

**SECTION E : OPERATING COSTS AND EFFICIENCY**  
**Table E3: PPP Project Analysis**

Line Ref.	Description	WICS Reference AR 06	Units	Field Type	10	20	30	40	50	60	70	80	90	100	110	120	130	140
					Highland CG	Highland CG	Tay CG	Aberdeen CG	Aberdeen CG	Aberdeen CG	Aberdeen CG	Moray Coast CG	Moray Coast CG	Moray Coast CG	AVSE CG	AVSE CG	AVSE CG	AVSE CG
<b>Project Data</b>					Ft William	Inverness	Hatton	Nigg	Persley	Peterhead	Fraserburgh	Lossiemouth	Buckie	Banff/Macduff	Seafield	Newbridge	East Calder	Blackburn
E3.0	Name	E3.0	I															
E3.1	Annual average resident connected population	E3.1	000	I/C	8.2 B3	59.5 B3	192.2 B3	217.6 B3	36.8 B3	23.2 B3	18.0 B3	36.2 B3	13.5 B3	11.0 B3	590.2 B3	22.5 B3	70.9 B3	18.8
E3.2	Annual average non-resident connected population	E3.2	000	I/C	1.1 B3	4.3 B3	2.2 B3	3.5 B3	0.6 B3	0.5 B3	0.4 B3	0.6 B3	0.4 B3	0.5 B3	5.2 B3	0.1 B3	0.3 B3	0.2
E3.3	Population equivalent of total load received	E3.5	000	I/C	16 B3	83 B3	247 B3	285 B3	48 B3	36 B3	26 B3	44 B3	21 B3	13 B3	757 B3	28 B3	119 B3	25
<b>Scope of Works</b>																		
E3.4	Sewerage	E3.7	1/0	I	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	0 A1	0
E3.5	Sewage Treatment	E3.8	1/0	I	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1
E3.6	Sludge Treatment	E3.9	1/0	I	0 A1	1 A1	1 A1	1 A1	0 A1	0 A1	0 A1	1 A1	0 A1	0 A1	1 A1	1 A1	0 A1	0
E3.7	Terminal Pumping Station	E3.10	1/0	I	1 A1	1 A1	1 A1	0 A1	0 A1	0 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	0 A1	0
E3.8	Other (state details)	E3.11	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
<b>Sewage Treatment - Effluent Consent Standard</b>																		
E3.9	Suspended solids consent	E3.17	mg/l	I	100 A1	100 A1	100 A1	0 N	100 A1	0 N	0 N	100 A1	100 A1	100 A1	375 A1	100 A1	100 A1	100
E3.10	BOD consent	E3.18	mg/l	I	25 A1	25 A1	25 A1	25 A1	25 A1	25 A1	25 A1	25 A1	25 A1	25 A1	25 A1	15 A1	15 A1	10
E3.11	COD consent	E3.19	mg/l	I	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1	125
E3.12	Ammonia consent	E3.20	mg/l	I	0 N	0 N	50 A1	0 N	35 A1	0 N	0 N	0 N	0 N	0 N	0 N	7 A1	2 A1	2
E3.13	Phosphate consent	E3.21	mg/l	I	0 N	0 N	0 N	0 N	2 A1	0 N	0 N	0 N	0 N	0 N	0 N	0.5 A1	0.5 A1	0.5
E3.14	Compliance with effluent consent standard	E3.22	%	I	100 A1	100 A1	100 A1	98 A1	100 A1	100 A1	100 A1	96 A1	100 A1	100 A1	100 A1	100 A1	99 A1	97
<b>Treatment Works Category</b>																		
E3.15	Primary	E3.25	1/0	I	1 A1	1 A1	1 A1	1 A1	0 A1	1 A1	1 A1	0 A1	0 A1	0 A1	1 A1	1 A1	1 A1	1
E3.16	Secondary activated sludge	E3.26	1/0	I	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	0
E3.17	Secondary biological	E3.27	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	1
E3.18	Tertiary A1	E3.28	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
E3.19	Tertiary A2	E3.29	1/0	I	0 A1	1 A1	0 A1	0 A1	1 A1	0 A1	1 A1	0 A1	0 A1	1 A1	0 A1	1 A1	1 A1	0
E3.20	Tertiary B1	E3.30	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
E3.21	Tertiary B2	E3.31	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	1
<b>Sewerage Data</b>																		
E3.22	Total length of sewer	E3.47	km	I	4.3 B3	10.7 B3	40.7 B3	35.7 B3	0.4 B3	1.0 B3	1.8 B3	31.6 B3	18.5 B3	9.5 B3	44.0 B3	3.1 B3	0.0 N	0.0
E3.23	Length of critical sewer	E3.48	km	I	4.3 B3	10.7 B3	40.7 B3	35.7 B3	0.4 B3	1.0 B3	1.8 B3	31.6 B3	18.5 B3	9.5 B3	44.0 B3	3.1 B3	0.0 N	0.0
E3.24	Number of pumping stations	E3.49	nr	I	4 A1	4 A1	16 A1	14 A1	0 N	0 N	1 A1	7 A1	12 A1	10 A1	7 A1	2 A1	0 N	0
E3.25	Capacity of pumping stations (m <sup>3</sup> /d)	E3.50	m <sup>3</sup> /day	I	65,992 B3	247,622 B3	2,480,129 B3	192,871 B3	0 N	0 N	16,848 B3	236,563 B3	44,240 B3	239,242 B3	238,723 B3	27,043 B3	0 N	0
E3.26	Capacity of pumping stations (kw)	E3.51	kw	I	59 B3	806 B3	6,623 B3	2,103 B3	0 N	0 N	0 N	325 B3	525 B3	625 B3	713 B3	26 B3	0 N	0
E3.27	Number of combined pumping stations	E3.52	nr	I	2 A1	1 A1	7 A1	12 A1	0 N	0 N	0 N	4 A1	8 A1	7 A1	6 A1	1 A1	0 N	0
E3.28	Capacity of combined pumping stations (m <sup>3</sup> /d)	E3.53	m <sup>3</sup> /day	I	4,821 B3	34,214 B3	209,002 B3	96,362 B3	0 N	0 N	0 N	65,232 B3	23,599 B3	115,949 B3	116,035 B3	10,109 B3	0 N	0
E3.29	Number of stormwater pumping stations	E3.54	nr	I	0 N	2 A1	6 A1	2 A1	0 N	0 N	0 N	1 A1	1 A1	1 A1	0 N	0 N	0 N	0
E3.30	Capacity of stormwater pumping stations (m <sup>3</sup> /d)	E3.55	m <sup>3</sup> /day	I	0 N	209,088 B3	2,105,741 B3	96,509 B3	0 N	0 N	0 N	142,560 B3	6,394 B3	56,419 B3	0 N	0 N	0 N	0
E3.31	Number of combined sewer overflows	E3.56	nr	I	2 A1	1 A1	9 A1	8 A1	0 N	0 N	1 A1	4 A1	10 A1	8 A1	9 A1	1 A1	0 N	0
E3.32	Number of combined sewer overflows (screened)	E3.57	nr	I	2 A1	1 A1	9 A1	8 A1	0 N	0 N	1 A1	4 A1	10 A1	8 A1	9 A1	1 A1	0 N	0
<b>Sludge Treatment and Disposal Data</b>																		
E3.33	Farmland Untreated	E3.58	ttds	I/C	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000
E3.34	Farmland Conventional	E3.59	ttds	I/C	0.000 N	2.661 B4	0.412 B4	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000
E3.35	Farmland Advanced	E3.60	ttds	I/C	0.000 N	0.000 N	5.069 B4	13.140 B4	0.000 N	0.000 N	0.000 N	3.102 B4	0.000 N	0.000 N	20.189 N	0.000 N	0.000 N	0.000
E3.36	Incineration	E3.62	ttds	I/C	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 B4	0.000 N	0.000 N	0.000
E3.37	Landfill	E3.61	ttds	I/C	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000
E3.38	Composted	E3.63	ttds	I/C	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000
E3.39	Land Reclamation	E3.64	ttds	I/C	0.000 N	0.000 N	0.000 N	0.000 N	0.159 B4	0.267 B4	0.058 B4	0.000 N	0.000 N	0.000 N	0.129 B4	2.306 B4	0.000 N	0.000
E3.40	Other	E3.65	ttds	I/C	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000

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**SECTION E : OPERATING COSTS AND EFFICIENCY**  
**Table E3a: PPP Cost Analysis**

Line Ref.	Description	Ofwat Ref JR 07	WICS Reference AR 06	Units	Field Type	10	20	30	40	50	60	70	80	90	100	110
						Highland CG	Highland CG	Tay CG	Aberdeen CG	Aberdeen CG	Aberdeen CG	Aberdeen CG	Moray Coast CG	Moray Coast CG	Moray Coast CG	AVSE CG

E3a.0	Name	-	E3a.0			Ft William	Inverness	Hatton	Nigg	Persley	Peterhead	Fraserburgh	Lossie Mouth	Buckie	Banff/Macduff	Seafield
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Sewerage Costs					
E3a.1	Estimated direct operating cost	-	E3a.1	£m	I/C
E3a.2	Rates paid by the PPP contractor	-	E3a.2	£m	I/C
E3a.3	SEPA charges paid by the PPP contractor	-	E3a.3	£m	I/C
E3a.4	Total direct cost	-	E3a.4	£m	C
E3a.5	Scottish Water general & support expenditure	-	E3a.5	£m	I/C
E3a.6	Scottish Water SEPA charges	-	E3a.6	£m	I/C
E3a.7	Total sewerage cost	-	E3a.7	£m	C

0.042	D6	0.142	D6	2.371	D6	1.743	D6	0.007	D6	0.055	D6	0.048	D6	0.529	D6	0.413	D6	0.304	D6	0.377	D6
-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N
0.001	A2	-	N	0.011	A2	-	A2	-	N	-	N	-	N	0.004	A2	0.012	A2	0.008	A2	0.007	A2
0.043	D6	0.142	D6	2.382	D6	1.743	D6	0.007	D6	0.055	D6	0.048	D6	0.533	D6	0.425	D6	0.312	D6	0.384	D6
0.001	CX	0.005	C4	0.049	C4	0.120	C4	-	CX	0.002	CX	0.001	CX	0.011	C4	0.013	C4	0.009	C4	0.005	C4
-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N
0.044	D6	0.147	D6	2.431	D6	1.863	D6	0.007	D6	0.057	D6	0.049	D6	0.544	D6	0.438	D6	0.321	D6	0.389	D6

Sewage Treatment Costs					
E3a.8	Estimated direct operating cost	-	E3a.8	£m	I/C
E3a.9	Rates paid by the PPP contractor	-	E3a.9	£m	I/C
E3a.10	SEPA charges paid by the PPP contractor	-	E3a.10	£m	I/C
E3a.11	Total direct cost	-	E3a.11	£m	C
E3a.12	Scottish Water general & support expenditure	-	E3a.12	£m	I/C
E3a.13	Scottish Water SEPA charges	-	E3a.13	£m	I/C
E3a.14	Total sewage treatment cost	-	E3a.14	£m	C
E3a.15	Estimated terminal pumping cost	-	E3a.15	£m	I/C

0.677	D6	1.484	D6	1.903	D6	1.382	D6	0.966	D6	0.590	D6	0.659	D6	0.498	D6	0.384	D6	0.438	D6	7.695	D6
0.054	B3	0.189	B3	0.277	B3	0.459	B3	0.161	B3	0.068	B3	0.092	B3	0.041	B3	0.042	B3	0.061	B3	1.179	B3
0.022	A2	0.215	A2	0.132	A2	0.130	A2	0.022	A2	0.036	A2	0.036	A2	0.035	A2	0.030	A2	0.029	A2	0.155	A2
0.753	D6	1.888	D6	2.312	D6	1.971	D6	1.149	D6	0.694	D6	0.787	D6	0.574	D6	0.456	D6	0.528	D6	9.029	D6
0.017	C4	0.070	C4	0.062	C4	0.136	C4	0.023	C4	0.024	C4	0.024	C4	0.013	C4	0.014	C4	0.015	C4	0.117	C4
-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N
0.770	D6	1.958	D6	2.374	D6	2.107	D6	1.172	D6	0.718	D6	0.811	D6	0.587	D6	0.470	D6	0.543	D6	9.146	D6
0	M	0.004	A3	0.014	A3	0	N	0	N	0.001	N	0	M	0.001	A3	0	M	0	M	0	M

Sludge Treatment and Disposal Costs					
E3a.16	Estimated direct operating cost	-	E3a.16	£m	I/C
E3a.17	Rates paid by the PPP contractor	-	E3a.17	£m	I/C
E3a.18	SEPA charges paid by the PPP contractor	-	E3a.18	£m	I/C
E3a.19	Total direct cost	-	E3a.19	£m	C
E3a.20	Scottish Water general & support expenditure	-	E3a.20	£m	I/C
E3a.21	Scottish Water SEPA charges	-	E3a.21	£m	I/C
E3a.22	Total sludge treatment & disposal cost	-	E3a.22	£m	C

-	N	0.912	D6	2.703	D6	1.560	D6	-	N	-	N	-	N	1.797	D6	-	N	-	N	2.131	D6
-	N	0.095	B3	0.313	B3	0.376	B3	-	N	-	N	-	N	0.170	B3	-	N	-	N	0.306	B3
-	N	0.015	A2	0.005	A2	0.001	A2	-	N	-	N	-	N	-	N	-	N	-	N	0.004	A2
-	N	1.022	D6	3.021	D6	1.937	D6	-	N	-	N	-	N	1.967	D6	-	N	-	N	2.441	D6
-	N	0.449	C4	0.168	C4	0.453	C4	-	N	-	N	-	N	0.121	C4	-	N	-	N	0.036	C4
-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N
-	N	1.471	D6	3.189	D6	2.390	D6	-	N	-	N	-	N	2.088	D6	-	N	-	N	2.477	D6

Total Cost Analysis					
E3a.23	Total direct cost	-	E3a.23	£m	C
E3a.24	Total Scottish Water cost	-	E3a.24	£m	C
E3a.25	Total operating cost	-	E3a.25	£m	C
E3a.26	Annual charge	-	E3a.26	£m	I/C
E3a.27	Public sector capital equivalent value	-	E3a.27	£m	I

0.796	D6	3.052	D6	7.715	D6	5.651	D6	1.156	D6	0.749	D6	0.835	D6	3.074	D6	0.881	D6	0.840	D6	11.854	D6
0.018	C4	0.524	C4	0.279	C4	0.709	C4	0.023	C4	0.026	C4	0.025	C4	0.145	C4	0.027	C4	0.024	C4	0.158	C4
0.814	D6	3.576	D6	7.994	D6	6.360	D6	1.179	D6	0.775	D6	0.860	D6	3.219	D6	0.908	D6	0.864	D6	12.012	D6
3.595	A1	7.029	A1	21.920	A1	14.199	A1	2.450	A1	2.071	A1	1.928	A1	4.321	A1	2.783	A1	3.295	A1	21.387	B3
22.806	B3	73.629	B3	197.701	B3	109.006	B3	26.473	B3	21.801	B3	26.473	B3	48.403	B3	35.726	B3	31.116	B3	84.884	B3

Contract Information					
E3a.28	Contract period	-	E3a.28	years	I
E3a.29	Contract end date	-	E3a.29	dd/mm/yy	I

25	A1	25	A1	30	A1	30	A1	30	A1	30	A1	30	A1	30	A1	30	A1	30	A1	30	A1
12/12/21	A1	12/12/21	A1	16/12/29	A1	04/05/30	A1	04/05/30	A1	04/05/30	A1	04/05/30	A1	25/06/31	A1	25/06/31	A1	25/06/31	A1	30/11/29	A1

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 Authorised by: Alan P Scott Date: 9th June 2017

120	130	140	150	160	170	180	190	200	210	199
AVSE	AVSE	AVSE	AVSE	Levenmouth	Dalmuir	Daldowie	MSI	MSI	MSI	Total
CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG

Newbridge East Calder Blackburn Whitburn Levenmouth Dalmuir Daldowie Meadowhead Stevenston Inverclyde

0.001	D6	-	N	-	N	-	DX	0.151	D6	-	N	0.486	D6	-	N	-	N	-	DX	6.669	D6	
-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	0.000	N
0.001	A2	-	N	-	N	-	N	0.001	A2	-	N	-	N	-	N	-	N	-	N	-	0.045	A2
0.002	D6	-	N	-	N	-	DX	0.152	D6	-	N	0.486	D6	-	N	-	N	-	DX	6.714	D6	
-	CX	-	N	-	N	-	N	0.006	C4	-	N	0.007	C4	-	N	-	N	-	CX	0.229	C4	
-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	0.000	BX
0.002	D6	-	N	-	N	-	DX	0.158	D6	-	N	0.493	D6	-	N	-	N	-	DX	6.943	D6	

1.172	D6	0.526	D6	0.308	D6	0.417	D6	3.738	D6	2.384	D6	-	N	2.084	D6	1.210	D6	1.065	D6	29.580	D6
0.125	B3	0.144	B3	0.084	B3	0.053	B3	0.220	B3	0.740	B3	-	N	0.325	B3	0.247	B3	0.107	B3	4.668	B3
0.019	A2	0.124	A2	0.017	A2	0.016	A2	0.139	A2	-	N	-	N	-	N	-	N	-	N	1.157	A2
1.316	D6	0.794	D6	0.409	D6	0.486	D6	4.097	D6	3.124	D6	-	N	2.409	D6	1.457	D6	1.172	D6	35.405	D6
0.022	C4	0.020	C4	0.015	C4	0.016	C4	0.175	C4	0.071	C4	-	N	0.508	C4	0.216	C4	0.371	C4	1.929	C4
-	N	-	N	-	N	-	N	-	N	0.374	A2	-	N	0.423	A2	0.185	A2	0.047	A2	1.029	A2
1.338	D6	0.814	D6	0.424	D6	0.502	D6	4.272	D6	3.569	D6	-	N	3.340	D6	1.858	D6	1.590	D6	38.363	D6
0	M	0	N	0	N	0	M	0	M	0	N	0	N	0.362	A3	0	N	0.064	A3	0.446	A3

0.674	D6	-	N	-	N	-	N	1.512	D6	0.824	A3	12.157	D6	1.379	D6	-	N	-	N	25.649	D6
0.105	B3	-	N	-	N	-	N	0.086	B3	-	N	0.392	A2	0.215	B3	-	N	-	N	2.058	B3
-	N	-	N	-	N	-	N	0.018	A2	-	N	0.039	A2	0.016	A2	-	N	-	N	0.098	A2
0.779	D6	-	N	-	N	-	N	1.616	D6	0.824	A3	12.588	D6	1.610	D6	-	N	-	N	27.805	D6
0.013	C4	-	N	-	N	-	N	0.069	C4	0.563	A3	1.318	C4	0.027	C4	-	N	-	N	3.217	C4
-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	-	N	0.000	N
0.792	D6	-	N	-	N	-	N	1.685	D6	1.387	A3	13.906	D6	1.637	D6	-	N	-	N	31.022	D6

2.097	D6	0.794	D6	0.409	D6	0.486	D6	5.865	D6	3.948	D6	13.074	D6	4.019	D6	1.457	D6	1.172	D6	69.924	D6
0.035	C4	0.020	C4	0.015	C4	0.016	C4	0.250	C4	1.008	C4	1.325	C4	0.958	C4	0.401	C4	0.418	C4	6.404	C4
2.132	D6	0.814	D6	0.424	D6	0.502	D6	6.115	D6	4.956	D6	14.399	D6	4.977	D6	1.858	D6	1.590	D6	76.328	D6
3.095	B3	1.688	B3	0.844	B3	1.126	B3	11.123	A1	13.802	A1	20.290	A1	8.024	A1	3.530	A1	3.799	A1	152.299	A1
12.286	B3	6.701	B3	3.351	B3	4.468	B3	42.433	B3	73.665	B3	111.610	B3	77.260	B3	21.890	B3	21.118	B3	1052.800	B3

30	A1	30	A1	30	A1	30	A1	40	A1	25	A1	24	A1	30	A1	30	A1	30	A1		
30/11/29	A1	30/11/29	A1	30/11/29	A1	30/11/29	A1	30/10/40	A1	15/06/26	A1	01/04/26	A1	29/09/32	A1	29/09/32	A1	29/09/32	A1		

**SECTION E : OPERATING COSTS AND EFFICIENCY**  
**Table E4: Water Resources and Treatment**

Line Ref.	Description	Ofwat Ref JR 07	WICS Reference AR 06	Units	Field Type	Number of Own Sources				Total Number of Sources	Own Source Outputs				Total Source Outputs	CG
						Area 1	Area 2	Area 3	Area 4		Area 1	Area 2	Area 3	Area 4		
<b>Source Types</b>						<b>number</b>				<b>average daily output (MI/d)</b>				<b>MI/d</b>		
E4.0	Area Name	-	E4.0	-	I											
E4.1	Impounding reservoirs	T12, L1	E4.1	nr, MI/d	I/C	North	East	South	West		North	East	South	West		
E4.2	Lochs	-	E4.2	nr, MI/d	I/C	32	20	26	29	107	77.027	288.503	424.941	533.557	1324.029	B2
E4.3	River and burn abstractions	T12, L2	E4.3	nr, MI/d	I/C	29	8	0	1	38	10.298	9.167	0.000	0.000	19.465	B2
E4.4	Boreholes	T12, L3	E4.4	nr, MI/d	I/C	45	15	1	14	75	11.655	156.508	0.021	208.108	376.292	B2
E4.5	Total	-	E4.5	nr, MI/d	C	23	28	11	1	63	16.910	23.636	21.435	3.065	65.046	B2
E4.6	Bulk water exports	-	E4.6	nr, MI/d	I/C	129	71	38	45	283	115.890	477.815	446.397	744.731	1784.832	B2
E4.7	Bulk water imports	-	E4.7	nr, MI/d	I/C	0	0	0	0	0	0	0	0	0	0.000	A1

E4.8	Impounding reservoirs	-	E4.8	nr	C
E4.9	Lochs	-	E4.9	nr	C
E4.10	River and burn abstractions	-	E4.10	nr	C
E4.11	Boreholes	-	E4.11	nr	C
E4.12	Total	-	E4.12	nr	C

Proportional Breakdown of Source output produced					Proportion of Own Source Output
Area 1	Area 2	Area 3	Area 4		
0.043	0.162	0.238	0.299	0.742	
0.006	0.005	0.000	0.000	0.011	
0.007	0.088	0.000	0.117	0.211	
0.009	0.013	0.012	0.002	0.036	
0.065	0.268	0.250	0.417	1.000	

Peak demand and Pumping Head					
E4.13	Peak demand - peak to average ratio	-	E4.13	nr	I
E4.14	Average pumping head - resources and treatment	T12, L5	E4.14	m	I

10	20
Total	CG
1.055	A2
28.4	C4

Resources and Treatment costs (operational area)					
E4.15	Power	T21, L2	E1.2	£m	I/C
E4.16	Service charges by SEPA	T21, L7	E1.6	£m	I/C
E4.17	Total direct costs	T21, L10	E1.9	£m	I/C
E4.18	General and support costs	T21, L11	E1.10 + E1.11	£m	I/C
E4.19	Functional expenditure	T21, L12	E1.12	£m	C

Resource and treatment - Costs					110
Area 1	Area 2	Area 3	Area 4	Total	CG
3.029	3.826	2.106	3.882	12.843	A2
0.608	0.622	0.689	0.855	2.774	A2
10.636	12.636	9.368	15.331	47.971	A2
4.220	2.662	0.730	2.273	9.885	A2
14.856	15.298	10.098	17.604	57.856	A2

Water Treatment Works by Process Type					
E4.20	Simple Disinfection	T12, L6	E4.17	nr, MI/d, £m	I/C
E4.21	W1	T12, L7	E4.18	nr, MI/d, £m	I/C
E4.22	W2	T12, L8	E4.19	nr, MI/d, £m	I/C
E4.23	W3	T12, L9	E4.20	nr, MI/d, £m	I/C
E4.24	W4	T12, L10	E4.21	nr, MI/d, £m	I/C
E4.25	Total numbers of works	T12, L12	E4.22	nr	C
E4.26	Total distribution input	T12, L11	E4.23	MI/d	C
E4.27	Total Operating costs	-	-	£m	C

Total Nr of Works		Total volume Dist'n input		Tot. prop'n of D.I.	Operating Costs	
nr	CG	MI/d	CG	Prop'n (0-1)	£m	CG
26	B2	19.812	B3	0.011	1.504	A2
7	B2	0.284	B3	0.000	0.237	A2
30	B2	634.820	B3	0.356	12.244	A2
147	B2	1038.676	B3	0.582	37.347	A2
35	B2	91.239	B3	0.051	6.524	A2
245	B2					
		1784.832	B3	1.000		
					57.856	A2

Water Treatment Works by Size Band					
E4.28	Size band <=1 MI/d	-	E4.30, E4.47	nr, £m	I/C
E4.29	Size band >1 - <=2.5 MI/d	-	E4.31, E4.48	nr, £m	I/C
E4.30	Size band >2.5 - <=5 MI/d	-	E4.32, E4.49	nr, £m	I/C
E4.31	Size band >5 - <=10 MI/d	-	E4.33, E4.50	nr, £m	I/C
E4.32	Size band >10 - <=25 MI/d	-	E4.34, E4.51	nr, £m	I/C
E4.33	Size band >25 - <=50 MI/d	-	E4.35, E4.53	nr, £m	I/C
E4.34	Size band >50 - <=100 MI/d	-	E4.36, E4.54	nr, £m	I/C
E4.35	Size band >100 - <=175 MI/d	-	E4.37, E4.55	nr, £m	I/C
E4.36	Size band >175 MI/d	-	E4.38, E4.56	nr, £m	I/C
E4.37	Total number of works	-	E4.39	nr	C
E4.38	Proportion of distribution input - total	-	E4.40	nr	C
E4.39	Total operating costs	-	E4.57	£m	C

Nr of Works		Prop'n of D.I.		Operating Costs	
nr	CG	Prop'n (0-1)	CG	£m	CG
132	B2	0.0115	C3	9.543	A2
25	B2	0.013	C3	3.760	A2
23	B2	0.0266	C3	4.273	A2
19	B2	0.0487	C3	5.383	A2
19	B2	0.1044	C3	9.504	A2
12	B2	0.1529	C3	8.834	A2
9	B2	0.2276	C3	7.207	A2
4	B2	0.2146	C3	5.008	A2
2	B2	0.2007	C3	4.344	A2
245	B2				
		1	C3		
				57.856	A2

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 Checked by: ..... Date: .....  
 Authorised by: Rob Mustard Date: 9th June 2017

**SECTION E : OPERATING COSTS AND EFFICIENCY**

**Table E6: Water Distribution**

Line Ref.	Description	Ofwat Ref CMR 02, JR07	WICS Reference AR 06	Units	Field Type
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Area Data					
E6.0	Name	-	E6.0	Name	I
E6.1	Annual average resident connected population	-	E6.1	000	I/C
E6.2	Total connected properties	-	E6.2	000	I/C
E6.3	Volume of water delivered to households	-	E6.3	MI/d	I/C
E6.4	Volume of water delivered to non-households	-	E6.4	MI/d	I/C
E6.5	Area	-	E6.5	km <sup>2</sup>	I/C
E6.6	Number of supply zones	-	E6.7	nr	I/C

Distribution costs					
E6.7	Power	T21, L2	E1.2	£m	I/C
E6.8	Service charges by SEPA	T21, L7	E1.6	£m	I/C
E6.9	Total direct costs	T21, L10	E1.9	£m	I/C
E6.10	General and support costs	T21, L11	E1.10 + E1.11	£m	I/C
E6.11	Functional expenditure	T21, L12	E1.12	£m	C

Water mains data					
E6.12	Potable mains: Band 1 ( <=165mm)	T12,L13 C1	-	km	I
E6.13	Potable mains: Band 2 ( 166 - 320mm)	T12,L13 C2	-	km	I
E6.14	Potable mains: Band 3 ( 321 - 625mm)	T12,L13 C3	-	km	I
E6.15	Potable mains: Band 4 ( >625mm)	T12,L13 C4	-	km	I
E6.16	Total length of mains	-	E6.8	km	C
E6.17	Total length of unlined iron mains	-	E6.9	km	I
E6.18	Total length of mains > 320mm diameter	-	E6.10	km	C
E6.19	Water mains bursts	-	E6.11	nr	I
E6.20	Leakage level	-	E6.12	MI/d	I
E6.21	Properties reported for low pressure	-	E6.13	nr	I/C

Pumping Stations					
E6.22	Total number of pumping stations	-	E6.14	nr	I/C
E6.23	Total capacity of pumping stations	-	E6.15	m <sup>3</sup> /d	I/C
E6.24	Total capacity of booster pumping stations	CM3, L18	E6.15a	Kw	I/C
E6.25	Average pumping head	-	E6.16	m	I

Service Reservoirs					
E6.26	Total number of service reservoirs	CM3, 13	E6.17	nr	I/C
E6.27	Total capacity of service reservoirs	CM3, L14	E6.18	MI	I/C

Water Towers					
E6.28	Total number of water towers	CM3, L15	E6.19	nr	I/C
E6.29	Total capacity of tower towers	CM3, L16	E6.20	MI	I/C

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Report Year 2016-17									
Area 1		Area 2		Area 3		Area 4		Total	
CG		CG		CG		CG		CG	

North		East		South		West			
279.087	A2	1351.306	A2	1773.248	A2	1821.127	A2	5224.8	A2
157.081	B4	681.027	B4	879.471	B4	934.338	B4	2651.916	B4
53.37	B2	231.46	B2	297.10	B2	309.46	B2	891.395	B2
21.13	B4	103.45	B4	100.99	B4	168.92	B4	394.492	B4
35208	A1	20371	A1	15475	A1	8744	A1	79799.036	A1
118	A1	57	A1	50	A1	61	A1	286	A1

0.808	A2	3.803	A2	1.726	A2	3.328	A2	9.665	A2
0.000	A2	0.000	A2	0.000	A2	0.000	A2	0.000	A2
5.847	A2	12.554	A2	13.049	A2	14.781	A2	46.231	A2
2.626	A2	4.250	A2	4.880	A2	5.700	A2	17.456	A2
8.473	A2	16.804	A2	17.929	A2	20.481	A2	63.687	A2

6315.56	B2	11592.00	B2	10027.12	B2	7924.37	B2	35859.04	B2
1215.45	B2	2403.66	B2	2783.14	B2	2314.90	B2	8717.14	B2
176.63	B2	976.20	B2	1155.40	B2	769.68	B2	3077.90	B2
7.98	B2	139.04	B2	292.06	B2	387.21	B2	826.29	B2
7715.62	B2	15110.89	B2	14257.71	B2	11396.15	B2	48480.37	B2
811.40	B2	2546.98	B2	4791.66	B2	4123.17	B2	12273.21	B2
184.62	B2	1115.24	B2	1447.45	B2	1156.88	B2	3904.19	B2
993	B3	1359	B3	2158	B3	2168	B3	6678	B3
44.83	B3	106.01	B3	176.23	B3	232.21	B3	559.284	B3
44	B2	315	B2	33	B2	23	B2	415	B2

178	B2	184	B2	131	B2	112	B2	605	B2
150506	C4	705346	C4	549795	C4	974924	C4	2380571	C4
2780.2	C3	13355.1	C3	9537.1	C3	16125.4	C3	41797.9	C3
22.95	C4	30.08	C4	33.81	C4	29.98	C4	30.51	C4

401	B2	446	B2	246	B2	222	B2	1315	B2
216.836	B2	1190.446	B2	1052.714	B2	1391.581	B2	3851.577	B2

3	B2	5	B2	6	B2	4	B2	18	B2
0.532	B2	3.613	B2	12.544	B2	12.577	B2	29.266	B2

**SECTION E : OPERATING COSTS AND EFFICIENCY**  
**Table E7: Wastewater Explanatory Factors - Sewerage & Sewage treatment by area**

Line Ref.	Description	Ofwat Ref JR 07	WICS Reference AR 10	Units	Field Type
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Area Data					
E7.0	Name	-	E7.0	Name	I
E7.1	Annual average resident connected population	T17a, L1	E7.1	000	I/C
E7.2	Annual average non- resident connected population	T17a, L2	E7.2	000	I/C
E7.3	Volume of sewage collected (daily average)	T17a, L3	E7.3	M/d	I/C
E7.4	Total connected properties	T17a, L4	E7.4	nr	I/C
E7.5	Area of Sewerage District	T17a, L5	E7.5	km 2	I/C
E7.6	Drained Area	-	E7.6	km2	I/C
E7.7	Annual Precipitation	-	E7.7	mm	I

Sewerage Data					
E7.8	Total length of sewer	T17a, L6	E7.8	km	I/C
E7.9	Total length of lateral sewer	-	E7.9	km	I/C
E7.10	Length of combined sewer	-	E7.10	km	I/C
E7.11	Length of separate stormwater sewer	-	E7.11	km	I/C
E7.12	Length of sewer > 1000 mm diameter	-	E7.12	km	I/C
E7.13	Length of Critical Sewer	-	E7.13	km	I/C
E7.14	Sewer Collapses	-	E7.14	nr	I/C

Sewerage costs					
E7.15	Power	T22, L2	E2.2	£m	I/C
E7.16	Service charges by SEPA	T22, L7	E2.5	£m	I/C
E7.17	Total direct costs	T22, L9	E2.7	£m	C
E7.18	General and support costs	T22, L10	E2.8	£m	I/C
E7.19	Functional expenditure	T22, L11	E2.9	£m	C

Pumping Stations					
E7.20	Total number of pumping stations	-	E7.15	nr	I/C
E7.21	Total capacity of pumping stations (m <sup>3</sup> /d)	-	E7.16	m <sup>3</sup> /d	I/C
E7.22	Total capacity of pumping stations (kw)	-	E7.16a	Kw	I/C
E7.23	Average pumping head	-	E7.17	m	I
E7.24	Total number of combined pumping stations	-	E7.18	nr	I/C
E7.25	Total capacity of combined pumping stations	-	E7.19	m <sup>3</sup> /d	I/C
E7.26	Total number of stormwater pumping stations	-	E7.20	nr	I/C
E7.27	Total capacity of stormwater pumping stations	-	E7.21	m <sup>3</sup> /d	I/C
E7.28	Number of combined sewer overflows	-	E7.22	nr	I/C
E7.29	Number of combined sewer overflows (screened)	-	E7.23	nr	I/C

Sewage treatment works					
E7.30	Number of sewage treatment works	-	-	nr	I/C
E7.31	Total Load	-	-	kg BOD/day	I/C

Sewage treatment costs					
E7.32	Power	T22, L2	E2.2	£m	I/C
E7.33	Service charges by SEPA	T22, L7	E2.5	£m	I/C
E7.34	Total direct costs	T22, L9	E2.7	£m	I/C
E7.35	General and support costs	T22, L10	E2.8	£m	I/C
E7.36	Functional expenditure	T22, L11	E2.9	£m	I/C

10	20	30	40	199
Report Year 2016-17				
Area 1	Area 2	Area 3	Area 4	Total
CG	CG	CG	CG	CG

North	East	South	West	
219.2 B2	1241.6 B2	1591.4 B2	1866.2 B2	4918.5 B2
25.1 C4	30.2 C4	15.3 C4	17.7 C4	88.3 C4
196.9 C3	751.9 C3	1052.6 C3	997.0 C3	2998.4 C3
124975 B4	646520 B4	841934 B4	909630 B4	2523059 B4
35208 A1	20371 A1	15475 A1	8744 A1	79799 A1
153.300 A1	516.600 A1	609.600 A1	647.500 B2	1927 B2
1413 A2	1022 A2	1272 A2	866 A2	1095 A2

3666 C4	13726 C4	17460 C4	16346 C4	51199 C4
625 C4	4276 C4	6067 C4	5724 C4	16693 C4
1438 B2	4393 B2	5475 B2	6180 B2	17487 B2
555 B2	2407 B2	3265 B2	2152 B2	8379 B2
15 B2	161 B2	264 B2	403 B2	844 B2
834 B3	2909 B3	3786 B3	3627 B3	11155 B3
35 B4	471 B4	512 B4	589 B4	1607 B4

1 A2	2 A2	2 A2	3 A2	8 A2
0 A2	1 A2	1 A2	1 A2	2 A2
3 A2	9 A2	8 A2	11 A2	31 A2
1.7 A2	3.3 A2	3.2 A2	3.5 A2	12 A2
5 A2	12 A2	11 A2	14 A2	42 A2

524 B3	801 B3	437 B3	455 B3	2217 B3
1669240 C4	3249614 C4	3177857 C4	5133240 C4	13229951 C4
9723 C4	24574 C4	14873 C4	31648 C4	80818 C4
42.1 C5	25.9 C5	17.4 C5	28.5 C5	32.0 C5
314 B3	472 B3	264 B3	283 B3	1333 B3
1179953 C4	2448641 C4	2488101 C4	3715805 C4	9832500 C4
17 B3	17 B3	6 B3	9 B3	49 B3
134590 C4	175745 C4	67915 C4	340820 C4	719070 C4
358 A3	780 A3	954 A3	1060 A3	3152 A3
222 A3	208 A3	354 A3	437 A3	1221 A3

565 A3	590 A3	489 A3	204 A3	1848 A3
13451 B3	46299 B3	69013 B3	97139 B3	225902 B3

2 A2	4 A2	6 A2	6 A2	17 A2
1 A2	2 A2	2 A2	2 A2	7 A2
7 A2	11 A2	14 A2	13 A2	45 A2
2.2 A2	2.8 A2	3.3 A2	3.3 A2	12 A2
9 A2	13 A2	18 A2	17 A2	57 A2

Prepared by: ..... Date: .....  
 Checked by: ..... Date: .....  
 Authorised by: Rob Mustard Date: 9th June 2017

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

Line Ref.	Description	Ofwat Ref JR 07	WICS Reference AR 06	Units	Field Type	Treatment Category																			Total				
						Septic Tanks		Primary			Tertiary A1			Tertiary A2		Tertiary B1		Tertiary B2		Sea Preliminary		Sea Screened		Sea Unscreened					
						CG	CG	Sec Activated Sludge	CG	Sec biological	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG					
<b>Numbers</b>																													
E8.1	Size Band 0	-	E8.1	nr	I/C	966	B3	4	B3	11	B3	100	B3	7	B3	1	B3	10	B3	1	B3	0	AX	0	AX	16	B3	1116	B3
E8.2	Size Band 1	T17c, L1	E8.2	nr	I/C	120	B3	8	B3	19	B3	48	B3	6	B3	4	B3	11	B3	3	B3	0	AX	0	AX	2	B3	221	B3
E8.3	Size Band 2	T17c, L2	E8.3	nr	I/C	57	B3	7	B3	20	B3	45	B3	2	B3	3	B3	8	B3	3	B3	0	AX	0	AX	0	AX	145	B3
E8.4	Size Band 3	T17c, L3	E8.4	nr	I/C	32	B3	14	B3	43	B3	61	B3	7	B3	3	B3	18	B3	4	B3	0	AX	3	B3	0	AX	185	B3
E8.5	Size Band 4	T17c, L4	E8.5	nr	I/C	0	AX	8	B3	45	B3	38	B3	7	B3	2	B3	9	B3	2	B3	8	B3	0	AX	1	B3	120	B3
E8.6	Size Band 5	T17c, L5	E8.6	nr	I/C	0	AX	0	AX	25	B3	3	B3	5	B3	3	B3	3	B3	1	B3	0	AX	0	AX	0	AX	40	B3
E8.7	Size Band 6 (Large Works)	T17c, L6	E8.7	nr	I/C	0	AX	0	AX	17	B3	1	B3	1	B3	1	B3	0	AX	0	AX	0	AX	0	AX	0	AX	21	B3
E8.8	Total Sewage Treatment Works	T17c, L7	E8.8	nr	C	1175	B3	41	B3	180	B3	296	B3	35	B3	17	B3	60	B3	14	B3	8	B3	3	B3	19	B3	1848	B3
E8.9	Small Sewage treatment works with ammonia consent 5 - 10 mg/l	T17c, L8	E8.9	nr	I/C	0	AX	0	AX	12	A1	23	A1	4	A1	0	AX	4	A1	2	B3	0	AX	0	AX	0	AX	45	A1
E8.10	Small Sewage treatment works with ammonia consent <= 5 mg/l	T17c, L9	E8.10	nr	I/C	0	AX	0	AX	18	A1	16	A1	11	A1	3	A1	13	A1	3	A1	0	AX	0	AX	0	AX	64	A1

Loading (average daily load)						Total excluding Septic Tanks																							
E8.11	Size Band 0	-	E8.11	kg BOD/day	I/C	1532	B3	11	B3	49	B3	250	B3	30	B3	3	B3	32	B3	5	B3	0	AX	0	AX	34	B3	414	B3
E8.12	Size Band 1	T17d, L1	E8.12	kg BOD/day	I/C	1278	B3	78	B3	184	B3	532	B3	60	B3	44	B3	133	B3	39	B3	0	AX	0	AX	17	B3	1087	B3
E8.13	Size Band 2	T17d, L2	E8.13	kg BOD/day	I/C	1204	B3	182	B3	461	B3	1066	B3	48	B3	72	B3	176	B3	71	B3	0	AX	0	AX	0	AX	2076	B3
E8.14	Size Band 3	T17d, L3	E8.14	kg BOD/day	I/C	1763	B3	932	B3	3117	B3	4130	B3	563	B3	246	B3	1028	B3	328	B3	0	AX	230	B3	0	AX	10573	B3
E8.15	Size Band 4	T17d, L4	E8.15	kg BOD/day	I/C	0	AX	2257	B3	14527	B3	11594	B3	2182	B3	330	B3	2633	B3	394	B3	1845	B3	0	AX	319	B3	36080	B3
E8.16	Size Band 5	T17d, L5	E8.16	kg BOD/day	I/C	0	AX	0	AX	22182	B3	2567	B3	4676	B3	2155	B3	2850	B3	760	B3	0	AX	0	AX	0	AX	35191	B3
E8.17	Size Band 6 (large works)	T17d, L6	E8.17	kg BOD/day	I/C	0	AX	0	AX	111040	B3	3775	B3	16330	B3	1624	B3	1933	B3	0	AX	0	AX	0	AX	0	AX	134703	B3
E8.18	Total Load Received	T17d, L7	E8.18	kg BOD/day	C	5777	B3	3461	B3	151559	B3	23915	B3	23889	B3	4473	B3	8786	B3	1597	B3	1845	B3	230	B3	370	B3	220125	B3
E8.19	Small Sewage treatment works with ammonia consent 5 - 10 mg/l	T17d, L8	E8.19	kg BOD/day	I/C	0	AX	0	AX	3963	B3	1704	B3	2018	B3	0	AX	245	B3	989	B3	0	AX	0	AX	0	AX	8918	B3
E8.20	Small Sewage treatment works with ammonia consent <= 5 mg/l	T17d, L9	E8.20	kg BOD/day	I/C	0	AX	0	AX	15865	B3	2191	B3	17825	B3	2912	B3	2601	B3	323	B3	0	AX	0	AX	0	AX	41717	B3

Compliance																													
E8.21	Size Band 0	-	E8.21	%	I	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	0.0	AX	0.0	AX	100.0	B2		
E8.22	Size Band 1	-	E8.22	%	I/C	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	0.0	AX	0.0	AX	100.0	B2		
E8.23	Size Band 2	-	E8.23	%	I/C	100.0	B2	100.0	B2	97.8	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	0.0	AX	0.0	AX	0.0	AX		
E8.24	Size Band 3	-	E8.24	%	I/C	100.0	B2	97.7	B2	98.4	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	0.0	AX	100.0	B2	0.0	AX		
E8.25	Size Band 4	-	E8.25	%	I/C	100.0	B2	97.8	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	0.0	AX	100.0	B2		
E8.26	Size Band 5	-	E8.26	%	I/C	0.0	AX	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	0.0	AX	0.0	AX	0.0	AX		
E8.27	Size Band 6 (large works)	-	E8.27	%	I/C	0.0	AX	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	0.0	AX	0.0	AX	0.0	AX	0.0	AX		
E8.28	Average compliance by works - all sizes	-	E8.28	%	I/C	100.0	B2	98.9	B2	99.3	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2		
E8.29	Small Sewage treatment works with ammonia consent 5 - 10 mg/l	-	E8.29	%	I/C	0.0	AX	93.3	B2	96.8	B2	100.0	B2	100.0	B2	0.0	AX	100.0	B2	100.0	B2	0.0	AX	0.0	AX	0.0	AX		
E8.30	Small Sewage treatment works with ammonia consent <= 5 mg/l	-	E8.30	%	I/C	0.0	AX	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	100.0	B2	0.0	AX	0.0	AX	0.0	AX		

Costs						Total																							
E8.31	Direct costs for works in size band 0	-	E8.31	£000	I/C	726.117	A2	11.552	A2	148.302	A2	500.143	A2	81.208	A2	8.311	A2	104.810	A2	14.782	A2	0.000	AX	0.000	A2	12.961	A2	1608.186	A2
E8.32	Direct costs for works in size band 1	T17f, L1	E8.32	£000	I/C	574.469	A2	57.323	A2	278.739	A2	549.181	A2	79.055	A2	26.485	A2	180.677	A2	22.092	A2	0.000	AX	0.000	A2	8.996	A2	1777.017	A2
E8.33	Direct costs for works in size band 2	T17f, L2	E8.33	£000	I/C	655.433	A2	61.358	A2	495.521	A2	946.172	A2	62.754	A2	149.835	A2	159.896	A2	74.944	A2	0.000	AX	0.000	A2	0.000	AX	2605.913	A2
E8.34	Direct costs for works in size band 3	T17f, L3	E8.34	£000	I/C	595.977	A2	387.056	A2	2050.259	A2	2011.640	A2	405.655	A2	267.304	A2	756.214	A2	172.164	A2	0.000	AX	27.474	A2	0.000	AX	6673.743	A2
E8.35	Direct costs for works in size band 4	T17f, L4	E8.35	£000	I/C	53.853	A2	726.033	A2	4827.158	A2	2815.396	A2	680.002	A2	560.117	A2	822.138	A2	147.867	A2	194.298	A2	0.000	AX	46.088	A2	10872.950	A2
E8.36	Direct costs for works in size band 5	T17f, L5	E8.36	£000	I/C	0.000	AX	0.000	AX	5198.511	A2	536.672	A2	1388.698	A2	458.819	A2	698.251	A2	283.124	A2	0.000	AX	0.000	AX	0.000	AX	8564.075	A2
E8.37	Direct costs for works in size band 6 (large works)	T17f, L6	E8.37	£000	I/C	0.000	AX	0.000	AX	10832.842	A2	642.549	A2	1099.775	A2	336.682	A2	69.321	A2	0.000	AX	0.000	AX	0.000	AX	0.000	AX	12981.169	A2
E8.38	Direct costs for all sewage treatment works	T17f, L7	E8.38	£000	C	2605.849	A2	1243.322	A2	23831.332	A2	8001.753	A2	3797.147	A2	1807.553	A2	2791.307	A2	714.973	A2	194.298	A2	27.474	A2	68.045	A2	45083.053	A2
E8.39	General and support expenditure	T17f, L12	E8.39	£000	I/C	451.256	A2	413.056	A2	5640.996	A2	2719.093	A2	761.974	A2	481.797	A2	823.255	A2	185.748	A2	47.277	A2	5.752	A2	8.817	A2	11539.021	A2
E8.40	Functional expenditure	T17f, L13	E8.40	£000	C	3057.105	A2	1656.378	A2	29472.328	A2	10720.846	A2	4559.121	A2	2289.350	A2	3614.562	A2	900.721	A2	241.575	A2	33.226	A2	76.862	A2	56622.074	A2
E8.41	Power costs	T17f, L10	E8.41	£000	I/C	422.820	A2	315.043	A2	10810.796	A2	1810.860	A2	1998.784	A2	775.572	A2	506.908	A2	212.906	A2	37.272	A2	0.000	AX	12.286	A2	16903.247	A2
E8.42	Service charges SEPA	T17f, L11	E8.42	£000	I/C	1573.744	A2	220.507	A2	2452.387	A2	1435.961	A2	334.508	A2	178.626	A2	415.671	A2	86.810	A2	63.788	A2	19.227	A2	40.456	A2	6821.685	A2

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Checked by: ..... Date: .....  
Authorised by: Rob Mustard Date: 9th June 2017



ANNUAL RETURN INFORMATION REQUIREMENT

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

Line Ref.	Description	Ofwat Ref JR 07	WICS Reference AR 06	Units	Field Type	10	20	30	40	50	60	70	80	90
						1	2	3	4	5	6	7	8	9
<b>Works Size</b>						CG	CG	CG	CG	CG	CG	CG	CG	CG
E9.0	Name	T17b, L1	E9.0	Name	I	STW000011	STW001979	STW000033	STW000125	STW001975	STW000218	STW000222	STW003728	STW001984
E9.0a	Name of operational area	-	-	Name	I	Allers South	Alloa West	Ardoch West	Carbarns South	Dalderse West	Daldowie South	Dalmarnock West	Dunbar South	Dunfermline East
E9.1	Population equivalent of total load received	T17b, L2	E9.5	000	I	45 B3	43 B3	58 B3	49 B3	96 B3	272 B3	243 B3	27 B3	81 B3
<b>Compliance</b>														
E9.2	Suspended solids consent	T17b, L3	E9.11	mg/l	I	100 A1	100 A1	100 A1	100 A1	100 A1	100 A1	100 A1	100 A1	100 A1
E9.3	BOD consent	T17b, L4	E9.12	mg/l	I	20 A1	75 A1	75 A1	15 A1	75 A1	15 A1	25 A1	20 A1	75 A1
E9.4	COD consent	T17b, L5	E9.13	mg/l	I	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1	125 A1
E9.5	Ammonia consent	T17b, L6	E9.14	mg/l	I	5 A1	30 A1	0 A1	2 A1	25 A1	5 A1	4 A1	4 A1	0 A1
E9.6	Phosphate consent	T17b, L7	E9.15	mg/l	I	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N
E9.7	Compliance with effluent consent standard	-	E9.16	%	I	100 A1	100 A1	100 A1	100 A1	100 A1	100 A1	99 A1	99 A1	100 A1
<b>Treatment Works Category</b>														
E9.8	Primary	T17b, L8	E9.19	1/0	I	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1
E9.9	Secondary activated sludge	T17b, L8	E9.20	1/0	I	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1	1 A1
E9.10	Secondary biological	T17b, L8	E9.21	1/0	I	1 A1	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N
E9.11	Tertiary A1	T17b, L8	E9.22	1/0	I	0 N	0 N	0 N	0 N	0 N	1 A1	0 N	0 N	0 N
E9.12	Tertiary A2	T17b, L8	E9.23	1/0	I	0 N	0 N	0 N	0 N	0 N	0 N	0 N	1 A1	0 N
E9.13	Tertiary B1	T17b, L8	E9.24	1/0	I	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N
E9.14	Tertiary B2	T17b, L8	E9.25	1/0	I	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N
<b>Works Cost</b>														
E9.15	Power costs	T17b, L10	E9.34	£'000	I	134 A2	202 A2	141 A2	203 A2	48 A2	842 A2	970 A2	257 A2	28 A2
E9.16	Service charges SEPA	T17b, L11	E9.37	£'000	I	25 A2	27 A2	43 A2	45 A2	56 A2	66 A2	68 A2	11 A2	47 A2
E9.17	Total direct costs	T17b, L9	E9.39	£'000	I	285.5 A2	527.8 A2	429.6 A2	324.5 A2	267.8 A2	1099.8 A2	1507.5 A2	336.7 A2	203.8 A2
E9.18	General and support expenditure	T17b, L12	E9.40	£'000	I	81 A2	110 A2	118 A2	28 A2	53 A2	91 A2	296 A2	40 A2	61 A2
E9.19	Functional Expenditure	T17b, L13	E9.41	£'000	C	366.03 A2	637.38 A2	547.54 A2	352.82 A2	320.43 A2	1190.34 A2	1803.76 A2	377.03 A2	264.52 A2
E9.20	Estimated terminal pumping station costs	T17b, L14	E9.42	£'000	I	0 N	0 N	100 A2	0 N	0 N	0 N	291 A2	77 A2	8 A2
E9.21	Estimated sludge costs	T17b, L15	E9.43	£'000	I	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N

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100 <b>10</b>	110 <b>11</b>	120 <b>12</b>	130 <b>13</b>	140 <b>14</b>	150 <b>15</b>	160 <b>16</b>	170 <b>17</b>	180 <b>18</b>	190 <b>19</b>	200 <b>20</b>	210 <b>21</b>
CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG

STW000265 Dunnswood West 30 B3	STW000281 Erskine West 78 B3	STW001989 Galashiels South 32 B3	STW000355 Hamilton South 63 B3	STW001977 Kinneil Kerse South 89 B3	STW001982 Kirkcaldy East 63 B3	STW000455 Lairpark (Paisley) West 120 B3	STW001712 Perth East 112 B3	STW000576 Philipshill South 64 B3	STW000642 Shieldhall West 555 B3	STW002268 Stirling West 75 B3	STW000719 Troqueer South 48 B3
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15 A1 6 A1 125 A1 5 A1 0 N 100 A1	115 A1 60 A1 125 A1 40 A1 0 N 96 A1	100 A1 25 A1 125 A1 15 A1 0 N 99 A1	100 A1 20 A1 125 A1 5 A1 0 N 99 A1	100 A1 25 A1 125 A1 15 A1 0 N 100 A1	0 A1 225 A1 125 A1 0 A1 0 N 96 A1	100 A1 15 A1 125 A1 20 A1 0 N 100 A1	100 A1 225 A1 125 A1 45 A1 0 N 97 A1	100 A1 10 A1 125 A1 2 A1 0 N 97 A1	0 A1 0 A1 125 A1 20 A1 0 N 100 A1	100 A1 75 A1 125 A1 15 A1 0 N 95 A1	100 A1 75 A1 125 A1 0 A1 0 N 100 A1
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1 A1 1 A1 0 N 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N 0 N	1 A1 0 N 1 A1 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N 0 N	1 A1 0 N 1 A1 0 N 0 N 1 A1 0 N
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144 A2 24 A2 288.2 A2 44 A2 332.43 A2	361 A2 50 A2 572.5 A2 52 A2 624.41 A2	-87 A2 25 A2 69.3 A2 32 A2 101.78 A2	366 A2 30 A2 557.0 A2 96 A2 653.33 A2	269 A2 47 A2 445.3 A2 56 A2 500.93 A2	328 A2 45 A2 642.5 A2 77 A2 719.77 A2	431 A2 360 A2 931.2 A2 35 A2 965.75 A2	332 A2 37 A2 491.3 A2 95 A2 586.77 A2	589 A2 58 A2 866.3 A2 124 A2 990.27 A2	1451 A2 151 A2 2084.6 A2 285 A2 2369.50 A2	264 A2 49 A2 729.8 A2 223 A2 953.26 A2	114 A2 26 A2 320.1 A2 38 A2 357.77 A2
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0 N 0 N	0 N 0 N	0 A2 0 N	0 N 0 N	0 N 0 N	82 A2 0 N	129 A2 0 N	204 A2 0 N	0 N 0 N	435 A2 0 N	80 A2 0 N	16 A2 0 N
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**SECTION E : OPERATING COSTS AND EFFICIENCY**  
**Table E10: Sludge Treatment and Disposal**

Line Ref.	Description	Ofwat Ref JR 07	WICS Reference AR 06	Units	Field Type	10	11	12	20	30	31	32	50	199		
						Disposal category								Total		
						Farmland Untreated	Farmland Conventional	Farmland Advanced	Incineration	Landfill	Composted	Land Reclamation	Other			
						CG	CG	CG	CG	CG	CG	CG	CG	CG		
<b>Sludge volumes</b>																
E10.1	Resident population served	T17g, L1	E10.1	000	I	0.0	340.3	1045.4	951.8	16.6	0.0	127.4	0.0	2481.602		
E10.2	Amount of sewage sludge	T17g, L2	E10.2	ttds	I	0.0	3.4	8.5	0.0	0.4	0.0	1.2	0.0	13.560		
<b>Sludge Treatment and Disposal costs</b>																
E10.3	Sludge Treatment direct costs	T17g, L3	-	£000	I	0.000	2023.106	3294.572	0.000	304.205	0.000	3129.206	0.000	8751.089		
E10.4	Sludge disposal direct costs	T17g, L4	-	£000	I	0.000	243.913	777.052	0.000	318.558	0.000	1288.385	0.000	2627.908		
E10.5	Sludge treatment & disposal: Power costs	T17g, L6	E10.4	£000	I	0.000	805.363	563.995	0.000	45.211	0.000	800.951	0.000	2215.520		
E10.6	Sludge treatment & disposal: Service charges SEPA	T17g, L7	E10.7	£000	I	0.000	7.197	16.852	0.000	4.403	0.000	26.295	0.000	54.747		
E10.7	Sludge treatment & disposal: Total direct costs	T17g, L5	E10.9	£000	C	0.000	2267.019	4071.624	0.000	622.763	0.000	4417.591	0.000	11378.997		
E10.8	Sludge treatment and disposal: General and support expenditure	T17g, L8	E10.10	£000	I	0.000	584.867	1250.695	0.000	361.285	0.000	1506.519	0.000	3703.366		
E10.9	Sludge Treatment and disposal: Functional Expenditure	T17g, L9	E10.11	£000	C	0.000	2851.886	5322.319	0.000	984.048	0.000	5924.110	0.000	15082.363		

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