ADD1 - Base expenditure analysis - water resources and water network+; post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	Operating expenditure	
1	Power	All figures come from an identical data set to CW2, adjusted for real price effects and the post-frontier efficiency shift.
2	Income treated as negative expenditure	
3	Bulk Supply/Bulk discharge	
4	Renewals expensed in year (infrastructure)	
5	Renewals expensed in year (non-infrastructure)	
6	Other operating expenditure	
7	Local authority and Cumulo rates	
	Service Charges	
8	Canal & River Trust abstraction charges/ discharge consents	
9	Environment Agency / NRW abstraction charges/ discharge consents	
10	Other abstraction charges/ discharge consents	
	Location specific costs & obligations	
11	Costs associated with Traffic Management Act	
12	Costs associated with lane rental schemes	
13	Statutory water softening	
14	Total base operating expenditure	
	Capital expenditure	
15	Maintaining the long term capability of the assets - infra	
16	Maintaining the long term capability of the assets - non-infra	
17	Total base capital expenditure	
	Traffic Management Act	
18	Projects incurring costs associated with Traffic Management Act	

ADD2 - Enhancement expenditure - water resources and water network+; post-frontier shift efficiency and real price effects basis		
Line description		Commentary
	EA/NRW environmental programme (WINEP/NEP)	
1	Biodiversity and conservation; (WINEP/NEP) water capex	All figures come from an identical data set to CW3, adjusted for real price effects and the post-frontier efficiency shift.
2	Biodiversity and conservation; (WINEP/NEP) water opex	
3	Biodiversity and conservation; (WINEP/NEP) water totex	
4	Eels/fish entrainment screens; (WINEP/NEP) water capex	
5	Eels/fish entrainment screens; (WINEP/NEP) water opex	
6	Eels/fish entrainment screens; (WINEP/NEP) water totex	
7	Eels/fish passes; (WINEP/NEP) water capex	
8	Eels/fish passes; (WINEP/NEP) water opex	
9	Eels/fish passes; (WINEP/NEP) water totex	
10	Invasive Non Native Species; (WINEP/NEP) water capex	
11	Invasive Non Native Species; (WINEP/NEP) water opex	
12	Invasive Non Native Species; (WINEP/NEP) water totex	
13	Drinking Water Protected Areas; (WINEP/NEP) water capex	
14	Drinking Water Protected Areas; (WINEP/NEP) water opex	
15	Drinking Water Protected Areas; (WINEP/NEP) water totex	
16	Water Framework Directive; (WINEP/NEP) water capex	
17	Water Framework Directive; (WINEP/NEP) water opex	
18	Water Framework Directive; (WINEP/NEP) water totex	
19	Wetland creation; (WINEP/NEP) water capex	
20	Wetland creation; (WINEP/NEP) water opex	
21	Wetland creation; (WINEP/NEP) water totex	
22	Trade effluent discharge flow monitoring; (WINEP/NEP) water capex	
23	Trade effluent discharge flow monitoring; (WINEP/NEP) water opex	

24	Trade effluent discharge flow monitoring; (WINEP/NEP) water totex	
25	25 year environment plan; (WINEP/NEP) water capex	
26	25 year environment plan; (WINEP/NEP) water opex	
27	25 year environment plan; (WINEP/NEP) water totex	
28	Investigations; (WINEP/NEP) - desk based study only water capex	
29	Investigations; (WINEP/NEP) - desk based study only water opex	
30	Investigations; (WINEP/NEP) - desk based study only water totex	
31	Investigations; (WINEP/NEP) - survey, monitoring or simple modelling water capex	
32	Investigations; (WINEP/NEP) - survey, monitoring or simple modelling water opex	
33	Investigations; (WINEP/NEP) - survey, monitoring or simple modelling water totex	
34	Investigations; (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling water capex	
35	Investigations; (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling water opex	
36	Investigations; (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling water totex	
37	Investigations total; (WINEP/NEP) water capex	
38	Investigations total; (WINEP/NEP) water opex	
39	Investigations total; (WINEP/NEP) water totex	
40	Total environmental programme expenditure; (WINEP/NEP) water totex	
	Supply-demand balance	
41	Supply-side improvements delivering benefits in 2025-2030; SDB capex	
42	Supply-side improvements delivering benefits in 2025-2030; SDB opex	
43	Supply-side improvements delivering benefits in 2025-2030; SDB totex	
44	Demand-side improvements delivering benefits in 2025-2030 (excl leakage and metering); SDB capex	

45	Demand-side improvements delivering benefits in 2025-2030 (excl leakage and metering); SDB opex	
46	Demand-side improvements delivering benefits in 2025-2030 (excl leakage and metering); SDB totex	
47	Leakage improvements delivering benefits in 2025-2030; SDB capex	
48	Leakage improvements delivering benefits in 2025-2030; SDB opex	
49	Leakage improvements delivering benefits in 2025-2030; SDB totex	
50	Internal interconnectors delivering benefits in 2025-2030; SDB capex	
51	Internal interconnectors delivering benefits in 2025-2030; SDB opex	
52	Internal interconnectors delivering benefits in 2025-2030; SDB totex	
53	Supply demand balance improvements delivering benefits starting from 2031; SDB capex	
54	Supply demand balance improvements delivering benefits starting from 2031; SDB opex	
55	Supply demand balance improvements delivering benefits starting from 2031; SDB totex	
56	Strategic regional resource solutions; SDB capex	
57	Strategic regional resource solutions; SDB opex	
58	Strategic regional resource solutions; SDB totex	
59	Total supply demand expenditure; SDB totex	
	Metering	
60	New meters requested by existing customers (optants); metering capex	
61	New meters requested by existing customers (optants); metering opex	
62	New meters requested by existing customers (optants); metering totex	
63	New meters introduced by companies for existing customers; metering capex	
64	New meters introduced by companies for existing customers; metering opex	

65	New meters introduced by companies for existing customers; metering totex	
66	New meters for existing customers - business; metering capex	
67	New meters for existing customers - business; metering opex	
68	New meters for existing customers - business; metering totex	
69	Replacement of existing basic meters with AMR meters for residential customers; metering capex	
70	Replacement of existing basic meters with AMR meters for residential customers; metering opex	
71	Replacement of existing basic meters with AMR meters for residential customers; metering totex	
72	Replacement of existing basic meters with AMI meters for residential customers; metering capex	
73	Replacement of existing basic meters with AMI meters for residential customers; metering opex	
74	Replacement of existing basic meters with AMI meters for residential customers; metering totex	
73	Replacement of existing AMR meters with AMI meters for residential customers; metering capex	
76	Replacement of existing AMR meters with AMI meters for residential customers; metering opex	
77	Replacement of existing AMR meters with AMI meters for residential customers; metering totex	
78	Replacement of existing basic meters with AMR meters for business customers; metering capex	
79	Replacement of existing basic meters with AMR meters for business customers; metering opex	
80	Replacement of existing basic meters with AMR meters for business customers; metering totex	
81	Replacement of existing basic meters with AMI meters for business customers; metering capex	
82	Replacement of existing basic meters with AMI meters for business customers; metering opex	
83	Replacement of existing basic meters with AMI meters for business customers; metering totex	
84	Replacement of existing AMR meters with AMI meters for business customers; metering capex	
85	Replacement of existing AMR meters with AMI meters for business customers; metering opex	

86	Replacement of existing AMR meters with AMI meters for business customers; metering totex	
87	Smart meter infrastructure; metering capex	
88	Smart meter infrastructure; metering opex	
89	Smart meter infrastructure; metering totex	
90	Total metering expenditure; metering totex	
	Water quality improvements	
91	Improvements to taste, odour and colour (grey solutions); enhancement capex	
92	Improvements to taste, odour and colour (grey solutions); enhancement opex	
93	Improvements to taste, odour and colour (grey solutions); enhancement totex	
94	Improvements to taste, odour and colour (green solutions); enhancement capex	
95	Improvements to taste, odour and colour (green solutions); enhancement opex	
96	Improvements to taste, odour and colour (green solutions); enhancement totex	
97	Addressing raw water quality deterioration (grey solutions); enhancement capex	
98	Addressing raw water quality deterioration (grey solutions); enhancement opex	
99	Addressing raw water quality deterioration (grey solutions); enhancement totex	
100	Addressing raw water quality deterioration (green solutions); enhancement capex	
101	Addressing raw water quality deterioration (green solutions); enhancement opex	
102	Addressing raw water quality deterioration (green solutions); enhancement totex	
103	Conditioning water to reduce plumbosolvency; enhancement capex	
104	Conditioning water to reduce plumbosolvency; enhancement opex	
105	Conditioning water to reduce plumbosolvency; enhancement totex	

106	Lead communication pipes replaced or relined; enhancement capex	
107	Lead communication pipes replaced or relined; enhancement opex	
108	Lead communication pipes replaced or relined; enhancement totex	
109	External lead supply pipes replaced or relined; enhancement capex	
110	External lead supply pipes replaced or relined; enhancement opex	
111	External lead supply pipes replaced or relined; enhancement totex	
112	Internal lead supply pipes replaced or relined; enhancement capex	
113	Internal lead supply pipes replaced or relined; enhancement opex	
114	Internal lead supply pipes replaced or relined; enhancement totex	
115	Other lead reduction related activity; enhancement capex	
116	Other lead reduction related activity; enhancement opex	
117	Other lead reduction related activity; enhancement totex	
	Water resilience and security	
118	Resilience; enhancement water capex	
119	Resilience; enhancement water opex	
120	Resilience; enhancement water totex	
121	Security - SEMD; enhancement water capex	
122	Security - SEMD; enhancement water opex	
123	Security - SEMD; enhancement water totex	
124	Security - Cyber; enhancement water capex	
125	Security - Cyber; enhancement water opex	
126	Security - Cyber; enhancement water totex	
	Net zero	
127	Greenhouse gas reduction (net zero); enhancement water capex	

128	Greenhouse gas reduction (net zero); enhancement water opex	
129	Greenhouse gas reduction (net zero); enhancement water totex	
	Other enhancement (Freeform lines - by exception)	
130	AMP7 Other enhancement - water capex	
131	Alternative delivery AMP 8 - water opex	
132	Reservoir safety, Emerging contaminants, Climate Change Adaptation; enhancement water capex	
133	Havant Thicket - payments to Portsmouth Water - opex	
134	Mains replacement Capex	
135	Mains replacement Opex	
136	WRMP mitigation capex	
137	WRMP mitigation opex	
138	Top down efficiency capex	
139	Top down efficiency opex	
140	Total other enhancement water expenditure	
	Total enhancement	
141	Total enhancement expenditure; water capex	
142	Total enhancement expenditure; water opex	
143	Total enhancement expenditure; water totex	

ADD3 - Third party costs by business unit for the wholesale water service; post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	Third party costs ~ price control (operating expenditure)	
1	Non potable water (which are not bulk supplies)	All figures come from an identical data set to CW11, adjusted for real price effects and the post-frontier efficiency shift.
2	Rechargeable opex - Fluoridation	
3	Rechargeable opex - Fire hydrant install & repair	
4	Rechargeable opex - third party damage	

5	Rechargeable opex - build over	
6	Other rechargeable opex	
7	Total third party water service costs ~ price control (operating expenditure)	
8	Diversions - s185 - opex	
9	Diversions - NRSWA - opex	
10	Diversions - other non-section 185 diversions - opex	
11	Total third party water service costs ~ price control (operating expenditure)	
	Third party costs ~ non price control (operating expenditure)	
12	Bulk supplies (water) opex	
13	Reservoir operating agreements opex	
14	Other excluded charge opex	
15	Total third party water service costs ~ non price control (operating expenditure)	
	Third party costs ~ price control (capital expenditure)	
16	Non potable water (which are not bulk supplies)	
17	Rechargeable capex - Fluoridation	
18	Rechargeable capex - Fire hydrant install & repair	
19	Rechargeable capex - third party damage	
20	Rechargeable capex - build over	
21	Other rechargeable capex	
22	Third party water price control capex excluding developer services	
23	Diversions - s185 - capex	
24	Diversions - NRSWA - capex	
25	Diversions - other non-section 185 diversions - capex	
26	Total third party water service costs ~ price control (capital expenditure)	
	Third party costs ~ non price control (capital expenditure)	

27	Bulk supplies (water) capex	
28	Reservoir operating agreements capex	
29	Other excluded charge capex	
30	Total third party water service costs ~ non price control (capital expenditure)	

ADD4 - Transitional expenditure - water resources and water network+; post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	EA/NRW environmental programme (WINEP/NEP)	
1	Biodiversity and conservation; (WINEP/NEP) water capex	All figures come from an identical data set to CW12, adjusted for real price effects and the post-frontier efficiency shift.
2	Biodiversity and conservation; (WINEP/NEP) water opex	
3	Biodiversity and conservation; (WINEP/NEP) water totex	
4	Eels/fish entrainment screens; (WINEP/NEP) water capex	

5	Eels/fish entrainment screens; (WINEP/NEP) water opex	
6	Eels/fish entrainment screens; (WINEP/NEP) water totex	
7	Eels/fish passes; (WINEP/NEP) water capex	
8	Eels/fish passes; (WINEP/NEP) water opex	
9	Eels/fish passes; (WINEP/NEP) water totex	
10	Invasive Non Native Species; (WINEP/NEP) water capex	
11	Invasive Non Native Species; (WINEP/NEP) water opex	
12	Invasive Non Native Species; (WINEP/NEP) water totex	
13	Drinking Water Protected Areas; (WINEP/NEP) water capex	
14	Drinking Water Protected Areas; (WINEP/NEP) water opex	
15	Drinking Water Protected Areas; (WINEP/NEP) water totex	
16	Water Framework Directive; (WINEP/NEP) water capex	
17	Water Framework Directive; (WINEP/NEP) water opex	
18	Water Framework Directive; (WINEP/NEP) water totex	
19	Wetland creation; (WINEP/NEP) water capex	
20	Wetland creation; (WINEP/NEP) water opex	
21	Wetland creation; (WINEP/NEP) water totex	
22	Trade effluent discharge flow monitoring; (WINEP/NEP) water capex	
23	Trade effluent discharge flow monitoring; (WINEP/NEP) water opex	
24	Trade effluent discharge flow monitoring; (WINEP/NEP) water totex	
25	25 year environment plan; (WINEP/NEP) water capex	
26	25 year environment plan; (WINEP/NEP) water opex	
27	25 year environment plan; (WINEP/NEP) water totex	
28	Investigations; (WINEP/NEP) - desk based study only water capex	
29	Investigations; (WINEP/NEP) - desk based study only water opex	

30	Investigations; (WINEP/NEP) - desk based study only water totex	
31	Investigations; (WINEP/NEP) - survey, monitoring or simple modelling water capex	
32	Investigations; (WINEP/NEP) - survey, monitoring or simple modelling water opex	
33	Investigations; (WINEP/NEP) - survey, monitoring or simple modelling water totex	
34	Investigations; (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling water capex	
35	Investigations; (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling water opex	
36	Investigations; (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling water totex	
37	Investigations total; (WINEP/NEP) water capex	
38	Investigations total; (WINEP/NEP) water opex	
39	Investigations total; (WINEP/NEP) water totex	
40	Total environmental programme expenditure; (WINEP/NEP) water totex	
	Supply-demand balance	
41	Supply-side improvements delivering benefits in 2025-2030; SDB capex	
42	Supply-side improvements delivering benefits in 2025-2030; SDB opex	
43	Supply-side improvements delivering benefits in 2025-2030; SDB totex	
44	Demand-side improvements delivering benefits in 2025-2030 (excl leakage and metering); SDB capex	
45	Demand-side improvements delivering benefits in 2025-2030 (excl leakage and metering); SDB opex	
46	Demand-side improvements delivering benefits in 2025-2030 (excl leakage and metering); SDB totex	
47	Leakage improvements delivering benefits in 2025-2030; SDB capex	
48	Leakage improvements delivering benefits in 2025-2030; SDB opex	
49	Leakage improvements delivering benefits in 2025-2030; SDB totex	

50	Internal interconnectors delivering benefits in 2025-2030; SDB capex	
51	Internal interconnectors delivering benefits in 2025-2030; SDB opex	
52	Internal interconnectors delivering benefits in 2025-2030; SDB totex	
53	Supply demand balance improvements delivering benefits starting from 2031; SDB capex	
54	Supply demand balance improvements delivering benefits starting from 2031; SDB opex	
55	Supply demand balance improvements delivering benefits starting from 2031; SDB totex	
56	Total supply demand expenditure; SDB totex	
	Metering	
57	New meters requested by existing customers (optants); metering capex	
58	New meters requested by existing customers (optants); metering opex	
59	New meters requested by existing customers (optants); metering totex	
60	New meters introduced by companies for existing customers; metering capex	
61	New meters introduced by companies for existing customers; metering opex	
62	New meters introduced by companies for existing customers; metering totex	
63	New meters for existing customers - business; metering capex	
64	New meters for existing customers - business; metering opex	
65	New meters for existing customers - business; metering totex	
66	Replacement of existing basic meters with AMR meters for residential customers; metering capex	
67	Replacement of existing basic meters with AMR meters for residential customers; metering opex	
68	Replacement of existing basic meters with AMR meters for residential customers; metering totex	
69	Replacement of existing basic meters with AMI meters for residential customers; metering capex	

70	Replacement of existing basic meters with AMI meters for residential customers; metering opex	
71	Replacement of existing basic meters with AMI meters for residential customers; metering totex	
72	Replacement of existing AMR meters with AMI meters for residential customers; metering capex	
73	Replacement of existing AMR meters with AMI meters for residential customers; metering opex	
74	Replacement of existing AMR meters with AMI meters for residential customers; metering totex	
75	Replacement of existing basic meters with AMR meters for business customers; metering capex	
76	Replacement of existing basic meters with AMR meters for business customers; metering opex	
77	Replacement of existing basic meters with AMR meters for business customers; metering totex	
78	Replacement of existing basic meters with AMI meters for business customers; metering capex	
79	Replacement of existing basic meters with AMI meters for business customers; metering opex	
80	Replacement of existing basic meters with AMI meters for business customers; metering totex	
81	Replacement of existing AMR meters with AMI meters for business customers; metering capex	
82	Replacement of existing AMR meters with AMI meters for business customers; metering opex	
83	Replacement of existing AMR meters with AMI meters for business customers; metering totex	
84	Smart meter infrastructure; metering capex	
85	Smart meter infrastructure; metering opex	
86	Smart meter infrastructure; metering totex	
87	Total metering expenditure; metering totex	
	Water quality improvements	
88	Improvements to taste, odour and colour (grey solutions); enhancement capex	
89	Improvements to taste, odour and colour (grey solutions); enhancement opex	

90	Improvements to taste, odour and colour (grey solutions); enhancement totex	
91	Improvements to taste, odour and colour (green solutions); enhancement capex	
92	Improvements to taste, odour and colour (green solutions); enhancement opex	
93	Improvements to taste, odour and colour (green solutions); enhancement totex	
94	Addressing raw water quality deterioration (grey solutions); enhancement capex	
95	Addressing raw water quality deterioration (grey solutions); enhancement opex	
96	Addressing raw water quality deterioration (grey solutions); ; enhancement totex	
97	Addressing raw water quality deterioration (green solutions); enhancement capex	
98	Addressing raw water quality deterioration (green solutions); enhancement opex	
99	Addressing raw water quality deterioration (green solutions); enhancement totex	
100	Conditioning water to reduce plumbosolvency; enhancement capex	
101	Conditioning water to reduce plumbosolvency; enhancement opex	
102	Conditioning water to reduce plumbosolvency; enhancement totex	
103	Lead communication pipes replaced or relined; enhancement capex	
104	Lead communication pipes replaced or relined; enhancement opex	
105	Lead communication pipes replaced or relined; enhancement totex	
106	External lead supply pipes replaced or relined; enhancement capex	
107	External lead supply pipes replaced or relined; enhancement opex	
108	External lead supply pipes replaced or relined; enhancement totex	
109	Internal lead supply pipes replaced or relined; enhancement capex	

110	Internal lead supply pipes replaced or relined; enhancement opex	
111	Internal lead supply pipes replaced or relined; enhancement totex	
112	Other lead reduction related activity; enhancement capex	
113	Other lead reduction related activity; enhancement opex	
114	Other lead reduction related activity; enhancement totex	
	Water resilience and security	
115	Resilience; enhancement water capex	
116	Resilience; enhancement water opex	
117	Resilience; enhancement water totex	
118	Security - SEMD; enhancement water capex	
119	Security - SEMD; enhancement water opex	
120	Security - SEMD; enhancement water totex	
121	Security - Cyber; enhancement water capex	
122	Security - Cyber; enhancement water opex	
123	Security - Cyber; enhancement water totex	
	Net zero	
124	Greenhouse gas reduction (net zero); enhancement water capex	
125	Greenhouse gas reduction (net zero); enhancement water opex	
126	Greenhouse gas reduction (net zero); enhancement water totex	
	Other enhancement (Freeform lines - by exception)	
127	Additional line 1; enhancement water capex	
128	Additional line 1; enhancement water opex	
129	Additional line 2; enhancement water capex	
130	Additional line 2; enhancement water opex	
131	Additional line 3; enhancement water capex	
132	Additional line 3; enhancement water opex	
133	Additional line 4; enhancement water capex	

134	Additional line 4; enhancement water opex	
135	Additional line 5; enhancement water capex	
136	Additional line 5; enhancement water opex	
137	Total other enhancement water expenditure	
	Total transitional expenditure	
138	Total transitional expenditure; water capex	
139	Total transitional expenditure; water opex	
140	Total transitional expenditure; water totex	

ADD5 - Accelerated programme expenditure - water resources and water network plus; post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	General comment	There is no accelerated expenditure in water resources and water network plus

ADD6 - Base expenditure analysis - wastewater network + and bioresources; post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	Operating expenditure	
1	Power	All figures come from an identical data set to CWW2, adjusted for real price effects and the post-frontier efficiency shift.
2	Income treated as negative expenditure	
3	Bulk Supply/Bulk discharge	
4	Renewals expensed in year (infrastructure)	

5	Renewals expensed in year (non-infrastructure)	
6	Other operating expenditure	
7	Local authority and Cumulo rates	
	Service Charges	
8	Canal & River Trust abstraction charges/ discharge consents	
9	EA / NRW abstraction charges/ discharge consents	
10	Other abstraction charges/ discharge consents	
	Location specific costs & obligations	
11	Costs associated with Traffic Management Act	
12	Costs associated with lane rental schemes	
13	Cost associated with the Industrial Emissions Directive	
14	Total base operating expenditure	
	Capital expenditure	
15	Maintaining the long term capability of the assets - infra	
16	Maintaining the long term capability of the assets - non-infra	
17	Total base capital expenditure	
	Traffic Management Act	
18	Projects incurring costs associated with Traffic Management Act	

ADD7 - Enhancement expenditure - wastewater network+ and bioresources; post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	EA/NRW environmental programme wastewater (WINEP/NEP)	
1	Event duration monitoring at intermittent discharges (WINEP/NEP) wastewater capex	All figures come from an identical data set to CWW3, adjusted for real price effects and the post-frontier efficiency shift.
2	Event duration monitoring at intermittent discharges (WINEP/NEP) wastewater opex	
3	Event duration monitoring at intermittent discharges (WINEP/NEP) wastewater totex	
4	Flow monitoring at sewage treatment works; (WINEP/NEP) wastewater capex	
5	Flow monitoring at sewage treatment works; (WINEP/NEP) wastewater opex	
6	Flow monitoring at sewage treatment works; (WINEP/NEP) wastewater totex	
7	Continuous river water quality monitoring (WINEP/NEP) wastewater capex	
8	Continuous river water quality monitoring (WINEP/NEP) wastewater opex	
9	Continuous river water quality monitoring (WINEP/NEP) wastewater totex	
10	MCERTs monitoring at emergency sewage pumping station overflows (WINEP/NEP) wastewater capex	
11	MCERTs monitoring at emergency sewage pumping station overflows (WINEP/NEP) wastewater opex	
12	MCERTs monitoring at emergency sewage pumping station overflows (WINEP/NEP) wastewater totex	
13	Increase flow to full treatment; (WINEP/NEP) wastewater capex	

14	Increase flow to full treatment; (WINEP/NEP) wastewater opex	
15	Increase flow to full treatment; (WINEP/NEP) wastewater totex	
16	Increase storm tank capacity at STWs - grey solution; (WINEP/NEP) wastewater capex	
17	Increase storm tank capacity at STWs - grey solution; (WINEP/NEP) wastewater opex	
18	Increase storm tank capacity at STWs - grey solution; (WINEP/NEP) wastewater totex	
19	Increase storm system attenuation / treatment on a STW - green solution; (WINEP/NEP) wastewater capex	
20	Increase storm system attenuation / treatment on a STW - green solution; (WINEP/NEP) wastewater opex	
21	Increase storm system attenuation / treatment on a STW - green solution; (WINEP/NEP) wastewater totex	
22	Storage schemes to reduce spill frequency at CSOs etc - grey solution; (WINEP/NEP) wastewater capex	
23	Storage schemes to reduce spill frequency at CSOs etc - grey solution; (WINEP/NEP) wastewater opex	
24	Storage schemes to reduce spill frequency at CSOs etc - grey solution; (WINEP/NEP) wastewater totex	
25	Storage to reduce spill frequency at CSOs etc - green solution; (WINEP/NEP) wastewater capex	
26	Storage to reduce spill frequency at CSOs etc - green solution; (WINEP/NEP) wastewater opex	

27	Storage to reduce spill frequency at CSOs etc - green solution; (WINEP/NEP) wastewater totex	
28	Storm overflow - discharge relocation (WINEP/NEP) wastewater capex	
29	Storm overflow - discharge relocation (WINEP/NEP) wastewater opex	
30	Storm overflow - discharge relocation (WINEP/NEP) wastewater totex	
31	Storm overflow - increase in combined sewer / trunk sewer capacity; (WINEP/NEP) wastewater capex	
32	Storm overflow - increase in combined sewer / trunk sewer capacity; (WINEP/NEP) wastewater opex	
33	Storm overflow - increase in combined sewer / trunk sewer capacity; (WINEP/NEP) wastewater totex	
34	Storm overflow - sustainable drainage / attenuation in the network; (WINEP/NEP) wastewater capex	
35	Storm overflow - sustainable drainage / attenuation in the network; (WINEP/NEP) wastewater opex	
36	Storm overflow - sustainable drainage / attenuation in the network; (WINEP/NEP) wastewater totex	
37	Storm overflow - source surface water separation; (WINEP/NEP) wastewater capex	
38	Storm overflow - source surface water separation; (WINEP/NEP) wastewater opex	
39	Storm overflow - source surface water separation; (WINEP/NEP) wastewater totex	
40	Storm overflow - infiltration management: (WINEP/NEP) wastewater capex	

41	Storm overflow - infiltration management: (WINEP/NEP) wastewater opex	
42	Storm overflow - infiltration management: (WINEP/NEP) wastewater totex	
43	Storm overflow - sewer flow management and control; (WINEP/NEP) wastewater capex	
44	Storm overflow - sewer flow management and control; (WINEP/NEP) wastewater opex	
45	Storm overflow - sewer flow management and control; (WINEP/NEP) wastewater totex	
46	Storm overflow - new / upgraded screens (WINEP/NEP) wastewater capex	
47	Storm overflow - new / upgraded screens (WINEP/NEP) wastewater opex	
48	Storm overflow - new / upgraded screens (WINEP/NEP) wastewater totex	
49	Treatment for chemical removal (WINEP/NEP) wastewater capex	
50	Treatment for chemical removal (WINEP/NEP) wastewater opex	
51	Treatment for chemical removal (WINEP/NEP) wastewater totex	
52	Chemicals and emerging contaminants monitoring, investigations, options appraisals; (WINEP/NEP) wastewater capex	
53	Chemicals and emerging contaminants monitoring, investigations, options appraisals; (WINEP/NEP) wastewater opex	
54	Chemicals and emerging contaminants monitoring, investigations, options appraisals; (WINEP/NEP) wastewater totex	

55	Treatment for total nitrogen removal (chemical) (WINEP/NEP) wastewater capex	
56	Treatment for total nitrogen removal (chemical) (WINEP/NEP) wastewater opex	
57	Treatment for total nitrogen removal (chemical) (WINEP/NEP) wastewater totex	
58	Treatment for total nitrogen removal (biological) (WINEP/NEP) wastewater capex	
59	Treatment for total nitrogen removal (biological) (WINEP/NEP) wastewater opex	
60	Treatment for total nitrogen removal (biological) (WINEP/NEP) wastewater totex	
61	Nitrogen technically achievable limit monitoring, investigation or options appraisal; (WINEP/NEP) wastewater capex	
62	Nitrogen technically achievable limit monitoring, investigation or options appraisal; (WINEP/NEP) wastewater opex	
63	Nitrogen technically achievable limit monitoring, investigation or options appraisal; (WINEP/NEP) wastewater totex	
64	Treatment for phosphorus removal (chemical) (WINEP/NEP) wastewater capex	
65	Treatment for phosphorus removal (chemical) (WINEP/NEP) wastewater opex	
66	Treatment for phosphorus removal (chemical) (WINEP/NEP) wastewater totex	

67	Treatment for phosphorus removal (biological) (WINEP/NEP) wastewater capex	
68	Treatment for phosphorus removal (biological) (WINEP/NEP) wastewater opex	
69	Treatment for phosphorus removal (biological) (WINEP/NEP) wastewater totex	
70	Treatment for nutrients (N or P) and / or sanitary determinands, nature based solution (WINEP/NEP) wastewater capex	
71	Treatment for nutrients (N or P) and / or sanitary determinands, nature based solution (WINEP/NEP) wastewater opex	
72	Treatment for nutrients (N or P) and / or sanitary determinands, nature based solution (WINEP/NEP) wastewater totex	
73	Treatment for tightening of sanitary parameters (WINEP/NEP) wastewater capex	
74	Treatment for tightening of sanitary parameters (WINEP/NEP) wastewater opex	
75	Treatment for tightening of sanitary parameters (WINEP/NEP) wastewater totex	
76	Catchment management - chemicals source control; (WINEP/NEP) wastewater capex	
77	Catchment management - chemicals source control; (WINEP/NEP) wastewater opex	
78	Catchment management - chemicals source control; (WINEP/NEP) wastewater totex	
79	Catchment management - nutrient balancing; (WINEP/NEP) wastewater capex	

80	Catchment management - nutrient balancing; (WINEP/NEP) wastewater opex	
81	Catchment management - nutrient balancing; (WINEP/NEP) wastewater totex	
82	Catchment management - catchment permitting; (WINEP/NEP) wastewater capex	
83	Catchment management - catchment permitting; (WINEP/NEP) wastewater opex	
84	Catchment management - catchment permitting; (WINEP/NEP) wastewater totex	
85	Catchment management - habitat restoration; (WINEP/NEP) wastewater capex	
86	Catchment management - habitat restoration; (WINEP/NEP) wastewater opex	
87	Catchment management - habitat restoration; (WINEP/NEP) wastewater totex	
88	Microbiological treatment - bathing waters, coastal and inland (WINEP/NEP) wastewater capex	
89	Microbiological treatment - bathing waters, coastal and inland (WINEP/NEP) wastewater opex	
90	Microbiological treatment - bathing waters, coastal and inland (WINEP/NEP) wastewater totex	
91	Septic tank replacements - treatment solution; (WINEP/NEP) wastewater capex	
92	Septic tank replacements - treatment solution; (WINEP/NEP) wastewater opex	

93	Septic tank replacements - treatment solution; (WINEP/NEP) wastewater totex	
94	Septic tank replacements - flow diversion; (WINEP/NEP) wastewater capex	
95	Septic tank replacements - flow diversion; (WINEP/NEP) wastewater opex	
96	Septic tank replacements - flow diversion; (WINEP/NEP) wastewater totex	
97	Fish outfall screens; (WINEP/NEP) wastewater capex	
98	Fish outfall screens; (WINEP/NEP) wastewater opex	
99	Fish outfall screens; (WINEP/NEP) wastewater totex	
100	25 year environment plan; (WINEP/NEP) wastewater capex	
101	25 year environment plan; (WINEP/NEP) wastewater opex	
102	25 year environment plan; (WINEP/NEP) wastewater totex	
103	Investigations, other (WINEP/NEP) - desk-based studies only wastewater capex	
104	Investigations, other (WINEP/NEP) - desk-based studies only wastewater opex	
105	Investigations, other (WINEP/NEP) - desk-based studies only wastewater totex	
106	Investigations, other (WINEP/NEP) - survey, monitoring or simple modelling wastewater capex	
107	Investigations, other (WINEP/NEP) - survey, monitoring or simple modelling wastewater opex	

108	Investigations, other (WINEP/NEP) - survey, monitoring or simple modelling wastewater totex	
109	Investigations, other (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling wastewater capex	
110	Investigations, other (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling wastewater opex	
111	Investigations, other (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling wastewater totex	
112	Investigations, total; (WINEP/NEP) wastewater capex	
113	Investigations, total; (WINEP/NEP) wastewater opex	
114	Investigations, total; (WINEP/NEP) wastewater totex	
115	Contribution to third party schemes under WINEP/NEP only (not covered elsewhere) wastewater capex	
116	Contribution to third party schemes under WINEP/NEP only (not covered elsewhere) wastewater opex	
117	Contribution to third party schemes under WINEP/NEP only (not covered elsewhere) wastewater totex	
118	River connectivity (e.g. for fish passage); (WINEP/NEP) wastewater capex	
119	River connectivity (e.g. for fish passage); (WINEP/NEP) wastewater opex	
120	River connectivity (e.g. for fish passage); (WINEP/NEP) wastewater totex	

121	Restoration management (marine conservation zones etc) (WINEP/NEP) wastewater capex	
122	Restoration management (marine conservation zones etc) (WINEP/NEP) wastewater opex	
123	Restoration management (marine conservation zones etc) (WINEP/NEP) wastewater totex	
124	Access and amenity for WINEP/NEP only (not covered elsewhere) wastewater capex	
125	Access and amenity for WINEP/NEP only (not covered elsewhere) wastewater opex	
126	Access and amenity for WINEP/NEP only (not covered elsewhere) wastewater totex	
127	Advanced WINEP (not covered elsewhere) wastewater capex	
128	Advanced WINEP (not covered elsewhere) wastewater opex	
129	Advanced WINEP (not covered elsewhere) wastewater totex	
130	Total environmental programme expenditure; (WINEP/NEP) wastewater totex	
	EA/NRW environmental programme bioresources (WINEP/NEP)	
131	Sludge storage -Tanks (pre-thickening, pre-dewatering or untreated) (WINEP/NEP) capex	
132	Sludge storage -Tanks (pre-thickening, pre-dewatering or untreated); (WINEP/NEP) opex	
133	Sludge storage -Tanks (pre-thickening, pre-dewatering or untreated); (WINEP/NEP) totex	

134	Sludge storage -Tanks (thickened/dewatered or treated); (WINEP/NEP) capex	
135	Sludge storage - Tanks (thickened/dewatered or treated); (WINEP/NEP) opex	
136	Sludge storage - Tanks (thickened/dewatered or treated); (WINEP/NEP) totex	
137	Sludge storage - Cake pads / bays / other; (WINEP/NEP) bioresources capex	
138	Sludge storage - Cake pads / bays / other; (WINEP/NEP) bioresources opex	
139	Sludge storage - Cake pads / bays /other; (WINEP/NEP) bioresources totex	
140	Sludge treatment - Anaerobic digestion and/or advanced anaerobic digestion; (WINEP/NEP) bioresources capex	
141	Sludge treatment - Anaerobic digestion and/or advanced anaerobic digestion; (WINEP/NEP) bioresources opex	
142	Sludge treatment - Anaerobic digestion and/or advanced anaerobic digestion; (WINEP/NEP) bioresources totex	
143	Sludge treatment - Thickening and/or dewatering; (WINEP/NEP) capex	
144	Sludge treatment -Thickening and/or dewatering; (WINEP/NEP) opex	
145	Sludge treatment - Thickening and/or dewatering; (WINEP/NEP) totex	
146	Sludge treatment - Other; (WINEP/NEP) bioresources capex	
147	Sludge treatment - Other; (WINEP/NEP) bioresources opex	
148	Sludge treatment -Other; (WINEP/NEP) bioresources totex	
149	Sludge investigations and monitoring (WINEP/NEP) bioresources capex	

150	Sludge investigations and monitoring (WINEP/NEP) bioresources opex	
151	Sludge investigations and monitoring (WINEP/NEP) bioresources totex	
152	Total environmental programme expenditure; (WINEP/NEP) bioresources totex	
	Other enhancement	
153	Growth at sewage treatment works (excluding sludge treatment); enhancement capex	
154	Growth at sewage treatment works (excluding sludge treatment); enhancement opex	
155	Growth at sewage treatment works (excluding sludge treatment); enhancement totex	
156	Reduce flooding risk for properties; enhancement capex	
157	Reduce flooding risk for properties; enhancement opex	
158	Reduce flooding risk for properties; enhancement totex	
159	First time sewerage; enhancement capex	
160	First time sewerage; enhancement opex	
161	First time sewerage; enhancement totex	
162	Sludge enhancement (growth); enhancement capex	
163	Sludge enhancement (growth); enhancement opex	
164	Sludge enhancement (growth); enhancement totex	
165	Odour and other nuisance; enhancement capex	

166	Odour and other nuisance; enhancement opex	
167	Odour and other nuisance; enhancement totex	
168	Resilience; enhancement wastewater capex	
169	Resilience; enhancement wastewater opex	
170	Resilience; enhancement wastewater totex	
171	Security - SEMD; enhancement wastewater capex	
172	Security - SEMD; enhancement wastewater opex	
173	Security - SEMD; enhancement wastewater totex	
174	Security - cyber; enhancement wastewater capex	
175	Security - cyber; enhancement wastewater opex	
176	Security - cyber; enhancement wastewater totex	
177	Greenhouse gas reduction (net zero); enhancement wastewater capex	
178	Greenhouse gas reduction (net zero); enhancement wastewater opex	
179	Greenhouse gas reduction (net zero); enhancement wastewater totex	
180	Total other enhancement wastewater/bioresources expenditure	
	Other enhancement (Freeform lines - by exception)	
181	Additional line 1 - AMP7 Other enhancement - waste capex	
182	Additional line 1 - Alternative delivery AMP 8 - waste opex	
183	Additional line - Top down efficiency Capex	
184	Additional line - Top down efficiency Opex	

185	Additional line 3; enhancement wastewater/bioresources capex	
186	Additional line 3; enhancement wastewater/bioresources opex	
187	Additional line 4; enhancement wastewater/bioresources capex	
188	Additional line 4; enhancement wastewater/bioresources opex	
189	Additional line 5; enhancement wastewater/bioresources capex	
190	Additional line 5; enhancement wastewater/bioresources opex	
191	Total other enhancement freeform lines wastewater/bioresources expenditure	
192	Total other enhancement wastewater/bioresources expenditure	
	Total enhancement	
193	Total enhancement expenditure; wastewater/bioresources capex	
194	Total enhancement expenditure; wastewater/bioresources opex	
195	Total enhancement expenditure; wastewater/bioresources totex	

ADD8 - Third party costs by business unit for the wholesale wastewater service; post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	Third party costs ~ price control (operating expenditure)	All figures come from an identical data set to CWW11, adjusted for real price effects and the post-frontier efficiency shift.
1	Rechargeable opex - third party damage	
2	Rechargeable opex - build over	
3	Other rechargeable opex	
4	Third party wastewater price control opex excluding developer services	
5	Diversions - NRSWA - opex	
6	Diversions - other non-section 185 diversions - opex	
7	Total third party wastewater service costs ~ price control (operating expenditure)	
	Third party costs ~ non price control (operating expenditure)	
8	Bulk supplies (wastewater) opex	
9	Reception and disposal of waste opex	
10	Other excluded charge opex	
11	Third party wastewater npc opex excluding developer services	
12	Developer services non-s185 diversions opex	
13	Total third party wastewater service costs ~ non price control (operating expenditure)	
	Third party costs ~ price control (capital expenditure)	
14	Rechargeable capex - third party damage	
15	Rechargeable capex - build over	
16	Other rechargeable capex	

17	Third party wastewater price control capex excluding developer services	
18	Diversions - NRSWA - capex	
19	Diversions - other non-section 185 diversions - capex	
20	Total third party wastewater service costs ~ price control (capital expenditure)	
	Third party costs ~ non price control (capital expenditure)	
21	Bulk supplies (wastewater) capex	
22	Reception and disposal of waste capex	
23	Other excluded charge capex	
24	Third party wastewater npc capex excluding developer services	
25	Developer services non-s185 diversions capex	
26	Total third party wastewater service costs ~ non price control (capital expenditure)	

ADD9 - Transitional expenditure - wastewater network+; post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	EA/NRW environmental programme wastewater (WINEP/NEP)	
1	Event duration monitoring at intermittent discharges (WINEP/NEP) wastewater capex	All figures come from an identical data set to CWW12, adjusted for real price effects and the post-frontier efficiency shift.
2	Event duration monitoring at intermittent discharges (WINEP/NEP) wastewater opex	
3	Event duration monitoring at intermittent discharges (WINEP/NEP) wastewater totex	
4	Flow monitoring at sewage treatment works; (WINEP/NEP) wastewater capex	
5	Flow monitoring at sewage treatment works; (WINEP/NEP) wastewater opex	
6	Flow monitoring at sewage treatment works; (WINEP/NEP) wastewater totex	
7	Continuous river water quality monitoring (WINEP/NEP) wastewater capex	
8	Continuous river water quality monitoring (WINEP/NEP) wastewater opex	
9	Continuous river water quality monitoring (WINEP/NEP) wastewater totex	
10	MCERTs monitoring at emergency sewage pumping station overflows (WINEP/NEP) wastewater capex	
11	MCERTs monitoring at emergency sewage pumping station overflows (WINEP/NEP) wastewater opex	
12	MCERTs monitoring at emergency sewage pumping station overflows (WINEP/NEP) wastewater totex	
13	Increase flow to full treatment; (WINEP/NEP) wastewater capex	
14	Increase flow to full treatment; (WINEP/NEP) wastewater opex	
15	Increase flow to full treatment; (WINEP/NEP) wastewater totex	
16	Increase storm tank capacity at STWs - grey solution; (WINEP/NEP) wastewater capex	
17	Increase storm tank capacity at STWs - grey solution; (WINEP/NEP) wastewater opex	

18	Increase storm tank capacity at STWs - grey solution; (WINEP/NEP) wastewater totex	
19	Increase storm system attenuation / treatment on a STW - green solution; (WINEP/NEP) wastewater capex	
20	Increase storm system attenuation / treatment on a STW - green solution; (WINEP/NEP) wastewater opex	
21	Increase storm system attenuation / treatment on a STW - green solution; (WINEP/NEP) wastewater totex	
22	Storage schemes to reduce spill frequency at CSOs etc - grey solution; (WINEP/NEP) wastewater capex	
23	Storage schemes to reduce spill frequency at CSOs etc - grey solution; (WINEP/NEP) wastewater opex	
24	Storage schemes to reduce spill frequency at CSOs etc - grey solution; (WINEP/NEP) wastewater totex	
25	Storage to reduce spill frequency at CSOs etc - green solution; (WINEP/NEP) wastewater capex	
26	Storage to reduce spill frequency at CSOs etc - green solution; (WINEP/NEP) wastewater opex	
27	Storage to reduce spill frequency at CSOs etc - green solution; (WINEP/NEP) wastewater totex	
28	Storm overflow - discharge relocation (WINEP/NEP) wastewater capex	
29	Storm overflow - discharge relocation (WINEP/NEP) wastewater opex	
30	Storm overflow - discharge relocation (WINEP/NEP) wastewater totex	
31	Storm overflow - increase in combined sewer / trunk sewer capacity; (WINEP/NEP) wastewater capex	
32	Storm overflow - increase in combined sewer / trunk sewer capacity; (WINEP/NEP) wastewater opex	
33	Storm overflow - increase in combined sewer / trunk sewer capacity; (WINEP/NEP) wastewater totex	
34	Storm overflow - sustainable drainage / attenuation in the network; (WINEP/NEP) wastewater capex	
35	Storm overflow - sustainable drainage / attenuation in the network; (WINEP/NEP) wastewater opex	
36	Storm overflow - sustainable drainage / attenuation in the network; (WINEP/NEP) wastewater totex	
37	Storm overflow - source surface water separation; (WINEP/NEP) wastewater capex	

38	Storm overflow - source surface water separation; (WINEP/NEP) wastewater opex	
39	Storm overflow - source surface water separation; (WINEP/NEP) wastewater totex	
40	Storm overflow - infiltration management: (WINEP/NEP) wastewater capex	
41	Storm overflow - infiltration management: (WINEP/NEP) wastewater opex	
42	Storm overflow - infiltration management: (WINEP/NEP) wastewater totex	
43	Storm overflow - sewer flow management and control; (WINEP/NEP) wastewater capex	
44	Storm overflow - sewer flow management and control; (WINEP/NEP) wastewater opex	
45	Storm overflow - sewer flow management and control; (WINEP/NEP) wastewater totex	
46	Storm overflow - new / upgraded screens (WINEP/NEP) wastewater capex	
47	Storm overflow - new / upgraded screens (WINEP/NEP) wastewater opex	
48	Storm overflow - new / upgraded screens (WINEP/NEP) wastewater totex	
49	Treatment for chemical removal (WINEP/NEP) wastewater capex	
50	Treatment for chemical removal (WINEP/NEP) wastewater opex	
51	Treatment for chemical removal (WINEP/NEP) wastewater totex	
52	Chemicals and emerging contaminants monitoring, investigations, options appraisals; (WINEP/NEP) wastewater capex	
53	Chemicals and emerging contaminants monitoring, investigations, options appraisals; (WINEP/NEP) wastewater opex	
54	Chemicals and emerging contaminants monitoring, investigations, options appraisals; (WINEP/NEP) wastewater totex	
55	Treatment for total nitrogen removal (chemical) (WINEP/NEP) wastewater capex	

56	Treatment for total nitrogen removal (chemical) (WINEP/NEP) wastewater opex	
57	Treatment for total nitrogen removal (chemical) (WINEP/NEP) wastewater totex	
58	Treatment for total nitrogen removal (biological) (WINEP/NEP) wastewater capex	
59	Treatment for total nitrogen removal (biological) (WINEP/NEP) wastewater opex	
60	Treatment for total nitrogen removal (biological) (WINEP/NEP) wastewater totex	
61	Nitrogen technically achievable limit monitoring, investigation or options appraisal; (WINEP/NEP) wastewater capex	
62	Nitrogen technically achievable limit monitoring, investigation or options appraisal; (WINEP/NEP) wastewater opex	
63	Nitrogen technically achievable limit monitoring, investigation or options appraisal; (WINEP/NEP) wastewater totex	
64	Treatment for phosphorus removal (chemical) (WINEP/NEP) wastewater capex	
65	Treatment for phosphorus removal (chemical) (WINEP/NEP) wastewater opex	
66	Treatment for phosphorus removal (chemical) (WINEP/NEP) wastewater totex	
67	Treatment for phosphorus removal (biological) (WINEP/NEP) wastewater capex	
68	Treatment for phosphorus removal (biological) (WINEP/NEP) wastewater opex	
69	Treatment for phosphorus removal (biological) (WINEP/NEP) wastewater totex	
70	Treatment for nutrients (N or P) and / or sanitary determinands, nature based solution (WINEP/NEP) wastewater capex	
71	Treatment for nutrients (N or P) and / or sanitary determinands, nature based solution (WINEP/NEP) wastewater opex	
72	Treatment for nutrients (N or P) and / or sanitary determinands, nature based solution (WINEP/NEP) wastewater totex	
73	Treatment for tightening of sanitary parameters (WINEP/NEP) wastewater capex	

74	Treatment for tightening of sanitary parameters (WINEP/NEP) wastewater opex	
75	Treatment for tightening of sanitary parameters (WINEP/NEP) wastewater totex	
76	Catchment management - chemicals source control; (WINEP/NEP) wastewater capex	
77	Catchment management - chemicals source control; (WINEP/NEP) wastewater opex	
78	Catchment management - chemicals source control; (WINEP/NEP) wastewater totex	
79	Catchment management - nutrient balancing; (WINEP/NEP) wastewater capex	
80	Catchment management - nutrient balancing; (WINEP/NEP) wastewater opex	
81	Catchment management - nutrient balancing; (WINEP/NEP) wastewater totex	
82	Catchment management - catchment permitting; (WINEP/NEP) wastewater capex	
83	Catchment management - catchment permitting; (WINEP/NEP) wastewater opex	
84	Catchment management - catchment permitting; (WINEP/NEP) wastewater totex	
85	Catchment management - habitat restoration; (WINEP/NEP) wastewater capex	
86	Catchment management - habitat restoration; (WINEP/NEP) wastewater opex	
87	Catchment management - habitat restoration; (WINEP/NEP) wastewater totex	
88	Microbiological treatment - bathing waters, coastal and inland (WINEP/NEP) wastewater capex	
89	Microbiological treatment - bathing waters, coastal and inland (WINEP/NEP) wastewater opex	
90	Microbiological treatment - bathing waters, coastal and inland (WINEP/NEP) wastewater totex	
91	Septic tank replacements - treatment solution; (WINEP/NEP) wastewater capex	
92	Septic tank replacements - treatment solution; (WINEP/NEP) wastewater opex	
93	Septic tank replacements - treatment solution; (WINEP/NEP) wastewater totex	

94	Septic tank replacements - flow diversion; (WINEP/NEP) wastewater capex	
95	Septic tank replacements - flow diversion; (WINEP/NEP) wastewater opex	
96	Septic tank replacements - flow diversion; (WINEP/NEP) wastewater totex	
97	Fish outfall screens; (WINEP/NEP) wastewater capex	
98	Fish outfall screens; (WINEP/NEP) wastewater opex	
99	Fish outfall screens; (WINEP/NEP) wastewater totex	
100	25 year environment plan; (WINEP/NEP) wastewater capex	
101	25 year environment plan; (WINEP/NEP) wastewater opex	
102	25 year environment plan; (WINEP/NEP) wastewater totex	
103	Investigations, other (WINEP/NEP) - desk-based studies only wastewater capex	
104	Investigations, other (WINEP/NEP) - desk-based studies only wastewater opex	
105	Investigations, other (WINEP/NEP) - desk-based studies only wastewater totex	
106	Investigations, other (WINEP/NEP) - survey, monitoring or simple modelling wastewater capex	
107	Investigations, other (WINEP/NEP) - survey, monitoring or simple modelling wastewater opex	
108	Investigations, other (WINEP/NEP) - survey, monitoring or simple modelling wastewater totex	
109	Investigations, other (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling wastewater capex	
110	Investigations, other (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling wastewater opex	
111	Investigations, other (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling wastewater totex	
112	Investigations, total; (WINEP/NEP) wastewater capex	
113	Investigations, total; (WINEP/NEP) wastewater opex	

114	Investigations, total; (WINEP/NEP) wastewater totex	
115	Contribution to third party schemes under WINEP/NEP only (not covered elsewhere) wastewater capex	
116	Contribution to third party schemes under WINEP/NEP only (not covered elsewhere) wastewater opex	
117	Contribution to third party schemes under WINEP/NEP only (not covered elsewhere) wastewater totex	
118	River connectivity (e.g. for fish passage); (WINEP/NEP) wastewater capex	
119	River connectivity (e.g. for fish passage); (WINEP/NEP) wastewater opex	
120	River connectivity (e.g. for fish passage); (WINEP/NEP) wastewater totex	
121	Restoration management (marine conservation zones etc) (WINEP/NEP) wastewater capex	
122	Restoration management (marine conservation zones etc) (WINEP/NEP) wastewater opex	
123	Restoration management (marine conservation zones etc) (WINEP/NEP) wastewater totex	
124	Access and amenity for WINEP/NEP only (not covered elsewhere) wastewater capex	
125	Access and amenity for WINEP/NEP only (not covered elsewhere) wastewater opex	
126	Access and amenity for WINEP/NEP only (not covered elsewhere) wastewater totex	
127	Advanced WINEP (not covered elsewhere) wastewater capex	
128	Advanced WINEP (not covered elsewhere) wastewater opex	
129	Advanced WINEP (not covered elsewhere) wastewater totex	
130	Total environmental programme expenditure; (WINEP/NEP) wastewater totex	
	EA/NRW environmental programme bioresources (WINEP/NEP)	
131	Sludge storage -Tanks (pre-thickening, pre-dewatering or untreated) (WINEP/NEP) capex	
132	Sludge storage -Tanks (pre-thickening, pre-dewatering or untreated); (WINEP/NEP) opex	

133	Sludge storage -Tanks (pre-thickening, pre-dewatering or untreated); (WINEP/NEP) totex	
134	Sludge storage -Tanks (thickened/dewatered or treated); (WINEP/NEP) capex	
135	Sludge storage - Tanks (thickened/dewatered or treated); (WINEP/NEP) opex	
136	Sludge storage - Tanks (thickened/dewatered or treated); (WINEP/NEP) totex	
137	Sludge storage - Cake pads / bays / other; (WINEP/NEP) bioresources capex	
138	Sludge storage - Cake pads / bays / other; (WINEP/NEP) bioresources opex	
139	Sludge storage - Cake pads / bays /other; (WINEP/NEP) bioresources totex	
140	Sludge treatment - Anaerobic digestion and/or advanced anaerobic digestion; (WINEP/NEP) bioresources capex	
141	Sludge treatment - Anaerobic digestion and/or advanced anaerobic digestion; (WINEP/NEP) bioresources opex	
142	Sludge treatment - Anaerobic digestion and/or advanced anaerobic digestion; (WINEP/NEP) bioresources totex	
143	Sludge treatment - Thickening and/or dewatering; (WINEP/NEP) capex	
144	Sludge treatment -Thickening and/or dewatering; (WINEP/NEP) opex	
145	Sludge treatment - Thickening and/or dewatering; (WINEP/NEP) totex	
146	Sludge treatment - Other; (WINEP/NEP) bioresources capex	
147	Sludge treatment - Other; (WINEP/NEP) bioresources opex	
148	Sludge treatment -Other; (WINEP/NEP) bioresources totex	
149	Sludge investigations and monitoring (WINEP/NEP) bioresources capex	
150	Sludge investigations and monitoring (WINEP/NEP) bioresources opex	
151	Sludge investigations and monitoring (WINEP/NEP) bioresources totex	
152	Total environmental programme expenditure; (WINEP/NEP) bioresources totex	
	Other enhancement	

153	Growth at sewage treatment works (excluding sludge treatment); enhancement capex	
154	Growth at sewage treatment works (excluding sludge treatment); enhancement opex	
155	Growth at sewage treatment works (excluding sludge treatment); enhancement totex	
156	Reduce flooding risk for properties; enhancement capex	
157	Reduce flooding risk for properties; enhancement opex	
158	Reduce flooding risk for properties; enhancement totex	
159	First time sewerage; enhancement capex	
160	First time sewerage; enhancement opex	
161	First time sewerage; enhancement totex	
162	Sludge enhancement (growth); enhancement capex	
163	Sludge enhancement (growth); enhancement opex	
164	Sludge enhancement (growth); enhancement totex	
165	Odour and other nuisance; enhancement capex	
166	Odour and other nuisance; enhancement opex	
167	Odour and other nuisance; enhancement totex	
168	Resilience; enhancement wastewater capex	
169	Resilience; enhancement wastewater opex	
170	Resilience; enhancement wastewater totex	
171	Security - SEMD; enhancement wastewater capex	
172	Security - SEMD; enhancement wastewater opex	
173	Security - SEMD; enhancement wastewater totex	
174	Security - cyber; enhancement wastewater capex	
175	Security - cyber; enhancement wastewater opex	
176	Security - cyber; enhancement wastewater totex	
177	Greenhouse gas reduction (net zero); enhancement wastewater capex	

178	Greenhouse gas reduction (net zero); enhancement wastewater opex	
179	Greenhouse gas reduction (net zero); enhancement wastewater totex	
180	Total other enhancement wastewater/bioresources expenditure	
	Other enhancement (Freeform lines - by exception)	
181	Additional line 1; enhancement wastewater/bioresources capex	
182	Additional line 1; enhancement wastewater/bioresources opex	
183	Additional line 2; enhancement wastewater/bioresources capex	
184	Additional line 2; enhancement wastewater/bioresources opex	
185	Additional line 3; enhancement wastewater/bioresources capex	
186	Additional line 3; enhancement wastewater/bioresources opex	
187	Additional line 4; enhancement wastewater/bioresources capex	
188	Additional line 4; enhancement wastewater/bioresources opex	
189	Additional line 5; enhancement wastewater/bioresources capex	
190	Additional line 5; enhancement wastewater/bioresources opex	
191	Total other enhancement freeform lines wastewater/bioresources expenditure	
192	Total other enhancement and enhancement freeform lines wastewater/bioresources expenditure	
	Total enhancement	
193	Total enhancement expenditure; wastewater/bioresources capex	
194	Total enhancement expenditure; wastewater/bioresources opex	
195	Total enhancement expenditure; wastewater/bioresources totex	

ADD10 - Accelerated programme expenditure - wastewater network+; post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	EA/NRW environmental programme wastewater (WINEP/NEP)	
1	Event duration monitoring at intermittent discharges (WINEP/NEP) wastewater capex	All figures come from an identical data set to CWW17, adjusted for real price effects and the post-frontier efficiency shift.
2	Event duration monitoring at intermittent discharges (WINEP/NEP) wastewater opex	
3	Event duration monitoring at intermittent discharges (WINEP/NEP) wastewater totex	
4	Flow monitoring at sewage treatment works; (WINEP/NEP) wastewater capex	
5	Flow monitoring at sewage treatment works; (WINEP/NEP) wastewater opex	
6	Flow monitoring at sewage treatment works; (WINEP/NEP) wastewater totex	
7	Continuous river water quality monitoring (WINEP/NEP) wastewater capex	
8	Continuous river water quality monitoring (WINEP/NEP) wastewater opex	
9	Continuous river water quality monitoring (WINEP/NEP) wastewater totex	
10	MCERTs monitoring at emergency sewage pumping station overflows (WINEP/NEP) wastewater capex	
11	MCERTs monitoring at emergency sewage pumping station overflows (WINEP/NEP) wastewater opex	
12	MCERTs monitoring at emergency sewage pumping station overflows (WINEP/NEP) wastewater totex	
13	Increase flow to full treatment; (WINEP/NEP) wastewater capex	
14	Increase flow to full treatment; (WINEP/NEP) wastewater opex	
15	Increase flow to full treatment; (WINEP/NEP) wastewater totex	
16	Increase storm tank capacity at STWs - grey solution; (WINEP/NEP) wastewater capex	
17	Increase storm tank capacity at STWs - grey solution; (WINEP/NEP) wastewater opex	
18	Increase storm tank capacity at STWs - grey solution; (WINEP/NEP) wastewater totex	
19	Increase storm system attenuation / treatment on a STW - green solution; (WINEP/NEP) wastewater capex	

20	Increase storm system attenuation / treatment on a STW - green solution; (WINEP/NEP) wastewater opex	
21	Increase storm system attenuation / treatment on a STW - green solution; (WINEP/NEP) wastewater totex	
22	Storage schemes to reduce spill frequency at CSOs etc - grey solution; (WINEP/NEP) wastewater capex	
23	Storage schemes to reduce spill frequency at CSOs etc - grey solution; (WINEP/NEP) wastewater opex	
24	Storage schemes to reduce spill frequency at CSOs etc - grey solution; (WINEP/NEP) wastewater totex	
25	Storage to reduce spill frequency at CSOs etc - green solution; (WINEP/NEP) wastewater capex	
26	Storage to reduce spill frequency at CSOs etc - green solution; (WINEP/NEP) wastewater opex	
27	Storage to reduce spill frequency at CSOs etc - green solution; (WINEP/NEP) wastewater totex	
28	Storm overflow - discharge relocation (WINEP/NEP) wastewater capex	
29	Storm overflow - discharge relocation (WINEP/NEP) wastewater opex	
30	Storm overflow - discharge relocation (WINEP/NEP) wastewater totex	
31	Storm overflow - increase in combined sewer / trunk sewer capacity; (WINEP/NEP) wastewater capex	
32	Storm overflow - increase in combined sewer / trunk sewer capacity; (WINEP/NEP) wastewater opex	
33	Storm overflow - increase in combined sewer / trunk sewer capacity; (WINEP/NEP) wastewater totex	
34	Storm overflow - sustainable drainage / attenuation in the network; (WINEP/NEP) wastewater capex	
35	Storm overflow - sustainable drainage / attenuation in the network; (WINEP/NEP) wastewater opex	
36	Storm overflow - sustainable drainage / attenuation in the network; (WINEP/NEP) wastewater totex	
37	Storm overflow - source surface water separation; (WINEP/NEP) wastewater capex	
38	Storm overflow - source surface water separation; (WINEP/NEP) wastewater opex	
39	Storm overflow - source surface water separation; (WINEP/NEP) wastewater totex	
40	Storm overflow - infiltration management: (WINEP/NEP) wastewater capex	

41	Storm overflow - infiltration management: (WINEP/NEP) wastewater opex	
42	Storm overflow - infiltration management: (WINEP/NEP) wastewater totex	
43	Storm overflow - sewer flow management and control; (WINEP/NEP) wastewater capex	
44	Storm overflow - sewer flow management and control; (WINEP/NEP) wastewater opex	
45	Storm overflow - sewer flow management and control; (WINEP/NEP) wastewater totex	
46	Storm overflow - new / upgraded screens (WINEP/NEP) wastewater capex	
47	Storm overflow - new / upgraded screens (WINEP/NEP) wastewater opex	
48	Storm overflow - new / upgraded screens (WINEP/NEP) wastewater totex	
49	Treatment for chemical removal (WINEP/NEP) wastewater capex	
50	Treatment for chemical removal (WINEP/NEP) wastewater opex	
51	Treatment for chemical removal (WINEP/NEP) wastewater totex	
52	Chemicals and emerging contaminants monitoring, investigations, options appraisals; (WINEP/NEP) wastewater capex	
53	Chemicals and emerging contaminants monitoring, investigations, options appraisals; (WINEP/NEP) wastewater opex	
54	Chemicals and emerging contaminants monitoring, investigations, options appraisals; (WINEP/NEP) wastewater totex	
55	Treatment for total nitrogen removal (chemical) (WINEP/NEP) wastewater capex	
56	Treatment for total nitrogen removal (chemical) (WINEP/NEP) wastewater opex	
57	Treatment for total nitrogen removal (chemical) (WINEP/NEP) wastewater totex	
58	Treatment for total nitrogen removal (biological) (WINEP/NEP) wastewater capex	
59	Treatment for total nitrogen removal (biological) (WINEP/NEP) wastewater opex	
60	Treatment for total nitrogen removal (biological) (WINEP/NEP) wastewater totex	
61	Nitrogen technically achievable limit monitoring, investigation or options appraisal; (WINEP/NEP) wastewater capex	
62	Nitrogen technically achievable limit monitoring, investigation or options appraisal; (WINEP/NEP) wastewater opex	

63	Nitrogen technically achievable limit monitoring, investigation or options appraisal; (WINEP/NEP) wastewater totex	
64	Treatment for phosphorus removal (chemical) (WINEP/NEP) wastewater capex	
65	Treatment for phosphorus removal (chemical) (WINEP/NEP) wastewater opex	
66	Treatment for phosphorus removal (chemical) (WINEP/NEP) wastewater totex	
67	Treatment for phosphorus removal (biological) (WINEP/NEP) wastewater capex	
68	Treatment for phosphorus removal (biological) (WINEP/NEP) wastewater opex	
69	Treatment for phosphorus removal (biological) (WINEP/NEP) wastewater totex	
70	Treatment for nutrients (N or P) and / or sanitary determinands, nature based solution (WINEP/NEP) wastewater capex	
71	Treatment for nutrients (N or P) and / or sanitary determinands, nature based solution (WINEP/NEP) wastewater opex	
72	Treatment for nutrients (N or P) and / or sanitary determinands, nature based solution (WINEP/NEP) wastewater totex	
73	Treatment for tightening of sanitary parameters (WINEP/NEP) wastewater capex	
74	Treatment for tightening of sanitary parameters (WINEP/NEP) wastewater opex	
75	Treatment for tightening of sanitary parameters (WINEP/NEP) wastewater totex	
76	Catchment management - chemicals source control; (WINEP/NEP) wastewater capex	
77	Catchment management - chemicals source control; (WINEP/NEP) wastewater opex	
78	Catchment management - chemicals source control; (WINEP/NEP) wastewater totex	
79	Catchment management - nutrient balancing; (WINEP/NEP) wastewater capex	
80	Catchment management - nutrient balancing; (WINEP/NEP) wastewater opex	
81	Catchment management - nutrient balancing; (WINEP/NEP) wastewater totex	
82	Catchment management - catchment permitting; (WINEP/NEP) wastewater capex	

83	Catchment management - catchment permitting; (WINEP/NEP) wastewater opex
84	Catchment management - catchment permitting; (WINEP/NEP) wastewater totex
85	Catchment management - habitat restoration; (WINEP/NEP) wastewater capex
86	Catchment management - habitat restoration; (WINEP/NEP) wastewater opex
87	Catchment management - habitat restoration; (WINEP/NEP) wastewater totex
88	Microbiological treatment - bathing waters, coastal and inland (WINEP/NEP) wastewater capex
89	Microbiological treatment - bathing waters, coastal and inland (WINEP/NEP) wastewater opex
90	Microbiological treatment - bathing waters, coastal and inland (WINEP/NEP) wastewater totex
91	Septic tank replacements - treatment solution; (WINEP/NEP) wastewater capex
92	Septic tank replacements - treatment solution; (WINEP/NEP) wastewater opex
93	Septic tank replacements - treatment solution; (WINEP/NEP) wastewater totex
94	Septic tank replacements - flow diversion; (WINEP/NEP) wastewater capex
95	Septic tank replacements - flow diversion; (WINEP/NEP) wastewater opex
96	Septic tank replacements - flow diversion; (WINEP/NEP) wastewater totex
97	Fish outfall screens; (WINEP/NEP) wastewater capex
98	Fish outfall screens; (WINEP/NEP) wastewater opex
99	Fish outfall screens; (WINEP/NEP) wastewater totex
100	25 year environment plan; (WINEP/NEP) wastewater capex
101	25 year environment plan; (WINEP/NEP) wastewater opex
102	25 year environment plan; (WINEP/NEP) wastewater totex
103	Investigations, other (WINEP/NEP) - desk-based studies only wastewater capex
104	Investigations, other (WINEP/NEP) - desk-based studies only wastewater opex

105	Investigations, other (WINEP/NEP) - desk-based studies only wastewater totex	
106	Investigations, other (WINEP/NEP) - survey, monitoring or simple modelling wastewater capex	
107	Investigations, other (WINEP/NEP) - survey, monitoring or simple modelling wastewater opex	
108	Investigations, other (WINEP/NEP) - survey, monitoring or simple modelling wastewater totex	
109	Investigations, other (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling wastewater capex	
110	Investigations, other (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling wastewater opex	
111	Investigations, other (WINEP/NEP) - multiple surveys, and/or monitoring locations, and/or complex modelling wastewater totex	
112	Investigations, total; (WINEP/NEP) wastewater capex	
113	Investigations, total; (WINEP/NEP) wastewater opex	
114	Investigations, total; (WINEP/NEP) wastewater totex	
115	Contribution to third party schemes under WINEP/NEP only (not covered elsewhere) wastewater capex	
116	Contribution to third party schemes under WINEP/NEP only (not covered elsewhere) wastewater opex	
117	Contribution to third party schemes under WINEP/NEP only (not covered elsewhere) wastewater totex	
118	River connectivity (e.g. for fish passage); (WINEP/NEP) wastewater capex	
119	River connectivity (e.g. for fish passage); (WINEP/NEP) wastewater opex	
120	River connectivity (e.g. for fish passage); (WINEP/NEP) wastewater totex	
121	Restoration management (marine conservation zones etc) (WINEP/NEP) wastewater capex	
122	Restoration management (marine conservation zones etc) (WINEP/NEP) wastewater opex	
123	Restoration management (marine conservation zones etc) (WINEP/NEP) wastewater totex	
124	Access and amenity for WINEP/NEP only (not covered elsewhere) wastewater capex	
125	Access and amenity for WINEP/NEP only (not covered elsewhere) wastewater opex	

126	Access and amenity for WINEP/NEP only (not covered elsewhere) wastewater totex	
127	Advanced WINEP (not covered elsewhere) wastewater capex	
128	Advanced WINEP (not covered elsewhere) wastewater opex	
129	Advanced WINEP (not covered elsewhere) wastewater totex	
130	Total environmental programme expenditure; (WINEP/NEP) wastewater totex	
	EA/NRW environmental programme bioresources (WINEP/NEP)	
131	Sludge storage -Tanks (pre-thickening, pre-dewatering or untreated) (WINEP/NEP) capex	
132	Sludge storage -Tanks (pre-thickening, pre-dewatering or untreated); (WINEP/NEP) opex	
133	Sludge storage -Tanks (pre-thickening, pre-dewatering or untreated); (WINEP/NEP) totex	
134	Sludge storage -Tanks (thickened/dewatered or treated); (WINEP/NEP) capex	
135	Sludge storage - Tanks (thickened/dewatered or treated); (WINEP/NEP) opex	
136	Sludge storage - Tanks (thickened/dewatered or treated); (WINEP/NEP) totex	
137	Sludge storage - Cake pads / bays / other; (WINEP/NEP) bioresources capex	
138	Sludge storage - Cake pads / bays / other; (WINEP/NEP) bioresources opex	
139	Sludge storage - Cake pads / bays /other; (WINEP/NEP) bioresources totex	
140	Sludge treatment - Anaerobic digestion and/or advanced anaerobic digestion; (WINEP/NEP) bioresources capex	
141	Sludge treatment - Anaerobic digestion and/or advanced anaerobic digestion; (WINEP/NEP) bioresources opex	
142	Sludge treatment - Anaerobic digestion and/or advanced anaerobic digestion; (WINEP/NEP) bioresources totex	
143	Sludge treatment - Thickening and/or dewatering; (WINEP/NEP) capex	
144	Sludge treatment -Thickening and/or dewatering; (WINEP/NEP) opex	
145	Sludge treatment - Thickening and/or dewatering; (WINEP/NEP) totex	
146	Sludge treatment - Other; (WINEP/NEP) bioresources capex	
147	Sludge treatment - Other; (WINEP/NEP) bioresources opex	

148	Sludge treatment -Other; (WINEP/NEP) bioresources totex	
149	Sludge investigations and monitoring (WINEP/NEP) bioresources capex	
150	Sludge investigations and monitoring (WINEP/NEP) bioresources opex	
151	Sludge investigations and monitoring (WINEP/NEP) bioresources totex	
152	Total environmental programme expenditure; (WINEP/NEP) bioresources totex	
	Other enhancement	
153	Growth at sewage treatment works (excluding sludge treatment); enhancement capex	
154	Growth at sewage treatment works (excluding sludge treatment); enhancement opex	
155	Growth at sewage treatment works (excluding sludge treatment); enhancement totex	
156	Reduce flooding risk for properties; enhancement capex	
157	Reduce flooding risk for properties; enhancement opex	
158	Reduce flooding risk for properties; enhancement totex	
159	First time sewerage; enhancement capex	
160	First time sewerage; enhancement opex	
161	First time sewerage; enhancement totex	
162	Sludge enhancement (growth); enhancement capex	
163	Sludge enhancement (growth); enhancement opex	
164	Sludge enhancement (growth); enhancement totex	
165	Odour and other nuisance; enhancement capex	
166	Odour and other nuisance; enhancement opex	
167	Odour and other nuisance; enhancement totex	
168	Resilience; enhancement wastewater capex	
169	Resilience; enhancement wastewater opex	
170	Resilience; enhancement wastewater totex	
171	Security - SEMD; enhancement wastewater capex	

172	Security - SEMD; enhancement wastewater opex	
173	Security - SEMD; enhancement wastewater totex	
174	Security - cyber; enhancement wastewater capex	
175	Security - cyber; enhancement wastewater opex	
176	Security - cyber; enhancement wastewater totex	
177	Greenhouse gas reduction (net zero); enhancement wastewater capex	
178	Greenhouse gas reduction (net zero); enhancement wastewater opex	
179	Greenhouse gas reduction (net zero); enhancement wastewater totex	
180	Total other enhancement wastewater/bioresources expenditure	
	Other enhancement (Freeform lines - by exception)	
181	Additional line - Corprate overheads for Alternative delivery Capex	
182	Additional line - Corprate overheads for Alternative delivery Opex	
183	Additional line - Top down efficiency Capex	
184	Additional line - Top down efficiency Opex	
185	Additional line 3; enhancement wastewater/bioresources capex	
186	Additional line 3; enhancement wastewater/bioresources opex	
187	Additional line 4; enhancement wastewater/bioresources capex	
188	Additional line 4; enhancement wastewater/bioresources opex	
189	Additional line 5; enhancement wastewater/bioresources capex	
190	Additional line 5; enhancement wastewater/bioresources opex	
191	Total other enhancement wastewater expenditure	
192	Total other enhancement and enhancement freeform lines wastewater/bioresources expenditure	
	Total enhancement	
193	Total enhancement expenditure; wastewater/bioresources capex	
194	Total enhancement expenditure; wastewater/bioresources opex	

195	Total enhancement expenditure; wastewater/bioresources totex	

ADD11- Developer services expenditure - water (English companies); post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	Water developer services expenditure (price control)	
1	Infrastructure network reinforcement	All figures come from an identical data set to DS2e, adjusted for real price effects and the post-frontier efficiency shift.
2	Asset payments associated with legacy agreements	
	Water developer services expenditure (excluding diversions) - non-price control; Site-specific costs for developments that do not require new water mains	
3	New connections	
4	Other site-specific developer services activities	
	Water developer services expenditure (excluding diversions) - non-price control; Site-specific costs for developments that do require new water mains	
5	New connections	
6	Requisition mains	
7	Other site-specific developer services activities	
	Developer services expenditure (excluding diversions) - water (English companies); totals	
8	Developer services expenditure (excluding diversions) - water (price control)	
9	Developer services expenditure (excluding diversions) - water (non-price control)	
10	Developer services expenditure (excluding diversions) - water (total)	

ADD12 - Developer services expenditure (excluding diversions) - water (Welsh companies); post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	General comment	Not a Welsh Company

ADD13- Developer services expenditure - wastewater (English and Welsh companies); post-frontier shift efficiency and real price effects basis		
Line description		**Commentary**
	Wastewater developer services expenditure (price control)	
1	Infrastructure network reinforcement - capex	All figures come from an identical data set to DS3, adjusted for real price effects and the post-frontier efficiency shift.
2	Infrastructure network reinforcement - opex	
14	Asset payments - capex	
15	Asset payments - opex	
	Wastewater developer services expenditure (excluding diversions) -price control; Site-specific developer services - Capex	
3	New connections	
4	Requisition sewers	
5	Other site-specific developer services activities capex	
6	Total site-specific developer services capex	
	Wastewater developer services expenditure (excluding diversions) -price control; Site-specific developer services - Opex	
7	New connections	
8	Requisition sewers	
9	s185 diversions	
10	Other site-specific developer services activities	
	Developer services expenditure (excluding diversions) - wastewater; totals	
11	Developer services expenditure (excluding diversions) - wastewater (price control)	
12	Developer services expenditure (excluding diversions) - wastewater (non-price control)	
13	Developer services expenditure (excluding diversions) - wastewater (total)	

ADD14- Bioresources - Industrial Emissions Directive scheme costs and cost drivers		
Line description		**Commentary**
	Site Name	
	Secondary containment	
		Base Capital is nil, secondary containment is new requirement for IED. Enhancement OpEx is allowance for maintenance including directly related new assets (lighting, access/egress, lifting devices). Enhancement CapEx is essentially additional walls, impermeable surfaces and existing hardstanding improvement. See Draft Determination response on IED for additional information. Installation is planned to commence in AMP8 following survey and design development in remainder of AMP7. Confidence grade: B3. Sound outline design with costing benchmarked showing <10% cost efficiency. Scope is based on current understanding of requirements based on technical information available from EA or available improvement conditions from issued permits (to other WaSCs). There is still an uncertainty surrounding our Kent strategy (decommissioning of sites) but we have taken a pragmatic (cheaper) approach – Please see document SRN-DDR-042 Industrial Emissions Directive (IED) Enhancmeent Cost Evidence Case for more information.
	Tank covering for abatement of fugitive emissions	
		2 tanks were covered in AMP7 as part of base, as a result of Reg36 notification at our Ashford STC. Limited number of additional tank coverings (x4) required, all included in enhancement cost, as part of new IED requirement. Confidence grade: B3. Sound outline design. Scope is based on current understanding of requirements based on technical information available from EA or available improvement conditions from issued permits (to other WaSCs)
	Cake pad / cake storage covering	
		3 sites benefited from cake covering in AMP7 (Goddards Green, Aylesford & Ham Hill), included in Base CapEx. No plan for cake covering under IED for AMP8. Confidence grade: B3. Sound outline design. Costs were benchmarked based on existing experience and showed good efficiency. Scope is based on current understanding of requirements based on technical information available from EA or available improvement conditions from issued permits (to other WaSCs)

	Control and monitoring	
		No costs in Base. The enhancement costs are estimates provided on current understanding of the required scope. In line with permit submissions this will form part of the subsequent Plans to be submitted to the EA in response to Improvement conditions (ICs) for agreement to proceed. Confidence Grade C5: Costs are currently estimates based on limited information as per comment above – Please see document SRN-DDR-042 Industrial Emissions Directive (IED) Enhancmeent Cost Evidence Case for more information.
	Liquor sampling	
		No costs in base as these costs are currently minimal and our current accounting does not allow for current costing for liquors sampling. The enhancement costs are estimates provided on current understanding of the required scope. Further detailed evaluation is required with respect to specifications and site specific needs to gain confidence in the solutions required to be implemented. In line with permit submissions this will form part of the subsequent Plans to be submitted to the EA in response to Improvement conditions (ICs) for agreement to proceed. Confidence Grade C5: Costs are currently estimates based on limited information as per comment above – Please see document SRN-DDR-042 Industrial Emissions Directive (IED) Enhancmeent Cost Evidence Case for more information.
	Permit application	
		Base costs reflect costs incurred to date (£2.2m). Enhancement costs are anticipated costs for provision of required Plans for Improvement Conditions (per EA responses to other WASCs). Subsistence charges for permits have not been included as the cost is not yet known. Confidence grade: B3
	Other	

		Base CapEx includes:
		• Digesters inspection & maintenance
		  ○ In AMP7: 6 digesters
		  ○ In AMP8: Plan to increase programme to 21 digesters over the AMP
		• Tank replacement programme:
		  ○ AMP7: 2 tanks
		  ○ AMP8: TBC so not included here
		Enhancement CapEx is for a large proportion of scope to meet various BATs, includes scope removed from 'Tank Covering' due to change in section heading/title.
		Enhancement OpEx includes waste acceptance requirements (esp. Enhanced sampling of tankered wastes and sludge).
		Please see our Draft Determination response on IED for more information.

		Confidence Grade C5: Most of the costs are currently estimates based on limited information as per comment above.

ADD15- PR24 Water Industry National Environment Programme (WINEP) - England, Costs & number of actions		
Line description		**Commentary**
	Site Name	
	U_IMP1 - Totex	See commentary for 'Total (Totex)'
	U_IMP1 - Number of WINEP actions	One site (Wateringbury WwTW) has secondary drivers for WFD_ND and WFD_IMPg
	U_IMP2 - Totex	See commentary for 'Total (Totex)'
	U_IMP2 - Number of WINEP actions	Both actions for Summer Lane Pagham WwTW
	U_IMP3 - Totex	See commentary for 'Total (Totex)'
	U_IMP3 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	25YEP_IMP - Totex	See commentary for 'Total (Totex)'
	25YEP_IMP - Number WINEP actions	See commentary for 'Total (Number of actions)'
	25YEP_INV - Totex	See commentary for 'Total (Totex)'
	25YEP_INV - Number WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_INV_WRHMWB - Totex	See commentary for 'Total (Totex)'
	WFD_INV_WRHMWB - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_NDINV_WRHMWB - Totex	See commentary for 'Total (Totex)'
	WFD_NDINV_WRHMWB - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_ND_WRHMWB - Totex	See commentary for 'Total (Totex)'
	WFD_ND_WRHMWB - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_IMP_WRHMWB - Totex	See commentary for 'Total (Totex)'
	WFD_IMP_WRHMWB - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	BW_IMP1 - Totex	See commentary for 'Total (Totex)'
	BW_IMP1 - Number WINEP actions	See commentary for 'Total (Number of actions)'
	BW_IMP2 - Totex	Holding lines for improvements to newly designated bathing waters if needed after INV is completed in 2027.
	BW_IMP2 - Number WINEP actions	No costs known at this stage.
	BW_IMP3 - Totex	See commentary for 'Total (Totex)'
	BW_IMP3 - Number WINEP actions	See commentary for 'Total (Number of actions)'
	BW_IMP4 - Totex	See commentary for 'Total (Totex)'
	BW_IMP4 - Number of WINEP actions	See commentary for 'Total (Number of actions)'

	BW_INV1 - Totex	See commentary for 'Total (Totex)'
	BW_INV1 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	BW_INV2 - Totex	See commentary for 'Total (Totex)'
	BW_INV2 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	BW_INV3 - Totex	See commentary for 'Total (Totex)'
	BW_INV3 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	BW_INV5 - Totex	There were 3 actions in the 5 July 2024 version of the WINEP with a completion date of 30/04/2027, although these actions are AMP9 actions. The EA has now amended the completion date of these three actions on WINEP to 30/04/2032. However, our data table still includes the cost of these three investigations.
	BW_INV5 - Number of WINEP actions	There were 3 actions in the 5 July 2024 version of the WINEP with a completion date of 30/04/2027, although these actions are AMP9 actions. The EA has now amended the completion date of these three actions on WINEP to 30/04/2032. We have corrected the number of actions under this driver to zero, but our CWW3 data table still includes the cost of these three investigations (£0.284m).
	BW_ND - Totex	See commentary for 'Total (Totex)'
	BW_ND - Number WINEP actions	Secondary drivers for 3 sites are SW_ND and EnvAct_IMP2, and for one site EnvAct_IMP3 and EnvAct_IMP5
	BW_NDINV - Totex	See commentary for 'Total (Totex)'
	BW_NDINV - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	NERC_INV - Totex	See commentary for 'Total (Totex)'
	NERC_INV - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	NERC_IMP - Totex	See commentary for 'Total (Totex)'
	NERC_IMP - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_NDLS_CHEM1 - Totex	See commentary for 'Total (Totex)'
	WFD_NDLS_CHEM1 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_NDLS_CHEM2 - Totex	See commentary for 'Total (Totex)'
	WFD_NDLS_CHEM2 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_ND_CHEM3 - Totex	See commentary for 'Total (Totex)'
	WFD_ND_CHEM3 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_ND_CHEM4 - Totex	See commentary for 'Total (Totex)'
	WFD_ND_CHEM4 - Number of WINEP actions	All 5 actions have multiple components so the costs for these actions / sites are under other drivers/components.

	WFD_IMP_CHEM - Totex	See commentary for 'Total (Totex)'
	WFD_IMP_CHEM - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_INV_CHEM - Totex	See commentary for 'Total (Totex)'
	WFD_INV_CHEM - Number of WINEP actions	14 Actions, but 3 actions have multiple components, making 24 components (lines on the WINEP). One action has a secondary driver of WFD_INV_MP
	EnvAct_INV1 - Totex	See commentary for 'Total (Totex)'
	EnvAct_INV1 - Number of WINEP actions	2 holding lines on the WINEP whilst we await instruction from the EA on requirements for AMP8 (one for national CIP style investigation and one line for a local INV if required).
	EnvAct_MON1 - Totex	See commentary for 'Total (Totex)'
	EnvAct_MON1 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EnvAct_INV2 - Totex	See commentary for 'Total (Totex)'
	EnvAct_INV2 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EnvAct_MON2 - Totex	See commentary for 'Total (Totex)'
	EnvAct_MON2 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EnvAct_INV3 - Totex	See commentary for 'Total (Totex)'
	EnvAct_INV3 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EnvAct_MON3 - Totex	See commentary for 'Total (Totex)'
	EnvAct_MON3 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EnvAct_MON4 - Totex	See commentary for 'Total (Totex)'
	EnvAct_MON4 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EnvAct_MON5 - Totex	No costs known at this stage.
	EnvAct_MON5 - Number of WINEP actions	Holding line in WINEP.
	DrWPA_INV - Totex	See commentary for 'Total (Totex)'
	DrWPA_INV - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	DrWPA_ND - Totex	See commentary for 'Total (Totex)'
	DrWPA_ND - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	DrWPA_IMP - Totex	See commentary for 'Total (Totex)'
	DrWPA_IMP - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EE_INV - Totex	See commentary for 'Total (Totex)'
	EE_INV - Number of WINEP actions	See commentary for 'Total (Number of actions)'

	EE_IMP - Totex	See commentary for ‘Total (Totex)’
	EE_IMP - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	U_MON6 - Totex	See commentary for ‘Total (Totex)’
	U_MON6 - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	HD_IMP - Totex	See commentary for ‘Total (Totex)’
	HD_IMP - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	HD_ND - Totex	See commentary for ‘Total (Totex)’
	HD_ND - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	HD_INV - Totex	See commentary for ‘Total (Totex)’
	HD_INV - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	HD_IMP_NN - Totex	See commentary for ‘Total (Totex)’
	HD_IMP_NN - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	WFDGW_INV - Totex	See commentary for ‘Total (Totex)’
	WFDGW_INV - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	WFDGW_NDINV - Totex	See commentary for ‘Total (Totex)’
	WFDGW_NDINV - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	WFDGW_ND - Totex	See commentary for ‘Total (Totex)’
	WFDGW_ND - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	WFDGW_IMP - Totex	See commentary for ‘Total (Totex)’
	WFDGW_IMP - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	U_IMP5 - Totex	See commentary for ‘Total (Totex)’
	U_IMP5 - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	U_IMP6 - Totex	See commentary for ‘Total (Totex)’
	U_IMP6 - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	INNS_INV - Totex	See commentary for ‘Total (Totex)’
	INNS_INV - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	INNS_ND - Totex	See commentary for ‘Total (Totex)’
	INNS_ND - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	INNS_IMP - Totex	See commentary for ‘Total (Totex)’
	INNS_IMP - Number of WINEP actions	See commentary for ‘Total (Number of actions)’

	INNS_MON - Totex	See commentary for ‘Total (Totex)’
	INNS_MON - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	MCZ_ND - Totex	See commentary for ‘Total (Totex)’
	MCZ_ND - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	MCZ_IMP - Totex	See commentary for ‘Total (Totex)’
	MCZ_IMP - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	MCZ_INV - Totex	See commentary for ‘Total (Totex)’
	MCZ_INV - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	WFD_INV_MP - Totex	See commentary for ‘Total (Totex)’
	WFD_INV_MP - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	U_MON3 - Totex	See commentary for ‘Total (Totex)’
	U_MON3 - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	U_MON4 - Totex	See commentary for ‘Total (Totex)’
	U_MON4 - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	EPR_MON1 - Totex	See commentary for ‘Total (Totex)’
	EPR_MON1 - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	WFD_INV_N-Tal - Totex	See commentary for ‘Total (Totex)’
	WFD_INV_N-Tal - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	WFD_INV - Totex	See commentary for ‘Total (Totex)’
	WFD_INV - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	WFD_IMP - Totex	See commentary for ‘Total (Totex)’
	WFD_IMP - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	EnvAct_IMP1 - Totex	See commentary for ‘Total (Totex)’
	EnvAct_IMP1 - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	WFD_ND - Totex	See commentary for ‘Total (Totex)’
	WFD_ND - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	SAFFA_IMP - Totex	See commentary for ‘Total (Totex)’
	SAFFA_IMP - Number of WINEP actions	See commentary for ‘Total (Number of actions)’
	SAFFA_INV - Totex	See commentary for ‘Total (Totex)’
	SAFFA_INV - Number of WINEP actions	See commentary for ‘Total (Number of actions)’

	U_IMP7 - Totex	See commentary for 'Total (Totex)'
	U_IMP7 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	SUiAR_IMP - Totex	See commentary for 'Total (Totex)'
	SUiAR_IMP - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	SUiAR_ND - Totex	See commentary for 'Total (Totex)'
	SUiAR_ND - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	SW_IMP - Totex	See commentary for 'Total (Totex)'
	SW_IMP - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	SW_ND - Totex	See commentary for 'Total (Totex)'
	SW_ND - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	SW_INV - Totex	See commentary for 'Total (Totex)'
	SW_INV - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	SSSI_IMP - Totex	See commentary for 'Total (Totex)'
	SSSI_IMP - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	SSSI_ND - Totex	See commentary for 'Total (Totex)'
	SSSI_ND - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	SSSI_INV - Totex	See commentary for 'Total (Totex)'
	SSSI_INV - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EnvAct_INV4 - Totex	Costs for 210 investigations.
	EnvAct_INV4 - Number of WINEP actions	217 on WINEP dated 05 July 2024. this is incorrect. 7 of these actions are for storm overflows that discharge to coastal or shellfish waters – hence they do not require an investigation and need to be removed from the WINEP. The EA has been informed.
	EnvAct_IMP2 - Totex	See commentary for 'Total (Totex)'
	EnvAct_IMP2 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EnvAct_IMP3 - Totex	See commentary for 'Total (Totex)'
	EnvAct_IMP3 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EnvAct_IMP4 - Totex	See commentary for 'Total (Totex)'
	EnvAct_IMP4 - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EnvAct_IMP5 - Totex	See commentary for 'Total (Totex)'
	EnvAct_IMP5 - Number of WINEP actions	See commentary for 'Total (Number of actions)'

	WFD_INV_MOD - Totex	See commentary for 'Total (Totex)'
	WFD_INV_MOD - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_IMP_MOD - Totex	See commentary for 'Total (Totex)'
	WFD_IMP_MOD - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_INV_WRFlow - Totex	See commentary for 'Total (Totex)'
	WFD_INV_WRFlow - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_NDINV_WRFlow - Totex	See commentary for 'Total (Totex)'
	WFD_NDINV_WRFlow - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_ND_WRFlow - Totex	See commentary for 'Total (Totex)'
	WFD_ND_WRFlow - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_IMP_WRFlow - Totex	See commentary for 'Total (Totex)'
	WFD_IMP_WRFlow - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EDWRMP_INV - Totex	See commentary for 'Total (Totex)'
	EDWRMP_INV - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	EDWRMP_IMP - Totex	See commentary for 'Total (Totex)'
	EDWRMP_IMP - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_INV_PHYSHAB - Totex	See commentary for 'Total (Totex)'
	WFD_INV_PHYSHAB - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	WFD_IMP_PHYSHAB - Totex	See commentary for 'Total (Totex)'
	WFD_IMP_PHYSHAB - Number of WINEP actions	See commentary for 'Total (Number of actions)'
	Advanced WINEP expenditure not detailed above (please add explanation in Column G) - Totex	Nil return for A-WINEP expenditure.
	Total (Totex)	Costs used to populate CWW3 for AMP8 and CWW12 Year 2024-2025 and CWW17 Year 2024-25 have been used to complete the applicable driver Totex costs.
	Total (Number of actions)	Number of actions has been linked to July'2024 WINEP submission with the primary drivers being used to populate the appropriate cells in the data table and includes the sub-categories of actions under the primary driver so this number matches the number of lines on the WINEP.

ADD16 - PR24 National Environment Programme (NEP) - Wales, Costs and number of actions		
Line description		**Commentary**
	General comment	Not a Welsh Company

ADD17 - Wastewater network+ - WINEP / NEP Sanitary parameters scheme costs and cost drivers		
Line description		Commentary
	Sanitary parameter schemes	
	All lines	There are no mandatory commentary requirements for table ADD17. We have used design population equivalent data to complete the column called “population equivalent after 2029-30” The confidence grade for population equivalent data is B2. The methodology used to split costs between sanitary parameters and any other permit tightening (e.g., P and N drivers) was to review the main items of scope and determine which driver they related to (e.g. ferric dosing would be for P, methanol dosing and tertiary denitrification would be for N). The overall CAPEX value was then split proportional to the value of the driver specific scope, rounded to the nearest 10%. On sites where the majority of the scope was common to two drivers (e.g. tertiary solids removal to meet both P removal and BOD permit tightening), a 50/50 split was assumed. Since February 2024, 7 sites have been added to the WINEP with U_IMP1 drivers. They are sites that have descriptive permits but require first time numerical sanitary parameters permits because they have numerical P permits in AMP8. We are proposing investment in our business plan at 3 of them to ensure they meet a numerical permit level for BOD and suspended solids. We note that cost driver 12 asks only if there is a WINEP/NEP P or total N enhancement at the same site. Battle has P removal but also a chemicals removal driver of investment. Where “other” is selected for cost driver 13, our commentary is provided within the data table. The drop down for cost driver 14 “Corresponding CWW3 line” truncated the line numbering. We have used the drop down “W3.70-72 “ to indicate where we have allocated costs to the lines CWW3.70 - 72.

ADD18 – RORE Analysis		
Line description		Commentary
		See end of document for ADD18 commentary section

ADD19 - Wastewater network+ - Growth at STWs scheme costs and cost drivers		
Line description		**Commentary**
	Growth at STWs schemes	
1	Bishops Waltham WTW	Capital Expenditure costs are consistent with the original submission costs and as submitted for Query 237 in the table appended to '*SRN Outbound Query Response OFW-OBQ-SRN-237*', except for Whitfield WTW. Whitfield development costs (£6.2m) split across 2025-26 and 2026-27 (£4.2m and £2m respectively). Remainder split evenly across 2026-27 to After 2029-30 to make up to forecast cost of £103.2m. PE data does not align with APR data as uses a combination of local plan and Edge data. This is to ensure alignment with forecast figures and is explained in the commentary for data table CWW20.1. 'After 2029-30' is assumed to mean the PE at the design horizon of the scheme in 2040, i.e. the PE capacity of the WTW on completion of the scheme. Where permits have a variable summer/winter consent, the lower (more stringent) value is included for the cost drivers. For cost drivers 4 to 12 only the lower of the UWWTR and WRA limits are included. For example, where a DWF increase would result in a tightening (reduction) of the current WRA BOD limit but is still higher than the existing UWWTR limit, the lower UWWTR limit is retained in the cost driver information. Permit levels for cost drivers are as in place at the beginning of AMP8 i.e. include any changes due as part of AMP7 funded schemes up to 31/03/2025. Values in cost drivers are included for schemes which are identified as being delivered beyond 2029-30. Storm tank capacity volumes are the increase required solely due to growth after increases under any other drivers are taken into account i.e. if a greater volume is required under a WINEP driver than for growth, 0 is recorded. WINEP drivers which aren't delivering a numerical change in permit are omitted from the cost driver information (e.g. studies and investigations, flow monitoring etc.). Storm Overflow WINEP drivers are categorised according to whether they are being delivered through 'green' or 'grey' infrastructure in column AQ. All drivers are considered for cost driver future permit limits i.e. if a tightening of consent is driven by both growth and WINEP drivers, the lower of the two limits is included.
2	Chale WTW	
3	Charing WTW	
4	Dymchurch WTW	
5	Faversham WTW	
6	Ford WTW	
7	Fullerton WTW	
8	Goddards Green WTW	
9	Gravesend WTW	
10	Ham Hill WTW	
11	Hawkhurst North WTW	
12	Horsmonden WTW	
13	Leeds WTW	
14	Lenham WTW	
15	Loxwood WTW	
16	Ludgershall WTW	
17	Lydd WTW	
18	Milford Road Pennington WTW	
19	Motney Hill WTW	
20	Newnham Valley Preston WTW	
21	Northfleet WTW	
22	Paddock Wood WTW	
23	Park Road Handcross WTW	
24	Sandhurst WTW	
25	Sellindge WTW	
26	Staplehurst WTW	
27	Stoke WTW	

28	Thornham WTW	We note no information on tightening of N permits is requested. For completeness the following sites have a tightening of Total N consent solely because of an increase in DWF under a growth driver: Bishops Waltham WTW – reduction in Total N from 15mg/l currently to 13.7mg/l Milford Road Pennington WTW – reduction in Total N from 15mg/l currently to 8.1mg/l Thornham WTW - reduction in Total N from 15mg/l currently to 8.6mg/l For cost driver 19 – 'STW compliant with DWF permit under "3-in-5 rule" in 2022' we have assumed the 3 in 5 rule requires an exceedance in 2022 to trigger the rule (as is stated in the new environmental permits). For example, if a site didn't exceed in 2022 but did exceed in 2021, 2020, and 2019 it is marked as 'Y' in the cost information. In this scenario a failure in 2022 wouldn't have been triggered according to the permit. For cost drivers 16 and 17 baseline is assumed to mean 2022-23 as this is the year stated as the financial base in the PR24 business plan table guidance. The process capacity added is the design PE (2040) minus the baseline PE (2022-23). For cost drivers 16 and 17 process capacity added includes holiday PE. For cost drivers 16 and 17 it is assumed where a change in DWF permit is not required the PE increase is recorded against cost driver 16, and where a change in DWF permit is required it is included under cost driver 17.
29	Tonbridge WTW	
30	Wateringbury WTW	
31	Whitewall Creek WTW	
32	Whitfield WTW	
33	Willow Wood St Lawrence WTW	
34	Wivelsfield WTW	

ADD20 - Wastewater network+ - WINEP storm overflow scheme costs and cost drivers		
Line description		**Commentary**
	Line Description / Storm Overflow Name	
Cost driver 1	Total Equivalent Storage (m3)	Total between Cost driver 2, 3 and 4 as per 'PR24 business plan table guidance Part 13'.
Cost driver 2	Equivalent Storage delivered through Grey solutions (CWW20.14) (m3)	The total amount of grey storage anticipated for storm overflows due to commence in AMP8. Storm Overflows phased across AMP8 and AMP9 have portioned storage as per the capital expenditure profile i.e evenly distributing the capital expenditure across the estimated 7 years, therefore two sevenths of the total storage required for an overflow.
Cost driver 3	Equivalent Storage delivered through green solutions (CWW20.15) (m3)	The total amount of equivalent wetland storage anticipated for storm overflows due to commence in AMP8 (wetland hectares multiplied by 16mm). Storm Overflows phased across AMP8 and AMP9 have portioned storage as per the capital expenditure profile i.e evenly distributing the capital expenditure across the estimated 7 years, therefore two sevenths of the total storage required for an overflow.
Cost driver 4	Equivalent Storage delivered through other solutions (m3)	The total amount of equivalent SuDS and separation storage anticipated for storm overflows due to commence in AMP8 (hectares for both SuDS and separation solutions multiplied by 16mm). Storm Overflows phased across AMP8 and AMP9 have portioned storage as per the capital expenditure profile i.e evenly distributing the capital expenditure across the estimated 7 years, therefore two sevenths of the total storage required for an overflow.
Cost driver 5	BP Spill reduction (annual spills)	As per 'PR24 business plan table guidance Part 13'.
Cost driver 6	Priority site (yes/no)	In accordance with Defra prioritisation criteria in the SODRP published 25 September 2023 (which is slightly different to that used by the EA)
Cost driver 7	New screen required as part of scheme (yes/no)	Yes where existing screen is not 2D 6mm
Cost driver 8	Existing permit (y/n)	As per 'PR24 business plan table guidance Part 13'.
Cost driver 9	Existing permit ref	As per 'PR24 business plan table guidance Part 13'.
Cost driver 10	Permitted PFF (l/s)	As per 'PR24 business plan table guidance Part 13'.
Cost driver 11	PFF (modelled/calculated) (l/s)	Not calculated.
Cost driver 12	Formula A (l/s)	Not calculated as information is not readily available.
Cost driver 13	Permitted storage requirement (m3)	As stated in existing permit (if applicable)
Cost driver 14	Actual storage (m3)	Where data was available, the actual storage has been noted.
Cost driver 15	Permitted annual spill frequency (where stated)	Not stated in the environmental permit
Cost driver 16	Justification	Column has been used where a numerable permitted PFF or storage requirement is not provided

Cost driver 17	Permitted screening provision (6mm, 10mm, none)	As per 'PR24 business plan table guidance Part 13'.
Cost driver 18	Actual screening provision (6mm, 10mm, none)	As per 'PR24 business plan table guidance Part 13'.
Cost driver 19	Screen totex (£m)	As per 'PR24 business plan table guidance Part 13'.
Cost driver 20	SOAF Investigation current stage	61 SOAFs in AMP7. 36 complete. 7 in our programme for AMP8 with 2028 start will have SOAF completed by 31 March 2025.
Cost driver 21	Related FFT increase to reduce SO spills or allow storage discharge (l/s)	FFT increase for Storm Overflows does not contribute to this submission, therefore no values have been populated in this cost driver.
Cost driver 22	FFT increase location	FFT increase for Storm Overflows does not contribute to this submission, therefore no locations have been identified in this cost driver.
Cost driver 23	FFT increase totex (£m)	FFT increase for Storm Overflows does not contribute to this submission, therefore no values have been populated in this cost driver.
Cost driver 24	Surface water separation (ha removed)	The total amount of area removed anticipated for storm overflows due to commence in AMP8. Storm Overflows phased across AMP8 and AMP9 have portioned storage as per the capital expenditure profile i.e evenly distributing the capital expenditure across the estimated 7 years, therefore two sevenths of the total hectares removed required for an overflow.
Cost driver 25	Surface water separation totex (£m)	As per 'PR24 business plan table guidance Part 13'.
Cost driver 26	Wetland area (ha)	This assumes regulatory support for our proposals for 36 wetlands starting in AMP8
Cost driver 27	Wetland totex (£m)	This assumes regulatory support for our proposals for 36 wetlands starting in AMP8
Cost driver 28	Forecast scheme completion date	As per July'2024 WINEP submission requirements for overflows.
Cost driver 29	Combined scheme (provide name of combined scheme)	As per 'PR24 business plan table guidance Part 13'.
Cost driver 30	Company specific- AMP9 Equivalent Storage delivered through Grey solutions (m3)	The anticipated AMP9 total amount of grey storage anticipated for storm overflows due to commence in AMP8 but completed in AMP9. Storm Overflows phased across AMP8 and AMP9 have portioned storage as per the capital expenditure profile i.e evenly distributing the capital expenditure across the estimated 7 years, therefore five sevenths of the total storage required for an overflow.
Cost driver 31	Company specific- AMP9 Equivalent Storage delivered through other solutions (m3)	The total amount of equivalent SuDS and separation storage anticipated for storm overflows due to commence in AMP8 but completed in AMP9 (hectares for both SuDS and separation solutions multiplied by 16mm). Storm Overflows phased across AMP8 and AMP9 have portioned storage as per the capital expenditure profile i.e evenly distributing the capital expenditure across the estimated 7 years, therefore five sevenths of the total storage required for an overflow.
Cost driver 32	Company specific- AMP9 Surface water separation (ha removed)	The total amount of area removed anticipated for storm overflows due to commence in AMP8 but completed in AMP9. Storm Overflows phased across

		AMP8 and AMP9 have portioned storage as per the capital expenditure profile i.e evenly distributing the capital expenditure across the estimated 7 years, therefore five sevenths of the total hectares removed required for an overflow.
Cost driver 33	Additional Commentary	As per 'PR24 business plan table guidance Part 13'.
Cost driver 34	Current spills (annual spills - EDM, 2020)	EDM Annual Return
Cost driver 35	Current spills (annual spills - EDM, 2021)	EDM Annual Return
Cost driver 36	Current spills (annual spills - EDM, 2022)	EDM Annual Return
Cost driver 37	Current spills (annual spills - EDM, 2023)	EDM Annual Return
Cost driver 38	Model predicted spills (annual, 2025)	Differences in predicted spills for 2025 from current is based on actions implemented by our Clean Rivers and Seas team.
Cost driver 39	Target spills (annual spills)	As per 'PR24 business plan table guidance Part 13'.
Cost driver 40	2024-25 (2024) Company forecast spill position	Forecast spill position following accelerated funding.
Cost driver 41	2025-26 (2025) Company forecast spill position	Same as Cost driver 41
Cost driver 42	Spill reduction benefits – cumulative benefits - 2025-26 spill reduction	Spills reduction benefits are accrued in the year after the scheme is completed.
Cost driver 43	Spill reduction benefits – cumulative benefits - 2026-27 spill reduction	Spills reduction benefits are accrued in the year after the scheme is completed
Cost driver 44	Spill reduction benefits – cumulative benefits - 2027-28 spill reduction	Spills reduction benefits are accrued in the year after the scheme is completed and for schemes completed by 30 June 2027
Cost driver 45	Spill reduction benefits – cumulative benefits - 2028-29 spill reduction	Spills reduction benefits are accrued in the year after the scheme is completed
Cost driver 46	Spill reduction benefits – cumulative benefits - 2029-30 spill reduction	Spills reduction benefits are accrued in the year after the scheme is completed
Cost driver 47	Spill reduction benefits – cumulative benefits - 2030-31 spill reduction	Spills reduction benefits are accrued in the year after the scheme is completed
Cost driver 48	Spill reduction benefits – cumulative benefits - 2031-32 spill reduction	Spills reduction benefits are accrued in the year after the scheme is completed
Cost driver 49	Spill reduction benefits – cumulative benefits - 2032-33 spill reduction	Spills reduction benefits are accrued in the year after the scheme is completed
Cost driver 50	Spill reduction benefits – cumulative benefits - 2033-34 spill reduction	Spills reduction benefits are accrued in the year after the scheme is completed
Cost driver 51	Spill reduction benefits – cumulative benefits - 2034-35 spill reduction	Spills reduction benefits are accrued in the year after the scheme is completed

ADD21 - Resilience Interconnector Schemes			
Line description			**Commentary**
		Scheme Name	
1	Interzonal transfer (HWZ-HSW): Yew Hill to Rownhams, T[redacted] bi-directional - potable (60Ml/d) SLM- Yew Hill WSR to Rownhams WSR- Enabling	Costs for interconnector schemes included in ADD21 have been spit according to CIT line items for each scheme. Included are the breakdown of costs for the following interconnector schemes: • Interzonal transfer (HWZ-HSW): Yew Hill to Rownhams, [redacted] bi-directional - potable (60Ml/d) SLM • Hampshire grid (reversible link HSE-HW) SLM • Hampshire grid (reversible link HW-HA) ALM- Crabwood WSR to Micheldever WSR WRMP scheme Utilise full existing transfer has been excluded from the table as it has been reallocated as it was assessed as supply scheme in the draft determination and has been recategorized as a supply scheme. [redacted] Winter Transfer Stage 2 has been omitted from this table as break down costs are unavailable, and the delivery date has been revised to post AMP9. Names are consistent with WRMP. Lines have been named as follows: ***WRMP scheme name***- *line item costed* For example: ***Interzonal transfer (HWZ-HSW): Yew Hill to Rownhams, [redacted] bi-directional - potable (60Ml/d) SLM- Yew Hill WSR to Rownhams WSR***- *Open Cut* Costs for each line item have been profiled across the AMP utilising the spend profile from WRMP24 and therefore the spend profile is in line with CW8. For each scheme, the capex and opex of each of the line items sums to match the total values included in CW8. As the schemes included in the table all deliver benefit after 2030, these are also included as part of CW3 Supply demand balance improvements delivering benefits starting from 2031; SDB totex. The schemes included in this table are selected by our revised WRMP24, which was submitted to Defra in August 2024 and are included in our CW8 table as singular line items. The costs included in this table and CW8 do not align with WRMP24 because we have updated the costs with revised market-based costs from our delivery partner and have updated the cost base and multipliers in line with our PR24 multipliers. For further information on these costs please see SRN-DDR-028 Water Resources - Supply Enhancement Cost Evidence Case.
2	Interzonal transfer (HWZ-HSW): Yew Hill to Rownhams, [redacted] bi-directional - potable (60Ml/d) SLM- Yew Hill WSR to Rownhams WSR- Open Cut		
3	Interzonal transfer (HWZ-HSW): Yew Hill to Rownhams, [redacted] bi-directional - potable (60Ml/d) SLM- Yew Hill WSR to Rownhams WSR- Tunnels		
4	Interzonal transfer (HWZ-HSW): Yew Hill to Rownhams, [redacted] bi-directional - potable (60Ml/d) SLM- Yew Hill WSR		
5	Interzonal transfer (HWZ-HSW): Yew Hill to Rownhams, [redacted] bi-directional - potable (60Ml/d) SLM- Land drainage		
6		Interzonal transfer (HWZ-HSW): Yew Hill to Rownhams, [redacted] bi-directional - potable (60Ml/d) SLM- Pipeline disinfection	
7		Interzonal transfer (HWZ-HSW): Yew Hill to Rownhams, [redacted] bi-directional - potable (60Ml/d) SLM- Reservoir disinfection	

8	Interzonal transfer (HWZ-HSW): Yew Hill to Rownhams, [redacted] bi-directional - potable (60Ml/d) SLM- Reservoir connections	
9	Interzonal transfer (HWZ-HSW): Yew Hill to Rownhams, [redacted] bi-directional - potable (60Ml/d) SLM- Ecological and environmental surveys and mitigations	
10	Hampshire grid (reversible link HSE-HW) SLM- [redacted] to Yew Hill WSR- Enabling	
11	Hampshire grid (reversible link HSE-HW) SLM- [redacted] to Yew Hill WSR-Open Cut	
12	Hampshire grid (reversible link HSE-HW) SLM- [redacted] to Yew Hill WSR- Tunnels	
13	Hampshire grid (reversible link HSE-HW) SLM- [redacted] High Lift Pumping Station	
14	Hampshire grid (reversible link HSE-HW) SLM- Land Drainage	
15	Hampshire grid (reversible link HSE-HW) SLM- Pipeline disinfection	
16	Hampshire grid (reversible link HSE-HW) SLM- Reservoir disinfection	
17	Hampshire grid (reversible link HSE-HW) SLM- Reservoir connections	
18	Hampshire grid (reversible link HSE-HW) SLM- Ecological and environmental surveys and mitigations	
19	Hampshire grid (reversible link HW-HA) ALM- Land Drainage	
20	Hampshire grid (reversible link HW-HA) ALM- Crabwood WSR to Micheldever WSR- Enabling	
21	Hampshire grid (reversible link HW-HA) ALM- Crabwood WSR to Micheldever WSR- Open Cut	
22	Hampshire grid (reversible link HW-HA) ALM- Crabwood WSR to Micheldever WSR- Tunnels	
23	Hampshire grid (reversible link HW-HA) ALM- Micheldever WSR to River Way WSR- Enabling	
24	Hampshire grid (reversible link HW-HA) ALM- Micheldever WSR to River Way WSR- Open cut	

25	Hampshire grid (reversible link HW-HA) ALM-Micheldever WSR to River Way WSR-Tunnels	
26	Hampshire grid (reversible link HW-HA) ALM- -Pipeline disinfection	
27	Hampshire grid (reversible link HW-HA) ALM-Reservoir disinfection	
28	Hampshire grid (reversible link HW-HA) ALM-Reservoir connections	
29	Hampshire grid (reversible link HW-HA) ALM-Olivers Battery WBS ICA upgrade	
30	Hampshire grid (reversible link HW-HA) ALM-River Way WSW HLPS MEICA upgrade and connections	
31	Hampshire grid (reversible link HW-HA) ALM-Ecological and environmental surveys and mitigations	

ADD22A - Overall outcome performance - Bespoke performance commitments		
Line description		Commentary
	Bespoke PCs	
	Capital carbon	
	Embodied greenhouse gas emissions [SWB]	
	Embodied greenhouse gas emissions [UUW]	
	Lead pipe replacement	
	Lower carbon concrete	
	Low pressure	
	Streetworks collaboration	
	Wonderful Windermere	
	Bespoke PC 1	
	Bespoke PC 2	
	Bespoke PC 3	

ADD22B - Outcome performance from base expenditure - Bespoke performance commitments		
Line description		Commentary
	Bespoke PCs	
	Capital carbon	
	Embodied greenhouse gas emissions [SWB]	
	Embodied greenhouse gas emissions [UUW]	
	Lead pipe replacement	
	Lower carbon concrete	
	Low pressure	
	Streetworks collaboration	
	Wonderful Windermere	
	Bespoke PC 1	
	Bespoke PC 2	
	Bespoke PC 3	

ADD22C - Outcome performance from enhancement expenditure - Bespoke performance commitments		
Line description		Commentary
	Bespoke PCs	
	Capital carbon	
	Embodied greenhouse gas emissions [SWB]	
	Embodied greenhouse gas emissions [UUW]	
	Lead pipe replacement	
	Lower carbon concrete	
	Low pressure	
	Streetworks collaboration	
	Wonderful Windermere	
	Bespoke PC 1	
	Bespoke PC 2	
	Bespoke PC 3	

ADD22D - Outcome performance - ODIs (financial)		
Line description		Commentary
	Bespoke PCs	
	Capital carbon	
	Embodied greenhouse gas emissions [SWB]	
	Embodied greenhouse gas emissions [UUW]	
	Lead pipe replacement	
	Lower carbon concrete	
	Low pressure	
	Streetworks collaboration	
	Wonderful Windermere	
	Bespoke PC 1	
	Bespoke PC 2	
	Bespoke PC 3	

ADD22D - Underlying calculations for bespoke performance commitments		
Line description		**Commentary**
	Capital carbon	
1	Tonnes CO2e - baseline	No bespoke performance commitments
2	Tonnes CO2e - cumulative baseline for each price control period	
3	Tonnes CO2e	
4	Cumulative tonnes CO2e for each price control period	
5	Reduction % from baseline	
	Embodied greenhouse gas emissions [SWB]	
6	Total capital delivery spend	
7	Tonnes CO2e	
8	Tonnes CO2e per £1m	
9	Reduction % from baseline	
	Embodied greenhouse gas emissions [UUW]	
10	Programme baseline without reductions, Tonnes CO2e	
11	Programme baseline without reductions, cumulative, Tonnes CO2e	
12	Reduction in emissions incorporated into baseline, Tonnes CO2e	
13	Reduction in emissions incorporated into baseline, cumulative, Tonnes CO2e	
14	Programme baseline, Tonnes CO2e	
15	Programme baseline, cumulative, Tonnes CO2e	
16	Built solutions at project-in-use gateway (AMP8), Tonnes CO2e	
17	Built solutions at project-in-use gateway (AMP8), cumulative programme, Tonnes CO2e	
18	Reduction % from baseline	
	Lead pipe replacement	
19	Number of properties protected	
	Lower carbon concrete	
20	Tonnes CO2e - baseline	
21	Tonnes CO2e - cumulative baseline for each price control period	
22	Tonnes CO2e	

23	Cumulative tonnes CO2e for each price control period	
24	Reduction % from baseline	
	Low pressure	
25	Total number of properties covered by critical point loggers at year end	
26	The total number of properties where low pressure is recorded	
27	Minutes of low pressure recorded	
28	Total minutes of low pressure experienced	
29	Normalisation constant	
30	The total minutes of low pressure experienced - normalised	
31	Average time of low pressure experienced per property	
	Streetworks collaboration	
32	Number of collaborative projects delivered	
	Wonderful Windermere	
33	Kgs of phosphorus equivalents removed from Windermere catchment	
34	Total Kgs of phosphorus equivalents removed from Windermere catchment (cumulative)	
	Bespoke PC 1	
35	Line 1	
36	Line 2	
37	Line 3	
38	Line 4	
	Bespoke PC 2	
39	Line 1	
40	Line 2	
41	Line 3	
42	Line 4	
	Bespoke PC 3	
43	Line 1	
44	Line 2	
45	Line 3	

46	Line 4	

ADD23A - Overall outcome performance - Severe water supply interruptions common PC		
Line description		Commentary
	Common PCs	
1	Severe water supply interruptions	

ADD23B - Outcome performance from base expenditure - Severe water supply interruptions common PC		
Line description		Commentary
	Common PCs	
1	Severe water supply interruptions	

ADD23C - Outcome performance from enhancement expenditure - Severe water supply interruptions common PC		
Line description		Commentary
	Common PCs	
1	Severe water supply interruptions	

ADD23D - Underlying calculations for severe water supply interruptions common PC		
Line description		Commentary
	Severe water supply interruptions	
1	Impact of supply interruptions of >=12 hours - all incidents	
	Normalisation constant	
	Impact of supply interruptions of >=12 hours - all incidents - normalised	
	Total number of properties whose supply was interrupted >= 12 hours - all incidents	
	Average number of minutes lost per property	

ADD23E - Outcome performance - ODIs (financial)		
Line description		Commentary
	Common PCs	
1	Severe water supply interruptions	

ADD24a - Large schemes gated		
Line description		**Commentary**
	Large enhancement schemes expenditure - gated process (pre frontier shift efficiency and real price effects)	
1	Whitfield	A new treatment works required to address growth at Whitfield. The current treatment works has no capacity for significant capacity increases as it is built underground in a 'box'. The scheme costs have increased following a more detailed assessment of the requirements for network connections and the long sea outfall. Due to the scale of this works, the large scheme gated process would be the best route to review and agree the scheme details as they develop. See SRN-DDR-048: Wastewater Treatment Growth
2	NIS and SEMD	Security programme delivering physical and cyber security enhancements. See SRN-DDR-042 Network and Information Systems (NIS) Enhancement Cost Evidence Case and SRN-DDR-043 Security and Emergency Measures Direction (SEMD) Enhancement Cost Evidence Case for further details.
3	Sittingbourne	Sittingbourne is no longer proposed to be delivered via DPC. It is proposed to be delivered under this mechanism, in line with the Draft Determination from Ofwat. For more information see SRN-DDR-028 Water Resources – Supply Enhancement Cost Evidence Case
4		
5		
6		
7		
8		
9		
10		
	Large enhancement schemes expenditure - gated process (post frontier shift efficiency and real price effects)	
11	Whitfield	All figures come from pre-frontier and pre real price effects lines above, adjusted for real price effects and the post-frontier efficiency shift.
12	NIS and SEMD	
13	Sittingbourne	
14		
15		
16		
17		

18		
19		
20		

ADD24b - Large schemes enhanced		
Line description		**Commentary**
	Large enhancement schemes expenditure - enhanced engagement process (before frontier shift efficiency and real price effects)	
1	Storm Overflows (all 2027's)	A programme covering improvements to 54 storm overflows into bathing waters and shellfish waters - 4 for delivery by 31 March 2027 and 50 for delivery by 30 June 2027 to meet the WFD "no deterioration" requirements set by the EA.
2	[redacted]	The 5 sites are proposed to be delivered as an integrated programme under this mechanism. The [redacted] cost includes the WRMP funded half of the [redacted].
3		
4		
5		
6	Weirwood	
7	Sandown	Sandown is proposed to be delivered under this mechanism. For more information see SRN-DDR-028 Water Resources – Supply Enhancement Cost Evidence Case
8	Southampton Link Main (SLM)	Southampton Link Main (SLM) is proposed to be delivered under this mechanism. For more information see SRN-DDR-028 Water Resources – Supply Enhancement Cost Evidence Case
9		
10		
	Large enhancement schemes expenditure - enhanced engagement process (after frontier shift efficiency and real price effects)	
11	Storm Overflows (all 2027's)	All figures come from pre-frontier and pre real price effects lines above, adjusted for real price effects and the post-frontier efficiency shift.
12	[redacted]	
13		
14		
15		
16	Weirwood	
17	Sandown	
18	Southampton Link Main (SLM)	
19		
20		

ADD25 - Large schemes enhanced		
Line description		Commentary
	Delivery mechanism expenditure	
1	Continuous water Q Monitoring	Excludes year 1 costs as these are considered as core plan
2	Treatment for phosphorus removal (chemical)	Refer to SRN DDR 043, section 6 for list of the 21 complex schemes within this mechanism
3	Treatment for phosphorus removal (biological)	Refer to SRN DDR 043, section 6 for list of the 21 complex schemes within this mechanism
4	Treatment for total nitrogen removal (chemical)	Refer to SRN DDR 043, section 6 for list of the 21 complex schemes within this mechanism. Excludes year 1 and transition costs as these are considered as core plan
5	Storm Overflows (2035s)	A programme of work including 114 overflows a start date of 2028 to meet the 2035 statutory date
6	Treatment for chemical removal	Refer to SRN DDR 043, section 6 for list of the 21 complex schemes within this mechanism
7	Treatment for tightening of sanitary parameters	Refer to SRN DDR 043, section 6 for list of the 21 complex schemes within this mechanism
8	Water Network Resilience and disinfection	See SRN-DDR-026
9	Other WRMP Supply and interconnector schemes. This line totals all other WRMP Supply and interconnector schemes that have not been included in the other mechanisms that are included in Supply schemes delivering benefit 25-30 (CW3.43), interconnectors delivering benefit 25-30 (CW3.52) and supply and demand balance improvements delivering benefit from 2031 (CW3.55) CW lines.	See SRN-DDR-027
10	WRMP Mains Replacement	See SRN-DDR-028

ADD18 Commentary

1.1 Apportioning and mapping risk drivers

Our risk analysis detailed in *SRN-DDR-003 – Risk and Investability* calculates risk on a granular basis and aggregates it into categories that differ from those required for ADD18 and does not split by price control. To complete the ADD18 tables we have therefore:

- Mapped our categories to those required by the table. The aggregate sharing mechanism cannot be split between ODIs and was therefore allocated to "Other" within "Revenue & Other Impacts." Similarly, our assessment of embedded debt risk was allocated to "Other."
- Allocated risk relating to component associated with both price controls between water and wastewater by splitting the relative risk by the proportion of total regulated equity attributable to the price control. This was done for Enhancement totex, and Discharge Compliance and Serious Pollution incidents ODIs.

See Appendix 1 for a full mapping.

1.2 Representation of our view on risk

The summative RoRE ranges inferred in ADD18 are not representative of our view on risk. These include all rows shaded blue and therefore component (e.g. Totex, ODIs, Financing, etc) totals and overall RoRE. This is because:

1. P50 risk is non-zero, which cannot be captured in the tables, and
2. The aggregation of component RoRE risk requires consideration for the relationship between components and therefore an additive range is likely to misrepresent the true risk.

The total RoRE ranges presented in *SRN-DDR-003 – Risk and Investability* is our view of the true level of AMP8 risk. These are shown below and broken down into the format required for ADD18, i.e. the delta between high/low and base case in Appendix 2.

	Company view of DD			Company view of representations			Impact of changes proposed by company in representations		
	P10	P50	P90	P10	P50	P90	P10	P50	P90
Totex	-2.67%	-1.31%	0.15%	-1.56%	-0.05%	0.96%	1.12%	1.26%	0.81%
Retail	-2.17%	-0.62%	0.92%	-1.55%	0.00%	1.55%	0.62%	0.62%	0.62%
Measures of Experience	-0.37%	-0.05%	0.31%	-0.22%	0.01%	0.26%	0.15%	0.06%	-0.05%
ODIs	-3.30%	-1.72%	-0.55%	-0.71%	-0.19%	0.29%	2.59%	1.53%	0.84%
Financing	-1.86%	-0.35%	1.18%	-1.49%	0.01%	1.55%	0.37%	0.36%	0.37%
Revenue and other	-0.18%	-0.03%	0.00%	-0.18%	-0.03%	0.00%	0.00%	0.00%	0.00%
RoRE (additive)	-10.55%	-4.07%	2.00%	-5.70%	-0.24%	4.60%	4.85%	3.83%	2.60%
RoRE	**-7.10%**	**-4.18%**	**-1.27%**	**-2.87%**	**-0.38%**	**2.12%**	**4.23%**	**3.80%**	**3.39%**

These calculations factor in correlations between risk drivers and therefore differ from the additive RoRE totals presented in the ADD18 table. We have not amended the ADD18 totals to reflect our view on total risk in line with Ofwat guidance. Total risk should be viewed as that presented in the above table and detailed in our Risk Chapter.

As a result of the inability to show P50:

- The ADD18 approach demonstrates the effect of mitigations on the width of the RoRE range but cannot capture the impact they have on a negative P50.
- It is necessary to calculate the differential high and low case scenarios, as opposed to using the absolute P10/P90 figure. To calculate the 'high case' figures required in the ADD18 tables, the P50 RoRE % figure has been subtracted from the P90 % figure. Thus, leaving the upside performance of

each individual risk driver required. Similarly, 'low-case' figures are calculated by subtracting the P50% RoRE figure from the P10 figure, giving the downside performance.

1.3 Calculation of the impact of changes proposed in the representations.

Impact of changes proposed was calculated as follows:

- For the high case: the mitigated upside (P90 – P50) figures were subtracted by the unmitigated upside figures in % RoRE terms.
- For low case: the mitigated scenario downside (P10 – P50) figures were subtracted by the unmitigated downside figures in % RoRE terms.
- Both % impact in RoRE terms were then multiplied by the regulated equity for the year to give a £m value.

1.4 Other changes to the ADD18 tables

Relative to the cell references in Ofwat's published ADD18 tables for companies to populate, the following changes were made at request of Ofwat's latest changes, as per PR24 Business Plan Data Tables Amendments and Errata Log (Published: 1 August 2024; Updated: 20 August 2024):

- In E78 input " =IF(E$75=0,0,(E9+E10+E12+E13+E14)/E$75) " and dragged this to populate cells across I78.
- In cell J78 input " =AVERAGE(E78:I78) "
- In cell J79 input " =AVERAGE(E79:I79) "
- In E88 input " =IF(E$75=0,0,(E41+E42+E44+E45+E46)/E$75) "and dragged this across to cell I88.
- Drag cell E89 to populate cells across to cell I89.

Additionally, there was an error in the calculation of the total RoRE impact on high case which double counted Totex RoRE. As such, referring to the published ADD18 tables from Ofwat, cell E105 was amended to be a sum of E100:E104. E105 was then dragged across to I105.

1.5 Appendix

Appendix 1: Final position of mapping drivers to ADD18 categories – exceptions in blue

Common Risk Model Driver	Category within our analysis	ADD18 Category mapped to
Retail net profit	Totex	Retail costs
Base totex, post-timing adjustment - water	Totex	Wholesale water costs
Base totex, post-timing adjustment - wastewater	Totex	Wholesale wastewater costs
Base totex - bioresources	Totex	Bioresources costs
Enhancement totex (WaSC) - water	Totex	Wholesale water costs
Enhancement totex (WaSC) - wastewater	Totex	Wholesale wastewater costs
Enhancement totex (WoC)	Totex	Wholesale water costs
DPC, default risk	Revenue & other	Other
C-Mex	Measures of Experience	C-MeX
D-Mex	Measures of Experience	D-Mex
BR-Mex	Measures of Experience	BR-Mex – not modelled in common risk model
Leakage	ODIs	Water ODIs
Customer Contacts on Water Quality	ODIs	Water ODIs
Water Supply Interruptions	ODIs	Water ODIs
CRI	ODIs	Water ODIs
PCC	ODIs	Water ODIs
Mains Repairs	ODIs	Water ODIs
Unplanned Outage	ODIs	Water ODIs
Pollution Incidents	ODIs	Wastewater ODIs
Internal Sewer Flooding	ODIs	Wastewater ODIs
Sewer Collapse	ODIs	Wastewater ODIs
Discharge Compliance (WaSC) - water	ODIs	Water ODIs
Discharge Compliance (WaSC) - wastewater	ODIs	Wastewater ODIs

Discharge Compliance (WoC)	ODIs	Water ODIs
Bathing Water Quality	ODIs	Wastewater ODIs
Storm Overflows	ODIs	Wastewater ODIs
External Sewer Flooding	ODIs	Wastewater ODIs
Business demand	ODIs	Water ODIs
Serious Pollution Incidents (WaSC) - water	ODIs	Water ODIs
Serious Pollution Incidents (WaSC) - wastewater	ODIs	Wastewater ODIs
Serious Pollution Incidents (WoC)	ODIs	Water ODIs
River water quality (phosphorus)	ODIs	Wastewater ODIs
Real interest rate, embedded debt	Financing	Oher / Embedded debt
Real interest rate, new debt	Financing	New debt issuance
CPIH impact on fixed debt, embedded and new	Financing	Inflation
RPI-CPIH wedge impact on RPI-linked debt, embedded	Financing	Inflation
CPI-CPIH wedge impact on CPI-linked debt, embedded and new	Financing	Inflation
Revenue incentive mechanisms	Revenue & other	Revenue
Aggregated risk sharing mechanism - ODI - water	ODIs	Other -Aggregated risk sharing mechanism - ODI
Aggregated risk sharing mechanism - ODI - wastewater	ODIs	Other - Aggregated risk sharing mechanism - ODI
Aggregated risk sharing mechanism - totex - water	Totex	Other - Aggregated risk sharing mechanism - totex
Aggregated risk sharing mechanism - totex - wastewater	Totex	Other - Aggregated risk sharing mechanism - totex
Aggregated risk sharing mechanism - totex - bioresources	Totex	Other - Aggregated risk sharing mechanism - totex
Return Adjustment Mechanisms	Revenue & other	Other

Appendix 2: Our view on total risk, per SRN-DDR-003 – Risk and Investability

	Company view of DD				Impact of changes proposed by company in representations			
	ADD18	RoRE %	ADD18	£m	ADD18	RoRE %	ADD18	£m
High case (P90)								
Wholesale totex	n/a	0.15%	n/a	6.0	n/a	0.81%	n/a	32.9
Retail	n/a	0.92%	n/a	37.7	n/a	0.62%	n/a	25.4
Totex RoRE	n/a	1.07%	n/a	43.7	n/a	1.43%	n/a	58.4
Outcome delivery incentives	n/a	-0.55%	n/a	-22.5	n/a	0.84%	n/a	34.3
Financing	n/a	1.18%	n/a	48.0	n/a	0.37%	n/a	15.1
Customer measures of experience	n/a	0.31%	n/a	12.6	n/a	-0.05%	n/a	-1.9
Revenue & other	n/a	0.00%	n/a	0.0	n/a	0.00%	n/a	0.0
Total	n/a	-1.27%	n/a	-51.9	n/a	3.39%	n/a	138.4
Base case (P50)								
Wholesale totex	n/a	-1.31%	n/a	-53.3	n/a	1.26%	n/a	51.3
Retail	n/a	-0.62%	n/a	-25.5	n/a	0.62%	n/a	25.5
Totex RoRE	n/a	-1.93%	n/a	-78.8	n/a	1.88%	n/a	76.8
Outcome delivery incentives	n/a	-1.72%	n/a	-70.1	n/a	1.53%	n/a	62.3
Financing	n/a	-0.35%	n/a	-14.3	n/a	0.36%	n/a	14.8
Customer measures of experience	n/a	-0.05%	n/a	-1.8	n/a	0.06%	n/a	2.3
Revenue & other	n/a	-0.03%	n/a	-1.0	n/a	0.00%	n/a	0.0
Total	n/a	-4.18%	n/a	-170.5	n/a	3.80%	n/a	155.1
Low case (P10)								
Wholesale totex	n/a	-2.67%	n/a	-109.0	n/a	1.12%	n/a	45.5
Retail	n/a	-2.17%	n/a	-88.6	n/a	0.62%	n/a	25.5
Totex RoRE	n/a	-4.84%	n/a	-197.7	n/a	1.74%	n/a	71.0
Outcome delivery incentives	n/a	-3.30%	n/a	-134.6	n/a	2.59%	n/a	105.7
Financing	n/a	-1.86%	n/a	-75.9	n/a	0.37%	n/a	15.1
Customer measures of experience	n/a	-0.37%	n/a	-15.3	n/a	0.15%	n/a	6.2
Revenue & other	n/a	-0.18%	n/a	-7.2	n/a	0.00%	n/a	0.0
Total	n/a	-7.10%	n/a	-289.7	n/a	4.23%	n/a	172.6
High case vs base case (required by ADD18)								
Wholesale totex	RR30.48	1.45%	n/a	59.4	RR30.80	-0.45%	n/a	-18.4
Retail	RR30.49	1.55%	RR30.3	63.1	RR30.81	0.00%	n/a	0.0
Totex RoRE	RR30.50	3.00%	RR30.7	122.5	RR30.82	-0.45%	n/a	-18.4
Outcome delivery incentives	RR30.51	1.17%	RR30.12	47.6	RR30.83	-0.69%	n/a	-28.0
Financing	RR30.52	1.53%	RR30.15	62.3	RR30.84	0.01%	n/a	0.3

Customer measures of experience	RR30.53	0.35%	RR30.19	14.5	RR30.85	-0.10%	n/a	-4.2
Revenue & other	RR30.54	0.02%	RR30.22	1.0	RR30.86	0.00%	n/a	0.0
Total	RR30.55	2.90%	n/a	118.5	RR30.87	-0.41%	n/a	-16.7
Low case vs base case (required by ADD18)								
Wholesale totex	RR30.56	-1.37%	n/a	-55.7	RR30.88	-0.14%	n/a	-5.8
Retail	RR30.57	-1.55%	RR30.25	-63.1	RR30.89	0.00%	n/a	0.0
Totex RoRE	RR30.58	-2.91%	RR30.29	-118.9	RR30.90	-0.14%	n/a	-5.7
Outcome delivery incentives	RR30.59	-1.58%	RR30.34	-64.5	RR30.91	1.06%	n/a	43.4
Financing	RR30.60	-1.51%	RR30.37	-61.6	RR30.92	0.01%	n/a	0.3
Customer measures of experience	RR30.61	-0.33%	RR30.41	-13.4	RR30.93	0.10%	n/a	3.9
Revenue & other	RR30.62	-0.15%	RR30.44	-6.2	RR30.94	0.00%	n/a	0.0
Total	RR30.63	-2.92%	n/a	-119.3	RR30.95	0.43%	n/a	17.4