

ALBERT SQUARE SURFACE WATER MANHOLE SCHEDULE									
Manhole No.	Cover Level (m)	Invert Level (m)	Depth To Invert (m)	Main Channel Diameter (mm)	Manhole Type	Chamber Size (mm)	Cover Size (mm)	Cover Loading	COMMENTS
S2-1	39.600	38.250	1.350	1500	PPIC	4600	3500	D400	
S2-2	39.700	38.220	1.480	1500	PPIC	4600	3500	D400	
S2-3	NO LONGER REQUIRED								
S2-4	39.970	38.090	1.880	1500	PPIC	4600	3500	D400	IL 38.090 IL 38.090
S2-5	40.000	38.350	1.650	1500	PPIC	4600	3500	D400	
S2-6	40.110	38.000	2.110	1500	PCC	12000	600x600	D400	IL 38.000 IL 38.000 IL 38.000
S2-7	40.085	37.120	2.965	2250	PCC	12000	600x600	D400	IL 37.595 CATCH PIT
S2-8	39.880	38.220	1.660	1000	PPIC	4600	3500	D400	PERFORATED PIPE
S2-9	39.890	38.220	1.670	1000	PPIC	4600	3500	D400	
S2-10	39.890	38.220	1.670	1000	PPIC	4600	3500	D400	PERFORATED PIPE
S2-11	39.890	38.220	1.670	1000	PPIC	4600	3500	D400	
S2-12	39.950	37.730	2.220	1500	PCC	12000	600x600	D400	IL 38.205 CATCH PIT
S2-13	39.980	38.190	1.790	1000	PPIC	4600	3500	D400	PERFORATED PIPE
S2-14	39.900	38.190	1.710	1000	PPIC	4600	3500	D400	
S2-15	39.930	38.190	1.740	1000	PPIC	4600	3500	D400	PERFORATED PIPE
S2-16	39.900	38.190	1.710	1000	PPIC	4600	3500	D400	
S2-17	39.985	37.425	2.560	1500	PCC	12000	600x600	D400	IL 37.900 IL 37.900 CATCH PIT
S2-18	39.900	38.190	1.710	1000	PPIC	4600	3500	D400	PERFORATED PIPE
S2-19	40.000	38.190	1.810	1000	PPIC	4600	3500	D400	
S2-20	39.900	38.190	1.710	1000	PPIC	4600	3500	D400	PERFORATED PIPE
S2-21	40.000	38.190	1.810	1000	PPIC	4600	3500	D400	
S2-22	40.055	37.220	2.835	2250	PCC	12000	600x600	D400	IL 37.695 IL 37.695 CATCH PIT
S2-23	40.200	38.350	1.850	1000	PPIC	4600	3500	D400	PERFORATED PIPE
S2-24	40.170	38.350	1.820	1000	PPIC	4600	3500	D400	
S2-25	40.170	37.145	3.025	2250	PCC	12000	600x600	D400	IL 37.620 CATCH PIT
S2-26	40.265	37.600	2.665	2250	PCC	12000	600x600	D400	
S2-27	40.250	38.400	1.850	1000	PPIC	4600	3500	D400	
S2-28	40.265	36.995	3.270	2250	PCC	12000	600x600	D400	IL 38.000 IL 37.595 CATCH PIT
S2-29	40.250	38.900	1.350	1500	PPIC	4600	3500	D400	IL 38.900
S2-30	39.600	37.850	1.750	1500	PPIC	4600	3500	D400	
S2-31	40.075	37.240	2.835	1500	PCC	12000	600x600	D400	
S2-32	40.170	38.820	1.350	1500	PPIC	4600	3500	D400	
S2-34	40.170	38.285	1.885	1500	PCC	12000	600x600	D400	IL 38.760 IL 38.760 CATCH PIT
S2-35	40.330	38.980	1.350	1500	PPIC	4600	3500	D400	
S2-36	40.360	38.280	2.080	1500	PCC	12000	600x600	D400	IL 38.755 CATCH PIT
S2-37	40.255	38.100	2.155	1500	PCC	12000	600x600	D400	IL 38.575 IL 38.575 IL 38.575 CATCH PIT
S2-38	40.200	38.500	1.700	2250	PCC	12000	600x600	D400	
S2-39	40.225	37.375	2.850	3000	PCC	15000	600x600	D400	IL 37.375 IL 37.375 IL 37.375 CATCH PIT
S2-40	40.200	37.735	2.465	3000	PCC	12000	600x600	D400	



ALBERT SQUARE FOUL WATER MANHOLE SCHEDULE									
Manhole No.	Cover Level (m)	Invert Level (m)	Depth To Invert (m)	Main Channel Diameter (mm)	Manhole Type	Chamber Size (mm)	Cover Size (mm)	Cover Loading	COMMENTS
F2-1	40.000	38.350	1.650	150 Ø	PCC	1200 Ø	600x600	D400	
F2-2	39.900	38.300	1.600	150 Ø	PCC	1200 Ø	600x600	D400	
F2-3	40.170	38.350	1.820	150 Ø	PCC	1200 Ø	600x600	D400	
F2-4	40.000	38.000	2.000	150 Ø	PCC	1200 Ø	600x600	D400	2NO. ANTI-FLOOD VALVES ON INCOMING PIPES IL 38.000 IL 38.000
F2-5	40.255	38.000	2.255	150 Ø	PCC	1200 Ø	600x600	D400	
C2-1	40.260	37.100 #	3.160	300 Ø	PCC	1500 Ø	600x600	D400	2NO. ANTI-FLOOD VALVES ON INCOMING PIPES BUILD ON LINE OF EXISTING DRAIN

TO BE CONFIRMED ON SITE

ALBERT SQUARE SURFACE WATER DIVERSION SCHEDULE									
Manhole No.	Cover Level (m)	Invert Level (m)	Depth To Invert (m)	Main Channel Diameter (mm)	Manhole Type	Chamber Size (mm)	Cover Size (mm)	Cover Loading	COMMENTS
S3-1	40.200	TBC #	TBC	TBC	PCC	TBC	TBC	D400	BUILD ON LINE OF EXISTING HIGHWAY DRAIN LEVELS UNKNOWN
S3-2	40.150	TBC #	TBC	TBC	PCC	TBC	TBC	D400	
S3-3	40.200	TBC #	TBC	TBC	PCC	TBC	TBC	D400	CONNECT OUTLET INTO EXISTING PUBLIC SEWER MANHOLE EXPS-8001

TO BE CONFIRMED ON SITE

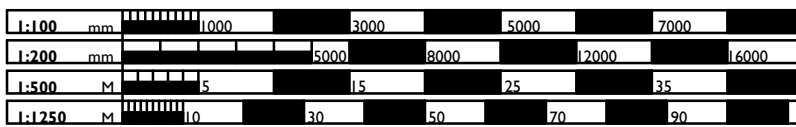
ATTENUATION TANK SCHEDULE									
REF.	MANUFACTURER & TYPE	STORAGE VOLUME (m³)	LENGTH (m)	WIDTH/ DIAMETER (m)	HEIGHT (m)	INVERT LEVEL (m)	PIPE IN INVERT (m)	PIPE OUT INVERT (m)	COMMENTS
S2-ATTEN-1	POLYPIPE POLYSTORM-R GEOCELLULAR TANK	100	50.0	5.0	0.4	37.550	MAIN: 37.600 BRANCHES: 37.600	37.485	WITH POLYSTORM INSPECT 225 - PSM4CRD225
S2-ATTEN-2	POLYPIPE POLYSTORM-R GEOCELLULAR TANK	80	25.0	8.0	0.4	38.500	MAIN: 38.550 BRANCHES: 38.550	38.550	WITH POLYSTORM INSPECT 225 - PSM4CRD225
TANKS TO BE VENTED INTO DOWNSTREAM MANHOLE GEOCELLULAR TANK TO BE WRAPPED IN IMPERMEABLE GEOMEMBRANE. TANK TO BE FITTED WITH POLYSTORM INSPECTION UNITS TO PROVIDE MAINTENANCE ACCESS THROUGHOUT TANK LENGTH									

CHANNEL DRAIN SCHEDULE				
REF.	MANUFACTURER & TYPE	DESIGNATION	OUTLET DIA (mm)	LENGTH (m)
DC-1a	ACO MULTIDRAIN	M150D 0.0	150	9.5
DC-1b	ACO MULTIDRAIN	M150D 10.0	150	74.5
DC-1c	ACO MULTIDRAIN	M150D 0.0	150	21.5
DC-2	ACO MULTIDRAIN	M150D 0.0	100	102.5
SD-3a	MARSHALLS DREXUS	15/0	150	79.7
SC-3b	MARSHALLS DREXUS	20/0	150	18.25
SD-4	MARSHALLS DREXUS	20/0	150	88.6
DC-5	ACO MULTIDRAIN	M150D 0.0	150	48
DC-6a	ACO MULTIDRAIN	M150D 10.0	150	26.5
DC-6b	ACO MULTIDRAIN	M150D 0.0	150	26.5
DC-7	ACO MULTIDRAIN	M150D 10.0	150	31
SD-8	MARSHALLS DREXUS	15/0	150	7
SD-9	MARSHALLS DREXUS	15/0	150	7
DC-10	ACO MULTIDRAIN	M150D 10.0	150	17.5
DC-11	ACO MULTIDRAIN	M150D 0.0	150	15.8
DC-12	ACO MULTIDRAIN	M150D 0.0	150	20.4
DC-13	ACO MULTIDRAIN	M150D 0.0	150	3
SD-14a	MARSHALLS DREXUS	20/0	150	26
SD-14b	MARSHALLS DREXUS	15/0	150	15
ALL CHANNELS HAVE BEEN DESIGNED FOR A DESIGN RAINFALL INTENSITY OF 171.41mm/hr (1in100yr EVENT +40% CLIMATE CHANGE, WITH A RISK CATEGORY 3) AND BE PROVIDED WITH END CAPS OR ACCESS UNITS AT THE END OF CHANNELS. ALL OUTLETS TO HAVE SUMPS AND RODDABLE TRAPS				
MARSHALLS SLOT DRAIN TO HAVE A DUO SLOT ACO MULTIDRAIN CHANNELS TO BE FITTED WITH ACO FREESTYLE GRATING WITH LOCKING BOLTS				



ANTI-FLOOD VALVE SCHEDULE			
MANHOLE REF	DRAINAGE SYSTEM	MANUFACTURER & TYPE	TYPE
F2-4 INLET FROM F2-2	FOUL NETWORK	ALTHON WASTOP	WASTOP 150 GRADE 304 SS
F2-4 INLET FROM F2-3	FOUL NETWORK	ALTHON WASTOP	WASTOP 150 GRADE 304 SS
C2-1 INLET FROM S2-40	SURFACE NETWORK	ALTHON WASTOP	WASTOP 300 GRADE 304 SS
C2-1 INLET FROM F2-5	FOUL NETWORK	ALTHON WASTOP	WASTOP 150 GRADE 304 SS
ALL ANTI-FLOOD VALVES TO BE INSTALLED AS PER MANUFACTURER'S REQUIREMENTS			

Scale Bars to be used as guidance only - refer to sheet size below



- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH GENERAL ARRANGEMENT DRAWINGS, DETAIL SHEETS AND SPECIFICATIONS
- ALL MANHOLE COVERS TO BE RECESSED TO SUIT LANDSCAPE ARCHITECT FINISHES AND REQUIREMENTS AS SPECIFICATION
- ALLOW FOR 15no. BESPOKE ORNAMENTAL MANHOLE COVERS TO BE CONFIRMED BY LANDSCAPE ARCHITECT
- BRANCH CONNECTIONS <150mm IN DIAMETER TO CONNECT INTO MAIN DRAIN AT HALF MAIN DRAIN LEVEL
- BRANCH CONNECTIONS >150mm IN DIAMETER TO CONNECT INTO MAIN DRAIN WITH LEVEL SOFFITS
- PCC = PRE CAST CONCRETE MANHOLES
PPIC = POLYPROPYLENE INSPECTION CHAMBERS
- ALL COVER LEVELS ARE INDICATIVE AND SUBJECT TO CHANGE TO SUIT LANDSCAPE LEVELS AND LAYOUTS
- ALL INSPECTION CHAMBERS WITH A DEPTH GREATER THAN 1.000m SHALL HAVE REDUCED ACCESS PROVISIONS TO 350mm INSPECTION CHAMBERS TO BE 460mm ADAPTABLE INSPECTION CHAMBER (BURIAL DEPTH UP TO 3m)

P04	05/09/2019	LS	SG	STAGE 4 ISSUE SEE REVISION CLOUDS
P03	26/7/2019	LS	SG	STAGE 4 ISSUE SEE REVISION CLOUDS
P02	01/05/2019	LS	SG	STAGE 3+ ISSUE DRAINAGE TO SUIT LATEST LANDSCAPE PLAN
P01	30/11/2018	LS	SG	STAGE 3 ISSUE
ISSUE	DATE	APPROVED	DRAWN	DESCRIPTION



OUR
TOWN
HALL
PROJECT



www.ramboll.co.uk

Arkwright House, Parsonage, Manchester, M3 2LF
+44 (0) 161 827 1800
www.Ramboll.com

PROJECT STATUS	STAGE 4
CLIENT	MANCHESTER CITY COUNCIL
PROJECT	OUR TOWN HALL PROJECT
DRAWING TITLE	TOWN HALL EXTERNALS MANHOLE SCHEDULES
SIZE & SCALE	A1: NTS
DRAWING STATUS	D2 - FOR TENDER
JOB NUMBER	1620003165
DRAWING NO.	OTH-RAM-EE-XX-DWG-C-1200
REV	P04