

SECTION E : OPERATING COSTS AND EFFICIENCY

Table E3: PPP Project Analysis

Prepared by: Date:

Checked by: Date:

Authorised by: Douglas Millican Date: 14th June 2013

140	150	160	170	180	190	200	210	220	230	240	250	199
AVSE	AVSE	Levenmouth	Dalmuir	Daldowie	MSI	MSI	MSI					Total
CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG

Blackburn	Whitburn	Levenmouth	Dalmuir	Daldowie	Meadowhead	Stevenson	Inverclyde					
8.3 B3	11.6 B3	120.3 B3	409.7 B3	0.0 A1	189.7 B3	70.0 B3	75.8 B3					2126.5 B3
0.1 B4	0.1 B4	0.8 B4	3.2 B4	0.0 A2	2.1 B4	0.3 B4	0.4 B4					25.3 B3
13 B5	13 B5	184 B5	553 B5	0 A3	396 B5	78 B5	89 B5					3016 B3

0 A1	1 A1	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	1 A1					
0 A1	0 A1	1 A1	1 A1	1 A1	1 A1	0 A1	0 A1					
0 A1	1 A1	1 A1	0 A1									
0 A1												

100 A1	100 A1	100 A1	135 A1	0 N	500 A1	0 N	100 A1					
10 A1	10 A1	25 A1	25 A1	0 N	25 A1	25 A1	25 A1					
125 A1	125 A1	125 A1	125 A1	0 N	125 A1	125 A1	125 A1					
2 A1	1 A1	0 N	20 A1	0 N	50 A1	50 A1	0 N					
1 A1	1 A1	0 N	0 N	0 N	0 N	0 N	0 N					
100 A1	100 A1	100 A1	96 A1	0 N	100 A1	100 A1	98 A1					

1 A1	1 A1	0 A1	1 A1	0 N	0 A1	1 A1	1 A1					
0 A1	1 A1											
1 A1	0 A1	0 A1	0 A1	0 N	0 A1	0 A1	0 A1					
0 A1	1 A1	0 A1	0 A1	0 N	0 A1	0 A1	0 A1					
0 A1	1 A1	1 A1	0 A1	0 N	1 A1	0 A1	0 A1					
0 A1	0 A1	0 A1	0 A1	0 N	0 A1	0 A1	0 A1					
1 A1	0 A1	0 A1	0 A1	0 N	0 A1	0 A1	0 A1					

0.00 N	0.00 N	8.00 B3	0.00 N	11.80 B3	0.00 N	0.00 N	0.90 B3					222.0 B3
0.00 N	0.00 N	8.00 B3	0.00 N	11.80 B3	0.00 N	0.00 N	0.90 B3					222.0 B3
0 N	1 A1	8 A1	0 N	1 A1	0 N	0 N	0 N					
0 N	3888 B3	503453 B3	0 N	10320 B3	0 N	0 N	0 N					
0 N	0 N	134 B3	0 N	660 B3	0 N	0 N	0 N					
0 N	0 N	1 A1	0 N	0 N	0 N	0 N	0 N					
0 N	0 N	23328 B3	0 N	0 N	0 N	0 N	0 N					
0 N	0 N	2 A1	0 N	0 N	0 N	0 N	0 N					
0 N	0 N	94176 B3	0 N	0 N	0 N	0 N	0 N					
0 N	0 N	5 A1	0 N	0 N	0 N	0 N	0 N					
0 N	0 N	5 A1	0 N	0 N	0 N	0 N	0 N					

0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N					0 B4
0 N	0 N	0 N	3 B4	1 B4	6 B3	6 B4	0 N	0 N				2 B4
0 N	0 N	1 B4	0 N	39 B3	2 B4	0 N	0 N					34 B4
0 N	0 N	0 N	0 N	1 B4	0 N	0 N	0 N					42 B3
0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N					1 B4
0 N	0 N	1 B4	2 B4	1 B4	2 B4	0 N	0 N					0 B4
0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N					22 B4
0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N					2 B4

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	120
						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

E3a.0	Name	-	E3a.0			Ft William	Inverness	Hatton	Nigg	Persley	Peterhead	Fraserburgh	Lossie Mouth	Buckie	Banff/Macduff	Seafield	Newbridge
Sewerage Costs																	
E3a.1	Estimated direct operating cost	-	E3a.1	£m	I/C	0.039 D6	0.131 D6	2.189 D6	1.634 D6	0.005 D6	0.065 D6	0.031 D6	0.487 D6	0.379 D6	0.279 D6	0.348 D6	0.001 D6
E3a.2	Rates paid by the PPP contractor	-	E3a.2	£m	I/C	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N							
E3a.3	SEPA charges paid by the PPP contractor	-	E3a.3	£m	I/C	0.001 A2	0.000 A2	0.009 A2	0.005 A2	0.000 N	0.000 N	0.000 N	0.002 A2	0.006 A2	0.008 A2	0.007 A2	0.001 A2
E3a.4	Total direct cost	-	E3a.4	£m	C	0.040 D6	0.131 D6	2.198 D6	1.639 D6	0.005 D6	0.065 D6	0.031 D6	0.489 D6	0.385 D6	0.287 D6	0.355 D6	0.002 D6
E3a.5	Scottish Water general & support expenditure	-	E3a.5	£m	I/C	0.000 CX	0.004 C4	0.038 C4	0.110 C4	0.000 CX	0.001 CX	0.000 CX	0.004 C4	0.003 C4	0.005 C4	0.003 C4	0.000 CX
E3a.6	Scottish Water SEPA charges	-	E3a.6	£m	I/C	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N							
E3a.7	Total sewerage cost	-	E3a.7	£m	C	0.040 D6	0.135 D6	2.236 D6	1.749 D6	0.005 D6	0.066 D6	0.031 D6	0.493 D6	0.388 D6	0.292 D6	0.358 D6	0.002 D6
Sewage Treatment Costs																	
E3a.8	Estimated direct operating cost	-	E3a.8	£m	I/C	0.622 D6	1.319 D6	1.734 D6	1.203 D6	1.385 D6	0.551 D6	0.537 D6	0.459 D6	0.353 D6	0.395 D6	7.559 D6	1.150 D6
E3a.9	Rates paid by the PPP contractor	-	E3a.9	£m	I/C	0.049 B3	0.170 B3	0.264 B3	0.462 B3	0.161 B3	0.067 B3	0.087 B3	0.037 B3	0.044 B3	0.057 B3	0.960 B3	0.123 B3
E3a.10	SEPA charges paid by the PPP contractor	-	E3a.10	£m	I/C	0.017 A2	0.228 A2	0.113 A2	0.138 A2	0.014 A2	0.034 A2	0.034 A2	0.031 A2	0.031 A2	0.031 A2	0.138 A2	0.014 A2
E3a.11	Total direct cost	-	E3a.11	£m	C	0.688 D6	1.717 D6	2.111 D6	1.803 D6	1.560 D6	0.652 D6	0.658 D6	0.527 D6	0.428 D6	0.483 D6	8.657 D6	1.287 D6
E3a.12	Scottish Water general & support expenditure	-	E3a.12	£m	I/C	0.009 C4	0.072 C4	0.045 C4	0.139 C4	0.018 C4	0.008 C4	0.008 C4	0.008 C4	0.005 C4	0.010 C4	0.095 C4	0.015 C4
E3a.13	Scottish Water SEPA charges	-	E3a.13	£m	I/C	0.000 N	0.000 N	0.000 N	0.248 A2	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N
E3a.14	Total sewage treatment cost	-	E3a.14	£m	C	0.697 D6	1.789 D6	2.156 D6	2.190 D6	1.578 D6	0.660 D6	0.666 D6	0.535 D6	0.433 D6	0.493 D6	8.752 D6	1.302 D6
E3a.15	Estimated terminal pumping cost	-	E3a.15	£m	I/C	0 M	0.005 A3	0.002 M	0 N	0 N	0 A3	0 M	0.002 A3	0 M	0 M	0 M	0 M
Sludge Treatment and Disposal Costs																	
E3a.16	Estimated direct operating cost	-	E3a.16	£m	I/C	0.000 N	0.821 D6	2.469 D6	1.632 D6	0.000 N	0.000 N	0.000 N	1.637 D6	0.000 N	0.000 N	2.124 D6	0.670 D6
E3a.17	Rates paid by the PPP contractor	-	E3a.17	£m	I/C	0.000 N	0.085 B3	0.297 B3	0.425 B3	0.000 N	0.000 N	0.000 N	0.159 B3	0.000 N	0.000 N	0.254 B3	0.100 B3
E3a.18	SEPA charges paid by the PPP contractor	-	E3a.18	£m	I/C	0.000 N	0.009 A2	0.002 A2	0.004 A2	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N	0.003 A2	0.000 N
E3a.19	Total direct cost	-	E3a.19	£m	C	0.000 N	0.915 D6	2.768 D6	2.061 D6	0.000 N	0.000 N	0.000 N	1.796 D6	0.000 N	0.000 N	2.381 D6	0.770 D6
E3a.20	Scottish Water general & support expenditure	-	E3a.20	£m	I/C	0.000 N	0.437 C4	0.203 C4	0.657 C4	0.000 N	0.000 N	0.000 N	0.231 C4	0.000 N	0.000 N	0.023 C4	0.008 C4
E3a.21	Scottish Water SEPA charges	-	E3a.21	£m	I/C	0.000 N	0.000 N	0.000 N	0.000 N	0.000 N							
E3a.22	Total sludge treatment & disposal cost	-	E3a.22	£m	C	0.000 N	1.352 D6	2.971 D6	2.718 D6	0.000 N	0 N	0.000 N	2.027 D6	0.000 N	0.000 N	2.404 D6	0.778 D6
Total Cost Analysis																	
E3a.23	Total direct cost	-	E3a.23	£m	C	0.728 D6	2.763 D6	7.077 D6	5.503 D6	1.565 D6	0.717 D6	0.689 D6	2.812 D6	0.813 D6	0.770 D6	11.393 D6	2.059 D6
E3a.24	Total Scottish Water cost	-	E3a.24	£m	C	0.009 C4	0.513 C4	0.286 C4	1.154 C4	0.018 C4	0.009 C4	0.008 C4	0.243 C4	0.008 C4	0.015 C4	0.121 C4	0.023 C4
E3a.25	Total operating cost	-	E3a.25	£m	C	0.737 D6	3.276 D6	7.363 D6	6.657 D6	1.583 D6	0.726 D6	0.697 D6	3.055 D6	0.821 D6	0.785 D6	11.514 D6	2.082 D6
E3a.26	Annual charge	-	E3a.26	£m	I/C	3.311 A1	5.611 A1	21.435 A1	14.966 A1	2.489 A1	1.763 A1	1.992 A1	4.480 A1	2.854 A1	3.111 A1	19.181 B3	2.776 B3
E3a.27	Public sector capital equivalent value	-	E3a.27	£m	I	21.005 B3	67.813 B3	182.085 B3	100.396 B3	24.382 B3	20.079 B3	24.382 B3	44.579 B3	32.904 B3	28.658 B3	78.285 B3	11.331 B3
Contract Information																	
E3a.28	Contract period	-	E3a.28	years	I	25 A1	25 A1	30 A1	30 A1	30 A1	30 A1	30 A1					
E3a.29	Contract end date	-	E3a.29	dd/mm/yy	I	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	30/11/29 A1

Prepared by:	Date:
Checked by:	Date:
Authorised by: Douglas Millican	
Date: 14th June 2013	

130	140	150	160	170	180	190	200	210	220	230	240	250	199
AVSE	AVSE	AVSE	Levenmouth	Dalmuir	Daldowie	MSI	MSI	MSI					Total
CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG

East Calder Blackburn Whitburn Levenmouth Dalmuir Daldowie Meadowhead Stevenston Inverclyde [redacted] [redacted] [redacted] [redacted]

0.000	N	0.000	N	0.000	DX	0.139	D6	0.000	N	0.448	D6	0.000	N	0.000	DX									6.175	D6	
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	0.002	A2	0.000	N	0.000	N	0.000	N	0.000	N									0.041	A2	
0.000	N	0.000	N	0.000	DX	0.141	D6	0.000	N	0.448	D6	0.000	N	0.000	DX	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.216	D6		
0.000	N	0.000	N	0.000	CX	0.007	C4	0.000	N	0.055	C4	0.000	N	0.000	N	0.000	CX								0.230	C4
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	BX								0.000	BX
0.000	N	0.000	N	0.000	DX	0.148	D6	0.000	N	0.503	D6	0.000	N	0.000	DX	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.446	D6		

0.507	D6	0.304	D6	0.407	D6	2.969	D6	2.028	D6	0.000	N	1.917	D6	1.089	D6	0.965	D6								27.453	D6
0.134	B3	0.075	B3	0.047	B3	0.200	B3	0.743	B3	0.000	N	0.320	B3	0.236	B3	0.096	B3								4.332	B3
0.129	A2	0.014	A2	0.016	A2	0.138	A2	0.000	N	0.000	N	0.000	N	0.000	N	0.000	N								1.120	A2
0.770	D6	0.393	D6	0.470	D6	3.307	D6	2.771	D6	0.000	N	2.237	D6	1.325	D6	1.061	D6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	32.905	D6
0.009	C4	0.005	C4	0.005	C4	0.183	C4	0.106	C4	0.000	N	0.436	C4	0.142	C4	0.082	C4								1.400	C4
0.000	N	0.000	N	0.000	N	0.000	N	0.386	A2	0.000	N	0.386	A2	0.193	A2	0.019	A2								1.232	A2
0.779	D6	0.398	D6	0.475	D6	3.490	D6	3.263	D6	0.000	N	3.059	D6	1.660	D6	1.162	D6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	35.537	D6
0	N	0	N	0	M	0	M	0	N	0	N	0.356	A3	0	N	0.065	A3								0.430	A3

0.000	N	0.000	N	0.000	N	1.209	D6	1.180	A3	11.372	D6	1.259	D6	0.000	N	0.000	N								24.373	D6
0.000	N	0.000	N	0.000	N	0.078	B3	0.000	N	0.411	A2	0.207	B3	0.000	N	0.000	N								2.016	B3
0.000	N	0.000	N	0.000	N	0.010	A2	0.000	N	0.024	A2	0.011	A2	0.000	N	0.000	N								0.063	A2
0.000	N	0.000	N	0.000	N	1.297	D6	1.180	A3	11.807	D6	1.477	D6	0.000	N	0.000	N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.452	D6
0.000	N	0.000	N	0.000	N	0.065	C4	1.098	A3	2.751	C4	0.011	C4	0.000	N	0.000	N								5.484	C4
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	1.362	D6	2.278	A3	14.558	D6	1.488	D6	0.000	N	0.000	N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.936	D6

0.770	D6	0.393	D6	0.470	D6	4.745	D6	3.951	D6	12.255	D6	3.714	D6	1.325	D6	1.061	D6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	65.573	D6
0.009	C4	0.005	C4	0.005	C4	0.255	C4	1.590	C4	2.806	C4	0.833	C4	0.335	C4	0.101	C4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.346	C4
0.779	D6	0.398	D6	0.475	D6	5.000	D6	5.541	D6	15.061	D6	4.547	D6	1.660	D6	1.162	D6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	73.919	D6
1.514	B3	0.757	B3	1.009	B3	13.280	A1	10.822	A1	19.193	A1	7.797	A1	3.430	A1	3.544	A1								145.315	A1
6.180	B3	3.090	B3	4.120	B3	39																				

SECTION E : OPERATING COSTS AND EFFICIENCY

Table E4: Water Resources and Treatment

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	Ml/d	I/C
E6.4	Volume of water delivered to non-households	-	E6.4	Ml/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 main 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	Ml/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	Ml	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	Ml	I/C

10	20	30	40	50	60	50	60	199
Report Year 2012-13								
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

North	East	South	West					
271.5 A2	1300.5 A2	1734.3 A2	1791.6 A2					
152.382 B4	668.892 B4	857.422 B4	922.681 B4					
48.013 B2	211.691 B2	269.610 B2	281.081 B2					
19.342 B4	104.991 B4	104.637 B4	190.799 B4					
35208.129 A1	20368.096 A1	15475.458 A1	8744.392 A1					
124 A1	58 A1	52 A1	64 A1					

0.655 A2	2.692 A2	1.604 A2	2.248 A2					
0.000 A2	0.000 A2	0.000 A2	0.000 A2					
5.518 A2	11.447 A2	12.499 A2	15.275 A2					
2.344 A2	4.052 A2	4.216 A2	4.934 A2					
7.862 A2	15.499 A2	16.715 A2	20.209 A2	0.000	0.000	0.000	0.000	60.285 A2

6230.23 B2	11465.14 B2	9887.44 B2	7876.59 B2					
1173.98 B2	2372.15 B2	2736.02 B2	2307.31 B2					
177.27 B2	966.95 B2	1150.74 B2	785.57 B2					
7.89 B2	138.11 B2	294.77 B2	388.09 B2					
7589.38 B2	14942.36 B2	14068.97 B2	11357.57 B2	0.00	0.00	0.00	0.00	47958.27 B2
785.24 B2	2662.44 B2	4987.90 B2	4435.60 B2					
185.17 B2	1105.06 B2	1445.51 B2	1173.67 B2	0.00	0.00	0.00	0.00	3909.40 B2
1276 B3	1740 B3	2347 B3	2835 B3					
52.752 B3	110.601 B3	198.793 B3	255.007 B3					
64 B2	468 B2	42 B2	30 B2					

172 B2	174 B2	129 B2	115 B2					
153118 C4	699339 C4	566009 C4	993007 C4					
2851.1 C3	13411.1 C3	9823.5 C3	16447.6 C3					
22.92 C4	30.54 C4	40.55 C4	27.25 C4					

425 B2	466 B2	255 B2	230 B2					
221.642 B2	1221.218 B2	1151.230 B2	1389.7					

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	Ml/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	km ²	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

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Checked by:	Date:
Authorised by: Geoff Aitkenhead	
Date: 14th June 2013	

10	20	30	40	50	60	70	80	199				
Report Year 2012-13												
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	CG	CG	CG	CG

North	East	South	West									
213.8 B2	1196.6 B2	1614.2 B2	1780.1 B2									
14.1 C4	19.9 C4	20.2 C4	14.8 C4									
161.4 C4	752.0 C4	1063.6 C4	1118.4 C4									
122771 B2	635118 B2	827085 B2	893587 B2									
35208 A1	20368 A1	15475 A1	8744 A1									
150.164 A2	505.531 A2	601.116 A2	641.510 A2									
1000 A2	1079 A2	1307 A2	1329 A2									

3821 C4	13184 C4	17461 C4	15526 C4									
805 C4	4036 C4	5392 C4	6287 C4									
1423 B2	4353 B2	5431 B2	6156 B2									
563 B2	2282 B2	3019 B2	2083 B2									
16 B2	139 B2	249 B2	341 B2									
832 B3	2819 B3	3690 B3	3547 B3									
30 B5	73 B5	118 B5	84 B5									

1 A2	2 A2	1 A2	3 A2									
0 A2	0 A2	0 A2	1 A2									
4 A2	9 A2	8 A2	11 A2									
1.6 A2	2.9 A2	3.1 A2	3.2 A2									
6 A2	11 A2	11 A2	14 A2									

501 B3	774 B3	435 B3	402 B3									

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

Line Ref.	Description	Ofwat Ref	WICS Reference	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 A1		Tertiary A2		Tertiary B1		Tertiary B2		Sea Preliminary		Sea Screened	
JR 07	AR 06					CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG						
Numbers																									
E8.1	Size Band 0	-	E8.1	nr	I/C	1003 B3	4 B3	13 B3	95 B3	6 B3	3 B3	11 B3	4 B3	1 B3	1 B3	43 B3	1184 B3								
E8.2	Size Band 1	T17c, L1	E8.2	nr	I/C	119 B3	10 B3	22 B3	53 B3	5 B3	2 B3	11 B3	1 B3	0 AX	0 AX	3 B3	226 B3								
E8.3	Size Band 2	T17c, L2	E8.3	nr	I/C	53 B3	8 B3	22 B3	41 B3	2 B3	4 B3	7 B3	2 B3	0 AX	0 AX	139 B3									
E8.4	Size Band 3	T17c, L3	E8.4	nr	I/C	30 B3	12 B3	39 B3	63 B3	7 B3	4 B3	20 B3	5 B3	0 AX	1 B3	0 AX	181 B3								
E8.5	Size Band 4	T17c, L4	E8.5	nr	I/C	0 AX	9 B3	44 B3	37 B3	7 B3	2 B3	10 B3	2 B3	9 B3	2 B3	1 B3	123 B3								
E8.6	Size Band 5	T17c, L5	E8.6	nr	I/C	1 B3	1 B3	22 B3	2 B3	5 B3	4 B3	2 B3	1 B3	0 AX	0 AX	38 B3									
E8.7	Size Band 6 (Large Works)	T17c, L6	E8.7	nr	I/C	0 AX	0 AX	1 B3	0 B3	1 B3	0 B3	0 AX	0 AX	0 AX	0 AX	1 B3	22 B3								
E8.8	Total Sewage Treatment Works	T17c, L7	E8.8	nr	C	1206 B3	44 B3	180 B3	292 B3	33 B3	19 B3	62 B3	15 B3	10 B3	4 B3	48 B3	1913 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	11 B3	30 B3	4 B3	0 AX	5 B3	0 AX	0 AX	0 AX	0 AX	50 A1								
E8.10	Small Sewage treatment works with ammonia consent <= 5 mg/l	T17c, L9	E8.10	nr	I/C	0 AX	0 AX	13 B3	13 B3	13 B3	2 B3	10 B3	4 B3	0 AX	0 AX	0 AX	55 A1								
Loading (average daily load)																									
E8.11	Size Band 0	-	E8.11	kg BOD/day	I/C	1483 B3	11 B3	33 B3	223 B3	23 B3	11 B3	31 B3	9 B3	2 B3	2 AX	53 B3	396 B3								
E8.12	Size Band 1	T17d, L1	E8.12	kg BOD/day	I/C	1189 B3	103 B3	215 B3	547 B3	50 B3	16 B3	124 B3	7 B3	0 AX	0 AX	24 B3	1085 B3								
E8.13	Size Band 2	T17d, L2	E8.13	kg BOD/day	I/C	1117 B3	197 B3	466 B3	914 B3	48 B3	75 B3	142 B3	43 B3	0 AX	0 AX	0 AX	1884 B3								
E8.14	Size Band 3	T17d, L3	E8.14	kg BOD/day	I/C	1686 B3	713 B3	2759 B3	4391 B3	525 B3	338 B3	1094 B3	352 B3	0 AX	47 B3	10219 B3									
E8.15	Size Band 4	T17d, L4	E8.15	kg BOD/day	I/C	0 AX	2406 B3	14167 B3	10550 B3	2232 B3	588 B3	2916 B3	364 B3	1880 B3	467 B3	485 B3	36055 B3								
E8.16	Size Band 5	T17d, L5	E8.16	kg BOD/day	I/C	983 B3	735 B3	19944 B3	1700 B3	4720 B3	3405 B3	2275 B3	753 B3	0 AX	0 AX	0 AX	33533 B3								
E8.17	Size Band 6 (large works)	T17d, L6	E8.17	kg BOD/day	I/C	6458 B3	4165 B3	145466 B3	22172 B3	23817 B3	4433 B3	8134 B3	1528 B3	1882 B3	515 B3	4173 B3	216286 B3								
E8.18	Total Load Received	T17d, L7	E8.18	kg BOD/day	C	0 AX	0 AX	3148 B3	2169 B3	1904 B3	0 AX	244 B3	0 AX	0 AX	0 AX	0 AX	7465 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	4274 B3	1845 B3	1871 B3	2026 B3	1168 B3	1199 B3	0 AX	0 AX	0 AX	12383 B3								
Compliance																									
E8.21	Size Band 0	-	E8.21	%	I	100.0 B2	100.0 B2	98.9 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	100.0 B2	100.0 B2	100.0 B2	100.0 B2	100.0 B2	100.0 B2	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	100.0 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	100.0 B2	100.0 B2	100.0 B2
E8.23	Size Band 2	-	E8.23	%	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	100.0 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	100.0 B2	100.0 B2	100.0 B2
E8.24	Size Band 3	-	E8.24	%	I/C	100.0 B2	100.0 B2	98.4 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	100.0 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
E8.25	Size Band 4	-	E8.25	%	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	100.0 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	100.0 B2	100.0 B2	100.0 B2
E8.26	Size Band 5	-	E8.26	%	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	100.0 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	100.0 B2	100.0 B2	100.0 B2
E8.27	Size Band 6 (large works)	-	E8.27	%	I/C	0 AX	100.0 B2	100.0 B2	100.0 B2	0 AX	100.0 B2	100.0 B2	0 AX	100.0 B2	100.0 B2	0 AX	100.0 B2	100.0 B2</							

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

Line Ref.	Description	Ofwat Ref	WICS Reference	Units	Field Type
		JR 07	AR 06		

10	20	30	40	50	60	70	80	90
1 CG	2 CG	3 CG	4 CG	5 CG	6 CG	7 CG	8 CG	9 CG

Works Size				
E9.0 Name	T17b, L1	E9.0	Name	I
E9.0a Name of operational area	-	-	Name	I
E9.1 Population equivalent of total load received	T17b, L2	E9.5	000	I

STW000011	STW001979	STW000033	STW002014	STW000125	STW001975	STW000218	STW000222	STW001984
Allers South 41 B3	Alloa West 46 B3	Ardoch West 61 B3	Bathgate South 26 B3	Carbarns South 48 B3	Dalderse West 89 B3	Daldowie South 270 B3	Dalmarnock West 263 B3	Dunfermline East 34 B3

Compliance				
E9.2 Suspended solids consent	T17b, L3	E9.11	mg/l	I
E9.3 BOD consent	T17b, L4	E9.12	mg/l	I
E9.4 COD consent	T17b, L5	E9.13	mg/l	I
E9.5 Ammonia consent	T17b, L6	E9.14	mg/l	I
E9.6 Phosphate consent	T17b, L7	E9.15	mg/l	I
E9.7 Compliance with effluent consent standard	-	E9.16	%	I

100 A1								
20 A1	75 A1	75 A1	7 A1	15 A1	20 A1	15 A1	25 A1	75 A1
125 A1								
5 A1	0 A1	0 A1	1 A1	10 A1	25 A1	5 A1	11 A1	0 N
0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N
100 A1	100 A1	99 A1	98 A1	100 A1	100 A1	100 A1	100 A1	95 A1

Treatment Works Category				
E9.8 Primary	T17b, L8	E9.19	1/0	I
E9.9 Secondary activated sludge	T17b, L8	E9.20	1/0	I
E9.10 Secondary biological	T17b, L8	E9.21	1/0	I
E9.11 Tertiary A1	T17b, L8	E9.22	1/0	I
E9.12 Tertiary A2	T17b, L8	E9.23	1/0	I
E9.13 Tertiary B1	T17b, L8	E9.24	1/0	I
E9.14 Tertiary B2	T17b, L8	E9.25	1/0	I

1 A1								
1 A1	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N
0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N
0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N
0 N	0 N	0 N	1 N	0 N	0 N	0 N	0 N	0 N

Works Cost				
E9.15 Power costs	T17b, L10	E9.34	£'000	I
E9.16 Service charges SEPA	T17b, L11	E9.37	£'000	I
E9.17 Total direct costs	T17b, L9	E9.39	£'000	I
E9.18 General and support expenditure	T17b, L12	E9.40	£'000	I
E9.19 Functional Expenditure	T17b, L13	E9.41	£'000	C

126 A2	150 A2	83 A2	66 A2	140 A2	68 A2	670 A2	703 A2	17 A2
22 A2	20 A2	34 A2	13 A2	44 A2	188 A2	53 A2	54 A2	39 A2
205.3 A2	307.1 A2	348.8 A2	160.3 A2	219.1 A2	313.7 A2	831.7 A2	941.2 A2	138.6 A2
38 A2	73 A2	116 A2	58 A2	14 A2	27 A2	22 A2	58 A2	32 A2
243 A2	381 A2	465 A2	218 A2	233 A2	341 A2	854 A2	999 A2	171 A2

E9.20 Estimated terminal pumping station costs	T17b, L14	E9.42	£'000	I
E9.21 Estimated sludge costs	T17b, L15	E9.43	£'000	I

0 N	0 N	118 A2	0 A2	0 N	0 N	0 N	211 A2	5 A2
0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N	0 N

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Checked by:	Date:
Authorised by: Geoff Aitkenhead	
Date: 14th June 2013	

100	110	120	130	140	150	160	170	180	190	200	210
10	11	12	13	14	15	16	17	18	19	20	21
CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG	CG
STW000265	STW00281	STW000355	STW001985	STW001977	STW001982	STW000455	STW001712	STW000576	STW000642	STW002268	STW000719
Dunnswood West 31 B3	Erskine West 77 B3	Hamilton South 57 B3	Iron Mill Bay East 61 B3	Kinnel Kerse South 50 B3	Kirkcaldy East 64 B3	Laighpark (Paisley) West 144 B3	Perth East 97 B3	Philipshill South 58 B3	Shieldhall West 537 B3	Stirling West 72 B3	Troqueer South 32 B3
100 A1 6 A1 125 A1 1 A1 0 N 100 A1	100 A1 75 A1 125 A1 30 A1 0 N 98 A1	100 A1 20 A1 125 A1 125 A1 0 N 100 A1	100 A1 75 A1 125 A1 125 A1 0 N 100 A1	100 A1 75 A1 125 A1 125 A1 0 N 99 A1	100 A1 15 A1 125 A1 20 A1 0 N 99 A1	100 A1 30 A1 125 A1 30 A1 0 N 100 A1	100 A1 10 A1 125 A1 2 A1 0 N 99 A1	100 A1 20 A1 125 A1 20 A1 0 N 100 A1	100 A1 75 A1 125 A1 15 A1 0 N 100 A1	100 A1 20 A1 125 A1 125 A1 0 N 100 A1	100 A1 20 A1 125 A1 125 A1 0 N 100 A1
1 A1 1 A1 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N	0 A1 1 A1 0 N 0 N 0 N 0 N	0 N 1 A1 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N	1 A1 1 A1 0 N 0 N 0 N 0 N
90 A2 22 A2 245.3 A2 35 A2 281 A2	247 A2 20 A2 371.8 A2 51 A2 422 A2	292 A2 26 A2 386.1 A2 38 A2 425 A2	90 A2 20 A2 164.9 A2 43 A2 208 A2	154 A2 184 A2 360.0 A2 43 A2 369 A2	292 A2 47 A2 484.6 A2 9 A2 529 A2	419 A2 375 A2 891.4 A2 45 A2 941 A2	169 A2 31 A2 284.2 A2 50 A2 341 A2	401 A2 60 A2 533.4 A2 48 A2 582 A2	1094 A2 140 A2 1976.6 A2 520 A2 2496 A2	177 A2 40 A2 232.5 A2 29 A2 261 A2	91 A2 20 A2 165.0 A2 20 A2 185 A2
0 N 0 N	0 N 0 N	0 N 0 N	0 N 0 N	0 N 0 N	73 A2 0 N	126 A2 0 N	50 A2 0 N	0 N 0 N	328 A2 0 N	53 A2 0 N	29 A2 0 N

SECTION E : OPERATING COSTS AND EFFICIENCY**Table E10: Sludge Treatment and Disposal**

Line	Description	Ofwat Ref	WICS Reference	Units	Field Type	10	11	12	20	30	31	32	50	199
						Farmland Untreated	Farmland Conventional	Farmland Advanced	Incineration	Landfill	Composted	Land Reclamation	Other	Total
Ref.		JR 07	AR 06			CG	CG	CG	CG	CG	CG	CG	CG	CG
Sludge volumes														
E10.1	Resident population served	T17g, L1	E10.1	000	I	0.0 AX	321.6 C3	1073.2 C3	1061.5 C3	42.4 C3	0.0 C3	150.0 C3	0.0 C3	2648.637 C3
E10.2	Amount of sewage sludge	T17g, L2	E10.2	ttds	I	0.0 AX	2.8 B4	14.7 B4	0.0 C3	0.3 B4	0.0 B4	1.3 AX	0.0 AX	19.2 B4
Sludge Treatment and Disposal costs														
E10.3	Sludge Treatment direct costs	T17g, L3	-	£000	I	0.000 BX	1702.363 B2	5085.868 B2	0.000 BX	253.984 B2	0.000 BX	671.378 B2	0.000 BX	7713.593 B2
E10.4	Sludge disposal direct costs	T17g, L4	-	£000	I	0.000 BX	143.099 B2	1363.241 B2	0.000 BX	222.892 B2	0.000 BX	112.260 B2	0.000 BX	1841.492 B2
E10.5	Sludge treatment & disposal: Power costs	T17g, L6	E10.4	£000	I	0.000 BX	689.468 B2	997.680 B2	0.000 BX	36.251 B2	0.000 BX	154.754 B2	0.000 BX	1878.153 B2
E10.6	Sludge treatment & disposal: Service charges SEPA	T17g, L7	E10.7	£000	I	0.000 BX	10.694 B2	32.300 B2	0.000 BX	4.311 B2	0.000 BX	5.664 B2	0.000 BX	52.969 B2
E10.7	Sludge treatment & disposal: Total direct costs	T17g, L5	E10.9	£000	C	0.000 BX	1845.462 B2	6449.109 B2	0.000 BX	476.876 B2	0.000 BX	783.638 B2	0.000 BX	9555.085 B2
E10.8	Sludge treatment and disposal: General and support expenditure	T17g, L8	E10.10	£000	I	0.000 BX	434.511 B2	1807.686 B2	0.000 BX	237.215 B2	0.000 BX	246.472 B2	0.000 BX	2725.884 B2
E10.9	Sludge Treatment and disposal: Functional Expenditure	T17g, L9	E10.11	£000	C	0.000 BX	2279.973 B2	8256.795 B2	0.000 BX	714.091 B2	0.000 BX	1030.110 B2	0.000 BX	12280.969 B2

Prepared by:

Date:

Checked by:

Date:

Authorised by: Geoff Aitkenhead

Date: 14th June 2013