

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	
Project Data																			
E3.0	Name	E3.0		I	Ft William	Inverness	Hatton	Nigg	Persley	Peterhead	Fraserburgh	Lossiemouth	Buckie	Banff/Macduff	Seafield	Newbridge	East Calder	Blackburn	
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	
Scope of Works																			
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	
Sewage Treatment - Effluent Consent Standard																			
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	
Treatment Works Category																			
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	
Sewerage Data																			
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 ³ /d)	E3.50	m ³ /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 ³ /d)	E3.53	m ³ /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 ³ /d)	E3.55	m ³ /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	
Sludge Treatment and Disposal Data																			
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	

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

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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	
Sewerage Costs																	
E3a.1	Estimated direct operating cost	-	E3a.1	£m	I/C	0.042	0.142	2.371	1.743	0.007	0.055	0.048	0.529	0.413	0.304	0.377	
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	0.001	-	0.011	-	-	-	-	0.004	0.012	0.008	0.007	
E3a.4	Total direct cost	-	E3a.4	£m	C	0.043	0.142	2.382	1.743	0.007	0.055	0.048	0.533	0.425	0.312	0.384	
E3a.5	Scottish Water general & support expenditure	-	E3a.5	£m	I/C	0.001	0.005	0.049	0.120	-	0.002	0.001	0.011	0.013	0.009	0.005	
E3a.6	Scottish Water SEPA charges	-	E3a.6	£m	I/C	-	-	-	-	-	-	-	-	-	-	-	
E3a.7	Total sewerage cost	-	E3a.7	£m	C	0.044	0.147	2.431	1.863	0.007	0.057	0.049	0.544	0.438	0.321	0.389	
Sewage Treatment Costs																	
E3a.8	Estimated direct operating cost	-	E3a.8	£m	I/C	0.677	1.484	1.903	1.382	0.966	0.590	0.659	0.498	0.384	0.438	7.695	
E3a.9	Rates paid by the PPP contractor	-	E3a.9	£m	I/C	0.054	0.189	0.277	0.459	0.161	0.068	0.092	0.041	0.042	0.061	1.179	
E3a.10	SEPA charges paid by the PPP contractor	-	E3a.10	£m	I/C	0.022	0.215	0.132	0.130	0.022	0.036	0.036	0.035	0.030	0.029	0.155	
E3a.11	Total direct cost	-	E3a.11	£m	C	0.753	1.888	2.312	1.971	1.149	0.694	0.787	0.574	0.456	0.528	9.029	
E3a.12	Scottish Water general & support expenditure	-	E3a.12	£m	I/C	0.017	0.070	0.062	0.136	0.023	0.024	0.024	0.013	0.014	0.015	0.117	
E3a.13	Scottish Water SEPA charges	-	E3a.13	£m	I/C	-	-	-	-	-	-	-	-	-	-	-	
E3a.14	Total sewage treatment cost	-	E3a.14	£m	C	0.770	1.958	2.374	2.107	1.172	0.718	0.811	0.587	0.470	0.543	9.146	
E3a.15	Estimated terminal pumping cost	-	E3a.15	£m	I/C	0	0.004	0.014	0	0	0.001	0	0.001	0	0	0	
Sludge Treatment and Disposal Costs																	
E3a.16	Estimated direct operating cost	-	E3a.16	£m	I/C	-	0.912	2.703	1.560	-	-	-	1.797	-	-	2.131	
E3a.17	Rates paid by the PPP contractor	-	E3a.17	£m	I/C	-	0.095	0.313	0.376	-	-	-	0.170	-	-	0.306	
E3a.18	SEPA charges paid by the PPP contractor	-	E3a.18	£m	I/C	-	0.015	0.005	0.001	-	-	-	-	-	-	0.004	
E3a.19	Total direct cost	-	E3a.19	£m	C	-	1.022	3.021	1.937	-	-	-	1.967	-	-	2.441	
E3a.20	Scottish Water general & support expenditure	-	E3a.20	£m	I/C	-	0.449	0.168	0.453	-	-	-	0.121	-	-	0.036	
E3a.21	Scottish Water SEPA charges	-	E3a.21	£m	I/C	-	-	-	-	-	-	-	-	-	-	-	
E3a.22	Total sludge treatment & disposal cost	-	E3a.22	£m	C	-	1.471	3.189	2.390	-	-	-	2.088	-	-	2.477	
Total Cost Analysis																	
E3a.23	Total direct cost	-	E3a.23	£m	C	0.796	3.052	7.715	5.651	1.156	0.749	0.835	3.074	0.881	0.840	11.854	
E3a.24	Total Scottish Water cost	-	E3a.24	£m	C	0.018	0.524	0.279	0.709	0.023	0.026	0.025	0.145	0.027	0.024	0.158	
E3a.25	Total operating cost	-	E3a.25	£m	C	0.814	3.576	7.994	6.360	1.179	0.775	0.860	3.219	0.908	0.864	12.012	
E3a.26	Annual charge	-	E3a.26	£m	I/C	3.595	7.029	21.920	14.199	2.450	2.071	1.928	4.321	2.783	3.295	21.387	
E3a.27	Public sector capital equivalent value	-	E3a.27	£m	I	22.806	73.629	197.701	109.006	26.473	21.801	26.473	48.403	35.726	31.116	84.884	
Contract Information																	
E3a.28	Contract period	-	E3a.28	years	I	25	25	30	30	30	30	30	30	30	30	30	
E3a.29	Contract end date	-	E3a.29	dd/mm/yy	I	12/12/21	12/12/21	16/12/29	04/05/30	04/05/30	04/05/30	04/05/30	04/05/30	25/06/31	25/06/31	25/06/31	30/11/29

Prepared by: Date:
 Checked by: Date:
 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		

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Table E4: Water Resources and Treatment

Line Ref.	Description	Ofwat Ref JR 07	WICS Reference AR 06	Units	Field Type	10	20	30	40	100	110	120	130	140	200	299
						Number of Own Sources				Total Number of Sources	Own Source Outputs				Total Source Outputs	CG
Source Types						Area 1	Area 2	Area 3	Area 4		Area 1	Area 2	Area 3	Area 4		
E4.0	Area Name	-	E4.0	-	I											
E4.1	Impounding reservoirs	T12, L1	E4.1	nr, MI/d	I/C											
E4.2	Lochs	-	E4.2	nr, MI/d	I/C											
E4.3	River and burn abstractions	T12, L2	E4.3	nr, MI/d	I/C											
E4.4	Boreholes	T12, L3	E4.4	nr, MI/d	I/C											
E4.5	Total	-	E4.5	nr, MI/d	C											
E4.6	Bulk water exports	-	E4.6	nr, MI/d	I/C											
E4.7	Bulk water imports	-	E4.7	nr, MI/d	I/C											

Line Ref.	Description	Ofwat Ref	WICS Reference	Units	Field Type	number				average daily output (MI/d)				MI/d	CG	
						North	East	South	West	North	East	South	West			
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											

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	

10	20	30	40	100	110
Resource and treatment - Costs					
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	

10	20	30	40	100	110	120
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	

10	20	30	40	100	110
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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 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 ²	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 ³ /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 ³ /d)	-	E7.16	m ³ /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 ³ /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 ³ /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

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 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			TertiaryA1			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			
Numbers						10	20	30	40	50	60	70	80	90	100	110	199												
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	0 AX	8 B3	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																		
Line Ref.	Description	Ofwat Ref	WICS Reference	Units	Field Type	10	20	30	40	50	60	70	80	90	100	110	199							
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						Compliance Data																		
Line Ref.	Description	Ofwat Ref	WICS Reference	Units	Field Type	10	20	30	40	50	60	70	80	90	100	110	199							
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																		
Line Ref.	Description	Ofwat Ref	WICS Reference	Units	Field Type	10	20	30	40	50	60	70	80	90	100	110	199							
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 AX	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 AX	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
Works Size						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
Compliance														
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
Treatment Works Category														
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
Works Cost														
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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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		
Sludge volumes																
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		
Sludge Treatment and Disposal costs																
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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