

Surface Water Manhole Schedule

Manhole Name	Cover Level (m)	MH Depth (m)	Pipe Setting Out		Access Cover			Manhole Diam. (mm)	Manhole Type	Pipe Out			Pipe(s) In			Pipes In Backdrop (mm)	Comments
			Easting (m)	Northing (m)	Size	Loading Class	Cover Type			Pipe Ref.	Invert Level (m)	Diameter (mm)	Pipe Ref.	Invert Level (m)	Diameter (mm)		
SW 1	48.100	1.90	385311.91	398031.68	965 x 765	C250	Recessed	1200	Type 1	1.000	46.20	225	2No. Channel Drains	46.275	150		**Invert level to suit
SV2	48.640	2.57	385331.96	398052.60	300 x 300	C250	Recessed	600	Type 3A	1.001	46.070	225	1.000 2No. Channel Drains	46.070	225		**Invert level to suit
Attenuation Tank	Varies	Varies	385329.836	398049.034				Attenuation Tank 31m3 Length = 6.0m Width = 4.5m Depth = 1.2m (95% voids min)		1.002	46.070	300	1.001	46.070	225		Tank outlet/inlet pipes and layout as per supplier details
	48.53	2.460	385334.018	398053.336	-	-	-						2No. RWP	47.03	150		
	to 48.63	to 2.560	385337.245	398050.200													
SW 4	48.83	3.03	385346.67	398060.48	600 x 600	D400	Recessed	1200	Type 2	1.003	45.804	300	1.002	45.809	300		Tank outlet pipes and layout as per supplier details
SW 6	48.64	3.42	385356.02	398044.46	600 x 600	D400	Recessed	1500	Outfall MH	1.004	45.217	225	1.003	45.515	300	178	Flow Control Device installed at outfall pipe. Overflow Pipe as per standard detail
											47.72	225	1No. RWP	48.059	150	2842	
													1No. RWP	47.416	150	2199	
													1No. RWP	47.428	150	2211	
Sewer Connection	TBC on site	TBC on site	TBC on site	TBC on site	n/a	n/a	n/a	n/a	n/a	Existing UU 525 x 750mm SW Sewer			1.004		225	n/a	
RE6	48.00	1.66	385319.371	398024.305	300 x 300	A15			PD006		46.34	150					Rodding Eye
RE7	48.70	2.10	385344.993	398032.771	300 x 300	A15			PD006		46.60	150					Rodding Eye

Foul Water Manhole Schedule

Manhole Name	Cover Level (m)	MH Depth (m)	Pipe Setting Out		Access Cover			Manhole Diam. (mm)	Manhole Type	Pipe Out			Pipe(s) In			Pipes In Backdrop (mm)	Comments
			Easting (m)	Northing (m)	Size	Loading Class	Cover Type			Pipe Ref.	Invert Level (m)	Diameter (mm)	Pipe Ref.	Invert Level (m)	Diameter (mm)		
FW1	48.70	0.68	385348.00	398036.89	300 x 300	A15	Recessed	450	PPIC	F1.000	48.023	100	5No Branches	48.023	100		
FW2	48.70	0.82	385343.33	398034.06	300 x 300	A15	Recessed	450	Type 3	F1.001	47.880	100	F1.000	47.880	100		
FW3	48.74	1.25	385331.95	398045.17	600 x 600	C250	Recessed	1200	Type 3	F1.002	47.490	150	F1.001 RE1	47.540	100		
														47.490	150		
FW4	48.70	1.48	385321.73	398036.97	300 x 300	C250	Recessed	450	Type 3	F1.003	47.220	150	F1.002 F1.009	47.340	150	120	Backdrop / Ramp
														47.270	100		
FW5	48.05	1.53	385315.41	398030.69	300 x 300	C250	Recessed	450	Type 3	F1.004	46.520	150	F1.003 F1.006 1No. Branch	47.120	150	600	Backdrop / Ramp
														46.570	100		
														46.570	100		
FW9	48.72	1.43	385323.01	398035.99		Grease Trap to be specified and sized by Supplier				F1.009	47.290	100	F1.008	47.340	100		Levels to be confirmed by Supplier's Specification
FW6	48.00	1.01	385327.857	398017.852	300 x 300	A15	Recessed	450	Type 3	F1.007	46.987	100	1No. Branch	46.987	100		
FW7	48.70	2.00	385323.931	398022.569	300 x 300	A15	Recessed	450	Type 1	F1.006	46.697	100	F1.007	46.697	100		Backdrop
													2No. Branch	46.697	100		
													2No. Branch	47.830	100	1133	
FW6	47.98	2.77	385312.51	398028.82	600 x 600	C250	Recessed	1200	Type 3	F1.005	45.211	225	F1.004	46.438	150	1227	Backdrop connections
													2No. Branches	46.258	150	1047	
RE1	48.75	1.09	385340.957	398054.422	300 x 300	C250	Recessed		PD006		47.66	150					Rodding Eye
RE2	48.70	0.91	385337.133	398023.867	300 x 300	A15			PD006		47.79	100					Rodding Eye
RE3	48.70	0.75	385339.947	398030.073	300 x 300	A15			PD006		47.95	100					Rodding Eye
RE4	48.70	0.73	385341.310	398028.765	300 x 300	A15			PD006		47.97	100					Rodding Eye
RE5	48.70	0.78	385329.846	398019.777	300 x 300	A15			PD006		47.92	100					Rodding Eye

Surface Water Pipe Schedules

Pipe Ref	Pipe Dia Ø (mm)	Invert Level (mOD)		Plan Length (m)	Slope (1:x)	Pipe Bedding	Notes
		U.Stream	D.Stream				
S1.000	225	46.20	46.070	28.2	217	Class S	
S1.001	225	46.070	46.070	0.85	0	Class S	Connection to Attenuation Tank
S1.002	300	46.070	45.809	13.8	53	Class S	Connection from Attenuation Tank
S1.003	300	45.804	45.515	18.35	63	Class S	
S1.004	225	45.217	45	7.9	36	Class S	Saddle Connection to UU Sewer

Foul Water Pipe Schedules

Pipe Ref	Pipe Dia Ø (mm)	Invert Level (mOD)		Plan Length (m)	Slope (1:x)	Pipe Bedding	Notes
		U.Stream	D.Stream				
F1.000	100	48.023	47.880	5.1	36	PD010	
F1.001	100	47.880	47.540	15.1	44	PD010	
F1.002	150	47.490	47.340	12	80	Class S	Ramp to FW4 (IL=47.22* to be confirmed by Grease Trap supplier)
F1.003	150	47.220	47.120	8.3	83	Class S	Backdrop to FM5 (IL 46.52)
F1.004	150	46.520	46.438	2.6	32	Class S	
F1.005	225	45.211	45.000	4.78	23	Class S	*Approximate Invert Level of existing UU Sewer from Site team. Level to be confirmed when building the connection
F1.006	100	46.697	46.570	12.3	97	PD010	
F1.007	100	46.987	46.697	4.64	16	PD010	
F1.008	100	47.790	47.340	17.88	40	PD010	From Kitchen to Grease Trap
F1.009	100	47.290	47.270	0.8	40	Class S	From Grease Trap

DESIGN ASPECTS REGISTER

- 1 Invert Level of Public Sewer at point of connection to be confirmed on site before commencement of the drainage works.
- 2 Attenuation Tanks - Refer to Supplier's Drawing. Protection Slab may be required for Traffic Loading - To be confirmed by Contractor and Tank Supplier/Designer.
- 3 Drainage Connection to Public Sewer Subject to Section 106 Part 1 and Part 2 application and approval by UU.
- 4 Drainage within yellow hatch is issued for information only and require further coordination before construction issue.

SAFETY, HEALTH & ENVIRONMENTAL

This Information relates to only significant/unusual risks

- Notes
- All dimensions are in metres, all levels in mOD unless specified otherwise.
 - This drawing is copyright and is for use at the permission of Arup. This drawing should be read in conjunction with all relevant consultants drawings and specifications.
 - Layout is based on drawing 63048-SSL-ZZ-00-DR-A-2000 Rev P17.
 - All gully and linear drainage connections are to be 150mm diameter.
 - Final gully and channel locations to be verified on site by contractor taking into account final architect's paving layout and installation details.
 - Connection levels to existing drainage to be confirmed on site by contractor. If different that stated, engineer is to be informed.
 - Pop-Up Locations are based on drawings 7396-SSL-ZZ-00-DR-A-2300_P10 63048-ABE-XX-00-DR-M-5200
 - Specification: All drainage to be in accordance with the Building Regulations Part H and Civil Engineering Specification for the Water Industry (CESWI) 7th Edition.
 - Pipe Materials (Below Slab Drainage):
Cast Iron (BS EN 877) - For all drainage routed through sub-structure
Pipex PPH SDR 17.6 single containment system to BE EN 1852
Pipe Materials (External Drainage):
Vitrified Clay (BS 65 and BS EN 295);
PVC (BS EN 13476-1 and BS EN 13476-3)
 - Drainage based on domestic/commercial effluent only.
 - All FW Pipes to be Ø100 at 1:40 slope unless otherwise specified on the plan/schedules
All SW Pipes to be Ø150 at 1:60 slope unless otherwise specified on the plan/schedules
 - All Drainage Connections to Public Sewer (FW & SW) subject to Section 106 Application with United Utilities before commencement of the works
 - Invert Level of Existing UU Sewers at the point of connection to be confirmed before commencement of the drainage works.
 - All above ground drainage to have an access point immediately above ground floor level for rodding, to allow for inspection of the below slab connection.

C04	07/05/21	ARR	AR	AR
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Last Construction Issue

C03	29/09/20	ARR	AR	AR
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Issued for Construction

C02	09/09/20	ARR	AR	AR
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Issued for Construction

C01	30/07/20	ARR	AR	AR
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Issued for Construction

Rev	Date	By	Chkd	Appd
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ARUP

10th Floor, the Plaza
100 Old Hall Street, Liverpool, L3 9QU
Tel +44 (0)151 227 9397
www.arup.com

Client

Capital and Centric

Project Title

Leonardo Hotel
Adair Street, Manchester

Drawing Title

Proposed Drainage
Manhole and Pipe Schedules

Scale at A1

Not to scale

Role

Civil

Suitability

- For Construction

Arup Job No

264397

Rev

C04

Name

63048-ARP-ZZ-ZZ-DR-D-5002