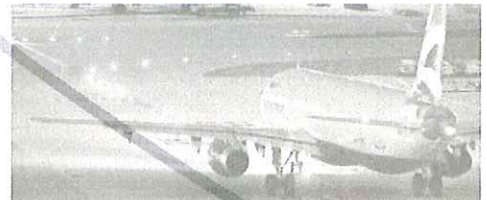


Consulting



M8 M73 M74 Motorway Improvements

**Package D02.3 – Drainage Outfalls
Chapelhall to Newhouse**

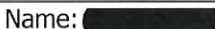
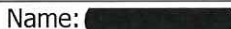
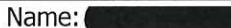
Specification Appendices

Document No: CO21000101/D02.3/D1 Rev B



Document Control Sheet

Project Name:	M8 M73 M74 Motorway Improvements Project
Project Number:	CO21000101
Document / Report Title:	DO2.3 Drainage Networks – Specification Appendices
Document / Report Number:	DO2.3/D1

Issue Status/Amendment	Prepared	Reviewed	Approved
Rev 0 For Construction	Name:  Signature: Date: 09/09/2014	Name:  Signature: Date: 09/09/2014	Name:  Signature: Date: 09/09/2014
Rev A For Construction	Name:  Signature: Date: 31/03/2016	Name:  Signature: Date: 31/03/2016	Name:  Signature: Date: 31/03/2016
Rev B For Construction (DI 1025 included)	Name:  Signature: Date: 22/05/17	Name:  Signature: Date: 22/05/17	Name:  Signature: Date: 22/05/17

APPENDIX 5/1: DRAINAGE REQUIREMENTS

1. This document should be read in conjunction with Specification Appendices – Notes, Document Number CO21000101/DO/D1

1. Drainage Schedules

Outfall 1 Combined schedule

Pipe Reference	USMH	DSMH	Drain Type	Length	Dia	Slope in X	USCL	USIL	US C Depth	DSCL	DSIL	DS C Depth	Chainage System	US Chainage	US Chamber Depth	US Chamber Type	US Internal Chamber Dia	Cover Type
2.3/2/ 1.013	63	64	Carrier	32.5	750	560.345	151.503	148.158	2.595	149.08	148.1	0.650	A8 Westbound	1113	3.645	Type 12A	1500	D400
2.3/2/ 1.014	64	HW/DO/2.3/2/1	Carrier	10	750	500.000	149.08	148.1	0.650*	-	148.08	-	Suds Maintenance Track	0	1.280*	Type 7 (1800) With Penstock	1800	D400
DO-2.3-2- 1.000	HW/DO/2.3/2/2	DO/2.3/2/1	Carrier	5	150	125.000	-	148.08	-	149.08	148.04	0.89	Suds Maintenance Track	220		Refer to headwall details		
DO-2.3-2- 1.001	DO/2.3/2/1	HW/DO/2.3/2/3	Carrier	27	150	70.13	149.08	148.04	0.89	-	147.655	-	Suds Maintenance Track	220	1.34	Type 7A With Penstock	1050	D400
DO-2.3-2- 1.002	HW/DO/2.3/2/4	HW/DO/2.3/2/5	Carrier	32	150	22.456	-	149.08	-	-	147.655	-	Suds Access Track	215		Refer to headwall details		

Outfall 2 Combined schedule

Pipe Reference	USMH	DSMH	Drain Type	Length	Dia	Slope in X	USCL	USIL	US C Depth	DSCL	DSIL	DS C Depth	Chainage System	US Chainage	US Chamber Depth	US Chamber Type	US Internal Chamber Dia	Cover Type
2.3-3-1.007	DN2.3/3/7	DN2.3/3/7a	Carrier	24	300	70.588	168.616	165.654	2.662	166.214	165.314	0.600	Newhouse Roundabout	364	3.262	Type 12A	1500	D400
2.3-3-1.007a	DN2.3/3/7a	DN2.3/3/8	Carrier	19	300	3.268	166.214	165.314	0.600	160.062	159.500	0.650*	Newhouse Roundabout	364	1.200	Type 7A	1050	D400
2.3-3-1.008	DN2.3/3/8	HW/DO/2.3/3/01	Carrier	3.00	300	50.847	160.062	159.500	0.650*	-	159.441	-	Newhouse Roundabout	364	0.862*	Type 7C With Penstock	1350	D400
2.3-4-1.009	DN2.3/4/37	DN2.3/4/38	Carrier	19.4	600	29.755	162.682	160.102	1.98	160.062	159.450	0.650*	A73 NB (North of Rdt)	84	2.880	Type 7C	1350	D400
2.3-4-1.010	DN2.3/4/38	HW/DO/2.3/4/01	Carrier	2.70	600	300.00	160.062	159.450	0.650*	-	159.441	-	A73 NB (North of Rdt)	84	0.912*	Type 7C With Penstock	1350	D400
DO-2.3-1-1.000	HW2.3-1201	DO-2.3-1-1	Ditch	63.203	150 (pipe from headwall to chamber)	104.468	161.619	160.569	-	161.014	159.964	0.9	Suds Access	290	Refer to headwall details			
DO-2.3-1-2.000	HW-DO-2.3-1-2	DO-2.3-1-1	Carrier	22.967	150	99.857	-	159.062	-	161.014	158.832	2.032	Suds Access	225	Refer to headwall details			
DO-2.3-1-1.001	DO-2.3-1-1	DO-2.3-1-2	Filter	47.965	450	144.473	161.014	158.382	2.182	160.254	158.05	1.754	Suds Access	225	2.932	Type 12B With Penstock	1800 (full height with no 1200 shaft)	D400
DO-2.3-1-1.002	DO-2.3-1-2	DO-2.3-1-5	Filter	58.603	450	65.332	160.254	158.05	1.754	158.571	157.153	0.968	Suds Access	174	2.504	Type 7a	1050	D400
DO-2.3-1-3.000	RE-2.3-DO-1	DO-2.3-1-4	Filter	54.845	150	21.929	161.818	160.668	1.000	159.317	158.167	1.000	Suds Access	0	Refer to Rodding Eye details			
DO-2.3-1-3.001	DO-2.3-1-4	DO-2.3-1-5	Filter	52.332	150	101.813	159.317	158.167	1.000	158.571	157.653	0.768	Suds Access	53	1.450	Type 7A	1050	D400
DO-2.3-1-1.003	DO-2.3-1-5	DO-2.3-1-6	Carrier	64	450	151.659	158.571	157.353	0.768	158.6	156.931	1.219	Suds Access	108	1.518	Type 7A	1050	D400
DO-2.3-1-1.004	DO-2.3-1-6	HW-DO-2.3-1-3	Carrier	12	450	15.152	158.6	156.931	1.219	-	156.139	-	A73 Southbound	5	1.969	Type 7A	1500	B125
Emergency Spillway	-	-	Ditch	12	-	193.548	160.062	160.062	-	160.999	160.000	-	Suds Access	231	-			

Outfall 3 Combined Schedule

Pipe Reference	USMH	DSMH	Drain Type	Length	Dia	Slope in X	USCL	USIL	US C Depth	DSCL	DSIL	DS C Depth	Chainage System	US Chainage	US Chamber Depth	US Chamber Type	US Internal Chamber Dia	Cover Type
DN2.3-1-	1.015	DN 2.3 60	DO-2.3-1-1	Carrier	67	600	15.691	169.601	166.77	163.641	162.5	0.541	Newhouse EB Merge	31	3.131*	Type 12A	1500	D400
DO-2.3-1-	1.000	DO/2.3/1/1	HW-DO-2.3-1-1	Carrier	2	750	42.553	163.641	162.5	-	162.453	-	Newhouse EB Merge	32	1.441*	Type 12B With Penstock	1800 (full height with no 1200 shaft)	D400
DO-2.3-1-	2.000	HW-DO-2.3-1-2	DO-2.3-1-2	Carrier	7.5	150	100	162.258	162.108	163.641	162.033	1.458	Newhouse EB Merge	32		Refer to headwall details		
DO-2.3-1-	2.001	DO-2.3-1-2	DO-2.3-1-3	Carrier	36.49	300	24.639	163.641	159.598	159.317	158.117	0.9	Suds Access	56	4.343	Type 12a With Penstock	1500 (Full height with no 1200 shaft)	D400
DO-2.3-1-	3.000	N/A	Tie into DO/2.3/1/2.003 downstream of HW DO/2.3/1/3	Ditch	78.092	-	21.255	162.902	161.674	159	158	-	Suds Access	110		Open Ditch		
DO-2.3-1-	4.000	N/A	Tie into DO/2.3/1/2.003 downstream of HW DO/2.3/1/3	Ditch	27.157	-	27.321	159.744	158.994	159	158	-	Suds Access	0		Open Ditch		
DO-2.3-1-	2.003	HW-DO-2.3-1-5 / DO2.3/1/3	HW-DO-2.3-1-6	Ditch (300 carrier from Chamber)	39.75	300	21.745	159.317	158.117	156.59	156.289	-	Suds Access	30	1.500	Type 7a	1050	D400
Emergency Spillway	-	-	-	Ditch	20	-	10.060	163.641	163.441	161.653	161.453	-	Suds Access	94		Open Ditch		

*Track Level to be raised and graded to ensure min 650mm cover over pipe

