

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E1a: Activity Based Costing - Water Service

					Report Year - 1 2001-02																
					10	20	30	40	50	60	199	210	220	230	240	250	260	299	999		
Line Ref.	Description	Ofwat Ref JR 00	Units	Field Type	Water Resources & Treatment							Water Distribution						Water Service			
					Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	sub total	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	sub total	Total	CG	
Service Analysis - Water : Direct Costs																					
E1.0	Name	-		I																	
E1.1	Employment costs	T21, L1	£m	I/C							0							0	0	0	
E1.2	Power	T21, L2	£m	I/C							0							0	0	0	
E1.3	Hired and contracted services	T21, L4	£m	I/C							0							0	0	0	
E1.4	Estimated running cost of PPP schemes	-	£m	I/C							0							0	0	0	
E1.5	Materials and consumables	T21, L6	£m	I/C							0							0	0	0	
E1.6	Service charges SEPA	T21, L7	£m	I/C							0							0	0	0	
E1.7	Bulk supply imports	T21, L8	£m	I/C							0							0	0	0	
E1.8	Other direct costs	T21, L9	£m	I/C							0							0	0	0	
E1.9	Total direct costs	T21, L10	£m	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
E1.10	General and support employment costs	-	£m	I/C							0							0	0	0	
E1.11	General and support other costs	-	£m	I/C							0							0	0	0	
E1.12	Functional expenditure	T21, L12	£m	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Operating Expenditure																					
E1.13	Customer services	T21, L13	£m	I																	
E1.14	Scientific services	T21, L14	£m	I																	
E1.15	Other business activities	T21, L15	£m	I																	
E1.16	Total business activities	T21, L16	£m	C															0		
E1.17	Local authority rates	T21, L17	£m	I																	
E1.18	Doubtful debts	T21, L18	£m	I																	
E1.19	Exceptional items - start-up costs	-	£m	I																	
E1.20	Exceptional items - reorganisation costs	-	£m	I																	
E1.21	Exceptional items - severance costs	-	£m	I																	
E1.22	Exceptional items - other costs (specify)	-	£m	I																	
E1.23	Total Exceptional items	T21, L19	£m	C															0		
E1.24	Total opex less third party services	T21, L20	£m	C															0		
E1.25	Third party services - opex	T21, L21	£m	I																	
E1.26	Total operating expenditure	T21, L16	£m	C															0		
Reactive and Planned Maintenance (included in Opex)																					
E1.27	Reactive and planned maintenance infrastructure	T21, L23	£m	I/C							0							0	0	0	
E1.28	Reactive and planned maintenance non-infrastructure	T21, L24	£m	I/C							0							0	0	0	
Capital Maintenance																					
E1.29	Infrastructure depreciation charge	T21, L25	£m	I																	
E1.30	Non-infrastructure depreciation charge	T21, L26	£m	I																	
E1.31	Amortisation of deferred credits	T21, L28	£m	I																	
E1.32	Amortisation of intangible assets	T21, L29	£m	I																	
E1.33	Business activities depreciation charge	T21, L30	£m	I																	
E1.34	Capital maintenance less third party services	T21, L31	£m	C															0		
E1.35	Third party services - depreciation	T21, L32	£m	I																	
E1.36	Total capital maintenance	T21, L33	£m	C															0		
PPP Costs																					
E1.37	Total annual charge for PPP schemes	T21, L25	£m	I																	
E1.38	Annual charge for PPP schemes less estimated running	T21, L26	£m	C															0		
E1.39	Total operating costs	T21, L34	£m	C															0		

Prepared by: Date:
 Checked by: Date:
 Authorised by: Douglas Millican Date:

ANNUAL RETURN INFORMATION REQUIREMENTS

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E1b: Activity Based Costing - Water Service

					Report Year 2002-03																	
					10	20	30	40	50	60	199	210	220	230	240	250	260	299	999			
Line Ref.	Description	Ofwat Ref JR 00	Units	Field Type	Water Resources & Treatment							Water Distribution						Water Service				
					Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	sub total	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	sub total	Total	CG		
Service Analysis - Water : Direct Costs																						
E1.0	Name	-		I	NW	NE	SE	SW				NW	NE	SE	SW							
E1.1	Employment costs	T21, L1	£m	I/C	4.619	2.242	1.927	7.325			16.113	4.598	4.903	5.883	10.322				25.706	41.819	B2	
E1.2	Power	T21, L2	£m	I/C	1.105	1.202	0.883	2.194			5.384	0.347	0.538	0.043	1.944				2.872	8.256	B2	
E1.3	Hired and contracted services	T21, L4	£m	I/C	0.801	0.692	0.779	2.232			4.504	1.208	0.965	1.44	3.395				7.008	11.512	B2	
E1.4	Estimated running cost of PPP schemes	-	£m	I/C	0	0	0	0			0	0	0	0	0				0	0	N	
E1.5	Materials and consumables	T21, L6	£m	I/C	1.812	1.385	1.244	3.623			8.064	0.674	0.356	0.347	0.817				2.194	10.258	B2	
E1.6	Service charges SEPA	T21, L7	£m	I/C	0.077	0.023	0.042	0.079			0.221	0.015	0.003	0.005	0				0.023	0.244	B2	
E1.7	Bulk supply imports	T21, L8	£m	I/C	0	0	0	0			0	0	0	0	0				0	0	N	
E1.8	Other direct costs	T21, L9	£m	I/C	0.175	0.183	0.369	0.611			1.338	0.306	0.238	0.4	1.231				2.175	3.513	B2	
E1.9	Total direct costs	T21, L10	£m	C	8.589	5.727	5.244	16.064	0	0	35.624	7.148	7.003	8.118	17.709	0	0		39.978	75.602	B2	
E1.10	General and support employment costs	-	£m	I/C	1.259	1.279	1.445	3.136			7.119	0.851	0.828	1.335	2.165				5.179	12.298	B2	
E1.11	General and support other costs	-	£m	I/C	3.333	1.177	1.047	3.697			9.254	1.977	1.03	1.907	3.867				8.781	18.035	B2	
E1.12	Functional expenditure	T21, L12	£m	C	13.181	8.183	7.736	22.897	0	0	51.997	9.976	8.861	11.36	23.741	0	0		53.938	105.935	B2	
Operating Expenditure																						
E1.13	Customer services	T21, L13	£m	I																15.903	B2	
E1.14	Scientific services	T21, L14	£m	I																7.82	B2	
E1.15	Other business activities	T21, L15	£m	I																2.659	B2	
E1.16	Total business activities	T21, L16	£m	C																26.382	B2	
E1.17	Local authority rates	T21, L17	£m	I																15.275	B2	
E1.18	Doubtful debts	T21, L18	£m	I																17.445	B2	
E1.19	Exceptional items - start-up costs	-	£m	I																0.831	B2	
E1.20	Exceptional items - reorganisation costs	-	£m	I																7.009	B2	
E1.21	Exceptional items - severance costs	-	£m	I																4.97	B2	
E1.22	Exceptional items - other costs (specify)	-	£m	I																0	N	
E1.23	Total Exceptional items	T21, L19	£m	C																12.81	B2	
E1.24	Total opex less third party services	T21, L20	£m	C																177.847	B2	
E1.25	Third party services - opex	T21, L21	£m	I																14.411	B3	
E1.26	Total operating expenditure	T21, L16	£m	C																192.258	B2	
Reactive and Planned Maintenance (included in Opex)																						
E1.27	Reactive and planned maintenance infrastructure	T21, L23	£m	I/C	0.022	0	0.002	0.041			0.065	9.298	7.937	11.231	21.583				50.049	50.114	B2	
E1.28	Reactive and planned maintenance non-infrastructure	T21, L24	£m	I/C	1.118	1.399	0.464	1.069			4.05	0.316	0.383	0.081	0.14				0.92	4.97	B2	
Capital Maintenance																						
E1.29	Infrastructure depreciation charge	T21, L25	£m	I																101	B2	
E1.30	Non-infrastructure depreciation charge	T21, L26	£m	I																50.351	B2	
E1.31	Amortisation of deferred credits	T21, L28	£m	I																-0.379	B2	
E1.32	Amortisation of intangible assets	T21, L29	£m	I																0	BX	
E1.33	Business activities depreciation charge	T21, L30	£m	I																0.282	B2	
E1.34	Capital maintenance less third party services	T21, L31	£m	C																151.254	B2	
E1.35	Third party services - depreciation	T21, L32	£m	I																0	N	
E1.36	Total capital maintenance	T21, L33	£m	C																151.254	B2	
PPP Costs																						
E1.37	Total annual charge for PPP schemes	T21, L25	£m	I																0	N	
E1.38	Annual charge for PPP schemes less estimated running	T21, L26	£m	C																0	N	
E1.39	Total operating costs	T21, L34	£m	C																343.512	B2	

Prepared by: Date:
 Checked by: Date:
 Authorised by: Douglas Millican Date:

ANNUAL RETURN INFORMATION REQUIREMENTS

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E1b: Activity Based Costing - Water Service

999	
Report Year	
2002-03	
Comment Necessary Y/N	Comment

Line Ref.	Description	Ofwat Ref JR 00	Units	Field Type
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Service Analysis - Water : Direct Costs

E1.0	Name	-		I
E1.1	Employment costs	T21, L1	£m	I/C
E1.2	Power	T21, L2	£m	I/C
E1.3	Hired and contracted services	T21, L4	£m	I/C
E1.4	Estimated running cost of PPP schemes	-	£m	I/C
E1.5	Materials and consumables	T21, L6	£m	I/C
E1.6	Service charges SEPA	T21, L7	£m	I/C
E1.7	Bulk supply imports	T21, L8	£m	I/C
E1.8	Other direct costs	T21, L9	£m	I/C

E1.9	Total direct costs	T21, L10	£m	C
E1.10	General and support employment costs	-	£m	I/C
E1.11	General and support other costs	-	£m	I/C

E1.12	Functional expenditure	T21, L12	£m	C
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Operating Expenditure

E1.13	Customer services	T21, L13	£m	I
E1.14	Scientific services	T21, L14	£m	I
E1.15	Other business activities	T21, L15	£m	I
E1.16	Total business activities	T21, L16	£m	C

E1.17	Local authority rates	T21, L17	£m	I
E1.18	Doubtful debts	T21, L18	£m	I

E1.19	Exceptional items - start-up costs	-	£m	I
E1.20	Exceptional items - reorganisation costs	-	£m	I
E1.21	Exceptional items - severance costs	-	£m	I
E1.22	Exceptional items - other costs (specify)	-	£m	I
E1.23	Total Exceptional items	T21, L19	£m	C

E1.24	Total opex less third party services	T21, L20	£m	C
E1.25	Third party services - opex	T21, L21	£m	I

E1.26	Total operating expenditure	T21, L16	£m	C
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Reactive and Planned Maintenance (included in Opex)

E1.27	Reactive and planned maintenance infrastructure	T21, L23	£m	I/C
E1.28	Reactive and planned maintenance non-infrastructure	T21, L24	£m	I/C

Capital Maintenance

E1.29	Infrastructure depreciation charge	T21, L25	£m	I
E1.30	Non-infrastructure depreciation charge	T21, L26	£m	I
E1.31	Amortisation of deferred credits	T21, L28	£m	I
E1.32	Amortisation of intangible assets	T21, L29	£m	I
E1.33	Business activities depreciation charge	T21, L30	£m	I

E1.34	Capital maintenance less third party services	T21, L31	£m	C
E1.35	Third party services - depreciation	T21, L32	£m	I

E1.36	Total capital maintenance	T21, L33	£m	C
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PPP Costs

E1.37	Total annual charge for PPP schemes	T21, L25	£m	I
E1.38	Annual charge for PPP schemes less estimated running	T21, L26	£m	C

E1.39	Total operating costs	T21, L34	£m	C
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		General		Benchmarking A1	
		A1	G	A1	G
		A2	G	A2	N
N	Please refer to A3	G	A3	N	
N	Please refer to A4	N	A4	N	
N	Please refer to AX	G	AX	G	
N	SW has no wa B2	G	B2	N	
N	Please refer to B3	G	B3	N	
N	Please refer to B4	N	B4	N	
N	SW has no bul BX	G	BX	N	
N	Please refer to C2	N	C2	N	
		C3	N	C3	N
N	Please refer to C4	N	C4	N	
N	Please refer to C5	N	C5	N	
N	Please refer to CX	N	CX	N	
		M	N	M	N
N	Please refer to N	N	N	N	
		D3	N	D3	N
		D4	N	D4	N
N	Please refer to D5	N	D5	N	
N	Please refer to D6	N	D6	N	
N	Please refer to DX	N	DX	N	
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	No costs incurred				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	Please refer to general comments on cost capture				
N	SW has no water service PPP schemes				
N	SW has no water service PPP schemes				
N	Please refer to general comments on cost capture				

Issues with data	Problem ?	Solution
E1.29 should equal F9.8 (col 2)	N	No solution required

Prepared by:	Date:
Checked by:	Date:
Authorised by: Douglas Millican	Date:

Edition 1

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E1c: Activity Based Costing - Water Service

Line Ref.	Description	Ofwat Ref JR00	Units	Field Type	Report Year + 1 Budget 2003-04				Report Year + 1 Forecast 2003-04				Report Year + 2 Budget 2004-05									
					10		20		50		100		110		150		200		210		250	
					Water Resources & Treatment	Water Distribution	Water Service		Water Resources & Treatment	Water Distribution	Water Service		Water Resources & Treatment	Water Distribution	Water Service		Water Resources & Treatment	Water Distribution	Water Service			
sub total		sub total		Total	CG	sub total		sub total		Total	CG	sub total		sub total		Total	CG					
Service Analysis - Water : Direct Costs																						
E1.0	Not in use																					
E1.1	Employment costs	T21, L1	£m	I/C			0				0				0							
E1.2	Power	T21, L2	£m	I/C			0				0				0							
E1.3	Hired and contracted services	T21, L4	£m	I/C			0				0				0							
E1.4	Estimated running costs of PPP schemes	-	£m	I/C			0				0				0							
E1.5	Materials and consumables	T21, L6	£m	I/C			0				0				0							
E1.6	Service charges SEPA	T21, L7	£m	I/C			0				0				0							
E1.7	Bulk supply imports	T21, L8	£m	I/C			0				0				0							
E1.8	Other direct costs	T21, L9	£m	I/C			0				0				0							
E1.9	Total direct costs	T21, L10	£m	C	0	0	0		0	0	0		0	0	0		0					
E1.10	General and support employment costs	-	£m	I/C			0				0				0							
E1.11	General and support other costs	-	£m	I/C			0				0				0							
E1.12	Functional expenditure	T21, L12	£m	C	0	0	0		0	0	0		0	0	0		0					
Operating Expenditure																						
E1.13	Customer services	T21, L13	£m	I																		
E1.14	Scientific services	T21, L14	£m	I																		
E1.15	Other business activities	T21, L15	£m	I																		
E1.16	Total business activities	T21, L16	£m	C			0				0				0							
E1.17	Local authority rates	T21, L17	£m	I																		
E1.18	Doubtful debts	T21, L18	£m	I																		
E1.19	Exceptional items - start-up costs	-	£m	I																		
E1.20	Exceptional items - reorganisation costs	-	£m	I																		
E1.21	Exceptional items - severance costs	-	£m	I																		
E1.22	Exceptional items - other costs (specify)	-	£m	I																		
E1.23	Total Exceptional items	T21, L19	£m	C			0				0				0							
E1.24	Total opex less third party services	T21, L20	£m	C			0				0				0							
E1.25	Third party services - opex	T21, L21	£m	I																		
E1.26	Total operating expenditure	T21, L16	£m	C			0				0				0							
Reactive and Planned Maintenance (included in Opex)																						
E1.27	Reactive and planned maintenance infrastructure	T21, L23	£m	I			0				0				0							
E1.28	Reactive and planned maintenance non-infrastructure	T21, L24	£m	I			0				0				0							
Capital Maintenance																						
E1.29	Infrastructure depreciation charge	T21, L25	£m	I																		
E1.30	Non-infrastructure depreciation charge	T21, L26	£m	I																		
E1.31	Amortisation of deferred credits	T21, L28	£m	I																		
E1.32	Amortisation of intangible assets	T21, L29	£m	I																		
E1.33	Business activities depreciation charge	T21, L30	£m	I																		
E1.34	Capital maintenance less third party services	T21, L31	£m	C			0				0				0							
E1.35	Third party services - depreciation	T21, L32	£m	I																		
E1.36	Total capital maintenance	T21, L33	£m	C			0				0				0							
PPP Costs																						
E1.37	Total annual charge for PPP schemes	T21, L25	£m	I																		
E1.38	Annual charge for PPP schemes less estimated running	T21, L26	£m	C			0				0				0							
E1.39	Total operating costs	T21, L34	£m	C			0				0				0							

Prepared by: Date:
 Checked by: Date:
 Authorised by: Douglas Millican Date:

ANNUAL RETURN INFORMATION REQUIREMENTS

SECTION E : OPERATING COSTS AND EFFICIENCY Table E1c: Activity Based Costing - Water Service

50 Report Year + 1 Budget 2003-04

150 Report Year + 1 Forecast 2003-04

250 Report Year + 2 Budget 2004-05

Line Ref.	Description	Ofwat Ref JR00	Units	Field Type
Service Analysis - Water : Direct Costs				
E1.0	Not in use			
E1.1	Employment costs	T21_L1	£m	I/C
E1.2	Power	T21_L2	£m	I/C
E1.3	Hired and contracted services	T21_L4	£m	I/C
E1.4	Estimated running costs of PPP schemes	-	£m	I/C
E1.5	Materials and consumables	T21_L6	£m	I/C
E1.6	Service charges SEPA	T21_L7	£m	I/C
E1.7	Bulk supply imports	T21_L8	£m	I/C
E1.8	Other direct costs	T21_L9	£m	I/C
E1.9	Total direct costs	T21_L10	£m	C
E1.10	General and support employment costs	-	£m	I/C
E1.11	General and support other costs	-	£m	I/C
E1.12	Functional expenditure	T21_L12	£m	C
Operating Expenditure				
E1.13	Customer services	T21_L13	£m	I
E1.14	Scientific services	T21_L14	£m	I
E1.15	Other business activities	T21_L15	£m	I
E1.16	Total business activities	T21_L16	£m	C
E1.17	Local authority rates	T21_L17	£m	I
E1.18	Doubtful debts	T21_L18	£m	I
E1.19	Exceptional items - start-up costs	-	£m	I
E1.20	Exceptional items - reorganisation costs	-	£m	I
E1.21	Exceptional items - severance costs	-	£m	I
E1.22	Exceptional items - other costs (specify)	-	£m	I
E1.23	Total Exceptional items	T21_L19	£m	C
E1.24	Total opex less third party services	T21_L20	£m	C
E1.25	Third party services - opex	T21_L21	£m	I
E1.26	Total operating expenditure	T21_L18	£m	C
Reactive and Planned Maintenance (Included in Opex)				
E1.27	Reactive and planned maintenance infrastructure	T21_L23	£m	I
E1.28	Reactive and planned maintenance non-infrastructure	T21_L24	£m	I
Capital Maintenance				
E1.29	Infrastructure depreciation charge	T21_L25	£m	I
E1.30	Non-infrastructure depreciation charge	T21_L26	£m	I
E1.31	Amortisation of deferred credits	T21_L28	£m	I
E1.32	Amortisation of intangible assets	T21_L29	£m	I
E1.33	Business activities depreciation charge	T21_L30	£m	I
E1.34	Capital maintenance less third party services	T21_L31	£m	C
E1.35	Third party services - depreciation	T21_L32	£m	I
E1.36	Total capital maintenance	T21_L33	£m	C
PPP Costs				
E1.37	Total annual charge for PPP schemes	T21_L25	£m	I
E1.38	Annual charge for PPP schemes less estimated running	T21_L26	£m	C
E1.39	Total operating costs	T21_L34	£m	C

Comment Necessary Y/N	Comment
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Comment Necessary Y/N	Comment
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Comment Necessary Y/N	Comment
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General		Benchmarking B2		Benchmarking A2	
A1	G	A1	G	A1	G
A2	G	A2	G	A2	G
A3	G	A3	G	A3	N
A4	N	A4	N	A4	N
AX	G	AX	G	AX	G
B2	G	B2	G	B2	N
B3	G	B3	N	B3	N
B4	N	B4	N	B4	N
BX	G	BX	G	BX	N
C2	N	C2	N	C2	N
C3	N	C3	N	C3	N
C4	N	C4	N	C4	N
C5	N	C5	N	C5	N
CX	N	CX	N	CX	N
M	N	M	N	M	N
N	N	N	N	N	N
D3	N	D3	N	D3	N
D4	N	D4	N	D4	N
D5	N	D5	N	D5	N
D6	N	D6	N	D6	N
DX	N	DX	N	DX	N

Prepared by: Date:
Checked by: Date:
Authorised by: Douglas Millican Date:

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E2a: Activity Based Costing - Wastewater Service

Report Year - 1 2001-02

Line Ref.	Description	Ofwat Ref	Units	Field Type	Sewerage								210 Sewage Treatment	220 Sludge Treatment and Disposal	999 Sewerage Service Total TCG	
					10	20	30	40	50	60	70	80				199
					Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8				sub total
Service Analysis - Waste Water Direct Costs																
E2.0	Name	-														
E2.1	Employment costs	T22, L1	£m	I/C												0
E2.2	Power	T22, L2	£m	I/C												0
E2.3	Hired and contracted services	T22, L4	£m	I/C												0
E2.4	Estimated running cost of PPP schemes	-	£m	I/C												0
E2.5	Materials and consumables	T22, L6	£m	I/C												0
E2.6	Service charges SEPA	T22, L7	£m	I/C												0
E2.7	Not in use															
E2.8	Other direct costs	T22, L8	£m	I/C												0
E2.9	Total direct costs	T22, L11	£m	C	0	0	0	0	0	0	0	0	0	0	0	0
E2.10	General and support employment costs	-	£m	I/C												0
E2.11	General and support other costs	-	£m	I/C												0
E2.12	Functional expenditure	T22, L13	£m	C	0	0	0	0	0	0	0	0	0	0	0	0
Operating Expenditure																
E2.13	Customer services	T22, L14	£m	I												
E2.14	Scientific services	T22, L15	£m	I												
E2.15	Other business activities	T22, L16	£m	I												
E2.16	Total business activities	T22, L17	£m	C												0
E2.17	Local authority rates	T22, L18	£m	I												
E2.18	Doubtful debts	T22, L19	£m	I												
E2.19	Exceptional items - start-up costs	-	£m	I												
E2.20	Exceptional items - reorganisation costs	-	£m	I												
E2.21	Exceptional items - severance costs	-	£m	I												
E2.22	Exceptional items - other costs (specify)	-	£m	I												
E2.23	Total Exceptional items	T22, L20	£m	C												0
E2.24	Total opex less third party services	T22, L21	£m	C												0
E2.25	Third party services - opex	T22, L22	£m	I												
E2.26	Total operating expenditure	T22, L23	£m	C												0
Reactive and Planned Maintenance (included in Opex)																
E2.27	Reactive and planned maintenance infrastructure	T22, L24	£m	I/C												0
E2.28	Reactive and planned maintenance non-infrastructure	T22, L25	£m	I/C												0
Capital Maintenance																
E2.29	Infrastructure depreciation charge	T22, L26	£m	I												
E2.30	Non-infrastructure depreciation charge	T22, L28	£m	I												
E2.31	Amortisation of deferred credits	T22, L29	£m	I												
E2.32	Amortisation of intangible assets	T22, L30	£m	I												
E2.33	Business activities depreciation charge	T22, L31	£m	I												
E2.34	Capital maintenance less third party services	T22, L32	£m	C												0
E2.35	Third party services - depreciation	T22, L33	£m	I												
E2.36	Total capital maintenance	T22, L34	£m	C												0
PPP Costs																
E2.37	Total annual charge for PPP schemes	T21, L25	£m	I												
E2.38	Annual charge for PPP schemes less estimated run	T21, L26	£m	C												0
E2.39	Total operating costs	T22, L35	£m	C												0

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SECTION E : OPERATING COSTS AND EFFICIENCY
Table E2b: Activity Based Costing - Wastewater Service

Report Year 2002-03

Line Ref.	Description	Ofwat Ref	Units	Field Type	Sewerage										Sewage Treatment	Sludge Treatment	Sewerage Service Total		
					10	20	30	40	50	60	70	80	199	210			220	999	CG
					Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8	sub total						
Service Analysis - Waste Water Direct Costs																			
E2.0	Name	-		I	NW	NE	SE	SW											
E2.1	Employment costs	T22, L1	£m	I/C	2.53	3.134	3.487	7.536						16.687	13.495	1.149	31.331 B2		
E2.2	Power	T22, L2	£m	I/C	0.598	0.953	0.404	1.645						3.6	4.324	0.822	8.746 B2		
E2.3	Hired and contracted services	T22, L4	£m	I/C	0.72	0.646	1.281	4.797						7.444	6.246	5.699	19.389 B2		
E2.4	Estimated running cost of PPP schemes	-	£m	I/C	0	0	0	0						0	24.217	11.184	35.401 B2		
E2.5	Materials and consumables	T22, L6	£m	I/C	0.288	0.345	0.312	0.836						1.781	1.605	0.762	4.148 B2		
E2.6	Service charges SEPA	T22, L7	£m	I/C	0.143	0.213	0.051	0.567						0.974	4.402	0.28	5.656 B2		
E2.7	Not in use																		
E2.8	Other direct costs	T22, L8	£m	I/C	0.237	0.173	0.198	1.153						1.761	0.913	0.16	2.834 B2		
E2.9	Total direct costs	T22, L11	£m	C	4.516	5.464	5.733	16.534	0	0	0	0	32.247	55.202	20.056	107.505 B2			
E2.10	General and support employment costs	-	£m	I/C	1.067	0.954	0.77	1.896						4.687	7.919	0.806	13.412 B2		
E2.11	General and support other costs	-	£m	I/C	1.298	0.662	1.111	3.085						6.156	8.004	2.428	16.588 B2		
E2.12	Functional expenditure	T22, L13	£m	C	6.881	7.08	7.614	21.515	0	0	0	0	43.09	71.125	23.29	137.505 B2			
Operating Expenditure																			
E2.13	Customer services	T22, L14	£m	I													12.608 B2		
E2.14	Scientific services	T22, L15	£m	I													4.221 B2		
E2.15	Other business activities	T22, L16	£m	I													2.458 B2		
E2.16	Total business activities	T22, L17	£m	C													19.287 B2		
E2.17	Local authority rates	T22, L18	£m	I													10.586 B2		
E2.18	Doubtful debts	T22, L19	£m	I													19.556 B2		
E2.19	Exceptional items - start-up costs	-	£m	I													0.769 B2		
E2.20	Exceptional items - reorganisation costs	-	£m	I													6.476 B2		
E2.21	Exceptional items - severance costs	-	£m	I													4.591 B2		
E2.22	Exceptional items - other costs (specify)	-	£m	I													0 N		
E2.23	Total Exceptional items	T22, L20	£m	C													11.836 B2		
E2.24	Total opex less third party services	T22, L21	£m	C													198.77 B2		
E2.25	Third party services - opex	T22, L22	£m	I													5.971 B3		
E2.26	Total operating expenditure	T22, L23	£m	C													204.741 B2		
Reactive and Planned Maintenance (included in Opex)																			
E2.27	Reactive and planned maintenance infrastructure	T22, L24	£m	I/C	5.475	5.284	6.998	21.583						39.34	0.015	0	39.355 B2		
E2.28	Reactive and planned maintenance non-infrastructure	T22, L25	£m	I/C	0.664	0.631	0.081	0.14						1.516	4.844	0.336	6.696 B2		
Capital Maintenance																			
E2.29	Infrastructure depreciation charge	T22, L26	£m	I													39 B2		
E2.30	Non-Infrastructure depreciation charge	T22, L28	£m	I													55.999 B2		
E2.31	Amortisation of deferred credits	T22, L29	£m	I													0 BX		
E2.32	Amortisation of intangible assets	T22, L30	£m	I													0 BX		
E2.33	Business activities depreciation charge	T22, L31	£m	I													0 BX		
E2.34	Capital maintenance less third party services	T22, L32	£m	C													94.999 B2		
E2.35	Third party services - depreciation	T22, L33	£m	I													0 N		
E2.36	Total capital maintenance	T22, L34	£m	C													94.999 B2		
PPP Costs																			
E2.37	Total annual charge for PPP schemes	T21, L25	£m	I													99.252 B2		
E2.38	Annual charge for PPP schemes less estimated running costs	T21, L26	£m	C													63.851 B2		
E2.39	Total operating costs	T22, L35	£m	C													363.591 B2		

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ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E2b: Activity Based Costing - Wastewater Service

999
Report Year
2002-03

Comment
Necessary
Y/N

Line Ref.	Description	Ofwat Ref	Units	Field Type
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Service Analysis - Waste Water Direct Costs					General		Benchmarking A1		
E2.0	Name			I		A1	G	A1	G
E2.1	Employment costs	T22, L1	£m	I/C	N		G	A2	N
E2.2	Power	T22, L2	£m	I/C	N		G	A3	N
E2.3	Hired and contracted services	T22, L4	£m	I/C	N		N	A4	N
E2.4	Estimated running cost of PPP schemes		£m	I/C	N		G	AX	G
E2.5	Materials and consumables	T22, L6	£m	I/C	N		G	B2	N
E2.6	Service charges SEPA	T22, L7	£m	I/C	N		G	B3	N
E2.7	Not in use						N	B4	N
E2.8	Other direct costs	T22, L8	£m	I/C	N		G	BX	N
E2.9	Total direct costs	T22, L11	£m	C	N		N	C2	N
E2.10	General and support employment costs		£m	I/C	N		N	C3	N
E2.11	General and support other costs		£m	I/C	N		N	C4	N
E2.12	Functional expenditure	T22, L13	£m	C	N		N	C5	N
Operating Expenditure									
E2.13	Customer services	T22, L14	£m	I	N		N	CX	N
E2.14	Scientific services	T22, L15	£m	I	N		N	M	N
E2.15	Other business activities	T22, L16	£m	I	N		N	N	N
E2.16	Total business activities	T22, L17	£m	C	N		N	D3	N
E2.17	Local authority rates	T22, L18	£m	I	N		N	D4	N
E2.18	Doubtful debts	T22, L19	£m	I	N		N	D5	N
E2.19	Exceptional items - start-up costs		£m	I	N		N	D6	N
E2.20	Exceptional items - reorganisation costs		£m	I	N		N	DX	N
E2.21	Exceptional items - severance costs		£m	I	N		N		
E2.22	Exceptional items - other costs (specify)		£m	I	N		N		
E2.23	Total Exceptional items	T22, L20	£m	C	N		N		
E2.24	Total opex less third party services	T22, L21	£m	C	N		N		
E2.25	Third party services - opex	T22, L22	£m	I	N		N		
E2.26	Total operating expenditure	T22, L23	£m	C	N		N		
Reactive and Planned Maintenance (included in Opex)									
E2.27	Reactive and planned maintenance infrastructure	T22, L24	£m	I/C	N		N		
E2.28	Reactive and planned maintenance non-infrastructure	T22, L25	£m	I/C	N		N		
Capital Maintenance									
E2.29	Infrastructure depreciation charge	T22, L26	£m	I	N		N		
E2.30	Non-infrastructure depreciation charge	T22, L28	£m	I	N		N		
E2.31	Amortisation of deferred credits	T22, L29	£m	I	N		N		
E2.32	Amortisation of intangible assets	T22, L30	£m	I	N		N		
E2.33	Business activities depreciation charge	T22, L31	£m	I	N		N		
E2.34	Capital maintenance less third party services	T22, L32	£m	C	N		N		
E2.35	Third party services - depreciation	T22, L33	£m	I	N		N		
E2.36	Total capital maintenance	T22, L34	£m	C	N		N		
PPP Costs									
E2.37	Total annual charge for PPP schemes	T21, L25	£m	I	N		N		
E2.38	Annual charge for PPP schemes less estimated runni	T21, L26	£m	C	N		N		
E2.39	Total operating costs	T22, L35	£m	C	N		N		

Issues with data	Problem ?	Solution
E2.29 should equal F9.8 (col 7)	N	No solution required

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SECTION E : OPERATING COSTS AND EFFICIENCY
Table E2c: Activity Based Costing - Wastewater Service

Line Ref.	Description	Ofwat Ref	Units	Field Type	Report Year + 1 Budget 2003-04				Report Year + 1 Forecast 2003-04				Report Year + 2 Budget 2004-05						
					10	20	30	50	100	110	120	150	200	210	220	250			
					Sewerage All Areas Total	Sewage Treatment	Sludge Treatment	Sewerage Service Total CG	Sewerage All Areas Total	Sewage Treatment	Sludge Treatment	Sewerage Service Total CG	Sewerage All Areas Total	Sewage Treatment	Sludge Treatment	Sewerage Service Total CG			
Service Analysis - Waste Water Direct Costs																			
E2.0	Not in use																		
E2.1	Employment costs	T22, L1	£m	I/C				0				0						0	
E2.2	Power	T22, L2	£m	I/C				0				0						0	
E2.3	Hired and contracted services	T22, L4	£m	I/C				0				0						0	
E2.4	Estimated running cost of PPP schemes	-	£m	I/C				0				0						0	
E2.5	Materials and consumables	T22, L6	£m	I/C				0				0						0	
E2.6	Service charges SEPA	T22, L7	£m	I/C				0				0						0	
E2.7	Not in use																		
E2.8	Other direct costs	T22, L8	£m	I/C				0				0						0	
E2.9	Total direct costs	T22, L11	£m	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E2.10	General and support employment costs	-	£m	I/C				0				0						0	
E2.11	General and support other costs	-	£m	I/C				0				0						0	
E2.12	Functional expenditure	T22, L13	£m	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Expenditure																			
E2.13	Customer services	T22, L14	£m	I															
E2.14	Scientific services	T22, L15	£m	I															
E2.15	Other business activities	T22, L16	£m	I															
E2.16	Total business activities	T22, L17	£m	C				0				0						0	
E2.17	Local authority rates	T22, L18	£m	I															
E2.18	Doubtful debts	T22, L19	£m	I															
E2.19	Exceptional items - start-up costs	-	£m	I															
E2.20	Exceptional items - reorganisation costs	-	£m	I															
E2.21	Exceptional items - severance costs	-	£m	I															
E2.22	Exceptional items - other costs (specify)	-	£m	I															
E2.23	Total Exceptional items	T22, L20	£m	C				0				0						0	
E2.24	Total opex less third party services	T22, L21	£m	C				0				0						0	
E2.25	Third party services - opex	T22, L22	£m	I															
E2.26	Total operating expenditure	T22, L23	£m	C				0				0						0	
Reactive and Planned Maintenance (included in Opex)																			
E2.27	Reactive and planned maintenance infrastructure	T22, L24	£m	I/C				0				0						0	
E2.28	Reactive and planned maintenance non-infrastructure	T22, L25	£m	I/C				0				0						0	
Capital Maintenance																			
E2.29	Infrastructure depreciation charge	T22, L26	£m	I															
E2.30	Non-infrastructure depreciation charge	T22, L28	£m	I															
E2.31	Amortisation of deferred credits	T22, L29	£m	I															
E2.32	Amortisation of intangible assets	T22, L30	£m	I															
E2.33	Business activities depreciation charge	T22, L31	£m	I															
E2.34	Capital maintenance less third party services	T22, L32	£m	C				0				0						0	
E2.35	Third party services - depreciation	T22, L33	£m	I															
E2.36	Total capital maintenance	T22, L34	£m	C				0				0						0	
PPP Costs																			
E2.37	Total annual charge for PPP schemes	T21, L25	£m	I															
E2.38	Annual charge for PPP schemes less estimated running costs	T21, L26	£m	C				0				0						0	
E2.39	Total operating costs	T22, L35	£m	C				0				0						0	

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ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E2c: Activity Based Costing - Wastewater Services

50 Report Year + 1 Budget 2003-04	150 Report Year + 1 Forecast 2003-	250 Report Year + Budget 2004-
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Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment
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Line Ref.	Description	Ofwat Ref	Units	Field Type
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Service Analysis - Waste Water Direct Costs				Name
E2.0	Not in use			
E2.1	Employment costs	T22_L1	Em	I/C
E2.2	Power	T22_L2	Em	I/C
E2.3	Hired and contracted services	T22_L4	Em	I/C
E2.4	Estimated running cost of PPP schemes	-	Em	I/C
E2.5	Materials and consumables	T22_L6	Em	I/C
E2.6	Service charges SEPA	T22_L7	Em	I/C
E2.7	Not in use			
E2.8	Other direct costs	T22_L8	Em	I/C
E2.9	Total direct costs	T22_L11	Em	C
E2.10	General and support employment costs	-	Em	I/C
E2.11	General and support other costs	-	Em	I/C
E2.12	Functional expenditure	T22_L13	Em	C
Operating Expenditure				
E2.13	Customer services	T22_L14	Em	I
E2.14	Scientific services	T22_L15	Em	I
E2.15	Other business activities	T22_L16	Em	I
E2.16	Total business activities	T22_L17	Em	C
E2.17	Local authority rates	T22_L18	Em	I
E2.18	Doubtful debts	T22_L19	Em	I
E2.19	Exceptional items - start-up costs	-	Em	I
E2.20	Exceptional items - reorganisation costs	-	Em	I
E2.21	Exceptional items - severance costs	-	Em	I
E2.22	Exceptional items - other costs (specify)	-	Em	I
E2.23	Total Exceptional items	T22_L20	Em	C
E2.24	Total opex less third party services	T22_L21	Em	C
E2.25	Third party services - opex	T22_L22	Em	I
E2.26	Total operating expenditure	T22_L23	Em	C
Reactive and Planned Maintenance (Included in Opex)				
E2.27	Reactive and planned maintenance infrastructure	T22_L24	Em	I/C
E2.28	Reactive and planned maintenance non-infrastructure	T22_L25	Em	I/C
Capital Maintenance				
E2.29	Infrastructure depreciation charge	T22_L26	Em	I
E2.30	Non-infrastructure depreciation charge	T22_L28	Em	I
E2.31	Amortisation of deferred credits	T22_L29	Em	I
E2.32	Amortisation of intangible assets	T22_L30	Em	I
E2.33	Business activities depreciation charge	T22_L31	Em	I
E2.34	Capital maintenance less third party services	T22_L32	Em	C
E2.35	Third party services - depreciation	T22_L33	Em	I
E2.36	Total capital maintenance	T22_L34	Em	C
PPP Costs				
E2.37	Total annual charge for PPP schemes	T21_L25	Em	I
E2.38	Annual charge for PPP schemes less estimated running cost	T21_L26	Em	C
E2.39	Total operating costs	T22_L35	Em	C

General	Benchmarking B2	Benchmarking A2
A1 G	A1 G	A1 G
A2 G	A2 G	A2 G
A3 G	A3 G	A3 N
A4 N	A4 N	A4 N
AX G	AX G	AX G
B2 G	B2 G	B2 N
B3 G	B3 N	B3 N
B4 N	B4 N	B4 N
BX G	BX G	BX N
C2 N	C2 N	C2 N
C3 N	C3 N	C3 N
C4 N	C4 N	C4 N
C5 N	C5 N	C5 N
CX N	CX N	CX N
M N	M N	M N
N N	N N	N N
D3 N	D3 N	D3 N
D4 N	D4 N	D4 N
D5 N	D5 N	D5 N
D6 N	D6 N	D6 N
DX N	DX N	DX N

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ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E4: Water Explanatory Factors - Resources and Treatment

Table with columns: Line Ref., Description, Ofwat Ref, Units, Field Type. Includes rows for Source Types like Impounding reservoirs, Lochs, burns and springs intakes, River abstractions, Boreholes.

Summary table for Source Types with columns for 10, 20, 30, 40, 50, 60, 100, 120, 130, 140, 150, 160, 170, 200. Includes sub-tables for number, average daily output (MI/d), and M/d.

Table with columns: Line Ref., Description, Ofwat Ref, Units, Field Type. Includes rows for Impounding reservoirs, Lochs, burns and springs intakes, River abstractions, Boreholes, Total.

Summary table for Source output with columns for 10, 20, 30, 40, 50, 60, 100. Includes sub-tables for Proportional Breakdown of Source output produced and Proportion of Own Source Output.

Table with columns: Line Ref., Description, Ofwat Ref, Units, Field Type. Includes rows for Peak demand - peak to average ratio, Average pumping head - resources and treatment, Not in use.

Summary table for Peak Ratio & Pumping Head with columns for 10, 20, 30, 40, 50, 60, 100, 120, 150. Includes sub-tables for Peak Ratio & Pumping Head and Average Pumping Head.

Table with columns: Line Ref., Description, Ofwat Ref, Units, Field Type. Includes rows for Simple Disinfection, W1, W2, W3, W4, Total numbers of works, Total distribution input.

Summary table for Water Treatment Works with columns for 10, 20, 30, 40, 50, 60, 100, 120, 130, 140, 150, 160, 170, 200. Includes sub-tables for Number of Own Works and Volume of Distribution Input Produced.

Table with columns: Line Ref., Description, Ofwat Ref, Units, Field Type. Includes rows for Simple Disinfection, W1, W2, W3, W4, Total.

Summary table for Distribution Input with columns for 10, 20, 30, 40, 50, 60, 100. Includes sub-tables for Proportional Breakdown of Distribution Input and Tot. prop'n of D.I.

Table with columns: Line Ref., Description, Ofwat Ref, Units, Field Type. Includes rows for Size band <=1 MI/d, Size band >1 - <=2.5 MI/d, Size band >2.5 - <=5 MI/d, etc.

Summary table for Distribution Input with columns for 10, 20, 30, 40, 50, 60, 100, 120, 130, 140, 150, 160, 170, 200. Includes sub-tables for Number of Own Works and Proportional Breakdown of Distribution.

Table with columns: Line Ref., Description, Ofwat Ref, Units, Field Type. Includes rows for Bulk Imports from other Authorities, Bulk Exports to other Authorities.

Summary table for Treated Water Transfers with columns for 10, 20, 30, 40, 50, 60, 100. Includes sub-tables for Treated Water Transfers and Total. Note: net internal change should be zero.

Table with columns: Line Ref., Description, Ofwat Ref, Units, Field Type. Includes rows for Works size band <= 1 MI/d, Works size band >1 to <= 2.5 MI/d, Works size band >2.5 to <=5 MI/d, etc.

Summary table for Operating cost by area with columns for 10, 20, 30, 40, 50, 60, 100. Includes sub-tables for Operating cost by area and Total.

* This reference refers to JR00 whereas all other lines refer to JR01.

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Checked by: Date:
Authorised by: Geoff Aitkenhead Date:

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E4: Water Explanatory Factors - Resources and Treatment

Line Ref.	Description	Ofwat Ref	Units	Field Type
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Source Types				
E4.0	Area Name	-	-	I
E4.1	Impounding reservoirs	T12, L1	nr, ml/d	I/C
E4.2	Lochs, burns and springs intakes	-	nr, ml/d	I/C
E4.3	River abstractions	T12, L2	nr, ml/d	I/C
E4.4	Boreholes	T12, L3	nr, ml/d	I/C
E4.5	Total	-	nr, ml/d	C
E4.6	Raw water exports	-	nr, ml/d	I/C
E4.7	Raw water imports	-	nr, ml/d	I/C

Peak demand and Pumping Head				
E4.13	Peak demand - peak to average ratio	T12, L5	nr	I
E4.14	Average pumping head - resources and treatment	T12, L6	m	I
E4.15	Not in use			
E4.16	Not in use			

Water Treatment Works by Process type				
E4.17	Simple Disinfection	-	nr, ml/d	I/C
E4.18	W1	-	nr, ml/d	I/C
E4.19	W2	-	nr, ml/d	I/C
E4.20	W3	-	nr, ml/d	I/C
E4.21	W4	-	nr, ml/d	I/C
E4.22	Total numbers of works	T12, L17	nr, ml/d	C
E4.23	Total distribution input	T12, L16	nr, ml/d	C

Issues with data	
E4.12 should equal 1.0	
E4.22 (Col 100) should equal E4.39 (Col 100)	
E4.29 should equal 1.0	
E4.40 should equal 1.0	
E4.45 should equal 0	

Problem ?	
N	100
N	100
N	100
N	200
N	100

Solution	
No solution required	
No solution required	
No solution required	
No solution required	
No solution required	

* This reference refers to JR00 whereas all other lines refer to JR01.

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Checked by:	Date:
Authorised by: Geoff Aitkenhead	Date:

Edition 1

220
Total Source Outputs

Comment Necessary Y/N	Comment
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Comment Necessary Y/N	Comment	General		Benchmarking A1		Benchmarking A2	
		A1	G	A1	G	A1	G
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	A1	G	A1	G	A1	G
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	A2	G	A2	N	A2	G
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	A3	G	A3	N	A3	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	A4	N	A4	N	A4	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	AX	G	AX	G	AX	G
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	B2	N	B2	N	B2	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	B3	N	B3	N	B3	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	B4	N	B4	N	B4	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	BX	G	BX	N	BX	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	C2	N	C2	N	C2	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	C3	N	C3	N	C3	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	C4	N	C4	N	C4	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	C5	N	C5	N	C5	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	CX	N	CX	N	CX	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	M	N	M	N	M	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	D3	N	D3	N	D3	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	D4	N	D4	N	D4	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	D5	N	D5	N	D5	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	D6	N	D6	N	D6	N
N	Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.	DX	N	DX	N	DX	N

120
Average Peak Ratio

Comment Necessary Y/N	Comment
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N 120 Pumping head data not held or DX

170
Average Pumping Head

Comment Necessary Y/N	Comment
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N Pumping head data not held or DX

220
Total volume Dist'n input MI/d

Comment Necessary Y/N	Comment
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N Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.

N Data is classed as B4 because output from each source is not directly measured. The volume of water output from each source is not directly measured.

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SCOTTISH WATER

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E5: Large Water Treatment Works Information Database

For treatment works with a capacity greater than 25 Ml/d

Line Ref.	Description	Ofwat Ref	Units	Field Type	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	
					CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	
Works Size																				
E5.0	Name	-		I	Inverness	Spey Scheme (Badentini)	Clatto	Glendevon	Glenfarg	Invercarnie	Lintrathen	Mannofield	Turriff	Airwickhill	Castle Moffat	Fairmilehead	Marchbank	Pateshill	Rosebery	
E5.1	Average day demand	-	Ml/d	I	27.7 B3	11.82 A2	65.89 B2	78.75 B3	58.45 B3	40.77 B3	32.38 A2	42.68 A2	30.44 A1	55.75 B3	29.46 B3	84.79 B3	41.69 B3	17.81 B3	36.38	
E5.2	Peak day demand	-	Ml/d	I	27.9 B3	22 B3	79.32 B2	93.80 B3	81.24 B3	46.77 B3	38.00 A2	48.6 A2	32.18 A2	61.74 B3	32.1 B3	92.29 B3	55.43 B3	21.88 B3	44.96	
E5.3	Works Capacity	-	Ml/d	I	34 A2	27 A1	90.00 B2	91.00 A1	85.00 A1	70 A3	42.00 A1	45 A2	42 A1	74.4 A1	32 A1	122.7 A1	50 B3	27.3 A1	40.9	
E5.4	Headroom	-	Ml/d	C	6.1 B3	5 B3	10.68 B2	-2.8 B3	3.76 B3	23.23 B3	4 A2	-3.6 A2	9.82 A2	12.66 B3	-0.1 B3	30.41 B3	-5.43 B3	5.42 B3	-4.06	
Raw Water Source																				
E5.5	Source type	-	Type	I	LBS	BH	IR	IR	IR	RA	IR	RA	RA	IR	IR	IR	IR	IR	IR	
E5.6	Average turbidity	-	ntu	I	0.366 A1	0.405 A1	1.19 A1	0.81 A1	1.58 A1	0.68 A1	1.044 A1	1.265 A1	2.206 A1	0.91 A1	2.01 A1	0.78 A1	1.04 A1	0.3 A1	0.78	
E5.7	Peak turbidity	-	ntu	I	1.09 A1	1.09 A1	3.01 A1	1.3 A1	2.7 A1	3.2 A1	6 A1	4.24 A1	6 A1	1.40 A1	10.1 A1	1.30 A1	2.2 A1	0.3 A1	2	
E5.8	Average colour	-	hazen	I	6.84 A1	3.75 A1	18.02 A1	33.24 A1	17.6 A1	24.179 A1	22.33 A1	27.53 A1	29.29 A1	21.09 A1	57.78 A1	15.22 A1	19.26 A1	2.31 A1	22.38	
E5.9	Peak colour	-	hazen	I	12 A1	8 A1	38 A1	47 A1	26 A1	57 A1	38 A1	85 A1	97 A1	27.00 A1	86 A1	22.00 A1	25 A1	4 A1	46	
E5.10	Average parameter 'a'	-	mg/l	I	0.0158 A1	0.0376 A1	0.1193 A1	79.9 A1	63.78 A1	0.1194 A1	0.1124 A1	0.165 A1	0.241 A1	107.17 A1	175.99 A1	95.06 A1	90.9 A1	0 A1	73.75	
E5.11	Peak parameter 'a'	-	mg/l	I	0.177 A1	0.249 A1	0.267 A1	123 A1	90 A1	0.353 A1	0.134 A1	0.563 A1	0.516 A1	129.00 A1	372 A1	133.00 A1	290 A1	0 A1	81	
E5.12	Average parameter 'b'	-	mg/l	I	0.0066 A1	0.0015 A1	0.0183 A1	13.06 A1	7.81 A1	0.0064 A1	0.0097 A1	0.0121 A1	0.0089 A1	13.53 A1	15.89 A1	12.17 A1	20.25 A1	0 A1	12.87	
E5.13	Peak parameter 'b'	-	mg/l	I	0.0395 A1	0.008 A1	0.1091 A1	52.5 A1	22 A1	0.0722 A1	0.0135 A1	0.0456 A1	0.0568 A1	33.10 A1	53.8 A1	47.00 A1	94.8 A1	0 A1	29.3	
E5.14	Cryptosporidium risk assessment	-	high/med/low	I	High A1	Medium A1	low A1	low A1	low A1	high A1	low A1	Medium A1	high A1	Low A1	low A1	Low A1	low A1	low A1	low	
Compliance and Performance																				
E5.15	Coliform: samples exceeding compliance value	-	%	I	0 A1	0 A1	0.56 A1	0 A1	0 A1	0 A1	0.57 A1	0 A1	0.58 A1	0 A1	0 A1	0.29 A1	0 A1	0.29 A1	0	
E5.16	Turbidity: samples exceeding threshold value	-	%	I	0.41 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	3.45 A1	0 A1	0 A1	0 A1	0	
E5.17	THM: samples exceeding threshold value	-	%	I	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	36.36 A1	0 A1	0 A1	0 A1	3.03 A1	0	
E5.18	Aluminium: samples exceeding threshold value	-	%	I	0.53 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	7.14 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0	
E5.19	Iron: samples exceeding threshold value	-	%	I	1.07 A1	0 A1	0 A1	0 A1	0 A1	1.08 A1	0 A1	2.17 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0	
E5.20	Manganese: samples exceeding threshold value	-	%	I	0.53 A1	0 A1	0 A1	0 A1	0 A1	1.08 A1	0 A1	19.57 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0	
Processes																				
E5.21	Simple disinfection only	-	1/0	I	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0	
E5.22	Simple disinfection and filtration (W1)	-	1/0	I	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	1 A1	0 A1	0 A1	0 A1	0 A1	0	
E5.23	Single stage physical or chemical treatment (W2)	-	1/0	I	0 A1	1 A1	1 A1	1 A1	0 A1	0 A1	1 A1	0 A1	0 A1	0 A1	0 A1	1 A1	1 A1	0 A1	0	
E5.24	More than one stage of treatment excl W4 (W3)	-	1/0	I	1 A1	0 A1	0 A1	0 A1	1 A1	1 A1	0 A1	1 A1	1 A1	0 A1	1 A1	0 A1	0 A1	1 A1	1	
E5.25	Complex treatment, including Microfiltration (W4)	-	1/0	I	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0	
Miscellaneous Data																				
E5.26	Intake works on site	-	1/0	I	0 A1	1 A1	0 A1	0 A1	0 A1	0 A1	1 A1	0 A1	1 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0.00 A1	0.00
E5.27	Raw water pumping on site	-	1/0	I	0 A1	1 A1	1 A1	0 A1	0 A1	1 A1	0 A1	0 A1	1 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0.00 A1	0.00
E5.28	Treated water pumping on site	-	1/0	I	1 A1	0 A1	1 A1	0 A1	0 A1	0 A1	1 A1	1 A1	1 A1	0 A1	0 A1	1 A1	0 A1	0.00 A1	0.00	
E5.29	Waterworks own sludge treatment on site	-	1/0	I	0 A1	0 A1	0 A1	1 A1	1 A1	0 A1	1 A1	0 A1	0 A1	0 A1	1 A1	0 A1	0 A1	1.00 A1	1.00	
E5.30	Waterworks sludge discharged off site	-	1/0	I	1 A1	0 A1	1 A1	0 A1	0 A1	1 A1	1 A1	1 A1	1 A1	1 A1	0 A1	1 A1	1 A1	0.00 A1	0.00	
Works Cost																				
E5.31	Employment direct costs	-	£'000	I	132 B3	103 B3	137 B3	285 B3	220 B3	204 B3	113 B3	133 B3	154 B3	91 B3	190 B3	120 B3	152 B3	114 B3	104	
E5.32	Power direct costs	-	£'000	I	107 B3	223 B3	39 B3	22 B3	39 B3	119 B3	22 B3	312 B3	335 B3	19 B3	203 B3	67 B3	18 B3	49 B3	60	
E5.33	Hired and contracted services direct costs	-	£'000	I	25 B3	11 B3	118 B3	53 B3	63 B3	49 B3	67 B3	40 B3	69 B3	27 B3	50 B3	92 B3	46 B3	123 B3	33	
E5.34	Materials and consumables direct costs	-	£'000	I	118 B3	81 B3	115 B3	242 B3	206 B3	67 B3	126 B3	126 B3	128 B3	74 B3	150 B3	153 B3	46 B3	122 B3	98	
E5.35	Service charges SEPA direct costs	-	£'000	I	2 B3	2 B3	0 B3	1 B3	6 B3	4 B3	0 B3	0 B3	0 B3	1 B3	2 B3	1 B3	2 B3	1 B3	1	
E5.36	Other direct costs	-	£'000	I	4 B3	17 B3	9 B3	37 B3	2 B3	62 B3	37 B3	6 B3	7 B3	31 B3	38 B3	48 B3	34 B3	35 B3	37	
E5.37	Total direct costs	-	£'000	C	388 B3	437 B3	418 B3	665 B3	509 B3	480 B3	220 B3	617 B3	693 B3	243 B3	633 B3	482 B3	295 B3	445 B3	333	
E5.38	General and support expenditure	-	£'000	I	164 B3	239 B3	130 B3	379 B3	294 B3	165 B3	93 B3	200 B3	212 B3	138 B3	273 B3	406 B3	143 B3	218 B3	162	
E5.39	Functional Expenditure	-	£'000	C	552 B3	676 B3	548 B3	1044 B3	803 B3	645 B3	313 B3	817 B3	905 B3	381 B3	906 B3	888 B3	438 B3	663 B3	495	
E5.40	Estimated intake and raw water pumping direct costs	-	£'000	I	0 N	0 M	0 M	0 N	0 N	0 M	0 M	0 N	0 M	0 N	0 N	0 N	0 N	0 N	0	
E5.41	Estimated treated water pumping direct costs	-	£'000	I	0 M	0 N	0 M	0 N	0 N	0 N	0 N	0 M	0 M	0 N	0 N	0 M	0 N	0 N	0	
E5.42	Estimated waterworks sludge direct costs	-	£'000	I	0 BX	0 BX	0 BX	1 B3	2 B3	8 B3	0 BX	0 BX	38 B3	0 BX	9 B3	6 B3	0 BX	74 B3	0	

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 Authorised by: Geoff Aitkenhead Date:

SCOTTISH WATER

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E5: Large Water Treatment Works Information Database

Line Ref.	Description	Ofwat Ref	Units	Field Type	CG	160	170	180	190	200	210	220	230	240	250	260
Works Size																
E5.0	Name	-		I		Balmore	Blairlinnans New	Bradán	Camphill	Camps	Carron Valley	Daer	Milngavie	Muirdykes	Overton (Greenock) New	Turret
E5.1	Average day demand	-	MI/d	I	B3	190.0644075 B3	55.99 B2	99.51 B3	31.89 B3	26.16 B3	105.05 B3	117.39 B3	394.56 B3	45.99 B3	40.29 A1	68.81 B3
E5.2	Peak day demand	-	MI/d	I	B3	205.08 B3	69.1 B2	115.3 B3	35.3 B3	27.1 B3	119 B3	126.44 B3	434.2 B3	54.04 B3	47.37 A1	76.93 B3
E5.3	Works Capacity	-	MI/d	I	A1	364 A1	90.9 A1	142 B3	45.6 A1	33.2 B2	125 A1	142 B3	489 B2	60 A1	62.5 A1	85.2 A1
E5.4	Headroom	-	MI/d	C	B3	158.92 B3	21.8 B2	26.7 B3	10.3 B3	6.1 B3	6 B3	15.56 B3	54.8 B3	5.96 B3	15.13 A1	8.27 B3
Raw Water Source																
E5.5	Source type	-	Type	I		RA	RA	IR	IR	IR	IR	IR	IR	IR	IR	IR
E5.6	Average turbidity	-	ntu	I	A1	0.91 A1	1.75 A1	0.71 A1	1.41 A1	0.82 A1	6.75 A1	0.85 A1	0.28 A1	1.81 A1	2.77 A1	0.76 A1
E5.7	Peak turbidity	-	ntu	I	A1	1.50 A1	6.92 A1	1.24 A1	5.03 A1	1.37 A1	23 A1	2.31 A1	0.39 A1	2.32 A1	11.50 A1	2.8 A1
E5.8	Average colour	-	hazen	I	A1	20.79 A1	22.5 A1	62.9 A1	72.27 A1	31.5 A1	32.58 A1	46.78 A1	16.42 A1	47.83 A1	80.00 A1	30.69 A1
E5.9	Peak colour	-	hazen	I	A1	25.00 A1	31 A1	79 A1	99 A1	41 A1	39 A1	58 A1	22 A1	56 A1	113.00 A1	41 A1
E5.10	Average parameter 'a'	-	mg/l	I	A1	70.38 A1	179.27 A1	463.18 A1	324.73 A1	120.25 A1	477.1 A1	100.57 A1	58.33 A1	277.33 A1	542.92 A1	139.83 A1
E5.11	Peak parameter 'a'	-	mg/l	I	A1	91.00 A1	942 A1	609 A1	684 A1	177 A1	1576 A1	157 A1	174 A1	320 A1	1746.00 A1	183 A1
E5.12	Average parameter 'b'	-	mg/l	I	A1	7.27 A1	53.8 A1	45 A1	47.45 A1	32 A1	66.97 A1	25.11 A1	7 A1	43.83 A1	27.36 A1	16.62 A1
E5.13	Peak parameter 'b'	-	mg/l	I	A1	11.20 A1	334 A1	91 A1	197 A1	86 A1	422 A1	104 A1	27 A1	85 A1	170.00 A1	41.2 A1
E5.14	Cryptosporidium risk assessment	-	high/med/low	I	A1	Low A1	low A1	low A1	low A1	Low A1	low A1	low A1	high A1	low A1	Low A1	low A1
Compliance and Performance																
E5.15	Coliform: samples exceeding compliance value	-	%	I	A1	0.29 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0.59 A1	0 A1	0 A1	0 A1
E5.16	Turbidity: samples exceeding threshold value	-	%	I	A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1
E5.17	THM: samples exceeding threshold value	-	%	I	A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	3.57 A1	0 A1	0 A1	0 A1
E5.18	Aluminium: samples exceeding threshold value	-	%	I	A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1
E5.19	Iron: samples exceeding threshold value	-	%	I	A1	0 A1	0 A1	0 A1	0 A1	0 A1	11.11 A1	1.18 A1	1.2 A1	0 A1	0 A1	0 A1
E5.20	Manganese: samples exceeding threshold value	-	%	I	A1	0 A1	0 A1	9.09 A1	12.9 A1	2.94 A1	0 A1	2.94 A1	1.49 A1	0 A1	0 A1	0 A1
Processes																
E5.21	Simple disinfection only	-	1/0	I	A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	1 A1	0 A1	0 A1	0 A1
E5.22	Simple disinfection and filtration (W1)	-	1/0	I	A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1
E5.23	Single stage physical or chemical treatment (W2)	-	1/0	I	A1	1 A1	1 A1	0 A1	0 A1	1 A1	0 A1	0 A1	0 A1	0 A1	0 A1	1 A1
E5.24	More than one stage of treatment excl W4 (W3)	-	1/0	I	A1	0 A1	0 A1	1 A1	1 A1	0 A1	1 A1	1 A1	0 A1	1 A1	1 A1	0 A1
E5.25	Complex treatment, including Microfiltration (W4)	-	1/0	I	A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1
Miscellaneous Data																
E5.26	Intake works on site	-	1/0	I	A1	0 A1	0 A1	1 A1	0 A1	0 A1	0 A1	1 A1	1 A1	0 A1	0 A1	0 A1
E5.27	Raw water pumping on site	-	1/0	I	A1	1 A1	0 A1	0 A1	0 A1	1 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1
E5.28	Treated water pumping on site	-	1/0	I	A1	1 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	1 A1	1 A1	1 A1	1 A1
E5.29	Waterworks own sludge treatment on site	-	1/0	I	A1	0 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	0 A1	1 A1	1 A1	0 A1
E5.30	Waterworks sludge discharged off site	-	1/0	I	A1	1 A1	0 A1	1 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1	0 A1
Works Cost																
E5.31	Employment direct costs	-	£'000	I	B3	948 B3	252 B3	381 B3	267 B3	157 B3	189 B3	277 B3	537 B3	277 B3	204 B3	102 B3
E5.32	Power direct costs	-	£'000	I	B3	700 B3	101 B3	94 B3	22 B3	36 B3	174 B3	33 B3	27 B3	63 B3	47 B3	19 B3
E5.33	Hired and contracted services direct costs	-	£'000	I	B3	334 B3	83 B3	225 B3	97 B3	42 B3	151 B3	119 B3	116 B3	80 B3	96 B3	60 B3
E5.34	Materials and consumables direct costs	-	£'000	I	B3	444 B3	130 B3	322 B3	138 B3	105 B3	320 B3	265 B3	300 B3	138 B3	166 B3	147 B3
E5.35	Service charges SEPA direct costs	-	£'000	I	B3	4 B3	4 B3	1 B3	5 B3	0 B3	5 B3	3 B3	0 B3	1 B3	0 B3	2 B3
E5.36	Other direct costs	-	£'000	I	B3	226 B3	29 B3	25 B3	3 B3	8 B3	94 B3	13 B3	18 B3	5 B3	10 B3	57 B3
E5.37	Total direct costs	-	£'000	C	B3	2656 B3	599 B3	1048 B3	532 B3	348 B3	933 B3	710 B3	998 B3	564 B3	523 B3	387 B3
E5.38	General and support expenditure	-	£'000	I	B3	1232 B3	276 B3	417 B3	191 B3	138 B3	439 B3	294 B3	385 B3	217 B3	211 B3	171 B3
E5.39	Functional Expenditure	-	£'000	C	B3	3888 B3	875 B3	1465 B3	723 B3	486 B3	1372 B3	1004 B3	1383 B3	781 B3	734 B3	558 B3
E5.40	Estimated intake and raw water pumping direct costs	-	£'000	I	N	0 M	0 N	0 N	0 N	0 M	0 N	0 N	0 N	0 N	0 N	0 N
E5.41	Estimated treated water pumping direct costs	-	£'000	I	N	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 M	0 M	0 M
E5.42	Estimated waterworks sludge direct costs	-	£'000	I	BX	3 B3	30 B3	110 B3	110 B3	73 B3	47 B3	73 B3	25 B3	74 B3	74 B3	5 B3

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SCOTTISH WATER

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E5: Large Water Treatment Works Information Database

For treatment works with a capacity greater than 25 Ml/d

Line Ref.	Description	Ofwat Ref	Units	Field Type	10		20		30		40		50		60		70		80		90		100		
					Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary
					Y/N		Y/N		Y/N		Y/N		Y/N		Y/N		Y/N		Y/N		Y/N		Y/N		
Works Size																									
E5.0	Name	-		I																					
E5.1	Average day demand	-	Ml/d	I	N		N		N		N		N		N		N		N		N		N		
E5.2	Peak day demand	-	Ml/d	I	N		N		N		N		N		N		N		N		N		N		
E5.3	Works Capacity	-	Ml/d	I	N		N		N		N		N		N		N		N		N		N		
E5.4	Headroom	-	Ml/d	C	N		N		N		N		N		N		N		N		N		N		
Raw Water Source																									
E5.5	Source type	-	Type	I	#N/A		#N/A		#N/A		#N/A		#N/A		#N/A		#N/A		#N/A		#N/A		#N/A		
E5.6	Average turbidity	-	ntu	I	N		N		N		N		N		N		N		N		N		N		
E5.7	Peak turbidity	-	ntu	I	N		N		N		N		N		N		N		N		N		N		
E5.8	Average colour	-	hazen	I	N		N		N		N		N		N		N		N		N		N		
E5.9	Peak colour	-	hazen	I	N		N		N		N		N		N		N		N		N		N		
E5.10	Average parameter 'a'	-	mg/l	I	N		N		N		N		N		N		N		N		N		N		
E5.11	Peak parameter 'a'	-	mg/l	I	N		N		N		N		N		N		N		N		N		N		
E5.12	Average parameter 'b'	-	mg/l	I	N		N		N		N		N		N		N		N		N		N		
E5.13	Peak parameter 'b'	-	mg/l	I	N		N		N		N		N		N		N		N		N		N		
E5.14	Cryptosporidium risk assessment	-	high/med/low	I	N		N		N		N		N		N		N		N		N		N		
Compliance and Performance																									
E5.15	Coliform: samples exceeding compliance value	-	%	I	N		N		N		N		N		N		N		N		N		N		
E5.16	Turbidity: samples exceeding threshold value	-	%	I	N		N		N		N		N		N		N		N		N		N		
E5.17	THM: samples exceeding threshold value	-	%	I	N		N		N		N		N		N		N		N		N		N		
E5.18	Aluminium: samples exceeding threshold value	-	%	I	N		N		N		N		N		N		N		N		N		N		
E5.19	Iron: samples exceeding threshold value	-	%	I	N		N		N		N		N		N		N		N		N		N		
E5.20	Manganese: samples exceeding threshold value	-	%	I	N		N		N		N		N		N		N		N		N		N		
Processes																									
E5.21	Simple disinfection only	-	1/0	I	N		N		N		N		N		N		N		N		N		N		
E5.22	Simple disinfection and filtration (W1)	-	1/0	I	N		N		N		N		N		N		N		N		N		N		
E5.23	Single stage physical or chemical treatment (W2)	-	1/0	I	N		N		N		N		N		N		N		N		N		N		
E5.24	More than one stage of treatment excl W4 (W3)	-	1/0	I	N		N		N		N		N		N		N		N		N		N		
E5.25	Complex treatment, including Microfiltration (W4)	-	1/0	I	N		N		N		N		N		N		N		N		N		N		
Miscellaneous Data																									
E5.26	Intake works on site	-	1/0	I	N		N		N		N		N		N		N		N		N		N		
E5.27	Raw water pumping on site	-	1/0	I	N		N		N		N		N		N		N		N		N		N		
E5.28	Treated water pumping on site	-	1/0	I	N		N		N		N		N		N		N		N		N		N		
E5.29	Waterworks own sludge treatment on site	-	1/0	I	N		N		N		N		N		N		N		N		N		N		
E5.30	Waterworks sludge discharged off site	-	1/0	I	N		N		N		N		N		N		N		N		N		N		
Works Cost																									
E5.31	Employment direct costs	-	£'000	I	N		N		N		N		N		N		N		N		N		N		
E5.32	Power direct costs	-	£'000	I	N		N		N		N		N		N		N		N		N		N		
E5.33	Hired and contracted services direct costs	-	£'000	I	N		N		N		N		N		N		N		N		N		N		
E5.34	Materials and consumables direct costs	-	£'000	I	N		N		N		N		N		N		N		N		N		N		
E5.35	Service charges SEPA direct costs	-	£'000	I	N		N		N		N		N		N		N		N		N		N		
E5.36	Other direct costs	-	£'000	I	N		N		N		N		N		N		N		N		N		N		
E5.37	Total direct costs	-	£'000	C	N		N		N		N		N		N		N		N		N		N		
E5.38	General and support expenditure	-	£'000	I	N		N		N		N		N		N		N		N		N		N		
E5.39	Functional Expenditure	-	£'000	C	N		N		N		N		N		N		N		N		N		N		
E5.40	Estimated intake and raw water pumping direct costs	-	£'000	I	N		No pumping on site N		No process to captur N		No process to capt,N		No pumping on site N		No pumping on site N		No process to capture these N		No process to captur N		No pumping on site N		No process to captur N		No pumping on site N
E5.41	Estimated treated water pumping direct costs	-	£'000	I	N		Pumping costs incl N		No pumping on site N		No process to capt,N		No pumping on site N		No pumping on site N		No pumping on site N		No pumping on site N		No process to capt N		No process to captur N		No pumping on site N
E5.42	Estimated waterworks sludge direct costs	-	£'000	I	N		N		N		N		N		N		N		N		N		N		N

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SCOTTISH WATER

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E5: Large Water Treatment Works Information Database

Line Ref.	Description	Ofwat Ref	Units	Field Type	110 11		120 12		130 13		140 14		150 15		160 16		170 17		180 18		190 19		200 20	
					Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment
Works Size																								
E5.0	Name	-		I																				
E5.1	Average day demand	-	Ml/d	I	N																			
E5.2	Peak day demand	-	Ml/d	I	N																			
E5.3	Works Capacity	-	Ml/d	I	N																			
E5.4	Headroom	-	Ml/d	C	N																			
Raw Water Source																								
E5.5	Source type	-	Type	I	N	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
E5.6	Average turbidity	-	ntu	I	N																			
E5.7	Peak turbidity	-	ntu	I	N																			
E5.8	Average colour	-	hazen	I	N																			
E5.9	Peak colour	-	hazen	I	N																			
E5.10	Average parameter 'a'	-	mg/l	I	N																			
E5.11	Peak parameter 'a'	-	mg/l	I	N																			
E5.12	Average parameter 'b'	-	mg/l	I	N																			
E5.13	Peak parameter 'b'	-	mg/l	I	N																			
E5.14	Cryptosporidium risk assessment	-	high/med/low	I	N																			
Compliance and Performance																								
E5.15	Coliform: samples exceeding compliance value	-	%	I	N																			
E5.16	Turbidity: samples exceeding threshold value	-	%	I	N																			
E5.17	THM: samples exceeding threshold value	-	%	I	N																			
E5.18	Aluminium: samples exceeding threshold value	-	%	I	N																			
E5.19	Iron: samples exceeding threshold value	-	%	I	N																			
E5.20	Manganese: samples exceeding threshold value	-	%	I	N																			
Processes																								
E5.21	Simple disinfection only	-	1/0	I	N																			
E5.22	Simple disinfection and filtration (W1)	-	1/0	I	N																			
E5.23	Single stage physical or chemical treatment (W2)	-	1/0	I	N																			
E5.24	More than one stage of treatment excl W4 (W3)	-	1/0	I	N																			
E5.25	Complex treatment, including Microfiltration (W4)	-	1/0	I	N																			
Miscellaneous Data																								
E5.26	Intake works on site	-	1/0	I	N																			
E5.27	Raw water pumping on site	-	1/0	I	N																			
E5.28	Treated water pumping on site	-	1/0	I	N																			
E5.29	Waterworks own sludge treatment on site	-	1/0	I	N																			
E5.30	Waterworks sludge discharged off site	-	1/0	I	N																			
Works Cost																								
E5.31	Employment direct costs	-	£'000	I	N																			
E5.32	Power direct costs	-	£'000	I	N																			
E5.33	Hired and contracted services direct costs	-	£'000	I	N																			
E5.34	Materials and consumables direct costs	-	£'000	I	N																			
E5.35	Service charges SEPA direct costs	-	£'000	I	N																			
E5.36	Other direct costs	-	£'000	I	N																			
E5.37	Total direct costs	-	£'000	C	N																			
E5.38	General and support expenditure	-	£'000	I	N																			
E5.39	Functional Expenditure	-	£'000	C	N																			
E5.40	Estimated intake and raw water pumping direct costs	-	£'000	I	N	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No process to capture	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No process to c	No pumping on
E5.41	Estimated treated water pumping direct costs	-	£'000	I	N	No pumping on site	No process to capt	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No process to capture	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on site	No pumping on
E5.42	Estimated waterworks sludge direct costs	-	£'000	I	N																			

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SCOTTISH WATER

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E5: Large Water Treatment Works Information Database

Line Ref.	Description	Ofwat Ref	Units	Field Type	210 21		220 22		230 23		240 24		250 25		260 26	
					Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment
Works Size																
E5.0	Name	-		I												
E5.1	Average day demand	-	Ml/d	I	N		N		N		N		N		N	
E5.2	Peak day demand	-	Ml/d	I	N		N		N		N		N		N	
E5.3	Works Capacity	-	Ml/d	I	N		N		N		N		N		N	
E5.4	Headroom	-	Ml/d	C	N		N		N		N		N		N	
Raw Water Source																
E5.5	Source type	-	Type	I	N	#N/A	N	#N/A	N	#N/A	N	#N/A	N	#N/A	N	#N/A
E5.6	Average turbidity	-	ntu	I	N		N		N		N		N		N	
E5.7	Peak turbidity	-	ntu	I	N		N		N		N		N		N	
E5.8	Average colour	-	hazen	I	N		N		N		N		N		N	
E5.9	Peak colour	-	hazen	I	N		N		N		N		N		N	
E5.10	Average parameter 'a'	-	mg/l	I	N		N		N		N		N		N	
E5.11	Peak parameter 'a'	-	mg/l	I	N		N		N		N		N		N	
E5.12	Average parameter 'b'	-	mg/l	I	N		N		N		N		N		N	
E5.13	Peak parameter 'b'	-	mg/l	I	N		N		N		N		N		N	
E5.14	Cryptosporidium risk assessment	-	high/med/low	I	N		N		N		N		N		N	
Compliance and Performance																
E5.15	Coliform: samples exceeding compliance value	-	%	I	N		N		N		N		N		N	
E5.16	Turbidity: samples exceeding threshold value	-	%	I	N		N		N		N		N		N	
E5.17	THM: samples exceeding threshold value	-	%	I	N		N		N		N		N		N	
E5.18	Aluminium: samples exceeding threshold value	-	%	I	N		N		N		N		N		N	
E5.19	Iron: samples exceeding threshold value	-	%	I	N		N		N		N		N		N	
E5.20	Manganese: samples exceeding threshold value	-	%	I	N		N		N		N		N		N	
Processes																
E5.21	Simple disinfection only	-	1/0	I	N		N		N		N		N		N	
E5.22	Simple disinfection and filtration (W1)	-	1/0	I	N		N		N		N		N		N	
E5.23	Single stage physical or chemical treatment (W2)	-	1/0	I	N		N		N		N		N		N	
E5.24	More than one stage of treatment excl W4 (W3)	-	1/0	I	N		N		N		N		N		N	
E5.25	Complex treatment, including Microfiltration (W4)	-	1/0	I	N		N		N		N		N		N	
Miscellaneous Data																
E5.26	Intake works on site	-	1/0	I	N		N		N		N		N		N	
E5.27	Raw water pumping on site	-	1/0	I	N		N		N		N		N		N	
E5.28	Treated water pumping on site	-	1/0	I	N		N		N		N		N		N	
E5.29	Waterworks own sludge treatment on site	-	1/0	I	N		N		N		N		N		N	
E5.30	Waterworks sludge discharged off site	-	1/0	I	N		N		N		N		N		N	
Works Cost																
E5.31	Employment direct costs	-	£'000	I	N		N		N		N		N		N	
E5.32	Power direct costs	-	£'000	I	N		N		N		N		N		N	
E5.33	Hired and contracted services direct costs	-	£'000	I	N		N		N		N		N		N	
E5.34	Materials and consumables direct costs	-	£'000	I	N		N		N		N		N		N	
E5.35	Service charges SEPA direct costs	-	£'000	I	N		N		N		N		N		N	
E5.36	Other direct costs	-	£'000	I	N		N		N		N		N		N	
E5.37	Total direct costs	-	£'000	C	N		N		N		N		N		N	
E5.38	General and support expenditure	-	£'000	I	N		N		N		N		N		N	
E5.39	Functional Expenditure	-	£'000	C	N		N		N		N		N		N	
E5.40	Estimated intake and raw water pumping direct costs	-	£'000	I	N	capture N	No pumping on site	N	No pumping on site	N	No pumping on site	N	No pumping on site	N	No pumping on site	N
E5.41	Estimated treated water pumping direct costs	-	£'000	I	N	site N	No pumping on site	N	No pumping on site	N	No pumping on site	N	No process to capture th N	N	No process to ca N	N
E5.42	Estimated waterworks sludge direct costs	-	£'000	I	N		N		N		N		N		N	

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ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E6a: Water Explanatory Factors - Distribution

Line Ref.	Description	Ofwat Ref	Units	Field Type	10	20	30	40	50	60	199
					Report Year-1 2001-02						Total
Area Data					Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Total
Name					CG	CG	CG	CG	CG	CG	CG
E6.0	Name	-		I	North	East	West				
E6.1	Annual average resident connected population	-	000	I/C	1137.3 B2	1642.56 B3	2246.63 B2				5026.49 B2
E6.2	Total connected properties	-	000	I/C	560.29 B2	768.25 B3	1059.05 B2				2387.59 B2
E6.3	Volume of water delivered to households	-	MI/d	I/C	197.88 B3	272.06 B3	358.23 B3				828.17 B3
E6.4	Volume of water delivered to non-households	-	MI/d	I/C	98.6 B2	251.32 B3	211.61 B3				561.53 B3
E6.5	Area	-	km 2	I/C	6579 B2	11078 A2	20397.19 A1				38054.19 B2
E6.6	Not in use										
E6.7	Number of supply zones	-	nr	I/C	277 A1	106 A1	123 A1				506 A1
Water main data											
E6.8	Total length of mains	-	km	I/C	17883 B2	11090 A2	16951 B2				45924 B2
E6.9	Total length of unlined iron mains	-	km	I/C	3904 B2	5244 B3	9292 C4				18440 C4
E6.10	Total length of mains > 300mm diameter	-	km	I/C	1261 B2	1681 A2	2051 B2				4993 B2
E6.11	Water mains bursts	-	nr	I/C	2601 A3	1087 A3	5928 B2				9616 B3
E6.12	Leakage level	-	MI/d	I/C	149.2 C5	224.7 C4	643.76 B4				1017.66 C5
E6.13	Properties reported for low pressur	-	nr	I/C	5062 C5	1526 C4	1019 B4				7607 C5
Pumping Stations											
E6.14	Total number of pumping stations	-	nr	I/C	170 A2	100 B3	155 B3				425 B3
E6.15	Total capacity of pumping stations	-	m3/d	I/C	356447 B2	780506 C5	371830.7 B2				1508784 C5
E6.16	Average pumping heat	-	nr	I	25.2 B4	29.2 C4	17.8 B3				
Service Reservoirs											
E6.17	Total number of service reservoirs	-	nr	I/C	796 A4	253 B2	451 B3				1500 B4
E6.18	Total capacity of service reservoir	-	MI	I/C	1417.35 A4	828.67 B3	1264.4 B3				3510.42 B4

Note: Water Distribution costs are reported on Table E1

Prepared by: Date:

Checked by: Date:

Authorised by: Geoff Aitkenhear Date:

Edition 1

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E6b: Water Explanatory Factors - Distribution

Line Ref.	Description	Ofwat Ref	Units	Field Type	10	20	30	40	50	60	199	
					Report Year 2002-03							
					Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Total	
Area Data					CG	CG	CG	CG	CG	CG	CG	
Name												
E6.0	Name	-		I	NW	NE	SE	SW				
E6.1	Annual average resident connected population	-	000	I/C	366.86 B2	1179.79 B2	1024.26 B2	2378.15 B2			4949.06 B2	
E6.2	Total connected properties	-	000	I/C	187.31 B2	556.85 B2	490.77 B2	1154.31 B2			2389.24 B2	
E6.3	Volume of water delivered to households	-	MI/d	I/C	62.15 B3	193.82 B3	171.68 B3	410.37 B3			838.02 B3	
E6.4	Volume of water delivered to non-households	-	MI/d	I/C	32.26 B3	114.3377 B3	145.23 B3	232.41 B3			524.2377 B3	
E6.5	Area	-	km 2	I/C	38868 A1	16918 A1	10985 A1	13205 A1			79976 A1	
E6.6	Not in use											
E6.7	Number of supply zones	-	nr	I/C	234 A1	72 A1	111 A1	72 A1			489 A1	
Water main data												
E6.8	Total length of mains	-	km	I/C	9657.00 B2	11241.00 B2	15638.00 B2	9275.00 B2			45811 B2	
E6.9	Total length of unlined iron mains	-	km	I/C	1039.00 B3	2709.00 B3	8758.00 B3	3642.00 B3			16148 B3	
E6.10	Total length of mains > 300mm diameter	-	km	I/C	317.00 B2	1278.00 B2	2434.00 B2	1092.00 B2			5121 B2	
E6.11	Water mains bursts	-	nr	I/C	1568.00 B3	799.00 B3	4876.00 B3	1626.00 B3			8869 B3	
E6.12	Leakage level	-	MI/d	I/C	74.17 C4	176.41 C4	132.77 C4	748.86 C4			1132.21 C4	
E6.13	Properties reported for low pressur	-	nr	I/C	2787 C4	3148 C4	1980 C4	7027 C4			14942 C4	
Pumping Stations												
E6.14	Total number of pumping stations	-	nr	I/C	133 C4	109 C4	74 C4	107 C4			423 C4	
E6.15	Total capacity of pumping stations	-	m3/d	I/C	70126 C4	294407 C4	102397 C4	1464764 C4			1931694 C4	
E6.16	Average pumping heat	-	nr	I	15.0 C4	21.0 C4	7.2 C4	28.0 C4			22 C4	
Service Reservoirs												
E6.17	Total number of service reservoirs	-	nr	I/C	542 C4	439 C4	229 C4	340 C4			1550 C4	
E6.18	Total capacity of service reservoir	-	MI	I/C	292.1841 C4	1186 C4	493.6657 C4	1738.707 C4			3710.557 C4	

Note: Water Distribution costs are reported on Table E1

Prepared by: Date:

Checked by: Date:

Authorised by: Geoff Aitkenhear Date:

Edition 1

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E6b: Water Explanatory Factors - Distribution

Line Ref.	Description	Ofwat Ref	Units	Field Type
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199
Report Year
2002-03

Comment Necessary	Comment
Y/N	

Area Data		Name		
E6.0	Name	-		I
E6.1	Annual average resident connected population	-	000	I/C
E6.2	Total connected properties	-	000	I/C
E6.3	Volume of water delivered to households	-	MI/d	I/C
E6.4	Volume of water delivered to non-households	-	MI/d	I/C
E6.5	Area	-	km 2	I/C
E6.6	Not in use			
E6.7	Number of supply zones	-	nr	I/C

Water main data				
E6.8	Total length of mains	-	km	I/C
E6.9	Total length of unlined iron mains	-	km	I/C
E6.10	Total length of mains > 300mm diameter	-	km	I/C
E6.11	Water mains bursts	-	nr	I/C
E6.12	Leakage level	-	MI/d	I/C
E6.13	Properties reported for low pressure	-	nr	I/C

Pumping Stations				
E6.14	Total number of pumping stations	-	nr	I/C
E6.15	Total capacity of pumping stations	-	m3/d	I/C
E6.16	Average pumping head	-	nr	I

Service Reservoirs				
E6.17	Total number of service reservoirs	-	nr	I/C
E6.18	Total capacity of service reservoirs	-	MI	I/C

		General	
N		A1	G
N		A2	G
N		A3	G
N		A4	N
N		AX	G
		B2	G
N		B3	G
		B4	N
		BX	G
N		C2	N
N		C3	N
N		C4	N
N		C5	N
N	At present, Scottish CX		N
N	Data contributing to M		N
		N	N
		D3	N
N	Figure based on pr€	D4	N
N	Figure based on pr€	D5	N
N	Extrapolations of d€	D6	N
		DX	N
N	Records from Service Reservoirs cleaning records and Asset Inventory- for this specific data, former source is more accurate		
N	Records from Service Reservoirs cleaning records and Asset Inventory- for this specific data, former source is more accurate		

Issues with data	Problem ?	Solution
E6.16 should equal E4.15	Y	199 Please amend numbers so they reconcile
E6.13 should equal B2.9	N	199 No solution required
E6.3 should equal A2.1+A2.5	Y	199 Records from Service Reservoirs cleaning records and Asset
E6.2 should equal A1.69	N	199 No solution required
E6.1 should equal A1.71	Y	199 Please amend numbers so they reconcile

Note: Water Distribution costs are reported on Table E1

Prepared by:	Date:
Checked by:	Date:
Authorised by: Geoff Aitkenhead	Date:

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E7: Wastewater Explanatory Factors - Sewerage

Line Ref.	Description	Ofwat Ref	Units	Field Type	10	20	30	40	50	60	70	80	199
					Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8	Total
					CG	CG	CG	CG	CG	CG	CG	CG	CG
Area Data					Name								
E7.0	Name	-		I									
E7.1	Annual average resident connected population	T17a, L1	000	I/C	351	1128	979	2273					4731
E7.2	Annual average non- resident connected population	T17a, L2	000	I/C	36	44	53	81					214
E7.3	Volume of sewage collected (daily average)	T17a, L3	MI/d	I/C	228	839	780	1886					3733
E7.4	Total connected properties	T17a, L4	nr	I/C	17,412	52,036	45,853	107,934					223,235
E7.5	Area of Sewerage District	T17a, L5	km 2	I/C	38672	16848	13161	10927					79608
E7.6	Drained Area	T17a, L6	km2	I/C	142.465	373.164	615.807	218.747					1350.183
E7.7	Annual Precipitation	T17a, L8	mm	I	1328	1199.5	1270	1398.5					1294
Sewerage Data													
E7.8	Total length of sewer	T17a, L9	km	I/C	4406	9344	8444	17140					39334
E7.9	Not in use												
E7.10	Length of combined sewer	T17a, L11	km	I/C	1918	4002	7784	3469					17173
E7.11	Length of separate stormwater sewer	T17a, L12	km	I/C	660	1653	2910	1476					6699
E7.12	Length of sewer > 1000 mm diameter	T17a, L13	km	I/C	16	154	349	192					711
E7.13	Length of Critical Sewer	T17a, L14	km	I/C	625	1862	1690	3710					7887
E7.14	Sewer Collapses	T17a, L15	nr	I/C	400	254	481	1077					2212
Pumping Stations													
E7.15	Total number of pumping stations	T17a, L16	nr	I/C	488	675	266	395					1824
E7.16	Total capacity of pumping stations	T17a, L17	m3/d	I/C	2190968	1041041	229933	2843196					6305138
E7.17	Average pumping head	T17a, L18	m	I	65.9	37.9	37.9	65.9					51.9
E7.18	Total number of combined pumping stations	T17a, L19	nr	I/C	349	483	190	283					1305
E7.19	Total capacity of combined pumping stations	T17a, L20	m3/d	I/C	1415663	1958140	771652	1145874					5291329
E7.20	Total number of stormwater pumping stations	T17a, L21	nr	I/C	24	4	12	9					49
E7.21	Total capacity of stormwater pumping stations	T17a, L22	m3/d	I/C	429648	71608	214824	161118					877198
E7.22	Number of combined sewer overflows	T17a, L23	nr	I/C	172	310	1805	812					3099
E7.23	Number of combined sewer overflows (screened)	T17a, L24	nr	I/C	61	116	260	149					586

Note: Sewerage costs are reported on Table E2

Prepared by:	Date:
Checked by:	Date:
Authorised by: Geoff Aitkenhead	Date:

Edition 1

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E7: Wastewater Explanatory Factors - Sewerage

Line Ref.	Description	Ofwat Ref	Units	Field Type	10		20		30		40		50		60		70		80		199																																																																																																																																																																																																																																							
					Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8	Total	Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment																																																																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th colspan="2">Area Data</th> <th colspan="21">Name</th> </tr> </thead> <tbody> <tr> <td>E7.0</td> <td>Name</td> <td>-</td> <td></td> <td>I</td> <td colspan="21"></td> </tr> <tr> <td>E7.1</td> <td>Annual average resident connected population</td> <td>T17a, L1</td> <td>000</td> <td>IC</td> <td>N</td> <td>Data based on mergi</td> <td>N</td> <td>Data based on merj</td> <td>N</td> <td>Data based on merj</td> <td>N</td> <td>Data based on n</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.2</td> <td>Annual average non-resident connected population</td> <td>T17a, L2</td> <td>000</td> <td>IC</td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.3</td> <td>Volume of sewage collected (daily average)</td> <td>T17a, L3</td> <td>Mld</td> <td>IC</td> <td>N</td> <td>Measured flow data f</td> <td>N</td> <td>Measured flow data f</td> <td>N</td> <td>Measured flow data f</td> <td>N</td> <td>Measured flow d</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.4</td> <td>Total connected properties</td> <td>T17a, L4</td> <td>nr</td> <td>IC</td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.5</td> <td>Area of Sewerage District</td> <td>T17a, L5</td> <td>km²</td> <td>IC</td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.6</td> <td>Drained Area</td> <td>T17a, L6</td> <td>km²</td> <td>IC</td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.7</td> <td>Annual Precipitation</td> <td>T17a, L8</td> <td>mm</td> <td>I</td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> </tbody> </table>																							Area Data		Name																					E7.0	Name	-		I																						E7.1	Annual average resident connected population	T17a, L1	000	IC	N	Data based on mergi	N	Data based on merj	N	Data based on merj	N	Data based on n	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.2	Annual average non-resident connected population	T17a, L2	000	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.3	Volume of sewage collected (daily average)	T17a, L3	Mld	IC	N	Measured flow data f	N	Measured flow data f	N	Measured flow data f	N	Measured flow d	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.4	Total connected properties	T17a, L4	nr	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.5	Area of Sewerage District	T17a, L5	km ²	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.6	Drained Area	T17a, L6	km ²	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.7	Annual Precipitation	T17a, L8	mm	I	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																				
Area Data		Name																																																																																																																																																																																																																																																										
E7.0	Name	-		I																																																																																																																																																																																																																																																								
E7.1	Annual average resident connected population	T17a, L1	000	IC	N	Data based on mergi	N	Data based on merj	N	Data based on merj	N	Data based on n	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.2	Annual average non-resident connected population	T17a, L2	000	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.3	Volume of sewage collected (daily average)	T17a, L3	Mld	IC	N	Measured flow data f	N	Measured flow data f	N	Measured flow data f	N	Measured flow d	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.4	Total connected properties	T17a, L4	nr	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.5	Area of Sewerage District	T17a, L5	km ²	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.6	Drained Area	T17a, L6	km ²	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.7	Annual Precipitation	T17a, L8	mm	I	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
<table border="1"> <thead> <tr> <th colspan="2">Sewerage Data</th> <th colspan="21">Name</th> </tr> </thead> <tbody> <tr> <td>E7.8</td> <td>Total length of sewer</td> <td>T17a, L9</td> <td>km</td> <td>IC</td> <td>N</td> <td>Data produced from :N</td> <td>N</td> <td>Data produced from N</td> <td>N</td> <td>Data produced from N</td> <td>N</td> <td>Data produced f</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.9</td> <td>Not in use</td> <td></td> <td></td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.10</td> <td>Length of combined sewer</td> <td>T17a, L11</td> <td>km</td> <td>IC</td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.11</td> <td>Length of separate stormwater sewer</td> <td>T17a, L12</td> <td>km</td> <td>IC</td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.12</td> <td>Length of sewer > 1000 mm diameter</td> <td>T17a, L13</td> <td>km</td> <td>IC</td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>N</td> <td></td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.13</td> <td>Length of Critical Sewer</td> <td>T17a, L14</td> <td>km</td> <td>IC</td> <td>N</td> <td>Data produced from :N</td> <td>N</td> <td>Data produced from N</td> <td>N</td> <td>Data produced from N</td> <td>N</td> <td>Data produced f</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.14</td> <td>Sewer Collapses</td> <td>T17a, L15</td> <td>nr</td> <td>IC</td> <td>N</td> <td>Data produced from :N</td> <td>N</td> <td>Data produced from N</td> <td>N</td> <td>Data produced from N</td> <td>N</td> <td>Data produced f</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> </tbody> </table>																							Sewerage Data		Name																					E7.8	Total length of sewer	T17a, L9	km	IC	N	Data produced from :N	N	Data produced from N	N	Data produced from N	N	Data produced f	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.9	Not in use				N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.10	Length of combined sewer	T17a, L11	km	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.11	Length of separate stormwater sewer	T17a, L12	km	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.12	Length of sewer > 1000 mm diameter	T17a, L13	km	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.13	Length of Critical Sewer	T17a, L14	km	IC	N	Data produced from :N	N	Data produced from N	N	Data produced from N	N	Data produced f	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.14	Sewer Collapses	T17a, L15	nr	IC	N	Data produced from :N	N	Data produced from N	N	Data produced from N	N	Data produced f	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																														
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E7.9	Not in use				N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.10	Length of combined sewer	T17a, L11	km	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.11	Length of separate stormwater sewer	T17a, L12	km	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.12	Length of sewer > 1000 mm diameter	T17a, L13	km	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.13	Length of Critical Sewer	T17a, L14	km	IC	N	Data produced from :N	N	Data produced from N	N	Data produced from N	N	Data produced f	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.14	Sewer Collapses	T17a, L15	nr	IC	N	Data produced from :N	N	Data produced from N	N	Data produced from N	N	Data produced f	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
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extN</td> <td>N</td> <td>Data based on an e N</td> <td>N</td> <td>Data based on an e N</td> <td>N</td> <td>Data based on a</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.18</td> <td>Total number of combined pumping stations</td> <td>T17a, L19</td> <td>nr</td> <td>IC</td> <td>N</td> <td>WAMs does not differ</td> <td>N</td> <td>WAMs does not differ</td> <td>N</td> <td>WAMs does not differ</td> <td>N</td> <td>WAMs does not</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.19</td> <td>Total capacity of combined pumping stations</td> <td>T17a, L20</td> <td>m³/d</td> <td>IC</td> <td>N</td> <td>Data based on 2001- N</td> <td>N</td> <td>Data based on 200- N</td> <td>N</td> <td>Data based on 200- N</td> <td>N</td> <td>Data based on 2</td> <td>#N/A</td> <td>#N/A</td> 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overflows</td> <td>T17a, L23</td> <td>nr</td> <td>IC</td> <td>N</td> <td>Data based on 2001- N</td> <td>N</td> <td>Data based on 200- N</td> <td>N</td> <td>Data based on 200- N</td> <td>N</td> <td>Data based on 2</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> <tr> <td>E7.23</td> <td>Number of combined sewer overflows (screenec</td> <td>T17a, L24</td> <td>nr</td> <td>IC</td> <td>N</td> <td>Lack of high quality d N</td> <td>N</td> <td>Lack of high quality N</td> <td>N</td> <td>Lack of high quality N</td> <td>N</td> <td>Lack of high qua</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> <td>#N/A</td> </tr> </tbody> </table>																							Pumping Stations		Name																					E7.15	Total number of pumping stations	T17a, L16	nr	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.16	Total capacity of pumping stations	T17a, L17	m ³ /d	IC	N	Data based on an extN	N	Data based on an e N	N	Data based on an e N	N	Data based on a	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.17	Average pumping head	T17a, L18	m	I	N	Data based on an extN	N	Data based on an e N	N	Data based on an e N	N	Data based on a	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.18	Total number of combined pumping stations	T17a, L19	nr	IC	N	WAMs does not differ	N	WAMs does not differ	N	WAMs does not differ	N	WAMs does not	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.19	Total capacity of combined pumping stations	T17a, L20	m ³ /d	IC	N	Data based on 2001- N	N	Data based on 200- N	N	Data based on 200- N	N	Data based on 2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.20	Total number of stormwater pumping stations	T17a, L21	nr	IC	N		N	WAMS system doe: N	N	WAMS system doe: N	N	WAMS system c	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.21	Total capacity of stormwater pumping stations	T17a, L22	m ³ /d	IC	N	Data based on 2001- N	N	Data based on 200- N	N	Data based on 200- N	N	Data based on 2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.22	Number of combined sewer overflows	T17a, L23	nr	IC	N	Data based on 2001- N	N	Data based on 200- N	N	Data based on 200- N	N	Data based on 2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	E7.23	Number of combined sewer overflows (screenec	T17a, L24	nr	IC	N	Lack of high quality d N	N	Lack of high quality N	N	Lack of high quality N	N	Lack of high qua	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Pumping Stations		Name																																																																																																																																																																																																																																																										
E7.15	Total number of pumping stations	T17a, L16	nr	IC	N		N		N		N		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.16	Total capacity of pumping stations	T17a, L17	m ³ /d	IC	N	Data based on an extN	N	Data based on an e N	N	Data based on an e N	N	Data based on a	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.17	Average pumping head	T17a, L18	m	I	N	Data based on an extN	N	Data based on an e N	N	Data based on an e N	N	Data based on a	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.18	Total number of combined pumping stations	T17a, L19	nr	IC	N	WAMs does not differ	N	WAMs does not differ	N	WAMs does not differ	N	WAMs does not	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.19	Total capacity of combined pumping stations	T17a, L20	m ³ /d	IC	N	Data based on 2001- N	N	Data based on 200- N	N	Data based on 200- N	N	Data based on 2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
E7.20	Total number of stormwater pumping stations	T17a, L21	nr	IC	N		N	WAMS system doe: N	N	WAMS system doe: N	N	WAMS system c	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						
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E7.23	Number of combined sewer overflows (screenec	T17a, L24	nr	IC	N	Lack of high quality d N	N	Lack of high quality N	N	Lack of high quality N	N	Lack of high qua	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A																																																																																																																																																																																																																																						

Issues with data	Problem ?	Solution
E7.1 should equal A3.83	Y 199	Please amend numbers so they reconcile

Note: Sewerage costs are reported on Table E2

Prepared by: Date:
 Checked by: Date:
 Authorised by: Geoff Aikenhead Date:

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E8: Wastewater Explanatory Factors - Sewage Treatment Works

Line Ref.	Description	Ofwat Ref	Units	Field Type	10	20	30	40	50	60	70	80	90	100	110	199	Total	
					Treatment Category													
					Septic Tanks	Primary	Sec Activated Sludge	Sec biological	Tertiary A 1	Tertiary A2	Tertiary B1	Tertiary B2	Sea Preliminary	Sea Screened	Sea Unscreened	CG		
Numbers																		
E8.1	Size Band 0	-	nr	I/C	1040	27	11	59	1	1	7	0	0	39	75	1260		
E8.2	Size Band 1	T17c, L1	nr	I/C	161	16	21	53	1	0	7	0	2	22	33	316		
E8.3	Size Band 2	T17c, L2	nr	I/C	38	13	13	37	2	0	8	0	6	6	11	134		
E8.4	Size Band 3	T17c, L3	nr	I/C	34	21	42	63	4	2	15	1	7	6	8	203		
E8.5	Size Band 4	T17c, L4	nr	I/C	1	20	43	46	10	1	4	0	8	3	1	137		
E8.6	Size Band 5	T17c, L5	nr	I/C	0	5	21	3	2	2	2	1	2	0	0	38		
E8.7	Size Band 6 (Large Works)	T17c, L6	nr	I/C	0	0	27	2	1	7	0	0	0	0	0	37		
E8.8	Total Sewage Treatment Works	T17c, L7	nr	C	1274	102	178	263	21	13	43	2	25	78	128	2125		
E8.9	Small Sewage treatment works with ammonia consent 5 - 10 mg/l	T17c, L8	nr	I/C	2	1	11	32	3	1	5	0	0	0	0	55		
E8.10	Small Sewage treatment works with ammonia consent <= 5 mg/l	T17c, L9	nr	I/C	2	2	11	8	8	2	2	1	0	0	0	36		

Loading (average daily load)\																	Total excluding Septic Tanks
E8.11	Size Band 0	-	kg BOD/day	I/C	1582	81	43	156	2	2	25	0	0	153	245	706.5063	
E8.12	Size Band 1	T17d, L1	kg BOD/day	I/C	1566	147	204	566	7	0	79	0	15	246	361	1625.598	
E8.13	Size Band 2	T17d, L2	kg BOD/day	I/C	786	312	258	846	44	0	167	0	127	180	285	2219.125	
E8.14	Size Band 3	T17d, L3	kg BOD/day	I/C	1703	1430	2478	4120	278	127	773	114	541	452	523	10835.591	
E8.15	Size Band 4	T17d, L4	kg BOD/day	I/C	153	4907	13271	12067	2970	450	1412	0	2276	890	158	38400.674	
E8.16	Size Band 5	T17d, L5	kg BOD/day	I/C	0	4615	22194	2573	1994	1329	2264	828	1338	0	0	37134.548	
E8.17	Size Band 6 (large works)	T17d, L6	kg BOD/day	I/C	0	0	215077	5454	15000	82440	0	0	0	0	0	317971.24	
E8.18	Total Load Received	T17d, L7	kg BOD/day	C	5791.1878	11491.78	253524.802	25782.4281	20294.016	84347.34	4720.449	941.82	4297.496	1921.194	1571.96	408893.282	
E8.19	Small Sewage treatment works with ammonia consent 5 - 10 mg/l	T17d, L8	kg BOD/day	I/C	40	4	2910	3025	1048	633	799	0	0	0	0	8418.169	
E8.20	Small Sewage treatment works with ammonia consent <= 5 mg/l	T17d, L9	kg BOD/day	I/C	9	505	2806	2163	1119	540	155	114	0	0	0	7402.354	

Compliance																	Total
E8.21	Size Band 0	-	%	I	100.0	91.7	100.0	100.0	100.0	100.0	100.0	0	0	0	0	0	
E8.22	Size Band 1	T17e, L1	%	I/C	100.0	100.0	99.8	100.0	0	0	100.0	0	0	0	0	0	
E8.23	Size Band 2	T17e, L2	%	I/C	97.9	97.7	99.7	100.0	0	0	100.0	0	0	0	0	0	
E8.24	Size Band 3	T17e, L3	%	I/C	96.4	98.2	98.5	100.0	100.0	100.0	100.0	0	0	0	0	0	
E8.25	Size Band 4	T17e, L4	%	I/C	100.0	99.6	99.3	99.8	100.0	100.0	100.0	0	0	0	0	0	
E8.26	Size Band 5	T17e, L5	%	I/C	100.0	95.8	100.0	100.0	100.0	100.0	100.0	100.0	0	0	0	0	
E8.27	Size Band 6 (large works)	T17e, L6	%	I/C	0	98.3	100.0	99.0	98.2	0	0	0	0	0	0	0	
E8.28	Average compliance by works - all sizes	T17e, L7	%	I/C	98.8	98.2	99.3	99.9	99.1	100.0	100.0	0	0	0	0	0	
E8.29	Small Sewage treatment works with ammonia consent 5 - 10 mg/l	T17e, L8	%	I/C	0	92.7	99.7	100.0	100.0	100.0	100.0	0	0	0	0	0	
E8.30	Small Sewage treatment works with ammonia consent <= 5 mg/l	T17e, L9	%	I/C	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0	0	0	0	0	

Costs																	Total
E8.31	Direct costs for works in size band 0	-	£000	I/C	684	36	68	131	1	1	29	0	0	28	44	1022	
E8.32	Direct costs for works in size band 1	-	£000	I/C	243	16	227	669	28	0	58	0	3	44	65	1353	
E8.33	Direct costs for works in size band 2	-	£000	I/C	214	92	184	367	36	0	61	0	23	33	51	1061	
E8.34	Direct costs for works in size band 3	-	£000	I/C	186	388	1170	1567	142	29	307	87	98	82	95	4151	
E8.35	Direct costs for works in size band 4	-	£000	I/C	15	1256	3498	2847	871	118	155	0	411	161	29	9361	
E8.36	Direct costs for works in size band 5	-	£000	I/C	0	435	2809	495	322	353	311	211	242	0	0	5178	
E8.37	Direct costs for works in size band 6 (large works)	-	£000	I/C	0	0	21616	588	725	10152	0	0	0	0	0	33081	
E8.38	Direct costs for all sewage treatment works	-	£000	C	1342	2223	29572	6664	2125	10653	921	298	777	348	284	55207	
E8.39	General and support expenditure	-	£000	I/C	594	1294	8021	3349	869	490	514	52	408	182	149	15922	
E8.40	Functional expenditure	-	£000	C	1936	3517	37593	10013	2994	11143	1435	350	1185	530	433	71129	
E8.41	Power costs	-	£000	I/C	77	275	2465	799	420	60	120	13	53	24	19	4325	
E8.42	Service charges SEPA	-	£000	I/C	356	377	1790	967	175	58	141	13	290	130	106	4403	

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SECTION E : OPERATING COSTS AND EFFICIENCY
Table E8: Wastewater Explanatory Factors - Sewage Treatment Works

Line Ref.	Description	Ofwat Ref	Units	Field Type	10	20		30		40		50		60		70		80		90		100		110		199		
					Septic Tanks		Primary		Sec Activated Sludge		Sec biological		Tertiary A1		Tertiary A2		Tertiary B1		Tertiary B2		Sea Preliminary		Sea Screened		Sea Unscreened		Total	
					Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment
<p>Numbers</p> <p>E8.1 (Size Band 0) -- % IC N</p> <p>E8.2 (Size Band 1) T176.L1 % IC N</p> <p>E8.3 (Size Band 2) T176.L2 % IC N</p> <p>E8.4 (Size Band 3) T176.L3 % IC N</p> <p>E8.5 (Size Band 4) T176.L4 % IC N</p> <p>E8.6 (Size Band 5) T176.L5 % IC N</p> <p>E8.7 (Size Band 6 (large works)) T176.L6 % IC N</p> <p>E8.8 Total Sewage Treatment Works T176.L7 % C N</p> <p>E8.9 (Small Sewage treatment works with ammonia consent 5 - 10 mg/l) T176.L8 % IC N</p> <p>E8.10 (Small Sewage treatment works with ammonia consent <= 5 mg/l) T176.L9 % IC N</p>																												
<p>Loading (average daily load)</p> <p>E8.11 (Size Band 0) -- kg BOD/day IC N</p> <p>E8.12 (Size Band 1) T176.L11 kg BOD/day IC N</p> <p>E8.13 (Size Band 2) T176.L12 kg BOD/day IC N</p> <p>E8.14 (Size Band 3) T176.L13 kg BOD/day IC N</p> <p>E8.15 (Size Band 4) T176.L14 kg BOD/day IC N</p> <p>E8.16 (Size Band 5) T176.L15 kg BOD/day IC N</p> <p>E8.17 (Size Band 6 (large works)) T176.L16 kg BOD/day IC N</p> <p>E8.18 Total load (kilowatt) T176.L17 % C N</p> <p>E8.19 (Small Sewage treatment works with ammonia consent 5 - 10 mg/l) T176.L18 kg BOD/day IC N</p> <p>E8.20 (Small Sewage treatment works with ammonia consent <= 5 mg/l) T176.L19 kg BOD/day IC N</p>																												
<p>Compliance</p> <p>E8.21 (Size Band 0) -- % IT #N/A N</p> <p>E8.22 (Size Band 1) T176.L21 % IC #N/A N</p> <p>E8.23 (Size Band 2) T176.L22 % IC #N/A N</p> <p>E8.24 (Size Band 3) T176.L23 % IC #N/A N</p> <p>E8.25 (Size Band 4) T176.L24 % IC #N/A N</p> <p>E8.26 (Size Band 5) T176.L25 % IC #N/A N</p> <p>E8.27 (Size Band 6 (large works)) T176.L26 % IC #N/A N</p> <p>E8.28 Average compliance by works - all sizes T176.L27 % IC #N/A N</p> <p>E8.29 (Small Sewage treatment works with ammonia consent 5 - 10 mg/l) T176.L28 % IC #N/A N</p> <p>E8.30 (Small Sewage treatment works with ammonia consent <= 5 mg/l) T176.L29 % IC #N/A N</p>																												
<p>Costs</p> <p>E8.31 Direct costs for works in size band 0 -- £000 IC N</p> <p>E8.32 Direct costs for works in size band 1 -- £000 IC N</p> <p>E8.33 Direct costs for works in size band 2 -- £000 IC N</p> <p>E8.34 Direct costs for works in size band 3 -- £000 IC N</p> <p>E8.35 Direct costs for works in size band 4 -- £000 IC N</p> <p>E8.36 Direct costs for works in size band 5 -- £000 IC N</p> <p>E8.37 Direct costs for works in size band 6 (large works) -- £000 IC N</p> <p>E8.38 Direct costs for all sewage treatment works -- £000 C N</p> <p>E8.39 General and support expenditure -- £000 IC N</p> <p>E8.40 Functional expenditure -- £000 C N</p> <p>E8.41 Power costs -- £000 IC N</p> <p>E8.42 Service charges (SEPA) -- £000 IC N</p>																												

Issues with data	Problem ?	Solution
E8.18 should equal A4.34*(1000/365)	Y	Please amend numbers so they reconcile

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Checked by: _____	Date: _____
Authorised by: Geoff Allanhead	Date: _____

SCOTTISH WATER

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E9: Large Sewage Treatment Works Information Data

Line Ref.	Description	Ofwat Ref	Units	Field Type	290		300		310		320		330		340		350		360		370					
					CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	
Works Size																										
E9.0	Name	-		I																						
E9.1	Annual average resident connected population	T17b. L2	000	I	B3	31.4	46.64	112.6	50.4	468.3	19.2	44.51	34.37	13.2												
E9.2	Annual average non-resident connected population	T17b. L3	000	I	C4	0.12	0.49	0.92	0.62	11.34	0.31	0.92	0.31	0.18												
E9.3	Trade effluent load received by works	T17b. L4	kg/COD/day	I	B3	387	2270	11586	347	23750	1493	951	2502	3617												
E9.4	Tanker load received by works	T17b. L5	kg/COD/day	I	A1	18	0	0	3266	2600	0	3507	6993	0												
E9.5	Population equivalent of total laod received	T17b. L6	000	I	B3	35	54	228	60	823	54	75	70	47												
Treatability																										
E9.6	Biological Oxygen Demand (BOD5) of influent	T17b. L7	mg/l	I	A1	73	116	165	86	147	217	248	62	313												
E9.7	Chemical Oxygen Demand (COD) of influent	T17b. L8	mg/l	I	A1	217	301	350	255	357	499	638	163	624												
E9.8	Total Organic Carbon (TOC) of influent	T17b. L9	mg/l	I	N	0	0	0	0	0	0	0	0	0												
E9.9	Suspended solids (SS) of influent	T17b. L10	mg/l	I	A1	119	125	205	128	164	188	465	97	230												
E9.10	Ammoniacal Nitrogen (NH3) of influent	T17b. L11	mg/l	I	A1	13	14.2	0	16.5	13	15	27	12.8	0												
Compliance																										
E9.11	Suspended solids consent	T17b. L12	mg/l	I	N	0	0	0	0	150	0	0	0	0												
E9.12	BOD consent	T17b. L13	mg/l	I	A1	25	25	25	25	25	15	25	25	25												
E9.13	COD consent	T17b. L14	mg/l	I	A1	125	125	125	125	125	125	125	125	125												
E9.14	Ammonia consent	T17b. L15	mg/l	I	A1	30	0	0	0	0	5	0	15	0												
E9.15	Phosphate consent	T17b. L16	mg/l	I	N	0	0	0	0	0	0.5	0	0	0												
E9.16	Compliance with effluent consent standard	T17b. L17	%	I	A1	100	100	100	100	98	94	100	100	100												
Flow																										
E9.17	Average daily flow in dry weather	T17b. L18	MI/d	I	B3	13	29	68	18	261.1	10.5	22	26.5	7												
E9.18	Ratio of daily maximum to to minimum flow	T17b. L19	nr	I	B3	6.8	14.58	3.6	5.24	2	2	3	3	3.2												
Treatment Works Category																										
E9.19	Primary	T17b. L20	1/0	I	A1	1	1	1	1	1	1	1	0	1												
E9.20	Secondary activated sludge	T17b. L21	1/0	I	A1	1	0	1	1	1	1	1	1	1												
E9.21	Secondary biological	T17b. L22	1/0	I	A1	0	1	1	0	0	0	0	0	0												
E9.22	Tertiary A1	T17b. L23	1/0	I	A1	0	0	0	0	0	0	0	0	0												
E9.23	Tertiary A2	T17b. L24	1/0	I	A1	0	0	0	1	1	1	1	0	1												
E9.24	Tertiary B1	T17b. L25	1/0	I	A1	0	0	0	0	0	0	0	0	0												
E9.25	Tertiary B2	T17b. L26	1/0	I	A1	0	0	0	0	0	0	0	0	0												
Miscellaneous Data																										
E9.26	Distance to next works	T17b. L27	km	I	A1	5	5	6	1	12	4	5	3	10												
E9.27	Sea outfalls at works	T17b. L28	1/0	I	A1	0	1	1	1	1	0	0	1	1												
E9.28	Terminal Pumping costs	T17b. L29	1/0	I	A1	0	1	1	1	1	0	0	0	1												
E9.29	Own sludge	T17b. L30	1/0	I	A1	0	0	0	0	0	0	0	0	0												
E9.30	Own sludge costs	T17b. L31	1/0	I	A1	0	0	0	0	0	0	0	0	0												
E9.31	Sludge centre	T17b. L32	1/0	I	A1	0	0	1	1	1	1	1	1	0												
E9.32	Sludge centre costs	T17b. L33	1/0	I	A1	0	0	1	1	1	1	1	1	0												
Works Cost																										
E9.33	Employment costs	-	£'000	I	B4	114	6	0	49	0	0	53	96	0												
E9.34	Power costs	T17b. L35	£'000	I	B4	72	102	0	57	0	0	102	81	0												
E9.35	Hired and contracted services	-	£'000	I	B4	25	66	883	414	6101	497	88	134	614												
E9.36	Materials and consumables	-	£'000	I	B4	13	57	0	20	0	0	30	32	0												
E9.37	Service charges SEPA	-	£'000	I	BX	0	56	0	109	0	0	3	67	0												
E9.38	Other direct costs	-	£'000	I	B4	14	16	0	16	0	0	19	25	0												
E9.39	Total direct costs	T17b. L34	£'000	C	B4	238	303	883	665	6101	497	295	435	614												
E9.40	General and support expenditure	T17b. L37	£'000	I	B4	129	181	41	271	126	11	200	220	25												
E9.41	Functional Expenditure	T17b. L38	£'000	C	B4	367	484	924	936	6227	508	495	655	639												
E9.42	Estimated terminal pumping station costs	T17b. L39	£'000	I	N	0	40	0	20	0	0	0	0	0												
E9.43	Estimated sludge costs	T17b. L40	£'000	I	N	0	0	0	0	0	0	0	0	0												

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ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY

Table E9: Large Sewage Treatment Works Information Database

Line Ref.	Description	Ofwat Ref	Units	Field Type	10		20		30		40		50		60		70		80		90		100		110		
					Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary
Works Size																											
E9.0	Name	-		I																							
E9.1	Annual average resident connected population	T17b, L2	000	I	N																						
E9.2	Annual average non-resident connected population	T17b, L3	000	I	N	Low confidence grade																					
E9.3	Trade effluent load received by works	T17b, L4	kg/COD/day	I	N																						
E9.4	Tanker load received by works	T17b, L5	kg/COD/day	I	N																						
E9.5	Population equivalent of total load received	T17b, L6	000	I	N													Figures from Dalmeir									
Treatability																											
E9.6	Biological Oxygen Demand (BOD5) of influent	T17b, L7	mg/l	I	N																						
E9.7	Chemical Oxygen Demand (COD) of influent	T17b, L8	mg/l	I	N																						
E9.8	Total Organic Carbon (TOC) of influent	T17b, L9	mg/l	I	N	Influent samples not taken		Influent samples not taken		Influent samples not taken		Influent samples not taken		Influent samples not taken		Influent samples not taken		Influent samples not taken		Influent samples not taken		Influent samples not taken		Influent samples not taken		Influent samples not taken	
E9.9	Suspended solids (SS) of influent	T17b, L10	mg/l	I	N																						
E9.10	Ammoniacal Nitrogen (NH3) of influent	T17b, L11	mg/l	I	N																						
Compliance																											
E9.11	Suspended solids consent	T17b, L12	mg/l	I	N																						
E9.12	BOD consent	T17b, L13	mg/l	I	N																						
E9.13	COD consent	T17b, L14	mg/l	I	N			This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent	
E9.14	Ammonia consent	T17b, L15	mg/l	I	N	This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent	
E9.15	Phosphate consent	T17b, L16	mg/l	I	N	This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent		This parameter is not in consent	
E9.16	Compliance with effluent consent standard	T17b, L17	%	I	N																						
Flow																											
E9.17	Average daily flow in dry weather	T17b, L18	Ml/d	I	N																						
E9.18	Ratio of daily maximum to minimum flow	T17b, L19	nr	I	N																						
Treatment Works Category																											
E9.19	Primary	T17b, L20	1/0	I	N																						
E9.20	Secondary activated sludge	T17b, L21	1/0	I	N																						
E9.21	Secondary biological	T17b, L22	1/0	I	N																						
E9.22	Tertiary A1	T17b, L23	1/0	I	N																						
E9.23	Tertiary A2	T17b, L24	1/0	I	N																						
E9.24	Tertiary B1	T17b, L25	1/0	I	N																						
E9.25	Tertiary B2	T17b, L26	1/0	I	N																						
Miscellaneous Data																											
E9.26	Distance to next works	T17b, L27	km	I	N																						
E9.27	Sea outfalls at works	T17b, L28	1/0	I	N																						
E9.28	Terminal Pumping costs	T17b, L29	1/0	I	N																						
E9.29	Own sludge	T17b, L30	1/0	I	N																						
E9.30	Own sludge costs	T17b, L31	1/0	I	N																						
E9.31	Sludge centre	T17b, L32	1/0	I	N																						
E9.32	Sludge centre costs	T17b, L33	1/0	I	N																						
Works Cost																											
E9.33	Employment costs	-	£'000	I	N	Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N	
E9.34	Power costs	T17b, L35	£'000	I	N	Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N	
E9.35	Hired and contracted services	-	£'000	I	N	Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N	
E9.36	Materials and consumables	-	£'000	I	N	Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N	
E9.37	Service charges SEPA	-	£'000	I	N	Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N	
E9.38	Other direct costs	-	£'000	I	N	Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N	
E9.39	Total direct costs	T17b, L34	£'000	C	N	Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N	
E9.40	General and support expenditure	T17b, L37	£'000	I	N	Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N	
E9.41	Functional Expenditure	T17b, L38	£'000	C	N	Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N		Please refer to cost all N	
E9.42	Estimated terminal pumping station costs	T17b, L39	£'000	I	N	No terminal pumping costs		Cost allocation explained		No terminal pumping costs		No terminal pumping costs		No terminal pumping costs		No terminal pumping costs		No terminal pumping costs		No terminal pumping costs		No terminal pumping costs		No terminal pumping costs		No terminal pumping costs	
E9.43	Estimated sludge costs	T17b, L40	£'000	I	N	Estimated costs of sludge		Estimated costs of sludge		Estimated costs of sludge		Estimated costs of sludge		Estimated costs of sludge		Estimated costs of sludge		Estimated costs of sludge		Estimated costs of sludge		Estimated costs of sludge		Estimated costs of sludge		Estimated costs of sludge	

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SECTION E : OPERATING COSTS AND EFFICIENCY
Table E9: Large Sewage Treatment Works Information Data

Line Ref.	Description	Ofwat Ref	Units	Field Type	120		130		140		150		160		170		180		190		200		210		220			
					Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment
Works Size																												
Name																												
E9.0	Name	-		I																								
E9.1	Annual average resident connected population	T17b, L2	000	I	N																							
E9.2	Annual average non-resident connected population	T17b, L3	000	I	N	Low confidence gra																						
E9.3	Trade effluent load received by works	T17b, L4	kg/COD/day	I	N																							
E9.4	Tanker load received by works	T17b, L5	kg/COD/day	I	N																							
E9.5	Population equivalent of total load received	T17b, L6	000	I	N									Influent volume not r		Influent volume n												
Treatability																												
E9.6	Biological Oxygen Demand (BOD5) of influent	T17b, L7	mg/l	I	N																							
E9.7	Chemical Oxygen Demand (COD) of influent	T17b, L8	mg/l	I	N																							
E9.8	Total Organic Carbon (TOC) of influent	T17b, L9	mg/l	I	is n	Influent samples no		Influent samples n		Influent samples not		Influent samples n		Influent samples not n		Influent samples n		Influent samples N		Influent samples N		Influent samples nc		Influent samples not n		Influent samples n		Influent sample
E9.9	Suspended solids (SS) of influent	T17b, L10	mg/l	I	N																							
E9.10	Ammoniacal Nitrogen (NH3) of influent	T17b, L11	mg/l	I	N																Scottish Water doe		Scottish Water does		Scottish Water dc		Scottish Water	
Compliance																												
E9.11	Suspended solids consent	T17b, L12	mg/l	I	N					This parameter is not																		
E9.12	BOD consent	T17b, L13	mg/l	I	is n	This parameter is n																						
E9.13	COD consent	T17b, L14	mg/l	I	N																							
E9.14	Ammonia consent	T17b, L15	mg/l	I	N																							
E9.15	Phosphate consent	T17b, L16	mg/l	I	N																							
E9.16	Compliance with effluent consent standard	T17b, L17	%	I	N																							
Flow																												
E9.17	Average daily flow in dry weather	T17b, L18	Ml/d	I	N																							
E9.18	Ratio of daily maximum to minimum flow	T17b, L19	nr	I	N																							
Treatment Works Category																												
E9.19	Primary	T17b, L20	1/0	I	N																							
E9.20	Secondary activated sludge	T17b, L21	1/0	I	N																							
E9.21	Secondary biological	T17b, L22	1/0	I	N																							
E9.22	Tertiary A1	T17b, L23	1/0	I	N																							
E9.23	Tertiary A2	T17b, L24	1/0	I	N																							
E9.24	Tertiary B1	T17b, L25	1/0	I	N																							
E9.25	Tertiary B2	T17b, L26	1/0	I	N																							
Miscellaneous Data																												
E9.26	Distance to next works	T17b, L27	km	I	N																							
E9.27	Sea outfalls at works	T17b, L28	1/0	I	N																							
E9.28	Terminal Pumping costs	T17b, L29	1/0	I	N																							
E9.29	Own sludge	T17b, L30	1/0	I	N																							
E9.30	Own sludge costs	T17b, L31	1/0	I	N																							
E9.31	Sludge centre	T17b, L32	1/0	I	N																							
E9.32	Sludge centre costs	T17b, L33	1/0	I	N																							
Works Cost																												
E9.33	Employment costs	-	£'000	I	cos	N	Please refer to cost N																					
E9.34	Power costs	T17b, L35	£'000	I	cos	N	Please refer to cost N																					
E9.35	Hired and contracted services	-	£'000	I	cos	N	Please refer to cost N																					
E9.36	Materials and consumables	-	£'000	I	cos	N	Please refer to cost N																					
E9.37	Service charges SEPA	-	£'000	I	cos	N	Please refer to cost N																					
E9.38	Other direct costs	-	£'000	I	cos	N	Please refer to cost N																					
E9.39	Total direct costs	T17b, L34	£'000	C	cos	N	Please refer to cost N																					
E9.40	General and support expenditure	T17b, L37	£'000	I	cos	N	Please refer to cost N																					
E9.41	Functional Expenditure	T17b, L38	£'000	C	cos	N	Please refer to cost N																					
E9.42	Estimated terminal pumping station costs	T17b, L39	£'000	I	mpir	N	Cost allocation expl N			No terminal pumpi N				No terminal pumpi N							No process to ca N			No terminal pumpi N			No terminal pur	
E9.43	Estimated sludge costs	T17b, L40	£'000	I	s of	N	Estimated costs of s N			Estimated costs of N				Estimated costs of N							Estimated costs c N			Estimated costs of : N			Estimated costs of sli N	

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SCOTTISH WATER

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E9: Large Sewage Treatment Works Information Data

Line Ref.	Description	Ofwat Ref	Units	Field Type	230 23	240 24	250 25	260 26	270 27	280 28	290 29	300 30	310 31	320 32	330 33	
					Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment	Comment Necessary Y/N	Comment
Works Size																
E9.0	Name	-		I												
E9.1	Annual average resident connected population	T17b, L2	000	I	N	Low confidence grade	N	Low confidence grade	N	Low confidence grade	N	Low confidence grade	N	Low confidence grade	N	Low confidence grade
E9.2	Annual average non-resident connected population	T17b, L3	000	I	N		N		N		N		N		N	
E9.3	Trade effluent load received by works	T17b, L4	kg/COD/day	I	N		N		N		N		N		N	
E9.4	Tanker load received by works	T17b, L5	kg/COD/day	I	N		N		N		N		N		N	
E9.5	Population equivalent of total load received	T17b, L6	000	I	N		N		N		N		N	Influent volume no	N	Incomplete dataset
Treatability																
E9.6	Biological Oxygen Demand (BOD5) of influent	T17b, L7	mg/l	I	N		N		N		N		N		N	
E9.7	Chemical Oxygen Demand (COD) of influent	T17b, L8	mg/l	I	N		N		N		N		N		N	
E9.8	Total Organic Carbon (TOC) of influent	T17b, L9	mg/l	I	is not no	Influent samples not	N	Influent samples no	N	Influent samples no	N	Influent samples no	N	Influent samples no	N	Influent samples no
E9.9	Suspended solids (SS) of influent	T17b, L10	mg/l	I	N		N		N		N		N		N	
E9.10	Ammoniacal Nitrogen (NH3) of influent	T17b, L11	mg/l	I	does no	Scottish Water does	N	Scottish Water do	N	Scottish Water does	N	Scottish Water do	N	Scottish Water do	N	Scottish Water do
Compliance																
E9.11	Suspended solids consent	T17b, L12	mg/l	I	r is not ir	This parameter is not	N	This parameter is n	N	This parameter is r	N	This parameter is r	N	This parameter is r	N	This parameter is r
E9.12	BOD consent	T17b, L13	mg/l	I	N		N		N		N		N		N	
E9.13	COD consent	T17b, L14	mg/l	I	N		N		N		N		N		N	
E9.14	Ammonia consent	T17b, L15	mg/l	I	r is not ir	This parameter is not	N	This parameter is n	N	This parameter is r	N	This parameter is r	N	This parameter is r	N	This parameter is r
E9.15	Phosphate consent	T17b, L16	mg/l	I	r is not ir	This parameter is not	N	This parameter is n	N	This parameter is r	N	This parameter is r	N	This parameter is r	N	This parameter is r
E9.16	Compliance with effluent consent standard	T17b, L17	%	I	N		N		N		N		N		N	
Flow																
E9.17	Average daily flow in dry weather	T17b, L18	Ml/d	I	N		N		N		N		N		N	
E9.18	Ratio of daily maximum to minimum flow	T17b, L19	nr	I	N		N		N		N		N	Legacy data used	N	
Treatment Works Category																
E9.19	Primary	T17b, L20	1/0	I	N		N		N		N		N		N	
E9.20	Secondary activated sludge	T17b, L21	1/0	I	N		N		N		N		N		N	
E9.21	Secondary biological	T17b, L22	1/0	I	N		N		N		N		N		N	
E9.22	Tertiary A1	T17b, L23	1/0	I	N		N		N		N		N		N	
E9.23	Tertiary A2	T17b, L24	1/0	I	N		N		N		N		N		N	
E9.24	Tertiary B1	T17b, L25	1/0	I	N		N		N		N		N		N	
E9.25	Tertiary B2	T17b, L26	1/0	I	N		N		N		N		N		N	
Miscellaneous Data																
E9.26	Distance to next works	T17b, L27	km	I	N		N		N		N		N		N	
E9.27	Sea outfalls at works	T17b, L28	1/0	I	N		N		N		N		N		N	
E9.28	Terminal Pumping costs	T17b, L29	1/0	I	N		N		N		N		N		N	
E9.29	Own sludge	T17b, L30	1/0	I	N		N		N		N		N		N	
E9.30	Own sludge costs	T17b, L31	1/0	I	N		N		N		N		N		N	
E9.31	Sludge centre	T17b, L32	1/0	I	N		N		N		N		N		N	
E9.32	Sludge centre costs	T17b, L33	1/0	I	N		N		N		N		N		N	
Works Cost																
E9.33	Employment costs	-	£'000	I	N		N	Please refer to cost	N		N	Please refer to cos	N	Please refer to cos	N	Please refer to co
E9.34	Power costs	T17b, L35	£'000	I	N		N	Please refer to cost	N		N	Please refer to cos	N	Please refer to cos	N	Please refer to co
E9.35	Hired and contracted services	-	£'000	I	cost all	N	Please refer to cost	N	Please refer to cc	N	Please refer to cos	N	Please refer to cos	N	Please refer to co	Please refer to co
E9.36	Materials and consumables	-	£'000	I	N		N	Please refer to cost	N		N	Please refer to cos	N	Please refer to co	N	Please refer to co
E9.37	Service charges SEPA	-	£'000	I	cost all	N	Please refer to cost	N		N	Please refer to cos	N	Please refer to co	N	Please refer to co	
E9.38	Other direct costs	-	£'000	I	cost all	N	Please refer to cost	N		N	Please refer to cos	N	Please refer to co	N	Please refer to co	
E9.39	Total direct costs	T17b, L34	£'000	C	cost all	N	Please refer to cost	N	Please refer to cc	N	Please refer to cos	N	Please refer to co	N	Please refer to co	Please refer to co
E9.40	General and support expenditure	T17b, L37	£'000	I	cost all	N	Please refer to cost	N	Please refer to cc	N	Please refer to cos	N	Please refer to co	N	Please refer to co	Please refer to co
E9.41	Functional Expenditure	T17b, L38	£'000	C	cost all	N	Please refer to cost	N	Please refer to cc	N	Please refer to cos	N	Please refer to co	N	Please refer to co	Please refer to co
E9.42	Estimated terminal pumping station costs	T17b, L39	£'000	I	mping cc	N	No terminal pumping	N	No terminal pumpi	N	No terminal pumpi	N	No terminal pumpi	N	Cost allocation ex	No process to cap
E9.43	Estimated sludge costs	T17b, L40	£'000	I	s of slud	N	Estimated costs of sli	N	Estimated costs of s	N	Estimated costs of s	N	Estimated costs of s	N	Estimated costs of s	Estimated costs of s

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SCOTTISH WATER

ANNUAL RETURN INFORMATION REQUIREMENT

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E9: Large Sewage Treatment Works Information Data

Line Ref.	Description	Ofwat Ref	Units	Field Type	340		350		360		370	
					34		35		36		37	
Works Size					Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment
Name					Y/N		Y/N		Y/N		Y/N	
E9.0	Name	-		I								
E9.1	Annual average resident connected population	T17b, L2	000	I	N		N		N		N	
E9.2	Annual average non-resident connected population	T17b, L3	000	I	N	Low confidence gra	N	Low confidence gra	N	Low confidence gra	N	Low confidence
E9.3	Trade effluent load received by works	T17b, L4	kg/COD/day	I	N		N		N		N	
E9.4	Tanker load received by works	T17b, L5	kg/COD/day	I	N		N		N		N	
E9.5	Population equivalent of total load received	T17b, L6	000	I	N		N		N		N	
Treatability												
E9.6	Biological Oxygen Demand (BOD5) of influent	T17b, L7	mg/l	I	N		N		N		N	
E9.7	Chemical Oxygen Demand (COD) of influent	T17b, L8	mg/l	I	N		N		N		N	
E9.8	Total Organic Carbon (TOC) of influent	T17b, L9	mg/l	I	N	Influent samples no	N	Influent samples not	N	Influent samples not	N	Influent sample
E9.9	Suspended solids (SS) of influent	T17b, L10	mg/l	I	N		N		N		N	
E9.10	Ammoniacal Nitrogen (NH3) of influent	T17b, L11	mg/l	I	N		N		N		N	Scottish Water
Compliance												
E9.11	Suspended solids consent	T17b, L12	mg/l	I	N	This parameter is no	N	This parameter is no	N	This parameter is no	N	This parameter
E9.12	BOD consent	T17b, L13	mg/l	I	N		N		N		N	
E9.13	COD consent	T17b, L14	mg/l	I	N		N		N		N	
E9.14	Ammonia consent	T17b, L15	mg/l	I	N		N	This parameter is no	N		N	This parameter
E9.15	Phosphate consent	T17b, L16	mg/l	I	N		N	This parameter is no	N	This parameter is no	N	This parameter
E9.16	Compliance with effluent consent standard	T17b, L17	%	I	N		N		N		N	
Flow												
E9.17	Average daily flow in dry weather	T17b, L18	Ml/d	I	N		N		N		N	
E9.18	Ratio of daily maximum to to minimum flow	T17b, L19	nr	I	N		N		N		N	
Treatment Works Category												
E9.19	Primary	T17b, L20	1/0	I	N		N		N		N	
E9.20	Secondary activated sludge	T17b, L21	1/0	I	N		N		N		N	
E9.21	Secondary biological	T17b, L22	1/0	I	N		N		N		N	
E9.22	Tertiary A1	T17b, L23	1/0	I	N		N		N		N	
E9.23	Tertiary A2	T17b, L24	1/0	I	N		N		N		N	
E9.24	Tertiary B1	T17b, L25	1/0	I	N		N		N		N	
E9.25	Tertiary B2	T17b, L26	1/0	I	N		N		N		N	
Miscellaneous Data												
E9.26	Distance to next works	T17b, L27	km	I	N		N		N		N	
E9.27	Sea outfalls at works	T17b, L28	1/0	I	N		N		N		N	
E9.28	Terminal Pumping costs	T17b, L29	1/0	I	N		N		N		N	
E9.29	Own sludge	T17b, L30	1/0	I	N		N		N		N	
E9.30	Own sludge costs	T17b, L31	1/0	I	N		N		N		N	
E9.31	Sludge centre	T17b, L32	1/0	I	N		N		N		N	
E9.32	Sludge centre costs	T17b, L33	1/0	I	N		N		N		N	
Works Cost												
E9.33	Employment costs	-	£'000	I	N		N	Please refer to cost :N		Please refer to cost :N		
E9.34	Power costs	T17b, L35	£'000	I	N		N	Please refer to cost :N		Please refer to cost :N		
E9.35	Hired and contracted services	-	£'000	I	N	Please refer to cost N		Please refer to cost :N		Please refer to cost :N		Please refer to
E9.36	Materials and consumables	-	£'000	I	N		N	Please refer to cost :N		Please refer to cost :N		
E9.37	Service charges SEPA	-	£'000	I	N		N	Please refer to cost :N		Please refer to cost :N		
E9.38	Other direct costs	-	£'000	I	N		N	Please refer to cost :N		Please refer to cost :N		
E9.39	Total direct costs	T17b, L34	£'000	C	N	Please refer to cost N		Please refer to cost :N		Please refer to cost :N		Please refer to
E9.40	General and support expenditure	T17b, L37	£'000	I	N	Please refer to cost N		Please refer to cost :N		Please refer to cost :N		Please refer to
E9.41	Functional Expenditure	T17b, L38	£'000	C	N	Please refer to cost N		Please refer to cost :N		Please refer to cost :N		Please refer to
E9.42	Estimated terminal pumping station costs	T17b, L39	£'000	I	N	No terminal pumpin	N	No terminal pumpin	N	No terminal pumpin	N	No process to c
E9.43	Estimated sludge costs	T17b, L40	£'000	I	N	Estimated costs of :N		Estimated costs of s N		Estimated costs of s N		Estimated cost

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ANNUAL RETURN INFORMATION REQUIREMENTS

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E10: Wastewater Explanatory Factors - Sludge Treatment and Disposal

Line Ref.	Description	Ofwat Ref	Units	Field Type	10	20	30	40	50	199
					Disposal category					Total
					Farmland	Landfill	Incineration	Sea	Other	
					CG	CG	CG	CG	CG	CG
Sludge volumes										
E10.1	Resident population served	T17g, L1	0	I	1097	88	2248	0	1299	4732
E10.2	Amount of sewage sludge	T17g, L2	ttds	I	26.14	2.10	53.58	0	30.95	112.77
Sludge Treatment and Disposal costs										
E10.3	Employment costs	-	£000	I	560	298	199	0	92	1149
E10.4	Power costs	T17g, L6	£000	I	434	307	0	0	81	822
E10.5	Hired and contracted services	-	£000	I	5486	412	7143	0	3842	16883
E10.6	Materials and consumables	-	£000	I	218	125	381	0	38	762
E10.7	Service charges SEPA	-	£000	I	86	61	116	0	17	280
E10.8	Other direct costs	-	£000	I	71	60	15	0	14	160
E10.9	Total direct costs	T17g, L5	£000	C	6855	1263	7854	0	4084	20056
E10.10	General and support expenditure	T17g, L8	£000	I	135.1	121.7	79	0	587	922.8
E10.11	Functional Expenditure	T17g, L9	£000	C	6990.1	1384.7	7933	0	4671	20978.8
Sludge Treatment Type										
					No Sludge	CG	Own Sludge	CG	Sludge Centre	CG
E10.12	In treatment works size band 0	-	nr	I	1145	B2	0	B2	0	B2
E10.13	In treatment works size band 1	-	nr	I	259	B2	0	B2	0	B2
E10.14	In treatment works size band 2	-	nr	I	112	B2	0	B2	0	B2
E10.15	In treatment works size band 3	-	nr	I	183	B2	0	B2	1	B2
E10.16	In treatment works size band 4	-	nr	I	120	B2	2	B2	3	B2
E10.17	In treatment works size band 5	-	nr	I	27	B2	3	B2	5	B2
E10.18	In treatment works size band 6	-	nr	I	14	B2	0	B2	6	B2
E10.19	PPP schemes	-	nr	I	13	B2	0	B2	8	B2

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SECTION E : OPERATING COSTS AND EFFICIENCY
Table E10: Wastewater Explanatory Factors - Sludge Treatment and Disposal

Line Ref.	Description	Ofwat Ref	Units	Field Type	10		20		30		40		50		199		General	
					Farmland	Landfill	Incineration	Sea	Other	Total	Comment Necessary	Comment	Comment Necessary	Comment	Comment Necessary	Comment		Comment Necessary
Sludge volumes																		
E10.1	Resident population served	T17g_L1	0	I	N	Population data not ki	N	Population data not N	N	Population data noN	N	N	Population data not know	N	Population data not known by wor	A1	G	
E10.2	Amount of sewage sludge	T17g_L2	ttds	I	N	N	N	N	N	N	N	N	N	N	N	A2	G	
Sludge Treatment and Disposal cost																		
E10.3	Employment costs	-	£000	I	N	Extrapolation require	N	Extrapolation requir	N	Extrapolation requ	N	No sea disposal of slu	N	Extrapolation required to e	N	Extrapolation required to extract a	AX	G
E10.4	Power costs	T17g_L6	£000	I	N	Extrapolation require	N	Extrapolation requir	N	Extrapolation requ	N	No sea disposal of slu	N	Extrapolation required to e	N	Extrapolation required to extract a	B2	G
E10.5	Hired and contracted services	-	£000	I	N	Extrapolation require	N	Extrapolation requir	N	Extrapolation requ	N	No sea disposal of slu	N	Extrapolation required to e	N	Extrapolation required to extract a	B3	G
E10.6	Materials and consumables	-	£000	I	N	Extrapolation require	N	Extrapolation requir	N	Extrapolation requ	N	No sea disposal of slu	N	Extrapolation required to e	N	Extrapolation required to extract a	B4	N
E10.7	Service charges SEPA	-	£000	I	N	Extrapolation require	N	Extrapolation requir	N	Extrapolation requ	N	No sea disposal of slu	N	Extrapolation required to e	N	Extrapolation required to extract a	BX	G
E10.8	Other direct costs	-	£000	I	N	Extrapolation require	N	Extrapolation requir	N	Extrapolation requ	N	No sea disposal of slu	N	Extrapolation required to e	N	Extrapolation required to extract a	C2	N
E10.9	Total direct costs	T17g_L5	£000	C	N	Extrapolation require	N	Extrapolation requir	N	Extrapolation requ	N	No sea disposal of slu	N	Extrapolation required to e	N	Extrapolation required to extract a	C3	N
E10.10	General and support expenditure	T17g_L8	£000	I	N	Extrapolation require	N	Extrapolation requir	N	Extrapolation requ	N	No sea disposal of slu	N	Extrapolation required to e	N	Extrapolation required to extract a	C5	N
E10.11	Functional Expenditure	T17g_L9	£000	C	N	Extrapolation require	N	Extrapolation requir	N	Extrapolation requ	N	No sea disposal of slu	N	Extrapolation required to e	N	Extrapolation required to extract a	CX	N
Sludge Treatment Type																		
E10.12	In treatment works size band 0	-	nr	I	N	N	N	N	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	D3	N
E10.13	In treatment works size band 1	-	nr	I	N	N	N	N	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	D4	N
E10.14	In treatment works size band 2	-	nr	I	N	N	N	N	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	D5	N
E10.15	In treatment works size band 3	-	nr	I	N	N	N	N	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	D6	N
E10.16	In treatment works size band 4	-	nr	I	N	N	N	N	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	DX	N
E10.17	In treatment works size band 5	-	nr	I	N	N	N	N	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		
E10.18	In treatment works size band 1	-	nr	I	N	N	N	N	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		
E10.19	PPP schemes	-	nr	I	N	N	N	N	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		
Issues with data																		
Y	E10.11 should equal E2.12				Y	199												
Y	E10.10 should equal E2.10 + E2.11				Y	199												
Y	E10.9 should equal E2.9				Y	199												
Y	E10.4 should equal E2.2				Y	199												

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Checked by: Date:
Authorised by: Geoff Aitkenhead Date:

Edition 1

ANNUAL RETURN INFORMATION REQUIREMENTS

SECTION E : OPERATING COSTS AND EFFICIENCY
Table E11: Employee numbers

Line Ref.	Description	Ofwat Ref	Units	Field Type	10		20	
					Water Service		Wastewater Service	
						CG		CG
Employee numbers								
E11.1	Direct operations	-	nr	I	1,843	B2	1,468	B2
E11.2	Indirect operations (General and support)	-	nr	I	460	B2	375	B2
E11.3	Other (incl hired and contracted)	-	nr	I	472	B2	389	B2
E11.4	Total employee numbers	-	nr	C	2775	B2	2232	B2

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SECTION E : OPERATING COSTS AND EFFICIENCY
Table E11: Employee numbers

Line Ref.	Description	Ofwat Ref	Units	Field Type
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10	
Water Service	

20	
Wastewater Service	

Comment Necessary Y/N	Comment
-----------------------	---------

Comment Necessary Y/N	Comment
-----------------------	---------

Employee numbers				
E11.1	Direct operations	-	nr	I
E11.2	Indirect operations (General and support)	-	nr	I
E11.3	Other (incl hired and contracted)	-	nr	I
E11.4	Total employee numbers	-	nr	C

N
N
N
N

N
N
N
N

Issues with data

Problem ?

Solution

- General
- A1 G
- A2 G
- A3 G
- A4 N
- AX G
- B2 G
- B3 G
- B4 N
- C5 N
- CX N
- M N
- N N
- D3 N
- D4 N
- D5 N
- D6 N
- DX N

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