.48	0.72	0.96	1.2	1.2	1.44	1.68	1.92	2.16	2.4	2.4	3.6	4.8	6	6
	Nutrient Reduction	nr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Flooding 1 in 10	%	0.02%	0.04%	0.05%	0.07%	0.09%	0.09%	0.11%	0.12%	0.14%	0.16%	0.18%	0.18%	0.26%	0.35%	0.44%	0.44%
	DWF Compliance	nr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1. Overall summary

Our approach for the final DWMP is to complete all cells. Business as Usual (BAU) expenditure is included in the final DWMP so will be included within the data table costs. Any exceptions will be documented and justified.

The total amount of network storage in our DWMP plan is 550,817m^3 of storage to reduce storm overflows with traditional grey solutions. Blue/Green interventions will remove 1498 hectares of impermeable area inflow from the sewer network.

In the data table column T = AMP12 planning objectives is the final accumulative position for the 25 year period.

2. Line specifics

Scenario 1b:

Table 1 Line 1 – Reduced number of category 1-3 pollution incidents

The reduction in category 1-3 pollutions, as a result of table 1A and 1B interventions is forecast to be 5.16 per 10,000 km of wastewater network. This is delivered by AMP 8. The improved performance in pollutions is funded from other planning objectives, predominantly storm overflows.

The number moves up and down by a small amount due to the nature of reporting the figures as “per 10,000km of wastewater network”, with the network length increasing over time.

Table 1 Line 2 – Improvement in WwTW compliance

The delivery of interventions in tables 1A and 1B are not forecast to have an impact on WwTW compliance. Improvements in WwTW are being delivered by base expenditure not DWMP enhancements.

Table 1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

Interventions from tables 1A and 1B will reduce the percentage of properties at risk of sewer flooding in a 1 in 50 storm event by 0.85% by AMP 12.

Table 1 Line 4 – Storm overflow average spill reduction

Enhancements from tables 1A and 1B are forecast to reduce the total average number of spills per overflow by 12 by AMP10, reflecting the condensed 15-year programme to deliver environmental benefits earlier. The largest improvement in spills occurs by the end of AMP9.

Table 1 Line 5 – Reduced number of overflows spilling 10 or more per year

Tables 1A and 1B will reduce the total number of storm overflows spilling more than 10 times a year by 348. This will be delivered by AMP10. The largest reduction is between AMP9 to AMP10.

Table 1 Line 6 – Reduction in high priority overflows causing ecological harm per year

The total reduction in high priority overflows causing ecological harm, as a result of 1A and 1B enhancements is 195 overflows. This will be reached by the end of AMP9. The largest number of enhancements occur in AMP8. The 195 is reached in AMP10 reflecting the condensed programme to deliver environmental improvements sooner.

Table 1 Line 7 – Reduction in overflows causing ecological harm per year

This line is the same as line 6.

Table 1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

The total reduction in storm overflows in designated bathing waters spilling more than 3 times per bathing season, as a result of 1A and 1B enhancements is 122 overflows. This will be reached by AMP10 with the largest number of enhancements occur in AMP8, which is 89. The 122 is reached in AMP10 reflecting the condensed programme to deliver environmental improvements sooner.

Table 1 Line 9 – Reduction in sewer collapses

Table 1A and 1B enhances do not impact sewer collapses. Sewer collapses are covered by base investment.

Table 1 Line 10 – Reduction in households with internal sewer flooding

Table 1A and 1B enhancements are not impacting this line. Internal sewer flooding improvements are being delivered by base expenditure not DWMP enhancements.

Table 1 Line 11 – Coastal Resilience

Tables 1A and 1B intervention of ~164 of the total 172 coastal resilience enhancements. The largest number of enhancements occur in AMP9 which is ~49 interventions. This reflects the majority of the coastal resilience enhancements being network enhancements, with very few WwTW coastal resilience enhancements.

Table 1 Line 12 – Serious Pollution

The number of potential category 1-2 pollution incidents per 10,000km of wastewater network will be reduced by 6 incidents as a result of table 1A and 1B interventions. The improvements are achieved in even increments across the AMP periods.

Table 1 Line 13 – Nutrient Reduction

Tables 1A and 1B will have no impact on nutrient reduction.

Table 1 Line 14 – Flooding 1 in 10

The impact of the enhancements in tables 1A and 1B will reduce the percentage of properties at risk of flooding in a 1 in 10 storm by 0.44%. The reduction is steady across the AMP's, AMP9 sees the smallest improvement and AMP 12 the largest.

Table 1 Line 15 – DWF compliance

Tables 1A and 1B do not impact DWF compliance. Improvements are being delivered by base expenditure not DWMP enhancements.

Scenario 1a:

Table 1 Line 1 – Reduced number of category 1-3 pollution incidents

See Scenario 1b line 1.

Table 1 Line 2 – Improvement in WwTW compliance

See Scenario 1b line 2.

Table 1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

Interventions from tables 1A and 1B will reduce the percentage of properties at risk of sewer flooding in a 1 in 50 storm event by 0.85% by AMP 12. However the profile to reach 0.85% is slightly different to scenario 1b line 3. This reflects the different delivery profiles of the overflow enhancements between the two scenario's.

Table 1 Line 4 – Storm overflow average spill reduction

Enhancements from tables 1A and 1B are forecast to reduce the total average number of spills per overflow by 12 by AMP12. This is similar to Scenario 1b but the average of 12 is achieved by AMP12 rather than AMP10 in scenario 1b. Comparing figures for AMP9 demonstrate the difference in the delivery of schemes.

Table 1 Line 5 – Reduced number of overflows spilling 10 or more per year

Tables 1A and 1B will reduce the total number of storm overflows spilling more than 10 times a year by 348. This will be delivered by AMP12 reflecting the difference with scenario 1b delivery.

Table 1 Line 6 – Reduction in high priority overflows causing ecological harm per year

The total reduction in high priority overflows causing ecological harm, as a result of 1A and 1B enhancements is 195 overflows. This will be reached by the end of AMP10 reflecting the difference with scenario 1b. The largest number of enhancements occur in AMP8.

Table 1 Line 7 – Reduction in overflows causing ecological harm per year

This is the same as line 6.

Table 1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

The total reduction in storm overflows in designated bathing waters spilling more than 3 times per bathing season, as a result of 1A and 1B enhancements is 122 overflows. This will be reached by AMP12 with the largest number of enhancements occur in AMP8, which is 89. The 122 is reached in AMP12 reflects the different programme to deliver to scenario 1b.

Table 1 Line 9 – Reduction in sewer collapses

See Scenario 1b line 9.

Table 1 Line 10 – Reduction in households with internal sewer flooding

See Scenario 1b line 10.

Table 1 Line 11 – Coastal Resilience

See Scenario 1b line 11.

Table 1 Line 12 – Serious Pollution

See Scenario 1b line 12.

Table 1 Line 13 – Nutrient Reduction

See Scenario 1b line 13.

Table 1 Line 14 – Flooding 1 in 10

See Scenario 1b line 14.

Table 1 Line 15 – DWF compliance

See Scenario 1b line 15.

Scenario 2:

Table 1 Line 1 – Reduced number of category 1-3 pollution incidents

See Scenario 1b line 1.

Table 1 Line 2 – Improvement in WwTW compliance

See Scenario 1b line 2.

Table 1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

Interventions from tables 1A and 1B will reduce the percentage of properties at risk of sewer flooding in a 1 in 50 storm event by 3.02% by AMP 12. The increase compared to scenario 1 is due to baseline and base figures being impacted by 4°C increase to our climate and still maintaining 9.80% of properties at risk.

Table 1 Line 4 – Storm overflow average spill reduction

See Scenario 1b line 4.

Table 1 Line 5 – Reduced number of overflows spilling 10 or more per year

See Scenario 1b line 5.

Table 1 Line 6 – Reduction in high priority overflows causing ecological harm per year

See Scenario 1b line 6.

Table 1 Line 7 – Reduction in overflows causing ecological harm per year

See Scenario 1b line 7.

Table 1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See Scenario 1b line 8.

Table 1 Line 9 – Reduction in sewer collapses

See Scenario 1b line 9.

Table 1 Line 10 – Reduction in households with internal sewer flooding

See Scenario 1b line 10.

Table 1 Line 11 – Coastal Resilience

See Scenario 1b line 11.

Table 1 Line 12 – Serious Pollution

See Scenario 1b line 12.

Table 1 Line 13 – Nutrient Reduction

See Scenario 1b line 13.

Table 1 Line 14 – Flooding 1 in 10

Interventions from tables 1A and 1B will reduce the percentage of properties at risk of sewer flooding in a 1 in 10 storm event by 1.58% by AMP 12. The increase compared to scenario 1 is due to baseline and base figures being impacted by 4°C increase to our climate and still maintaining 9.80% of properties at risk.

Table 1 Line 15 – DWF compliance

See Scenario 1b line 15.

Scenario 3:

Table 1 Line 1 – Reduced number of category 1-3 pollution incidents

See Scenario 1b line 1

Table 1 Line 2 – Improvement in WwTW compliance

See Scenario 1b line 2.

Table 1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

Interventions from tables 1A and 1B will reduce the percentage of properties at risk of sewer flooding in a 1 in 50 storm event by 5.65% by AMP 12. The increase compared to scenario 1 is due to baseline and base figures being impacted by 2°C increase to our climate plus reducing the 9.80% of properties at risk in scenario 1 further to 5.00%.

Table 1 Line 4 – Storm overflow average spill reduction

See Scenario 1b line 4.

Table 1 Line 5 – Reduced number of overflows spilling 10 or more per year

See Scenario 1b line 5.

Table 1 Line 6 – Reduction in high priority overflows causing ecological harm per year

See Scenario 1b line 6.

Table 1 Line 7 – Reduction in overflows causing ecological harm per year

See Scenario 1b line 7.

Table 1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See Scenario 1b line 8.

Table 1 Line 9 – Reduction in sewer collapses

See Scenario 1b line 9.

Table 1 Line 10 – Reduction in households with internal sewer flooding

See Scenario 1b line 10.

Table 1 Line 11 – Coastal Resilience

See Scenario 1b line 11.

Table 1 Line 12 – Serious Pollution

See Scenario 1b line 12.

Table 1 Line 13 – Nutrient Reduction

See Scenario 1b line 13.

Table 1 Line 14 – Flooding 1 in 10

Interventions from tables 1A and 1B will reduce the percentage of properties at risk of sewer flooding in a 1 in 10 storm event by 2.97% by AMP 12. The increase compared to scenario 1 is due to baseline and base figures being impacted by 2°C increase to our climate plus reducing the 9.80% of properties at risk in scenario 1 further to 5.00%.

Table 1 Line 15 – DWF compliance

See Scenario 1b line 15.

Scenario 4:

Table 1 Line 1 – Reduced number of category 1-3 pollution incidents

See Scenario 1b line 1.

Table 1 Line 2 – Improvement in WwTW compliance

See Scenario 1b line 2.

Table 1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

Interventions from tables 1A and 1B will reduce the percentage of properties at risk of sewer flooding in a 1 in 50 storm event by 7.82% by AMP 12. The increase compared to scenario 1 is due to baseline and base figures being impacted by the same 4°C increase to our climate but reducing the 9.80% of properties at risk in scenario 1 further to 5.00%.

Table 1 Line 4 – Storm overflow average spill reduction

See Scenario 1b line 4.

Table 1 Line 5 – Reduced number of overflows spilling 10 or more per year

See Scenario 1b line 5.

Table 1 Line 6 – Reduction in high priority overflows causing ecological harm per year

See Scenario 1b line 6.

Table 1 Line 7 – Reduction in overflows causing ecological harm per year

See Scenario 1b line 7.

Table 1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See Scenario 1b line 8.

Table 1 Line 9 – Reduction in sewer collapses

See Scenario 1b line 9.

Table 1 Line 10 – Reduction in households with internal sewer flooding

See Scenario 1b line 10.

Table 1 Line 11 – Coastal Resilience

See Scenario 1b line 11.

Table 1 Line 12 – Serious Pollution

See Scenario 1b line 12.

Table 1 Line 13 – Nutrient Reduction

See Scenario 1b line 13.

Table 1 Line 14 – Flooding 1 in 10

Interventions from tables 1A and 1B will reduce the percentage of properties at risk of sewer flooding in a 1 in 10 storm event by 4.11% by AMP 12. The increase compared to scenario 1 is due to baseline and base figures being impacted by the same 4°C increase to our climate but reducing the 9.80% of properties at risk in scenario 1 further to 5.00%.

Table 1 Line 15 – DWF compliance

See Scenario 1b line 15.

Scenario 5:

Table 1 Line 1 – Reduced number of category 1-3 pollution incidents

See Scenario 1b line 1.

Table 1 Line 2 – Improvement in WwTW compliance

See Scenario 1b line 2.

Table 1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 4 line 3.

Table 1 Line 4 – Storm overflow average spill reduction

See Scenario 1b line 4.

Table 1 Line 5 – Reduced number of overflows spilling 10 or more per year

See Scenario 1b line 5.

Table 1 Line 6 – Reduction in high priority overflows causing ecological harm per year

See Scenario 1b line 6.

Table 1 Line 7 – Reduction in overflows causing ecological harm per year

See Scenario 1b line 7.

Table 1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See Scenario 1b line 8.

Table 1 Line 9 – Reduction in sewer collapses

See Scenario 1b line 9.

Table 1 Line 10 – Reduction in households with internal sewer flooding

See Scenario 1b line 10.

Table 1 Line 11 – Coastal Resilience

See Scenario 1b line 11.

Table 1 Line 12 – Serious Pollution

See Scenario 1b line 12.

Table 1 Line 13 – Nutrient Reduction

See Scenario 1b line 13.

Table 1 Line 14 – Flooding 1 in 10

See Scenario 4 line 14.

Table 1 Line 15 – DWF compliance

See Scenario 1b line 15.

Scenario 6:

Table 1 Line 1 – Reduced number of category 1-3 pollution incidents

See Scenario 1b line 1.

Table 1 Line 2 – Improvement in WwTW compliance

See Scenario 1b line 2.

Table 1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 4 line 3.

Table 1 Line 4 – Storm overflow average spill reduction

See Scenario 1b line 4.

Table 1 Line 5 – Reduced number of overflows spilling 10 or more per year

See Scenario 1b line 5.

Table 1 Line 6 – Reduction in high priority overflows causing ecological harm per year

See Scenario 1b line 6.

Table 1 Line 7 – Reduction in overflows causing ecological harm per year

See Scenario 1b line 7.

Table 1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See Scenario 1b line 8.

Table 1 Line 9 – Reduction in sewer collapses

See Scenario 1b line 9.

Table 1 Line 10 – Reduction in households with internal sewer flooding

See Scenario 1b line 10.

Table 1 Line 11 – Coastal Resilience

See Scenario 1b line 11.

Table 1 Line 12 – Serious Pollution

See Scenario 1b line 12.

Table 1 Line 13 – Nutrient Reduction

See Scenario 1b line 13.

Table 1 Line 14 – Flooding 1 in 10

See Scenario 4 line 14.

Table 1 Line 15 – DWF compliance

See Scenario 1b line 15.

3. RAID - Risks Assumptions Issues Dependencies

Assumption – A factor has been applied based on assessed association to the planning objective of the table number

Risk – the benefits of base or enhancement expenditure are subject to the accuracy of base over time

Issue – The Isles of Scilly have been included in DWMP but detailed costs are being prepared as part of the PR24 programme. SWW became the water and wastewater service provide for the IoS, in April 2020, after the DWMP process for Cycle 1 had started so have been managed outside of the Water UK Framework for DWMP.

Tables	Expenditure Summary – Scenario A		
Table	**Table 2a - Additional WwTW storage**	AMP8	AMP9+
Lines	Additional grey storage volume required at WwTW (enhancement)		
	Number of individual schemes		
	Projected spend on grey WwTW storage - capex		
	Projected spend on grey WwTW storage - opex		
	Projected spend on grey WwTW storage - totex		
Data Owner	Steve Rosser		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 2a – Additional WwTW storage

2A	Additional WwTW storage TRADITIONAL GREY INTERVENTIONS	Description	Units	2025-26	2026-27	2027-28	2028-29	2029-30	Total AMP8 (2025-2030)	2030-31	2031-32	2032-33	2033-34	2034-35	AMP9 (2030-35)	AMP10 (2035-40)	AMP11 (2040-45)	AMP12 (2045-50)	Total 25 yr
	Additional grey storage at WwTW	Additional grey storage volume required at WwTW (enhancement)	1000m3	2.414	4.828	7.242	9.655	24.138	48.277	8.6	17.26	25.89	34.52	86.3	172.597	86.019			306.893
		Number of individual schemes	nr	2	4	6	9	22	43	6	12	17	23	58	116	86			245
		Projected spend on grey WwTW storage - capex	£m	£6	£11	£17	£22	£56	£111	£29	£58	£87	£117	£292	£583	£290			£984
		Projected spend on grey WwTW storage - opex	£m	£0.1	£0.4	£0.7	£1.2	£2.4	£4.9	£2.7	£2.9	£3.2	£3.4	£3.7	£15.9	£4.9	£6.0	£7.0	£38.6
		Projected spend on grey WwTW storage - totex	£m	£5.7	£12	£17	£23	£58	£116	£32	£61	£91	£120	£295	£599	£295	£6	£7	£1,023

1. Overall summary

The total amount of WwTW storage in our DWMP plan is 306,893m^3 of storage across 245 schemes. The number of schemes is reasonably spread across all the AMPs however the amount of storage required is heavily loaded in AMP9, approximately 56% of the total, due to these specific schemes requiring large amounts of storage. The costs therefore replicate the pattern shown by the storage requirement, this being a fairly even split excluding AMP9.

2. Line specifics

Scenario 1b:

Table 2a Line 1 – As outlined in the data table, additional grey WwTW storage is estimated to be 48,277m^3 in AMP8, 172,587m^3 in AMP9, and 86,019m^3 in AMP10. The breakdown within each AMP is calculated by targeting 5% in the first year and then incrementally increases by 5% each year until year 5 where 50% of the total AMPs storage is targeted.

Table 2a Line 2 - The total number of schemes is 245, and there is an even spread across the AMPs with 43 schemes in AMP8, 116 in AMP9 and 86 in AMP10. AMP11 and 12 are zero due to the accelerated nature of this programme.

Table 2a Line 3 – The value assigned per m3 of storage is £3,205.21 across the 25 years. This results in projected capex totals of £111m in AMP8, £583m in AMP9 and £290m in AMP10.

Table 2a Line 4 – Projected Opex spend on grey WwTW storage is fairly even across AMPs with expenditure between £4.88m and £7m. AMP9 is an exception with a significantly higher opex total of £15.9m.

Table 2a Line 5 – Totex is the automated sum of both the Capex and Opex.

Scenario 1a:

Table 2a Line 1 – Scenario 1a has the same total storage as Scenario 1b, however this storage is spread across a 25-year period. This results in a fairly even breakdown of delivery across AMPs, with 48.277m3 in AMP8, 125.4m3 in AMP9, 32.19m3 in AMP10, 44.503m3 in AMP11, and 56.504m3 in AMP12.

Table 2a Line 2 – As above, schemes are spread evenly across the 25 years; there are between 43 and 60 schemes in each AMP.

Table 2a Line 3 – Projected capex is again split evenly across AMPs with expenditure per AMP sitting between £109m and £191m, with the exception of AMP9 totalling at £423m.

Table 2a Line 4 – Projected Opex follows the same trend, totalling at £38.6m across the 25 years.

Table 2a Line 5 – Totex is the automated sum of both the Capex and Opex.

Scenario 2:

Table 2a Line 1 – See scenario 1b

Table 2a Line 2 – See scenario 1b

Table 2a Line 3 – See scenario 1b

Table 2a Line 4 – See scenario 1b

Table 2a Line 5 – See scenario 1b

Scenario 3:

Table 2a Line 1 – See scenario 1b

Table 2a Line 2 – See scenario 1b

Table 2a Line 3 – See scenario 1b

Table 2a Line 4 – See scenario 1b

Table 2a Line 5 – See scenario 1b

Scenario 4:

Table 2a Line 1 – See scenario 1b

Table 2a Line 2 – See scenario 1b

Table 2a Line 3 – See scenario 1 b

Table 2a Line 4 – See scenario 1b

Table 2a Line 5 – See scenario 1b

Scenario 5:

Table 2a Line 1 – See scenario 1b

Table 2a Line 2 – See scenario 1b

Table 2a Line 3 – See scenario 1b

Table 2a Line 4 – See scenario 1b

Table 2a Line 5 – See scenario 1b

Scenario 6:

Table 2a Line 1 – See scenario 1b

Table 2a Line 2 – See scenario 1b

Table 2a Line 3 – See scenario 1b

Table 2a Line 4 – See scenario 1b

Table 2a Line 5 – See scenario 1b

3. RAID - Risks Assumptions Issues Dependencies

Risk

The extent of storage for some of the WwTW are based on EDM spill frequency observations, which are likely to vary in the future.

The sizing of storage for a proportion of WwTW storm tanks are based on a relationship to EDM as formed by the SOEP document.

Assumption:
Some elements of network enhancement has been provisionally provided for catchments with no infiltration issues; the proportion of infiltration to non-urban flows will need further assessment in the future.

Tables	Expenditure Summary – Scenario A		
Table	**Table 2b - Blue/Green Interventions at WwTW**	AMP8	AMP9+
	Number of individual blue/green interventions (schemes) required at WwTW to increase storm storage/reduce need for storm tanks on site		
	Projected spend on grey WwTW storage - capex		
	Projected spend on grey WwTW storage - opex		
	Projected spend on grey WwTW storage - totex		
Data Owner	Steve Rosser		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 2b – Blue/Green Interventions at WwTW

2B	BLUE/GREEN Interventions at WwTWs	Description	Units	2025-26	2026-27	2027-28	2028-29	2029-30	Total AMP8 (2025-2030)	2030-31	2031-32	2032-33	2033-34	2034-35	AMP9 (2030-35)	AMP10 (2035-40)	AMP11 (2040-45)	AMP12 (2045-50)	Total 25 yr
	Additional blue/green interventions at WwTW	Number of individual blue/green interventions (schemes) required at WwTW to increase storm storage/reduce need for storm tanks on site	nr	0	0	1	1	0	2	4	4	4	4	4	20	28	0	0	50
		Projected spend on green WwTW interventions - capex	£m	£0.1	£0.2	£0.4	£0.5	£1.2	£2.4	£1.2	£2.4	£3.6	£4.8	£12.0	£24.0	£33.6	£0.0	£0.0	£60.0
		Projected spend on green WwTW interventions - opex	£m	£0.02	£0.04	£0.06	£0.08	£0.10	£0.30	£0.50	£0.70	£0.90	£1.10	£1.10	£2.50	£5.00	£7.50	£16.20	
		Projected spend on green WwTW interventions - totex	£m	£0.1	£0.3	£0.4	£0.6	£1.3	£2.5	£1.5	£2.9	£4.3	£5.7	£13.1	£25.1	£36.1	£5.0	£7.5	£76.2

1. Overall summary

The total number of blue/green intervention schemes is 50. The number of schemes is low in AMP8 and rises significantly in AMPs 9 and 10. Capex follows this trend with a lower projected expenditure in AMP8 and 96% of total expenditure in AMP 9 onwards.

2. Line specifics

Scenario 1b:

Table 2b Line 1 – The number of blue/green interventions (schemes) required at WwTW is just 2 in AMP8, however this increases to 20 schemes in AMP9, and again to 28 in AMP10, totalling 50 schemes.

Table 2b Line 2 – Capital expenditure reflects the above, back-end loaded trend, with projected capex totalling £2.4m in AMP8, £24m in AMP9 and £33.6m in AMP10.

Table 2b Line 3 – Projected Opex for these schemes is low and follows the above trend, £0.1m in AMP8, £1.1m in AMP9, £2.5m in AMP10, £5m for AMP11 and £7.5m in AMP12.

Table 2b Line 4 – Totex is the automated sum of both the Capex and Opex.

Scenario 1a:

Table 2b Line 1 – See scenario 1b

Table 2b Line 2 – See scenario 1b

Table 2b Line 3 – See scenario 1b

Table 2b Line 4 – See scenario 1b

Scenario 2:

Table 2b Line 1 – See scenario 1b

Table 2b Line 2 – See scenario 1b

Table 2b Line 3 – See scenario 1b

Table 2b Line 4 – See scenario 1b

Scenario 3:

Table 2b Line 1 – See scenario 1b

Table 2b Line 2 – See scenario 1b

Table 2b Line 3 – See scenario 1b

Table 2b Line 4 – See scenario 1b

Scenario 4:

Table 2b Line 1 – See scenario 1b

Table 2b Line 2 – See scenario 1b

Table 2b Line 3 – See scenario 1b

Table 2b Line 4 – See scenario 1b

Scenario 5:

Table 2b Line 1 – See scenario 1b

Table 2b Line 2 – See scenario 1b

Table 2b Line 3 – See scenario 1b

Table 2b Line 4 – See scenario 1b

Scenario 6:

Table 2b Line 1 – See scenario 1b

Table 2b Line 2 – See scenario 1b

Table 2b Line 3 – See scenario 1b

Table 2b Line 4 – See scenario 1b

3. RAID - Risks Assumptions Issues Dependencies

Assumption – Blue / Green solutions have been identified for STW with high spilling overflows with nearby land availability to accommodate additional nature based treatment (i.e. reed beds). Further investigations will be required to determine the feasibility of the adoption of nature based treatment.
Assumption – Further investigation will be required to determine the sites with the potential for improved removal of nutrients as well as meeting spill frequency targets for STW storm tanks.
Risk – Dialog with stakeholder has confirmed the preference for nature based treatment for certain sites. Further dialog with the EA will be required to develop to adoption nature based treatment solutions.

Tables	Expenditure Summary – Scenario A		
Table	**Table 2 - Planning Objectives delivered by Tables 2A and 2B (multiple benefits)**	AMP8	AMP9+
Lines	Reduced number of category 1-3 pollution incidents		
	Improvement in WwTW compliance		
	Percentage of properties at risk of sewer flooding in a 1 in 50 storm		
	Storm overflow average spill reduction		
	Reduced number of overflows spilling 10 or more per year		
	Reduction in high priority overflows causing ecological harm per year		
	Reduction in overflows causing ecological harm per year		
	Storm overflows - designated bathing waters (coastal and inland)		
	Reduction in sewer collapses		
	Reduction in households with internal sewer flooding		
	Coastal Resilience		
	Serious Pollution		
	Nutrient Reduction		
	Flooding 1 in 10		
	DWF compliance		
Data Owner	Steve Rosser		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 2 – Planning Objectives delivered by Tables 2A and 2B (multiple benefits)

Planning Objectives delivered by Tables 2A and 2B (multiple benefits)	Reduced number of category 1-3 pollution incidents per 10,000 km of wastewater network	nr	0.10	0.19	0.29	0.38	0.47	0.47	0.47	0.47	0.47	0.46	0.46	0.46	0.45	0.47	0.46	0.46
	Improvement in WwTW compliance	%	0.10%	0.21%	0.30%	0.41%	0.51%	0.51%	0.62%	0.72%	0.82%	0.92%	1.02%	1.02%	1.54%	2.05%	2.56%	2.56%
	Percentage of properties at risk of sewer flooding in a 1 in 50 storm	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Storm overflow average spill reduction	nr	0.05	0.10	0.15	0.20	0.25	0.26	0.45	0.64	0.83	1.02	1.21	1.21	1.49	1.49	1.49	1.49
	Reduced number of overflows spilling 10 or more per year	nr	0.10	0.30	0.50	0.80	1.50	1.50	2.30	4.00	6.50	9.90	18.40	18.40	43.50	43.50	43.50	43.50
	Reduction in high priority overflows causing ecological harm per year	nr	0.80	2.30	4.60	7.70	15.30	15.30	15.80	16.70	18.10	19.90	24.40	24.40	24.40	24.40	24.40	24.40
	Reduction in overflows causing ecological harm per year	nr	0.80	2.30	4.60	7.70	15.30	15.30	15.80	16.70	18.10	19.90	24.40	24.40	24.40	24.40	24.40	24.40
	Storm overflows - designated bathing waters (coastal and inland)	nr	0.60	1.70	3.40	5.60	11.10	11.10	11.30	11.60	12.10	12.80	14.50	14.50	15.20	15.20	15.20	15.20
	Reduction in sewer collapses	nr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Reduction in households with internal sewer flooding	nr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Coastal Resilience	nr	0.23	0.46	0.69	0.92	1.06	1.06	1.61	2.12	2.58	2.99	3.40	3.40	4.88	6.35	7.91	7.91
	Serious Pollution	nr	0.03	0.06	0.09	0.12	0.15	0.15	0.18	0.21	0.24	0.27	0.30	0.30	0.45	0.60	0.75	0.75
	Nutrient Reduction	nr	7	7	14	24	48	48	53	63	79	99	151	151	194	216	230	230
	Flooding 1 in 10	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	DWF Compliance	nr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1. Overall summary

Our approach for the final DWMP is to complete all cells. Business as Usual (BAU) expenditure is included in the final DWMP so will be included within the data table costs. Any exceptions will be documented and justified.

The total amount of network storage in our DWMP plan is 550,817m^3 of storage to reduce storm overflows with traditional grey solutions. Blue/Green interventions will remove 1498 hectares of impermeable area inflow from the sewer network. Approximately 307,000m^3 of grey storage at WwTW will be delivered and 50 Blue/Green schemes.

2. Line specifics

Scenario 1b:

Table 2 Line 1 – Reduced number of category 1-3 pollution incidents

The reduction in category 1-3 pollutions, as a result of table 2A and 2B interventions is forecast to be ~0.46 per 10,000 km of wastewater network. The number moves up and down by a small amount due to the nature of reporting the figures as “per 10,000km of wastewater network”.

Table 2 Line 2 - Improvement in WwTW compliance

Tables 2A and 2B are forecast to enhance WwTW treatment permit compliance by 2.56%. The enhance is spread evenly across all 5 AMPs.

Table 2 Line 3 - Percentage of properties at risk of sewer flooding in a 1 in 50 storm

The delivery of interventions in tables 2A and 2B are not forecast to have an impact on percentage of properties at risk of sewer flooding in a 1 in 50 storm.

Table 2 Line 4 – Storm overflow average spill reduction

Enhancements from tables 2A and 2B are forecast to reduce the total average number of spills per overflow by 1.49 spill by AMP10. This is a low number as the enhancements in the network will have a greater impact.

Table 2 Line 5 – Reduced number of overflows spilling 10 or more per year

Tables 2A and 2B will reduce the total number of storm overflows spilling more than 10 times a year by 43.5. This will be delivered by AMP10. The largest reduction is between AMP9 to AMP10.

Table 2 Line 6 – Reduction in high priority overflows causing ecological harm per year

The total reduction in high priority overflows causing ecological harm, as a result of 2A and 2B enhancements is 24 overflows. This will be reached by the end of AMP9. The largest number of enhancements occur in AMP8.

Table 2 Line 7 – Reduction in overflows causing ecological harm per year

This is the same as line 6.

Table 2 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

The total reduction in storm overflows in designated bathing waters spilling more than 3 times per bathing season, as a result of 2A and 2B enhancements is 15 overflows. This will be reached by AMP10 with the largest number of enhancements occurring in AMP8, which is 11. The 15 is reached in AMP10 reflecting the condensed programme to deliver environmental improvements sooner.

Table 2 Line 9 – Reduction in sewer collapses

The delivery of interventions in tables 2A and 2B are not forecast to have an impact on sewer collapse performance.

Table 2 Line 10 – Reduction in households with internal sewer flooding

The delivery of interventions in tables 2A and 2B are not forecast to have an impact on internal sewer flooding performance.

Table 2 Line 11 – Coastal Resilience

Tables 2A and 2B interventions impact ~8 of the total 172 coastal resilience enhancements. This reflects the majority of coastal resilience enhancements that are required in the network.

Table 2 Line 12 – Serious Pollution

The number of potential category 1-2 pollution incidents per 10,000km of wastewater network will be reduced by 6 incidents as a result of table 2A and 2B interventions. The improvements are achieved in even increments across the AMP periods.

Table 2 Line 13 – Nutrient Reduction

The total number of nutrient reduction schemes is 230 delivered by AMP12. The largest number of schemes delivered is in AMP9 103.

Table 2 Line 14 - Flooding 1 in 10

The delivery of interventions in tables 2A and 2B are not forecast to have an impact on percentage of properties at risk of sewer flooding in a 1 in 10 storm.

Table 2 Line 15 - DWF compliance

Table 2 does not impact on DWF compliance.

Scenario 1a:

Table 2 Line 1 – Reduced number of category 1-3 pollution incidents

See scenario 1b line 1

Table 2 Line 2 - Improvement in WwTW compliance

See scenario 1b line 2

Table 2 Line 3 - Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3

Table 2 Line 4 – Storm overflow average spill reduction

Enhancements from tables 2A and 2B are forecast to reduce the total average number of spills per overflow by 1.49 spill by AMP12, this reflects the longer delivery programme of scenario 1a. This is a low number as the enhancements in the network will have a greater impact.

Table 2 Line 5 – Reduced number of overflows spilling 10 or more per year

Tables 2A and 2B will reduce the total number of storm overflows spilling more than 10 times a year by 43.5. This will be delivered by AMP12 reflecting the longer delivery period compared to scenario 1b.

Table 2 Line 6 – Reduction in high priority overflows causing ecological harm per year

The total reduction in high priority overflows causing ecological harm, as a result of 2A and 2B enhancements is 24 overflows. This will be reached by AMP10 which is slightly later than in scenario 1b.

Table 2 Line 7 – Reduction in overflows causing ecological harm per year

This is the same as line 6.

Table 2 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

The total reduction in storm overflows in designated bathing waters spilling more than 3 times per bathing season, as a result of 2A and 2B enhancements is 15 overflows. This will be reached by AMP12 with the largest number of enhancements occur in AMP8, which is 11. The 15 is reached in AMP12 reflecting the longer programme compared to scenario 1b.

Table 2 Line 9 – Reduction in sewer collapses

See scenario 1b line 9

Table 2 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10

Table 2 Line 11 – Coastal Resilience

See scenario 1b line 11

Table 2 Line 12 – Serious Pollution

See scenario 1b line 12

Table 2 Line 13 – Nutrient Reduction

See scenario 1b line 13

Table 2 Line 14 - Flooding 1 in 10

See scenario 1b line 14

Table 2 Line 15 - DWF compliance

See scenario 1b line 15

Scenario 2:
Table 2 Line 1 – Reduced number of category 1-3 pollution incidents

See scenario 1b line 1

Table 2 Line 2 - Improvement in WwTW compliance

See scenario 1b line 2

Table 2 Line 3 - Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3

Table 2 Line 4 – Storm overflow average spill reduction

See scenario 1b line 4

Table 2 Line 5 – Reduced number of overflows spilling 10 or more per year

See scenario 1b line 5

Table 2 Line 6 – Reduction in high priority overflows causing ecological harm per year

See scenario 1b line 6

Table 2 Line 7 – Reduction in overflows causing ecological harm per year

See scenario 1b line 7

Table 2 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See scenario 1b line 8

Table 2 Line 9 – Reduction in sewer collapses

See scenario 1b line 9

Table 2 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10

Table 2 Line 11 – Coastal Resilience

See scenario 1b line 11

Table 2 Line 12 – Serious Pollution

See scenario 1b line 12

Table 2 Line 13 – Nutrient Reduction

See scenario 1b line 13

Table 2 Line 14 - Flooding 1 in 10

See scenario 1b line 14

Table 2 Line 15 - DWF compliance

See scenario 1b line 15

Scenario 3:

Table 2 Line 1 – Reduced number of category 1-3 pollution incidents

See scenario 1b line 1

Table 2 Line 2 - Improvement in WwTW compliance

See scenario 1b line 2

Table 2 Line 3 - Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3

Table 2 Line 4 – Storm overflow average spill reduction

See scenario 1b line 4

Table 2 Line 5 – Reduced number of overflows spilling 10 or more per year

See scenario 1b line 5

Table 2 Line 6 – Reduction in high priority overflows causing ecological harm per year

See scenario 1b line 6

Table 2 Line 7 – Reduction in overflows causing ecological harm per year

See scenario 1b line 7

Table 2 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See scenario 1b line 8

Table 2 Line 9 – Reduction in sewer collapses

See scenario 1b line 9

Table 2 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10

Table 2 Line 11 – Coastal Resilience

See scenario 1b line 11

Table 2 Line 12 – Serious Pollution

See scenario 1b line 12

Table 2 Line 13 – Nutrient Reduction

See scenario 1b line 13

Table 2 Line 14 - Flooding 1 in 10

See scenario 1b line 14

Table 2 Line 15 - DWF compliance

See scenario 1b line 15

Scenario 4:

Table 2 Line 1 – Reduced number of category 1-3 pollution incidents

See scenario 1b line 1

Table 2 Line 2 - Improvement in WwTW compliance

See scenario 1b line 2

Table 2 Line 3 - Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3

Table 2 Line 4 – Storm overflow average spill reduction

See scenario 1b line 4

Table 2 Line 5 – Reduced number of overflows spilling 10 or more per year

See scenario 1b line 5

Table 2 Line 6 – Reduction in high priority overflows causing ecological harm per year

See scenario 1b line 6

Table 2 Line 7 – Reduction in overflows causing ecological harm per year

See scenario 1b line 7

Table 2 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See scenario 1b line 8

Table 2 Line 9 – Reduction in sewer collapses

See scenario 1b line 9

Table 2 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10

Table 2 Line 11 – Coastal Resilience

See scenario 1b line 11

Table 2 Line 12 – Serious Pollution

See scenario 1b line 12

Table 2 Line 13 – Nutrient Reduction

See scenario 1b line 13

Table 2 Line 14 - Flooding 1 in 10

See scenario 1b line 14

Table 2 Line 15 - DWF compliance

See scenario 1b line 15

Scenario 5:

Table 2 Line 1 – Reduced number of category 1-3 pollution incidents

See scenario 1b line 1

Table 2 Line 2 - Improvement in WwTW compliance

See scenario 1b line 2

Table 2 Line 3 - Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3

Table 2 Line 4 – Storm overflow average spill reduction

See scenario 1b line 4

Table 2 Line 5 – Reduced number of overflows spilling 10 or more per year

See scenario 1b line 5

Table 2 Line 6 – Reduction in high priority overflows causing ecological harm per year

See scenario 1b line 6

Table 2 Line 7 – Reduction in overflows causing ecological harm per year

See scenario 1b line 7

Table 2 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See scenario 1b line 8

Table 2 Line 9 – Reduction in sewer collapses

See scenario 1b line 9

Table 2 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10

Table 2 Line 11 – Coastal Resilience

See scenario 1b line 11

Table 2 Line 12 – Serious Pollution

See scenario 1b line 12

Table 2 Line 13 – Nutrient Reduction

The total number of nutrient reduction schemes is 319 delivered by AMP12. The largest number of schemes delivered is in AMP9 103. The larger number compared to the other scenario's reflects the improvements in technology and ability to improve performance in nutrient treatment.

Table 2 Line 14 - Flooding 1 in 10

See scenario 1b line 14

Table 2 Line 15 - DWF compliance

See scenario 1b line 15

Scenario 6:

Table 2 Line 1 – Reduced number of category 1-3 pollution incidents

See scenario 1b line 1

Table 2 Line 2 - Improvement in WwTW compliance

See scenario 1b line 2

Table 2 Line 3 - Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3

Table 2 Line 4 – Storm overflow average spill reduction

See scenario 1b line 4

Table 2 Line 5 – Reduced number of overflows spilling 10 or more per year

See scenario 1b line 5

Table 2 Line 6 – Reduction in high priority overflows causing ecological harm per year

See scenario 1b line 6

Table 2 Line 7 – Reduction in overflows causing ecological harm per year

See scenario 1b line 7

Table 2 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See scenario 1b line 8

Table 2 Line 9 – Reduction in sewer collapses

See scenario 1b line 9

Table 2 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10

Table 2 Line 11 – Coastal Resilience

See scenario 1b line 11

Table 2 Line 12 – Serious Pollution

See scenario 1b line 12

Table 2 Line 13 – Nutrient Reduction

See scenario 5 line 13

Table 2 Line 14 - Flooding 1 in 10

See scenario 1b line 14

Table 2 Line 15 - DWF compliance

See scenario 1b line 15

3. RAID - Risks Assumptions Issues Dependencies

Assumption – A factor has been applied based on assessed association to the planning objective of the table number
Risk – the benefits of base or enhancement expenditure are subject to the accuracy of base over time
Issue – The Isles of Scilly have been included in DWMP, but detailed costs are being prepared as part of the PR24 programme. SWW became the water and wastewater service provide for the IoS, in April 2020, after the DWMP process for Cycle 1 had started so have been managed outside of the Water UK Framework for DWMP.

Tables	Expenditure Summary – Scenario A		
Table	**Table 3 - Interventions at WwTWs - additional treatment capacity**	AMP7	AMP8+
	Additional FFT treatment capacity required at WwTWs		
	Number of individual schemes		
	Projected spend on additional WwTW capacity - capex		
	Projected spend on additional WwTW capacity - opex		
	Projected spend on additional WwTW capacity - totex		
Data Owner	Steve Rosser		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance (often different for AMP7 and AMP8 hence 2 columns)

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 3 – Interventions at WwTWs - additional treatment capacity

3	Interventions at WwTWs - additional treatment capacity	Description	Units	2025-26	2026-27	2027-28	2028-29	2029-30	Total AMP8 (2025-2030)	2030-31	2031-32	2032-33	2033-34	2034-35	AMP9 (2030-35)	AMP10 (2035-40)	AMP11 (2040-45)	AMP12 (2045-50)	Total 25 yr
	Schemes at sewage treatment works to increase flow to full treatment capacity.	Additional FFT treatment capacity required at WwTWs	ML/day	0	0	6.1	0	0	6.1	0	0	0	0	0	0	0	0	0	6.1
		Number of individual schemes	nr	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1
		Projected spend on additional WwTW capacity - capex	£m	1.8	3.5	5.3	7.0	17.5	35	0	0	0	0	0	0	0	0	0	35
		Projected spend on additional WwTW capacity - opex	£m	0.0	0.0	4.4	0.0	0.0	4	0.0	0.0	0.0	0.0	0.0	0	0	0	0	4
		Projected spend on additional WwTW capacity - totex	£m	1.80	3.50	9.65	7.00	17.50	39.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.45

1. Overall summary

DWMP enhancements to WwTW capacity involves one scheme, taking place in AMP8, increasing capacity by 6.1 ML/day.

2. Line specifics

Scenario 1b:

Table 3 Line 1 – The additional treatment capacity required at WwTW's is projected to be delivered entirely in AMP8, with a total of 6.1ML/d.

Table 3 Line 2 – The number of individual schemes is 1 across the 25 years, and this will be delivered in AMP8, reflecting the front-end loaded programme.

Table 3 Line 3 – Total projected capex is £35 million, as above, this occurs entirely in AMP8. Capex figures in years 2025-26 and 2026-27 will be preliminary works for the enhancement scheme delivered in year 2027-28.

Table 3 Line 4 – The projected opex spend is consistently £4.4m throughout the 25-year period. There is no opex for years 2025-26 and 2026-27 as the capex spend is for preliminary works so no opex is required.

Table 3 Line 5 – Totex is the automated sum of both the Capex and Opex.

Scenario 2:

Table 3 Line 1 – See Scenario 1b

Table 3 Line 2 – See Scenario 1b

Table 3 Line 3 – See Scenario 1b

Table 3 Line 4 – The projected opex spend is consistently £4.4m throughout the 25 year period. There is no opex for years 2025-26 and 2026-27 as the capex spend is for preliminary works so no opex is required

Table 3 Line 5 – See Scenario 1b

Scenario 3:

Table 3 Line 1 – See Scenario 1b

Table 3 Line 2 – See Scenario 1b

Table 3 Line 3 – See Scenario 1b

Table 3 Line 4 – The projected opex spend is consistently £4.4m throughout the 25 year period. There is no opex for years 2025-26 and 2026-27 as the capex spend is for preliminary works so no opex is required

Table 3 Line 5 – See Scenario 1b

Scenario 4:

Table 3 Line 1 – See Scenario 1b

Table 3 Line 2 – See Scenario 1b

Table 3 Line 3 – See Scenario 1b

Table 3 Line 4 – The projected opex spend is consistently £4.4m throughout the 25 year period. There is no opex for years 2025-26 and 2026-27 as the capex spend is for preliminary works so no opex is required

Table 3 Line 5 – See Scenario 1b

Scenario 5:

Table 3 Line 1 – See Scenario 1b

Table 3 Line 2 – See Scenario 1b

Table 3 Line 3 – See Scenario 1b

Table 3 Line 4 – The projected opex spend is consistently £4.4m throughout the 25 year period. There is no opex for years 2025-26 and 2026-27 as the capex spend is for preliminary works so no opex is required

Table 3 Line 5 – See Scenario 1b

Scenario 6:

Table 3 Line 1 – Scenario 6 addresses increased demand on the wastewater network and therefore total capacity is 709.1ML/d across the 25-year period; with 80% of that capacity delivered in AMP 10 onwards.

Table 3 Line 2 – The total number of schemes is 38, and is back end loaded following the trend above.

Table 3 Line 3 – Capex projection follows this same pattern with total capex at £494m, and 75% of this expenditure is in AMP10 onwards. Capex figures in years 2025-26 and 2026-27 will be preliminary works for the enhancement scheme delivered in year 2027-28.

Table 3 Line 4 – Opex is low in AMP8 and climbs as more capacity is delivered, totalling at £498m. There is no opex for years 2025-26 and 2026-27 as the capex spend is for preliminary works so no opex is required

Table 3 Line 5 – Totex is the automated sum of both the Capex and Opex.

3. RAID - Risks Assumptions Issues Dependencies

Assumption – Blue / Green solutions have been identified for STW with high spilling overflows with nearby land availability to accommodate additional nature based treatment (i.e. reed beds). Further investigations will be required to determine the feasibility of the adoption of nature based treatment.
Assumption – Further investigation will be required to determine the sites with the potential for improved removal of nutrients as well as meeting spill frequency targets for STW storm tanks.
Risk – Dialog with stakeholder has confirmed the preference for nature based treatment for certain sites. Further dialog with the EA will be required to develop to adoption nature based treatment solutions.

Tables	Expenditure Summary – Scenario A		
Table	**Table 3.1 - Planning Objectives delivered by Table 3 (multiple benefits)**	AMP8	AMP9+
Lines	Reduced number of category 1-3 pollution incidents		
	Improvement in WwTW compliance		
	Percentage of properties at risk of sewer flooding in a 1 in 50 storm		
	Storm overflow average spill reduction		
	Reduced number of overflows spilling 10 or more per year		
	Reduction in high priority overflows causing ecological harm per year		
	Reduction in overflows causing ecological harm per year		
	Storm overflows - designated bathing waters (coastal and inland)		
	Reduction in sewer collapses		
	Reduction in households with internal sewer flooding		
	Coastal Resilience		
	Serious Pollution		
	Nutrient Reduction		
	Flooding 1 in 10		
	DWF compliance		
Data Owner	Steve Rosser		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 3.1 – Planning Objectives delivered by Tables 3 (multiple benefits)

Planning Objectives delivered by Table 3 (multiple benefits)	Reduced number of category 1-3 pollution incidents	nr	0.024	0.048	0.072	0.096	0.118	0.118	0.11752	0.11704	0.11656	0.11608	0.1156	0.1156	0.1126	0.1176	0.1146	0.1146
	Improvement in WwTW compliance	%	0.03%	0.05%	0.08%	0.10%	0.13%	0.13%	0.15%	0.18%	0.20%	0.23%	0.26%	0.26%	0.38%	0.51%	0.64%	0.64%
	Percentage of properties at risk of sewer flooding in a 1 in 50 storm	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Storm overflow average spill reduction	nr	0.05	0.10	0.15	0.20	0.25	0.25	0.49	0.64	0.83	1.02	1.21	1.21	1.49	1.49	1.49	1.49
	Reduced number of overflows spilling 10 or more per year	nr	0	0	1	1	2	2	2	4	7	10	18	18	44	44	44	44
	Reduction in high priority overflows causing ecological harm per year	nr	1	2	5	8	15	15	16	17	18	20	24	24	24	24	24	24
	Reduction in overflows causing ecological harm per year	nr	1	2	5	8	15	15	16	17	18	20	24	24	24	24	24	24
	Storm overflows - designated bathing waters (coastal and inland)	nr	1	2	3	6	11	11	11	12	12	13	15	15	15	15	15	15
	Reduction in sewer collapses	nr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Reduction in households with internal sewer flooding	nr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Coastal Resilience	nr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Serious Pollution	nr	0.03	0.06	0.09	0.12	0.15	0.15	0.18	0.21	0.24	0.27	0.3	0.3	0.45	0.6	0.75	0.75
	Nutrient Reduction	nr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Flooding 1 in 10	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	DWF Compliance	nr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1. Overall summary

DWMP enhancements to WwTW capacity involves one scheme increasing capacity by 6.1 ML/day.

2. Line specifics

Scenario 1b:

Table 3.1 Line 1 – The reduction in category 1-3 pollutions

Table 3 interventions is forecast to reduce pollutions by ~0.11 per 10,000 km of wastewater network. The number moves up and down by a small amount due to the nature of reporting the figures as “per 10,000km of wastewater network”. The low number reflects the fact the network enhancements make a greater impact on pollutions.

Table 3.1 Line 2 – Improvement in WwTW compliance

Table 3 improves WwTW compliance by 0.64%. The improvements are even across each AMP. The improvement is small as the majority of improvements come through table 2 investment.

Table 3.1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

Interventions from Table 3 will result in no change in percentage of properties at risk of sewer flooding in a 1 in 50 storm event.

Table 3.1 Line 4 – Storm overflow average spill reduction

Enhancement from Table 3 are forecast to reduce the total average number of spills per overflow by 1.49 spill by AMP10. This is a low number as the enhancements in the network will have a greater impact.

Table 3.1 Line 5 – Reduced number of overflows spilling 10 or more per year

Table 3 will reduce the total number of storm overflows spilling more than 10 times a year by 43.5. This will be delivered by AMP10. The largest reduction is between AMP9 to AMP10.

Table 3.1 Line 6 – Reduction in high priority overflows causing ecological harm per year

The total reduction in high priority overflows causing ecological harm, as a result of Table 3 enhancement is 24 overflows. This will be reached by the end of AMP9. The largest number of enhancements occur in AMP8.

Table 3.1 Line 7 – Reduction in overflows causing ecological harm per year

See line 6.

Table 3.1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

The total reduction in storm overflows in designated bathing waters spilling more than 3 times per bathing season, because of Table 3 is 15 overflows. The largest number of enhancements occur in AMP8, which is 11 overflows. The 15 is reached at the end of AMP9.

Table 3.1 Line 9 – Reduction in sewer collapses

Enhancements from Table 3 are forecast to have no impact on the number of sewer collapses.

Table 3.1 Line 10 – Reduction in households with internal sewer flooding

Enhancements from Table 3 are forecast to have no impact on reducing the number of households with internal sewer flooding.

Table 3.1 Line 11 - Coastal Resilience

Table 3 has no impact on coastal resilience.

Table 3.1 Line 12 – Serious Pollution

The number of potential category 1-2 pollution incidents per 10,000km of wastewater network will reduced by 0.75 incidents because of Table 3 interventions. The improvements are achieved in fairly even increments across the AMP periods.

Table 3.1 Line 13 – Nutrient Reduction

Table 3 will have no impact on nutrient reduction.

Table 3.1 Line 14 – Flooding 1 in 10

Table 3 has no impact on properties at risk of flooding in a 1 in 10 storm.

Table 3.1 Line 15 – DWF compliance

Table 3 does not impact DWF compliance. Improvements are being delivered by base expenditure not DWMP enhancements.

Scenario 1a:

Table 3.1 Line 1 – The reduction in category 1-3 pollutions

See scenario 1b line 1.

Table 3.1 Line 2 – Improvement in WwTW compliance

See scenario 1b line 2.

Table 3.1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3.

Table 3.1 Line 4 – Storm overflow average spill reduction

Enhancements from Table 3 are forecast to reduce the total average number of spills per overflow by 1.49 spill by AMP12, this reflects the longer delivery programme of scenario 1a compared to 1b. This is a low number as the enhancements in the network will have a greater impact.

Table 3.1 Line 5 – Reduced number of overflows spilling 10 or more per year

Table 3 will reduce the total number of storm overflows spilling more than 10 times a year by 43.5. This will be delivered by AMP12 reflecting the longer delivery period compared to scenario 1b.

Table 3.1 Line 6 – Reduction in high priority overflows causing ecological harm per year

Table 3.1 Line 7 – Reduction in overflows causing ecological harm per year

This is the same as line 6.

Table 3.1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

The total reduction in storm overflows in designated bathing waters spilling more than 3 times per bathing season, as a result of table 3 enhancements is 15 overflows. This will be reached by AMP12 with the largest number of enhancements occur in AMP8, which is 11. The 15 is reached in AMP11 reflecting the longer programme compared to scenario 1b

Table 3.1 Line 9 – Reduction in sewer collapses

See scenario 1b line 9

Table 3.1 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10

Table 3.1 Line 11 – Coastal Resilience

See scenario 1b line 11

Table 3.1 Line 12 – Serious Pollution

See scenario 1b line 12

Table 3.1 Line 13 – Nutrient Reduction

See scenario 1b line 13.

Table 3.1 Line 14 – Flooding 1 in 10

See scenario 1b line 14.

Table 3.1 Line 15 – DWF compliance

See scenario 1b line 15.

Scenario 2:

Table 3.1 Line 1 – The reduction in category 1-3 pollutions

See scenario 1b line 1.

Table 3.1 Line 2 – Improvement in WwTW compliance

See scenario 1b line 2.

Table 3.1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3.

Table 3.1 Line 4 – Storm overflow average spill reduction

See scenario 1b line 4.

Table 3.1 Line 5 – Reduced number of overflows spilling 10 or more per year

See scenario 1b line 5.

Table 3.1 Line 6 – Reduction in high priority overflows causing ecological harm per year

The total reduction in high priority overflows causing ecological harm, as a result of 2A and 2B enhancements is 24 overflows. This will be reached by AMP10 which is slightly later than in scenario 1b.

Table 3.1 Line 7 – Reduction in overflows causing ecological harm per year

This is the same as line 6

Table 3.1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See scenario 1b line 8.

Table 3.1 Line 9 – Reduction in sewer collapses

See scenario 1b line 9.

Table 3.1 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10.

Table 3.1 Line 11 – Coastal Resilience

See scenario 1b line 11.

Table 3.1 Line 12 – Serious Pollution

See scenario 1b line 12.

Table 3.1 Line 13 – Nutrient Reduction

See scenario 1b line 13.

Table 3.1 Line 14 – Flooding 1 in 10

See scenario 1b line 14.

Table 3.1 Line 15 – DWF compliance

See scenario 1b line 15.

Scenario 3:

Table 3.1 Line 1 – The reduction in category 1-3 pollutions

See scenario 1b line 1.

Table 3.1 Line 2 – Improvement in WwTW compliance

See scenario 1b line 2.

Table 3.1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3.

Table 3.1 Line 4 – Storm overflow average spill reduction

See scenario 1b line 4.

Table 3.1 Line 5 – Reduced number of overflows spilling 10 or more per year

See scenario 1b line 5.

Table 3.1 Line 6 – Reduction in high priority overflows causing ecological harm per year

See scenario 1b line 6.

Table 3.1 Line 7 – Reduction in overflows causing ecological harm per year

This is the same as line 6.

Table 3.1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See scenario 1b line 8.

Table 3.1 Line 9 – Reduction in sewer collapses

See scenario 1b line 9.

Table 3.1 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10.

Table 3.1 Line 11 – Coastal Resilience

See scenario 1b line 11.

Table 3.1 Line 12 – Serious Pollution

See scenario 1b line 12.

Table 3.1 Line 13 – Nutrient Reduction

See scenario 1b line 13.

Table 3.1 Line 14 – Flooding 1 in 10

See scenario 1b line 14.

Table 3.1 Line 15 – DWF compliance

See scenario 1b line 15.

Scenario 4:

Table 3.1 Line 1 – The reduction in category 1-3 pollutions

See scenario 1b line 1.

Table 3.1 Line 2 – Improvement in WwTW compliance

See scenario 1b line 2.

Table 3.1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3.

Table 3.1 Line 4 – Storm overflow average spill reduction

See scenario 1b line 4.

Table 3.1 Line 5 – Reduced number of overflows spilling 10 or more per year

See scenario 1b line 5.

Table 3.1 Line 6 – Reduction in high priority overflows causing ecological harm per year

See scenario 1b line 6.

Table 3.1 Line 7 – Reduction in overflows causing ecological harm per year

This is the same as line 6.

Table 3.1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See scenario 1b line 8.

Table 3.1 Line 9 – Reduction in sewer collapses

See scenario 1b line 9.

Table 3.1 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10.

Table 3.1 Line 11 – Coastal Resilience

See scenario 1b line 11.

Table 3.1 Line 12 – Serious Pollution

See scenario 1b line 12.

Table 3.1 Line 13 – Nutrient Reduction

See scenario 1b line 13.

Table 3.1 Line 14 – Flooding 1 in 10

See scenario 1b line 14.

Table 3.1 Line 15 – DWF compliance

See scenario 1b line 15.

Scenario 5:

Table 3.1 Line 1 – The reduction in category 1-3 pollutions

See scenario 1b line 1.

Table 3.1 Line 2 – Improvement in WwTW compliance

See scenario 1b line 2.

Table 3.1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3.

Table 3.1 Line 4 – Storm overflow average spill reduction

See scenario 1b line 4.

Table 3.1 Line 5 – Reduced number of overflows spilling 10 or more per year

See scenario 1b line 5.

Table 3.1 Line 6 – Reduction in high priority overflows causing ecological harm per year

See scenario 1b line 6.

Table 3.1 Line 7 – Reduction in overflows causing ecological harm per year

This is the same as line 6.

Table 3.1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See scenario 1b line 8.

Table 3.1 Line 9 – Reduction in sewer collapses

See scenario 1b line 9.

Table 3.1 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10.

Table 3.1 Line 11 – Coastal Resilience

See scenario 1b line 11.

Table 3.1 Line 12 – Serious Pollution

See scenario 1b line 12.

Table 3.1 Line 13 – Nutrient Reduction

See scenario 1b line 13.

Table 3.1 Line 14 – Flooding 1 in 10

See scenario 1b line 14.

Table 3.1 Line 15 – DWF compliance

See scenario 1b line 15.

Scenario 6:

Table 3.1 Line 1 – The reduction in category 1-3 pollutions

See scenario 1b line 1.

Table 3.1 Line 2 – Improvement in WwTW compliance

See scenario 1b line 2.

Table 3.1 Line 3 – Percentage of properties at risk of sewer flooding in a 1 in 50 storm

See scenario 1b line 3.

Table 3.1 Line 4 – Storm overflow average spill reduction

See scenario 1b line 4.

Table 3.1 Line 5 – Reduced number of overflows spilling 10 or more per year

See scenario 1b line 5.

Table 3.1 Line 6 – Reduction in high priority overflows causing ecological harm per year

See scenario 1b line 6.

Table 3.1 Line 7 – Reduction in overflows causing ecological harm per year

This is the same as line 6.

Table 3.1 Line 8 – Storm overflows - designated bathing waters (coastal and inland)

See scenario 1b line 8.

Table 3.1 Line 9 – Reduction in sewer collapses

See scenario 1b line 9.

Table 3.1 Line 10 – Reduction in households with internal sewer flooding

See scenario 1b line 10.

Table 3.1 Line 11 – Coastal Resilience

See scenario 1b line 11.

Table 3.1 Line 12 – Serious Pollution

See scenario 1b line 12.

Table 3.1 Line 13 – Nutrient Reduction

See scenario 1b line 13.

Table 3.1 Line 14 – Flooding 1 in 10

See scenario 1b line 14.

Table 3.1 Line 15 – DWF compliance

See scenario 1b line 15.

3. RAID - Risks Assumptions Issues Dependencies

Assumption – A factor has been applied based on assessed association to the planning objective of the table number
Risk – the benefits of base or enhancement expenditure are subject to the accuracy of base over time
Issue – The Isles of Scilly have been included in DWMP, but detailed costs are being prepared as part of the PR24 programme. SWW became the water and wastewater service provide for the IoS, in April 2020, after the DWMP process for Cycle 1 had started so have been managed outside of the Water UK Framework for DWMP.

Tables	Expenditure Summary – Scenario A		
Table	**Table 4 - Interventions at storm overflows - screening**	AMP8	AMP9+
	Total number of storm overflows		
	Number of new screens required on overflows where the overflow has an existing screen (i.e. replacement screens)		
	Number of new screens required on overflows where the overflow has not had a screen installed previously.		
	Projected spend on storm discharge screening for SODRP - capex		
	Projected spend on storm discharge screening for SODRP- opex		
	Projected spend on storm discharge screening for SODRP - totex		
Data Owner	Steve Rosser		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 4 – Interventions at storm overflows – screening

4	Interventions at storm overflows - screening	Description	Units	2025-26	2026-27	2027-28	2028-29	2029-30	Total AMP8 (2025-2030)	2030-31	2031-32	2032-33	2033-34	2034-35	AMP9 (2030-35)	AMP10 (2035-40)	AMP11 (2040-45)	AMP12 (2045-50)	Total 25 yr
	Interventions at storm overflows to provide screening required to meet the SODRP	Total number of storm overflows	nr	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342
		Number of new screens required on overflows where the overflow has an existing screen (i.e. replacement screens)	nr	654	633	603	561	459	459	446	420	381	329	199	199	0	0	0	0
		Number of new screens required on overflows where the overflow has not had a screen installed previously.	nr	468	468	468	468	468	468	468	468	468	468	468	468	468	0	0	0
		Projected spend on storm discharge screening for SODRP - capex	£m	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£241.0	£0.0	£0.0	£241.0
		Projected spend on storm discharge screening for SODRP- opex	£m	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£1.44	£1.44	£1.44	£4.32
		Projected spend on storm discharge screening for SODRP - totex	£m	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£242.4	£1.4	£1.4	£245.3

1. Overall summary

2. Line specifics

Scenario 1a:

Table 4 Line 1 – The total number of storm overflows currently owned and operated by SWW is 1,342, we have no plan to increase or reduce this number and therefore the projected number of storm overflows remains at 1,342 for the entire 25-year period.

Table 4 Line 2 – The number of new screens required where a screen already is exists (i.e., replacements), 654. This number decreases throughout AMPs as we install screens, ending with 0 on AMP12.

Table 4 Line 3 – The number of new screens required (where a screen has not been present previously) is 468. Screens for these assets will be provided in AMP12.

Table 4 Line 4 – The projected capex spend on storm discharge screening for SODRP £241M. This accounts for the CAPEX expenditure associated with 468Nr storm overflows planned to be addressed in AMP11. Costs for replacement screens planned to be undertaken AMP 8, 9 and 10 are accounted for in Table 1a, 1b and 2a and have therefore been excluded from this CAPEX line

Table 4 Line 5 – The projected OPEX spend on storm discharge screening for SODRP is £1.44M.

Table 4 Line 6 –Totex is the automated sum of both the Capex and Opex is £242M.

Scenario 1b:

Table 4 Line 1 – as Scenario 1a.

Table 4 Line 2 – In this scenario, all new replacement screens will be delivered by AMP10.

Table 4 Line 3 – The number of new screens required (where a screen has not been present previously) is 468. Screens for these assets will be provided in AMP10 and be completed by AMP11.

Table 4 Line 4 – The projected capex spend on storm discharge screening for SODRP £241M. This accounts for the CAPEX expenditure associated with 468Nr storm overflows planned to be addressed in AMP11. Costs for replacement screens planned to be undertaken AMP 8, 9 and 10 are accounted for in Table 1a, 1b and 2a and have therefore been excluded from this CAPEX line

Table 4 Line 5 – The projected OPEX spend on storm discharge screening for SODRP is £4.32M.

Table 4 Line 6 –Totex is the automated sum of both the Capex and Opex is £245M.

Scenario 2:

Table 4 Line 1 – See scenario 1b

Table 4 Line 2 – See scenario 1b

Table 4 Line 3 – See scenario 1b

Table 4 Line 4 – See scenario 1b

Table 4 Line 5 – See scenario 1b

Table 4 Line 6 – See scenario 1b

Scenario 3:

Table 4 Line 1 – See scenario 1b

Table 4 Line 2 – See scenario 1b

Table 4 Line 3 – See scenario 1b

Table 4 Line 4 – See scenario 1b

Table 4 Line 5 – See scenario 1b

Table 4 Line 6 – See scenario 1b

Scenario 4:

Table 4 Line 1 – See scenario 1b

Table 4 Line 2 – See scenario 1b

Table 4 Line 3 – See scenario 1b

Table 4 Line 4 – See scenario 1b

Table 4 Line 5 – See scenario 1b

Table 4 Line 6 – See scenario 1b

Scenario 5:

Table 4 Line 1 – See scenario 1b

Table 4 Line 2 – See scenario 1b

Table 4 Line 3 – See scenario 1b

Table 4 Line 4 – See scenario 1b

Table 4 Line 5 – See scenario 1b

Table 4 Line 6 – See scenario 1b

Scenario 6:

Table 4 Line 1 – See scenario 1b

Table 4 Line 2 – See scenario 1b

Table 4 Line 3 – See scenario 1b

Table 4 Line 4 – See scenario 1b

Table 4 Line 5 – See scenario 1b

Table 4 Line 6 – See scenario 1b

3. RAID - Risks Assumptions Issues Dependencies

Assumptions – We have assumed that all storm overflows that currently do not have screens are not high spilling and therefore would have investment profiled in later AMP periods.

Assumptions – We have assumed that 75% storm overflows with screens that require replacement are also currently high spilling (have investment to meet requirements of the Environment Act).

Tables	Expenditure Summary – Scenario A		
Table	**Table 5 - Reduction in OPERATIONAL GHG emissions**	AMP8	AMP9+
	Total operational GHG emissions		
Data Owner	Steve Rosser		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 5 – Reduction in OPERATIONAL GHG emissions

5	Reduction in OPERATIONAL GHG emissions	Description	Units	2025-26	2026-27	2027-28	2028-29	2029-30	Total AMP8 (2025-2030)	2030-31	2031-32	2032-33	2033-34	2034-35	AMP9 (2030-35)	AMP10 (2035-40)	AMP11 (2040-45)	AMP12 (2045-50)	Total 25 yr	Additional Line Definitions
		Total operational GHG emissions	tCO2/e	-880.1	-1760.3	-2640.4	-3520.6	-8401.5	-17602.9	-948.8	-1897.5	-2846.3	-3795.1	-9487.7	-18975.4	-8693	-7808	-7808	-60887.3	Total forecast reduction in operational GHG emissions compared to the baseline (2020)

1. Overall summary

Operational carbon has been provided from a combination of calculated and estimated values provided as part of the WINEP process, for a range of interventions. These cover a number of interventions, and operational carbon is provided in terms of increased energy costs associated with the interventions, as well as carbon associated with additional or increased chemical use. Carbon associated with an anticipated increase in the number of operator visits and costs of the operation and maintenance of the asset have also been attributed.

2. Line specifics

Scenario 1b:

Table 5 Line 1 – The total forecast reduction in operational GHG emissions compared with the 2020 baseline is -60887 over the 25-year period. This is made up of a total reduction of -17603 in AMP8, - -18975.4.5 in AMP9 and subsequent reduction of around -8000 in each AMP across AMPs 10-12; this reflects the accelerated nature of the preferred programme.

Scenario 2:

Table 5 Line 1 – See scenario 1b

Scenario 3:

Table 5 Line 1 – See scenario 1b

Scenario 4:

Table 5 Line 1 – See scenario 1b

Scenario 5:

Table 5 Line 1 – See scenario 1b

Scenario 6:

Table 5 Line 1 – See scenario 1b

3. RAID - Risks Assumptions Issues Dependencies

Assumptions- Stantec's Carbon tool was used to determine the estimation of operational carbon is been based on. There is currently limited knowledge with regard to the operational and embodied carbon attributed to sustainable solutions.
Assumptions – Stantec's Carbon tool was also used to determine operational carbon treatment solutions. Treatment solutions assume a blend of civil and M&E works..

Tables	Expenditure Summary – Scenario A		
Table	**Table 6 - Reduction in EMBODIED GHG emissions**	AMP8	AMP9+
	Total operational GHG emissions		
Data Owner	Steve Rosser		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 6 – Reduction in EMBODIED GHG emissions

6	Reduction in EMBODIED GHG emissions	Description	Units	2025-26	2026-27	2027-28	2028-29	2029-30	Total AMP8 (2025-2030)	2030-31	2031-32	2032-33	2033-34	2034-35	AMP9 (2030-35)	AMP10 (2035-40)	AMP11 (2040-45)	AMP12 (2045-50)	Total 25 yr
		Total embodied GHG emissions	tCO2/e	-9715.7	-19431.3	-29147	-38862.7	-97156.7	-194313.4	-7008.2	-14016.4	-21024.5	-28032.7	-70081.8	-140163.6	-112146	-42740	-42740	-532103

1. Overall summary

Embodied carbon has been provided from a combination of calculated and estimated values provided as part of the WINEP process, for a range of interventions which generally cover hard engineering solutions for STW improvements, storm storage and the construction of nature-based solutions for a variety of drivers. This covers both the construction of new assets as well as the carbon bound up in the asset itself.

2. Line specifics

Scenario 1a:

Table 6 Line 1 – The total forecast reduction in Total embodied GHG emissions compared with the 2020 baseline is -532104 over the 25-year period. This is made up of a total reduction of –194313 in AMP8, -99364 in AMP9, -71671 in AMP10 and –81273 in AMP 11 and -85482 in AMP12. This profile reflects of the front end loaded nature of the programme.

Scenario 1b:

Table 6 Line 1 – The total forecast reduction in Total embodied GHG emissions compared with the 2020 baseline is -532103 over the 25-year period. This is made up of a total reduction of –194313 in AMP8, -140164 in AMP9, -112146 in AMP10, -42740 in AMPs 11 and AMP12. This profile reflects of the front end loaded nature of the programme, bringing forward storm overflow solutions from AMPs 11 and 12 into AMPs 9 and 10.

Scenario 2:

Table 6 Line 1 – The total forecast reduction in Total embodied GHG emissions compared with the 2020 baseline is -914884 over the 25-year period. This is made up of a total reduction of –270869 in

AMP8, -175921 in AMP9, -148227 in AMP10, -157829 in AMP11 and -162038 in AMP12. This profile reflects of the front end loaded nature of the programme.

Scenario 3:

Table 6 Line 1 – The total forecast reduction in Total embodied GHG emissions compared with the 2020 baseline is -1213934 over the 25-year period. This is made up of a total reduction of –330679 in AMP8, -235731 in AMP9, -208037 in AMP10, -217639 in AMP11 and -221848 in AMP12. This profile reflects of the front end loaded nature of the programme.

Scenario 4:

Table 6 Line 1 – The total forecast reduction in Total embodied GHG emissions compared with the 2020 baseline is -1577104 over the 25-year period. This is made up of a total reduction of –403313 in AMP8, -308365 in AMP9, -280671 in AMP10, –290273 in AMP 11 and -294482 in AMP12. This profile reflects of the front end loaded nature of the programme.

Scenario 5:

Table 6 Line 1 – See Scenario 4

Scenario 6:

Table 6 Line 1 – See Scenario 4

Note:

Differences in the embodied Carbon between the different scenarios is accounted for by the increase in surface water separation for storm overflow schemes, across the profiles, with increasing hectarage of SuDS being required. This represents a ‘worst case scenario’ as these increases have not been offset by the concomitant decrease in storage required, however such reductions are considered to be negligible in the consideration.

3. RAID - Risks Assumptions Issues Dependencies

Assumptions- Stantec’s Carbon tool was used to determine the estimation of embodied carbon is been based on. There is currently limited knowledge to the extent operational and embodied carbon attributed to sustainable solutions.

Assumptions – Stantec’s Carbon tool was also used to determine embodied carbon treatment solutions. Treatment solutions assume a blend of civil and M&E works.

Tables	Expenditure Summary – Scenario A		
Table	**Table 7 - Significant DWMP and PR24 schemes**	Scheme Title	Scheme description
Data Owner	Jane O'Connor		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 7 – Significant DWMP and PR24 schemes

7	Individual Scheme title	Scheme description	Benefits to be delivered (text)	Benefits to be delivered (£m)	Estimated totex expenditure (£m)	Delivery date (YYYY)	Primary Planning objective category	Additional planning objective category	Further information
1	Plymouth WwTW SO spill reduction and FFT increase	Multi AMP Scheme to reduce spills from WwTW SO to protect designated bathing waters at Plymouth Hoe East and West. Solution includes surface water separation (Green, blue and grey), prevention of saline ingress and FFT increase at Plymouth Central WwTW	Reduce spills from Plymouth Central WwTW SO to protect designated bathing waters	277	350	Mar-35	CP05	CP06	
2	East of Exeter new WwTW	New WwTW to treat flows from planned development east of Exeter city to manage population growth	Accomodate new development and protect compliance of existing assets	21	32.4	Mar-35	CP06	CP01	
3	Saltash new WwTW	New WwTW to treat flows from new developments at Saltash, previously treated at Ernesettle WwTW	Accomodate new development and protect compliance of existing assets	48	35	Mar-30	CP06	BP08	
4	Cullompton WwTW upgrade	Upgrade of assets to convey and treat flows from large new development to the east of Cullompton	Accomodate new development and protect compliance of existing assets	17	25.7	Mar-30	CP06		
5	Tiverton	Increase in flow to treatment to reduce overflow spills to the environment as part of catchment upgrade to reduce overflows	Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Solutions will reduce overflows spills, separating and storing where possible using a blend of Green/blue/grey network solutions. Partnership opportunites have been developed and solutions will be deliver in collaboration with our partners	6	29.8	Mar-35	CP05		
6	Falmouth catchment SO reduction	Catchment level solution to reduce storm overflow spills and to protect designated Bathing and Shellfish Waters	Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Solutions will reduce overflows spills, separating and storing where possible using a blend of Green/blue/grey network solutions. Partnership opportunites have been developed and solutions will be deliver in collaboration with our partners	198	61.3	Mar-28	CP05		
7	Sidmouth SO reduction	Catchment level solution to reduce storm overflow spills and to protect a designated Bathing Water	Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Solutions will reduce overflows spills, separating and storing where possible using a blend of Green/blue/grey network solutions. Partnership opportunites have been developed and solutions will be deliver in collaboration with our partners	0	9	Mar-28	CP05		
8	Combe Martin catchment SO spill reduction	Catchment level solution to reduce storm overflow spills through a combination of green, blue, grey solutions and to protect designated Bathing Waters.	Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Solutions will reduce overflows spills, separating and storing where possible using a blend of Green/blue/grey network solutions. Partnership opportunites have been developed and solutions will be deliver in collaboration with our partners	3	6	Mar-30	CP05		
9	Fowey catchment SO spill reduction	Catchment level solution to reduce storm overflow spills through a combination of green, blue, grey solutions and to protect designated Bathing and Shellfish Waters.	Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Solutions will reduce overflows spills, separating and storing where possible using a blend of Green/blue/grey network solutions.	19	33.3	Mar-30	CP05		
10	Brokenbury Quarry catchment spill reduction	Catchment level solution to reduce storm overflow spills through a combination of green, blue, grey solutions and to protect designated Bathing and Shellfish Waters and Ecologically sensitive waters. Additional benefit for severe flooding risk which will benefit from surface water separation.	Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Solutions will reduce overflows spills, separating and storing where possible using a blend of Green/blue/grey network solutions. Partnership opportunites have been developed and solutions will be deliver in collaboration with our partners.	7	62	Mar-30	CP05	CP01	BP07
11	Helston Nutrient Reduction to protect designated SSSI (Driver: SSSI_Imp)	WINEP driver to reduce nutrients (Total nitrogen) in the discharge from Helstone WwTW to the technically achievable limit (N-TAL). This will protect and enhance the ecology of the Loe Pool SSSI.	The current status of the Loe waterbody (ID GB30B46556) and SSSI is unfavourable, and algal blooms are frequently reported in summer months. The nutrient reduction will not fully remediate the issues arising in the Loe Pool, it is hoped that in parallel with landowners and a wider community approach to nutrient reduction, that an improvement in the status of the Loe Pool can be achieved. South West Water is already actively involved in catchment interventions, with our partners, through our Upstream Thinking Team.	17	23.9	Mar-30	BP10	CP06	BP08
12	Looe catchment spill reduction	Catchment level solution to reduce storm overflow spills through a combination of green, blue, grey solutions and to protect designated Bathing Waters.	Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Solutions will reduce overflows spills, separating and storing where possible using a blend of Green/blue/grey network solutions.	158	36	Mar-30	CP05		

1. Overall summary

This table relates to investments designed to provide significant benefits or assets to maintain or improve performance. These range from improvements to our sewerage networks at a catchment level to the complete replacement or the construction of new wastewater treatment works. These schemes address a wide range of drivers and environmental pressures and will collectively deliver in excess of £750m worth of environmental and societal benefits for an expenditure of just over £700m.

2. Line specifics

Scenario 1a:

Table 7 Line 1 – This scheme is a multi-AMP Scheme to reduce spills from Plymouth Central WwTW SO to protect designated bathing waters at Plymouth Hoe East and West. The solution includes surface water separation (Green, Blue and Grey), prevention of saline ingress and FFT increase at Plymouth Central WwTW. This scheme is expected to be complete by March 2035 and have a TOTEX of £350m, however it is expected to bring £277m worth of benefit. This scheme is part of CP05 primarily as well as CP06.

Table 7 Line 2 – This scheme is a new WwTW to treat flows from planned development east of Exeter city to accommodate the new development at Woodbury and protect compliance of existing assets with the increased population. This scheme is expected to be complete by March 2035 and have a TOTEX of £32.4m, however it is expected to bring £21m worth of benefit. This scheme is part of CP06 primarily as well as CP01.

Table 7 Line 3 – This scheme is a new WwTW to treat flows from new developments at Saltash, previously treated at Ernesettle WwTW, to accommodate the new development and protect compliance of existing assets with the increased population. This scheme is expected to be complete by March 2030 and have a TOTEX of £35m, however it is expected to bring £48m worth of benefit. This scheme is part of CP06 primarily as well as BP08.

Table 7 Line 4 – This scheme is to upgrade of assets to convey and treat flows from large new development to the WwTW to the east of Cullompton, to accommodate the new development and protect compliance of existing assets with the increased population. This scheme is expected to be complete by March 2030 and have a TOTEX of £25.7m, however it is expected to bring £17m worth of benefit. This scheme is primarily part of CP06.

Table 7 Line 5 – This scheme is to increase in flow to treatment to reduce overflow spills to the environment in Tiverton as part of catchment upgrade to reduce overflow spills, by separating and storing where possible using a blend of Green/Blue/Grey network solutions. Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Partnership opportunities have been developed and solutions will be delivered in collaboration with our partners. This scheme is expected to be complete by March 2035 and have a TOTEX of £28m, however it is expected to bring £6m worth of benefit. This scheme is primarily part of CP05.

Table 7 Line 6 – This scheme is a catchment level solution to reduce storm overflow spills and to protect designated Bathing and Shellfish Waters in Falmouth by separating and storing where possible using a blend of Green/Blue/Grey network solutions. Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Partnership opportunities have been developed and solutions will be delivered in collaboration with our partners. This scheme is expected to be complete by March 2028 and have a TOTEX of £61.3m, however it is expected to deliver £198m worth of benefit. This scheme is primarily part of CP05.

Table 7 Line 7 – This scheme is a catchment level solution to reduce storm overflow spills and to protect designated Bathing Waters in Sidmouth by separating and storing where possible using a

blend of Green/Blue/Grey network solutions. Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Partnership opportunities have been developed and solutions will be delivered in collaboration with our partners. This scheme is expected to be complete by March 2028 and have a TOTEX of £9m, whilst bringing £0 worth of benefit. This scheme is part of CP05 primarily.

Table 7 Line 8 – This scheme is a catchment level solution to reduce storm overflow spills and to protect designated Bathing Waters in Combe Martin by separating and storing where possible using a blend of Green/Blue/Grey network solutions. Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Partnership opportunities have been developed and solutions will be delivered in collaboration with our partners. This scheme is expected to be complete by March 2030 and have a TOTEX of £6m, however it is expected to bring £3m worth of benefit. This scheme is part of CP05 primarily.

Table 7 Line 9 – This scheme is a catchment level solution to reduce storm overflow spills and to protect designated Bathing and Shellfish Waters in Fowey by separating and storing where possible using a blend of Green/Blue/Grey network solutions. Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Partnership opportunities have been developed and solutions will be delivered in collaboration with our partners. This scheme is expected to be complete by March 2030 and have a TOTEX of £33.3m, however it is expected to bring £19m worth of benefit. This scheme is part of CP05 primarily.

Table 7 Line 10 – This scheme is a catchment level solution to reduce storm overflow spills and to protect designated Bathing, Shellfish and Ecologically sensitive waters in Torbay at Brokenbury Quarry WwTW and catchment, by separating and storing where possible using a blend of Green/Blue/Grey network solutions. Additional benefit for severe flooding risk which will be from surface water separation. Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. Partnership opportunities have been developed and solutions will be delivered in collaboration with our partners. This scheme is expected to be complete by March 2030 and have a TOTEX of £62m, and it is expected to deliver £7m worth of benefit. This scheme is part of CP05 primarily, as well as CP01 and BP07.

Table 7 Line 11 – This is a scheme to reduce nutrients in the discharge from Helston WwTW to the technically achievable limit (N-TAL). This will protect and enhance the ecology of the Loe Pool SSSI. The driver for this scheme is the SSSI_IMP (total Nitrogen) WINEP driver. South West Water is already actively involved in catchment interventions, with our partners, through our Upstream Thinking Team to work in conjunction with this scheme in order to completely resolve the issue. This scheme is expected to be complete by March 2030 and have a TOTEX of £23.9m, however it is expected to bring £17m worth of benefit. This scheme is part of BP10 primarily as well as CP06 and BP08.

Table 7 Line 12 – This scheme is a catchment level solution to reduce storm overflow spills and to protect designated Bathing Waters in Looe by separating and storing where possible using a blend of Green/Blue/Grey network solutions. Strategic catchment improvements within the network to incorporate future impacts of climate change, urban creep and growth. This scheme is expected to be complete by March 2030 and have a TOTEX of £36m, however it is expected to bring £158m worth of benefit. This scheme is primarily part of CP05.

Scenario 1b:

Table 7 Line 1 – See scenario 1a

Table 7 Line 2 – See scenario 1a

Table 7 Line 3 – See scenario 1a

Table 7 Line 4 – See scenario 1a

Table 7 Line 5 – See scenario 1a

Table 7 Line 6 – See scenario 1a

Table 7 Line 7 – See scenario 1a

Table 7 Line 8 – See scenario 1a

Table 7 Line 9 – See scenario 1a

Table 7 Line 10 – See scenario 1a

Table 7 Line 11 – See scenario 1a

Table 7 Line 12 – See scenario 1a

Scenario 2:

Table 7 Line 1 – See scenario 1a

Table 7 Line 2 – See scenario 1a

Table 7 Line 3 – See scenario 1a

Table 7 Line 4 – See scenario 1a

Table 7 Line 5 – See scenario 1a

Table 7 Line 6 – See scenario 1a

Table 7 Line 7 – See scenario 1a

Table 7 Line 8 – See scenario 1a

Table 7 Line 9 – See scenario 1a

Table 7 Line 10 – See scenario 1a

Table 7 Line 11 – See scenario 1a

Table 7 Line 12 – See scenario 1a

Scenario 3:

Table 7 Line 1 – See scenario 1a

Table 7 Line 2 – See scenario 1a

Table 7 Line 3 – See scenario 1a

Table 7 Line 4 – See scenario 1a

Table 7 Line 5 – See scenario 1a

Table 7 Line 6 – See scenario 1a

Table 7 Line 7 – See scenario 1a

Table 7 Line 8 – See scenario 1a

Table 7 Line 9 – See scenario 1a

Table 7 Line 10 – See scenario 1a

Table 7 Line 11 – See scenario 1a

Table 7 Line 12 – See scenario 1a

Scenario 4:

Table 7 Line 1 – See scenario 1a

Table 7 Line 2 – See scenario 1a

Table 7 Line 3 – See scenario 1a

Table 7 Line 4 – See scenario 1a

Table 7 Line 5 – See scenario 1a

Table 7 Line 6 – See scenario 1a

Table 7 Line 7 – See scenario 1a

Table 7 Line 8 – See scenario 1a

Table 7 Line 9 – See scenario 1a

Table 7 Line 10 – See scenario 1a

Table 7 Line 11 – See scenario 1a

Table 7 Line 12 – See scenario 1a

Scenario 5:

Table 7 Line 1 – See scenario 1a

Table 7 Line 2 – See scenario 1a

Table 7 Line 3 – See scenario 1a

Table 7 Line 4 – See scenario 1a

Table 7 Line 5 – See scenario 1a

Table 7 Line 6 – See scenario 1a

Table 7 Line 7 – See scenario 1a

Table 7 Line 8 – See scenario 1a

Table 7 Line 9 – See scenario 1a

Table 7 Line 10 – See scenario 1a

Table 7 Line 11 – See scenario 1a

Table 7 Line 12 – See scenario 1a

Scenario 6:

Table 7 Line 1 – See scenario 1a

Table 7 Line 2 – See scenario 1a

Table 7 Line 3 – See scenario 1a

Table 7 Line 4 – See scenario 1a

Table 7 Line 5 – See scenario 1a

Table 7 Line 6 – See scenario 1a

Table 7 Line 7 – See scenario 1a

Table 7 Line 8 – See scenario 1a

Table 7 Line 9 – See scenario 1a

Table 7 Line 10 – See scenario 1a

Table 7 Line 11 – See scenario 1a

Table 7 Line 12 – See scenario 1a

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3. RAID - Risks Assumptions Issues Dependencies

Assumption -Significant investments have been selected from planned WINEP investments. High profile investments were identified following Cost Certainty review. Investments with forecasted environmental benefits have also been selected.
Assumption – Significant investment will be reviewed for PR24.

Tables	Expenditure Summary – Scenario A		
Table	**Table 8 – Key Partnership Schemes**	Scheme Title	Scheme description
Data Owner	Jane O'Connor		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

N.B add rows above where necessary

Key to completion guidance

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

Table 8 – Key partnership schemes

8	Individual Scheme title	Type of Scheme	If 'other', please specify	Names / details of partner(s)	Company Input (£)	Partnership Input (£)	Company Input (£)	Partnership Input (£)	Company Input (£)	Partnership Input (£)	Company Input (£)	Partnership Input (£)	Company Input (£)	Partnership Input (£)
1	Plymouth Lanhydrock Road IUDM Phase 2	2. Surface water separation	1. Storage	Plymouth City Council, Environment Agency	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB
2	Plymouth Longbrook IUDM Phase 1b (Longcause)	2. Surface water separation	1. Storage	Plymouth City Council, Environment Agency	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB
3	Plymouth Lipson Vale IUDM Phase 2	2. Surface water separation	1. Storage	Plymouth City Council, Environment Agency	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB
4	Plymouth Western Approach IUDM Phase 2	1. SuDS	2. Surface water separation	Plymouth City Council, Environment Agency	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB
5	Plymouth Stonehouse Creek IUDM	1. SuDS	2. Surface water separation	Plymouth City Council, Environment Agency	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB
6	Torquay IUDM	2. Surface water separation	1. Storage	Torbay Council	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB
7	Falmouth IUDM	2. Surface water separation		Falmouth Town Council, Environment Agency	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB
8	Feniton Flood Scheme	2. Surface water separation		Exeter City Council	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB
9	Hele & Bradninch Flood Resilience Scheme	1. SuDS	2. Surface water separation	Network Rail	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB
10	Kingsbridge IUDM	2. Surface water separation	1. SuDS	Devon County Council, Environment Agency	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	
11	Combe Martin Flooding Relief	2. Surface water separation	1. Storage	Devon County Council, Westcountry Rivers Trust, Devon Wildlife Trust, Environment Agency	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	
12	Naturalising Mincinglake park	2. Surface water separation		Exeter City Council, Devon Wildlife Trust, Environment Agency	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB	ILB

1. Overall summary

This section highlights the various SWS, storage and SuDs etc. schemes that we are undertaking alongside a variety of partners. The majority of partners are the local councils where the scheme is taking place as well as the EA but there are a few schemes which bring in new partners such as Network Rail, and existing partners such as the Devon and Cornwall Wildlife and Westcountry Rivers Trust. The company and partnership inputs for each AMP have been intentionally left blank (ILB), as this data is still subject to the PR24 business planning process, agreement with partners and internal governance.

2. Line specifics

Scenario 1:

Table 8 Line 1 – This shows a scheme within Plymouth, more specifically on Lanhydrock Road. This scheme is under IUDM Phase 2 and is both a SWS and storage scheme. The partners to this work are the EA and Plymouth City Council.

Table 8 Line 2 – This shows a scheme within Longbrook, Plymouth. This scheme is under IUDM Phase 1b (longcause) and is both a SWS and storage scheme. The partners to this work are the EA and Plymouth City Council.

Table 8 Line 3 – This shows a scheme within Plymouth, more specifically in Lipson Vale. This scheme is under IUDM Phase 2 and is both a SWS and storage scheme. The partners to this work are the EA and Plymouth City Council.

Table 8 Line 4 – This shows a scheme near Western Approach, Plymouth. This scheme is under IUDM Phase 2 and is both a SWS and SuDs scheme. The partners to this work are the EA and Plymouth City Council.

Table 8 Line 5 – This shows a scheme within Stonehouse creek, Plymouth. This scheme is under IUDM Phase 2 and is both a SWS and SuDs scheme. The partners to this work are the EA and Plymouth City Council.

Table 8 Line 6 – This scheme is a SWS and storage scheme which is part of the Torquay IUDM scheme. The key partner is Torbay Council.

Table 8 Line 7 – This scheme is a SWS scheme which is part of the Falmouth IUDM scheme. The key partners are Falmouth Town Council and the EA.

Table 8 Line 8 – This scheme is a SWS scheme which is part of the Feniton Flood scheme. The key partner is Exeter City Council.

Table 8 Line 9 – This scheme is a SuDs and SWS scheme which is part of the Hele & Bradninch Flood Resilience Scheme. The key partner is Network Rail.

Table 8 Line 10 – This scheme is a SuDs and SWS scheme which is part of the Kingsbridge IUDM scheme. The key partners are Devon County Council and the EA.

Table 8 Line 11 – This scheme is a storage and SWS scheme which is part of the Combe Martin Flooding Relief scheme. The key partners are Devon County Council, Westcountry Rivers Trust, Devon Wildlife Trust and the EA.

Table 8 Line 12 – This scheme is a SWS scheme which is part of the Naturalising Mincinglake Park scheme. The key partners are Exeter City Council, Devon Wildlife Trust and the EA.

Scenario 2:

Table 7 Line 1 – See scenario 1

Scenario 3:

Table 7 Line 1 – See scenario 1

Scenario 4:

Table 7 Line 1 – See scenario 1

Scenario 5:

Table 7 Line 1 – See scenario 1

Scenario 6:

Table 7 Line 1 – See scenario 1

3. RAID - Risks Assumptions Issues Dependencies

The partnership schemes are reliant on the information following initial discussions during the DWMP period and ongoing AMP7 discussion. Further discussions with partners are required to develop schemes moving forwards.

Tables	Adaptive Plans		
Table	AP0 Adaptive Plan – Whole DWMP Plan AP1 – Addressing Harm from Storm overflows AP2 Reducing the risk of sewer flooding in 1 in 50-year storm AP3 wastewater treatment works capacity improvement /growth AP4 Additional WINEP Planned investments	Scheme Title	Type of Scheme
Data Owner	Jane O'Connor		
Senior Manager	Mark Worsfold		
Executive Director	Lisa Gahan		

Key to completion guidance

	Cell to be completed as part of final DWMP
	Optional but recommended as part of final DMWP
	Calculated cells

COMMENTARY

1. Overall summary

Four tables have been included to summarise the distribution of planned investments associated with our entire plan, storm overflow, 1 in 50 flooding, STW and other WINEP investments.

2. Line specifics

AP0 Company L1 adaptive plan and alternative pathways

Table 1 – AP0

0Total

AP0	Adaptive Plan - Whole DWMP Plan		AMP8	AMP9	AMP10	AMP11	AMP12	
	Company L1 adaptive plan and alternative pathways	Metric (totex)	2025-2030	2030-35	2035-40	2040-45	2045-50	Description of differences between pathways, including trigger and decision points
	Core pathway	£m	£1,465	£1,773	£977	£867	£1,111	**Scenario 1a** - this is our preferred scenario and delivers the least cost plan. It enables us to meet the legal targets for storm overflows and wastewater discharges in a future world with a 2°C increase to our climate.
	Preferred plan (if different to core)	£m						
	AP1 - Alternative pathway 1	£m	£1,465	£2,181	£1,698	£436	£411	**Scenario 1b - Accelerated Delivery** - as Scenario 1 with investments for storm overflow delivered in AMP8, 9 and 10
	AP1 - Alternative pathway 2	£m	£1,966	£2,681	£2,198	£936	£911	**Scenario 2: Climate Resilient** - this builds on Scenario 1 - Best Value, enabling us to meet all legal targets, maintaining flood risk to ensure no deterioration to 2050 and increasing our resilience to climate change. Our choices in this scenario are based on preparing for the needs of a 4°C increase to our climate.
	AP1 - Alternative pathway 3	£m	£1,916	£2,631	£2,148	£886	£861	**Scenario 3: Reduced Flooding** - this builds on Scenario 1 - Best Value, enabling us to meet all legal targets for storm overflows and wastewater discharges in a 2°C increase to our future climate. Our choices here enable us to reduce flood risk to our customers from our 2025 level of 10% of properties at risk of sewer flooding to a 5% level of risk
	AP1 - Alternative pathway 4	£m	£2,166	£2,881	£2,398	£1,136	£1,111	**Scenario 4: Enhanced Resilience** - this builds on Scenario 2 - Climate Resilient, preparing our assets for a 4°C increase in climate whilst also reducing future flood risk below 2025 levels.
	AP1 - Alternative pathway 5	£m	£2,166	£2,881	£2,443	£1,256	£1,256	**Scenario 5: Innovative Technology** - builds on Scenario 4 - Enhanced Resilience, ensuring we can meet all current wastewater targets whilst preparing for a 4°C increase in climate with reduced levels of flooding. Additionally we will adopt new technologies to improve how we analyse and operate our sewer network.and monitor the quality of our effluent discharges from our treatment works.
	AP1 - Alternative pathway 6	£m	£2,296	£3,000	£2,639	£1,423	£1,647	**Scenario 6: Lowest Risk**- this is our highest cost and lowest risk scenario. It builds on all the elements of our previous scenarios and is based on higher levels of population growth and an increased demand on our wastewater network in a 4°C

Total for Scenario 1b = £6,193M
This includes all planned investments with the exception of the following base investments:

- STW Base Investment
- Coastal resilience Base investment
- Sewer Collapse Base Investment

AP1 Addressing Harm from Storm overflows

Table 2 – AP1 Addressing Harm from Storm overflows

AP1	Adaptive Plan Component 1		AMP8	AMP9	AMP10	AMP11	AMP12	
	Addressing harm from storm overflows	Metric (totex)	2025-2030	2030-35	2035-40	2040-45	2045-50	Description of differences between pathways, including trigger and decision points
	Core pathway	£m	£858	£691	£463	£430	£700	**Scenario 1a** - this is our preferred scenario and delivers the least cost plan. It enables us to meet the legal targets for storm overflows and wastewater discharges in a future world with a 2°C increase to our climate.
	Preferred plan (if different to core)	£m						
	AP1 - Alternative pathway 1	£m	£858	£1,099	£1,185	£0	£0	**Scenario 1b** - Accelerated Delivery - as Scenario 1 with investments for storm overflow delivered in AMP8, 9 and 10
	AP1 - Alternative pathway 2	£m	£858	£1,099	£1,185	£0	£0	**Scenario 2: Climate Resilient** - this builds on Scenario 1 - Best Value, enabling us to meet all legal targets, maintaining flood risk to ensure no deterioration to 2050 and increasing our resilience to climate change. Our choices in this scenario are based on preparing for the needs of a 4°C increase to our climate.
	AP1 - Alternative pathway 3	£m	£858	£1,099	£1,185	£0	£0	**Scenario 3: Reduced Flooding** - this builds on Scenario 1 - Best Value, enabling us to meet all legal targets for storm overflows and wastewater discharges in a 2°C increase to our future climate. Our choices here enable us to reduce flood risk to our customers from our 2025 level of 10% of properties at risk of sewer flooding to a 5% level of risk
	AP1 - Alternative pathway 4	£m	£858	£1,099	£1,185	£0	£0	**Scenario 4: Enhanced Resilience** - this builds on Scenario 2 - Climate Resilient, preparing our assets for a 4°C increase in climate whilst also reducing future flood risk below 2025 levels.
	AP1 - Alternative pathway 5	£m	£858	£1,099	£1,185	£0	£0	**Scenario 5: Innovative Technology** - builds on Scenario 4 - Enhanced Resilience, ensuring we can meet all current wastewater targets whilst preparing for a 4°C increase in climate with reduced levels of flooding. Additionally we will adopt new technologies to improve how we analyse and operate our sewer network.and monitor the quality of our effluent discharges from our treatment works.
	AP1 - Alternative pathway 6	£m	£858	£1,099	£1,185	£0	£0	**Scenario 6: Highest Risk**- this is our highest cost and highest risk scenario. It builds on all the elements of our previous scenarios and is based on higher levels of population growth and an increased demand on our wastewater network in a 4°C

Total for Scenario 1b = £3,141M

This includes all planned investments with the exception of the following:

- Bioresources investments
- STW Base investment
- Additional Pass forward Costs (costs included within AP4)
- STW FFT Increases (costs included within AP4)
- EO Monitoring UMon6 (costs included within AP4)
- River Quality Monitoring (costs included within AP4)

Scenario AP2 : Reducing the risk of sewer flooding in 1-in-50 year storm

AP2	Adaptive Plan Component 2		AMP8	AMP9	AMP10	AMP11	AMP12	
	Reducing the risk of sewer flooding in 1-in-50 yr storm	Metric (totex)	2025-2030	2030-35	2035-40	2040-45	2045-50	Description of differences between pathways, including trigger and decision points
	Core pathway	£m	£0	£0	£0	£0	£0	**Scenario 1a** - this is our preferred scenario and delivers the least cost plan. It enables us to meet the legal targets for storm overflows and wastewater discharges in a future world with a 2°C increase to our climate.
	Preferred plan (if different to core)	£m						
	AP1 - Alternative pathway 1	£m	£0	£0	£0	£0	£0	**Scenario 1b** - Accelerated Delivery - as Scenario 1 with investments for storm overflow delivered in AMP8, 9 and 10
	AP1 - Alternative pathway 2	£m	£250	£250	£250	£250	£250	**Scenario 2: Climate Resilient** - this builds on Scenario 1 - Best Value, enabling us to meet all legal targets, maintaining flood risk to ensure no deterioration to 2050 and increasing our resilience to climate change. Our choices in this scenario are based on preparing for the needs of a 4°C increase to our climate.
	AP1 - Alternative pathway 3	£m	£450	£450	£450	£450	£450	**Scenario 3: Reduced Flooding** - this builds on Scenario 1 - Best Value, enabling us to meet all legal targets for storm overflows and wastewater discharges in a 2°C increase to our future climate. Our choices here enable us to reduce flood risk to our customers from our 2025 level of 10% of properties at risk of sewer flooding to a 5% level of risk
	AP1 - Alternative pathway 4	£m	£700	£700	£700	£700	£700	**Scenario 4: Enhanced Resilience** - this builds on Scenario 2 - Climate Resilient, preparing our assets for a 4°C increase in climate whilst also reducing future flood risk below 2025 levels.
	AP1 - Alternative pathway 5	£m	£700	£700	£700	£700	£700	**Scenario 5: Innovative Technology** - builds on Scenario 4 - Enhanced Resilience, ensuring we can meet all current wastewater targets whilst preparing for a 4°C increase in climate with reduced levels of flooding. Additionally we will adopt new technologies to improve how we analyse and operate our sewer network.and monitor the quality of our effluent discharges from our treatment works.
	AP1 - Alternative pathway 6	£m	£700	£700	£700	£700	£700	**Scenario 6: Lowest Risk**- this is our highest cost and lowest risk scenario. It builds on all the elements of our previous scenarios and is based on higher levels of population growth and an increased demand on our wastewater network in a 4°C

Total for Scenario 1b = £0M

This includes total investment required to meet target flood risk and future climate change as detailed in Table below.

Scenario	RCP	Flood Risk target
1a	6	10.8%
1b	6	10.8%
2	8.5	13%
3	6	10.8%
4	8.5	5%
5	8.5	5%
6	8.5	5%

AP3 Wastewater treatment works capacity improvements / growth

Table– AP3

AP3	Adaptive Plan Component 3		AMP8	AMP9	AMP10	AMP11	AMP12	
	Wastewater treatment works capacity improvments / growth	Metric (totex)	2025-2030	2030-35	2035-40	2040-45	2045-50	Description of differences between pathways, including trigger and decision points
	Core pathway	£m	£351	£576	£341	£265	£240	**Scenario 1a** - this is our preferred scenario and delivers the least cost plan. It enables us to meet the legal targets for storm overflows and wastewater discharges in a future world with a 2°C increase to our climate.
	Preferred plan (if different to core)	£m						
	AP1 - Alternative pathway 1	£m	£351	£576	£341	£265	£240	**Scenario 1b** - Accelerated Delivery - as Scenario 1 with investments for storm overflow delivered in AMP8, 9 and 10
	AP1 - Alternative pathway 2	£m	£351	£576	£341	£265	£240	**Scenario 2: Climate Resilient** - this builds on Scenario 1 - Best Value, enabling us to meet all legal targets, maintaining flood risk to ensure no deterioration to 2050 and increasing our resilience to climate change. Our choices in this scenario are based on preparing for the needs of a 4°C increase to our climate.
	AP1 - Alternative pathway 3	£m	£351	£576	£341	£265	£240	**Scenario 3: Reduced Flooding** - this builds on Scenario 1 - Best Value, enabling us to meet all legal targets for storm overflows and wastewater discharges in a 2°C increase to our future climate. Our choices here enable us to reduce flood risk to our customers from our 2025 level of 10% of properties at risk of sewer flooding to a 5% level of risk
	AP1 - Alternative pathway 4	£m	£351	£576	£341	£265	£240	**Scenario 4: Enhanced Resilience** - this builds on Scenario 2 - Climate Resilient, preparing our assets for a 4°C increase in climate whilst also reducing future flood risk below 2025 levels.
	AP1 - Alternative pathway 5	£m	£351	£576	£386	£385	£385	**Scenario 5: Innovative Technology** - builds on Scenario 4 - Enhanced Resilience, ensuring we can meet all current wastewater targets whilst preparing for a 4°C increase in climate with reduced levels of flooding. Additionally we will adopt new technologies to improve how we analyse and operate our sewer network.and monitor the quality of our effluent discharges from our treatment works.

Total for Scenario 1b = £1,773M

This includes all planned investments associated with WTW which include the following:

- STW enhancements
- Process Emissions enhancements
- Monitoring Final Effluent investments
- Nutrient reductions

Planned investments associated with Bioresources have been excluded.

AP4 Additional WINEP and other planned investments

Table AP4

AP4	Adaptive Plan Component 1		AMP8	AMP9	AMP10	AMP11	AMP12	
	Additional WINEP planned investments	Metric (totex)	2025-2030	2030-35	2035-40	2040-45	2045-50	Description of differences between pathways, including trigger and decision points
	Core pathway	£m	£205	£652	£283	£206	£181	**Scenario 1a** - this is our preferred scenario and delivers the least cost plan. It enables us to meet the legal targets for storm overflows and wastewater discharges in a future world with a 2°C increase to our climate.
	Preferred plan (if different to core)	£m						
	AP1 - Alternative pathway 1	£m	£205	£652	£283	£206	£181	**Scenario 1b** - Accelerated Delivery - as Scenario 1 with investments for storm overflow delivered in AMP8, 9 and 10
	AP1 - Alternative pathway 2	£m	£205	£205	£205	£205	£205	**Scenario 2: Climate Resilient** - this builds on Scenario 1 - Best Value, enabling us to meet all legal targets, maintaining flood risk to ensure no deterioration to 2050 and increasing our resilience to climate change. Our choices in this scenario are based on preparing for the needs of a 4°C increase to our climate.
	AP1 - Alternative pathway 3	£m	£205	£652	£283	£206	£181	**Scenario 3: Reduced Flooding** - this builds on Scenario 1 - Best Value, enabling us to meet all legal targets for storm overflows and wastewater discharges in a 2°C increase to our future climate. Our choices here enable us to reduce flood risk to our customers from our 2025 level of 10% of properties at risk of sewer flooding to a 5% level of risk
	AP1 - Alternative pathway 4	£m	£205	£652	£283	£206	£181	**Scenario 4: Enhanced Resilience** - this builds on Scenario 2 - Climate Resilient, preparing our assets for a 4°C increase in climate whilst also reducing future flood risk below 2025 levels.
	AP1 - Alternative pathway 5	£m	£205	£652	£328	£326	£326	**Scenario 5: Innovative Technology** - builds on Scenario 4 - Enhanced Resilience, ensuring we can meet all current wastewater targets whilst preparing for a 4°C increase in climate with reduced levels of flooding. Additionally we will adopt new technologies to improve how we analyse and operate our sewer network.and monitor the quality of our effluent discharges from our treatment works.
	AP1 - Alternative pathway 6	£m	£285	£696	£423	£368	£367	**Scenario 6: Lowest Risk**- this is our highest cost and lowest risk scenario. It builds on all the elements of our previous scenarios and is based on higher levels of population growth and an increased demand on our wastewater network in a 4°C

This includes all planned investments associated with WTW which include the following:

- River water Quality Mon

- Additional pass forward flow
- FFT Upgrade
- EO monitoring & U_MON6

Totals for Scenario 1b = £1,527M

3. RAID - Risks Assumptions Issues Dependencies

There are no specific assumptions or risks associated with ‘Adaptive Plans’ sheet. Detailed risks and assumptions are provided for each Outcome Summary and Expenditure table.