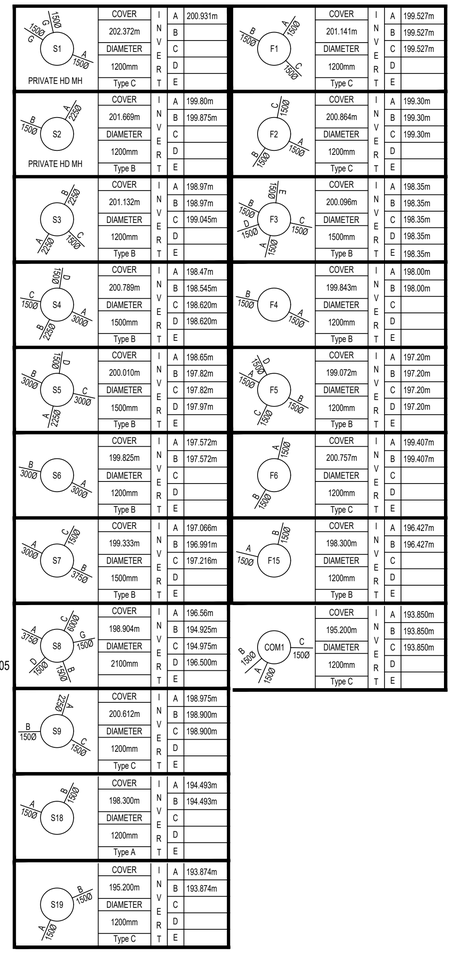
H-3-264-800

MANHOLE SCHEDULE

MH No.	MANHOLE DIAMETER (mm)	MANHOLE TYPE	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH TO SOFFIT (m)	EASTING (m)	NORTHING (m)	COVER TYPE/ SIZE
Private HD MH S1	1200	Type C	202.372	200.931	1.291	424270.36	412836.028	D400 (600x600)
Private HD MH S1	1200	Type B	201.669	199.80	1.644	424303.115	412823.53	D400 (600x600)
S3	1200	Type B	201.132	198.97	1.937	424314.661	412843.69	D400 (600x600)
S4	1500	Type B	200.789	198.47	2.019	424320.778	412855.933	D400 (600x600)
S5	1500	Type B	200.010	197.82	1.890	424368.044	412834.222	D400 (600x600)
S6	1200	Type B	199.825	197.572	1.953	424382.605	412831.073	D400 (600x600)
S7	1500	Type B	199.333	196.991	1.967	424409.829	412817.657	D400 (600x600)
S8 REFER TO DRAWING AMA/21311/D/505	2100		198.904	194.925	3.379	424433.216	412806.558	Twin D400 (600x600)
S9	1200	Type C	200.612	199.00	1.487	424434.488	412803.185	D400 (600x600)
S18	1200	Type A	198.300	194.493	3.657			D400 (600x600)
S19	1200	Type C	195.200	193.874	1.176			D400 (600x600)
TANK ACCESS-1 REFER TO TANK DRAWING SAT UK 028145			198.650			TWIN D400 (600x600) WITH LOCKABLE FALL ARREST GRILL		
TANK ACCESS-2 REFER TO TANK DRAWING SAT UK 028145			198.350					D400 (600x600)
TANK ACCESS-3 REFER TO TANK DRAWING SAT UK 028145			198.700					D400 (600x600)
F1	1200	Type C	201.141	199.527	1.464	424316.723	412844.284	D400 (600x600)
F2	1200	Type C	200.864	199.30	1.414	424322.434	412853.060	D400 (600x600)
F3	1500	Type B	200.096	198.35	1.596	424365.527	412832.713	D400 (600x600)
F4	1200	Type B	199.843	198.00	1.693	424383.220	412828.903	D400 (600x600)
F5	1200	Type B	199.072	197.20	1.722	424425.943	412807.763	D400 (600x600)
F6	1200	Type C	200.757	199.407	1.200	424361.822	412817.241	D400 (600x600)
F15	1200	Type B	198.300	196.427	1.723			D400 (600x600)
COM1	1200	Type C	195.200	193.850	1.200			D400 (600x600)

REFER TO DRAWING AMA/21311/D/505

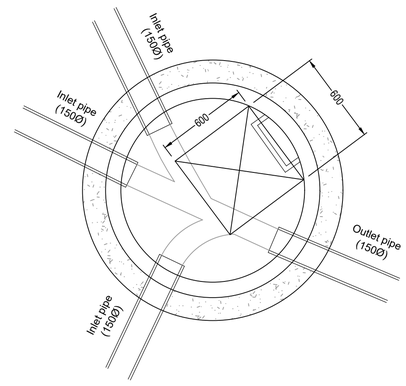


Lateral Surface Water Manhole Schedule

Manhole Reference	Cover Level (m)	Invert Level (m)	Depth (m)	Type	Chamber Size (mm)	Cover Frame	Pipe Material	Length & Gradient	PPIC Manufacturer
SW10	201.450	199.500	1.9500	RA-PPIC	450	B125	Plastic	7.00m 1in15	Polypipe
SW11	201.025	199.190	1.8350	RA-PPIC	450	B125	Plastic	5.70m 1in10	Polypipe
SW12	200.900	199.000	1.9000	CONC	1200	D400	Plastic	6.60m 1in17	Polypipe
SW13	200.150	198.570	1.5800	RA-PPIC	450	B125	Plastic	6.00m 1in10	Polypipe
SW14	200.8000	199.0500	1.7500	RA-PPIC	450	B125	Plastic	7.20m 1in96	Polypipe
SW15	200.750	199.400	1.3500	CONC	1200	D400	Plastic	6.20m 1in19	Concrete Ring
SW16	199.400	197.566	1.8340	RA-PPIC	450	B125	Plastic	3.50m 1in10	Polypipe
SW17	199.125	197.300	1.8250	RA-PPIC	450	B125	Plastic	7.20m 1in10	Polypipe

Lateral Foul Water Manhole Schedule

Manhole Reference	Cover Level (m)	Invert Level (m)	Depth (m)	Type	Chamber Size (mm)	Cover Frame	Pipe Material	Length & Gradient	PPIC Manufacturer
FW7	201.425	199.9000	1.5250	RA-PPIC	450	B125	Plastic	5.20m 1in32	Polypipe
FW8	201.200	199.650	1.5500	RA-PPIC	450	B125	Plastic	6.70m 1in50	Polypipe
FW9	200.900	199.400	1.5000	CONC	1200	D400	Plastic	8.00m 1in80	Concrete Ring
FW10	200.150	198.4500	1.7000	RA-PPIC	450	B125	Plastic	7.70m 1in77	Polypipe
FW11	200.300	198.8500	1.4500	RA-PPIC	450	B125	Plastic	7.00m 1in14	Polypipe
FW12	201.1500	199.6000	1.5500	CONC	1200	D400	Plastic	9.70m 1in50	Concrete Ring
FW13	199.200	197.4000	1.8000	RA-PPIC	450	B125	Plastic	5.20m 1in26	Polypipe
FW14	199.200	197.400	1.8000	RA-PPIC	450	B125	Plastic	7.90m 1in40	Polypipe



PLAN ON FW5 (1:20)

Yorkshire Water Notes

1. All adoptable sewer works and material to be in accordance with Design and Construction Guidance, The Relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
2. Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
3. Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
4. Yorkshire Water is not obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section with regard to the disposal of the filter drain/land drainage run-off.
5. Cover slabs must carry the BSI Kitemark or will be rejected by Yorkshire Water Inspector. Where the clear opening of the Kitemarked product is different to that of the cover and frame, a loading bearing slab should be fitted above the cover slab to bring the size down to 600mm x 600mm for the Yorkshire Water specified cover size. Please refer to Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued Autumn 2004 for Kitemarked cover slab opening sizes.
6. Sulphate resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
7. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
8. "Sewers must have 5 metres clearance from trees and hedges (please **also refer to the Design and Construction Guidance for restrictions on tree planting adjacent to sewers)".**
9. Sewers to be laid in Class "S" Bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in **highways and verges (or less than 900mm in none vehicular access** areas) then a concrete slab should be provide above granular bed and surround.
10. Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
11. The chamber size of manholes with more than one connection in them may need to be increased an increment to accommodate the connections and bends.
12. Yorkshire Water policy is not to accept Type "C" brick manholes and 1050mm dia manhole rings. Instead it is preferred that you use a Type "B" manhole with 1200mm dia or 1500mm dia rings, with the opening sited over the channel where depth of cover to pipe soffit is 1 - 1.5m.
13. Adoptable plastic sewer pipes to be BSI Kitemarked (certified to WIS 4-35-01 and BS/EN13476).Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channel in manholes. We have found that plastic channels are difficult to set in concrete because they float and a satisfactory finish cannot be obtained on the benching.
14. Where a B125 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.
15. Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height **(please also refer to the Design and Construction Guidance for restrictions on tree planting adjacent to sewers).**
16. There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm : if crossover is near the rocker then the clearance needed may be increased".
17. The minimum crushing strength for clay pipes should be as follows : 100mm dia. 40KN/m, 150mm dia. 40KN/m, 225mm dia. 45KN/m and 300mm dia. 72KN/m. The minimum crushing strength for concrete pipes should be - (**Class 120 to EN 1916/BS5911-1 2002**). Plastic pipes should conform to WIS 4-35-01 and BS EN13476.

NOTES

REV	DESCRIPTION	DATE	BY
P3	Revised in accordance with YW comments	14.4.22	TM
P2	Revised in accordance with YW comments	10.3.22	TM
P1	Preliminary - Initial Issue	4.2.22	TM

ANDREW MOSELEY ASSOCIATES
ECOLOGICAL AND DEVELOPMENT PLANNING CONSULTANTS

Project:
Residential Development off Wentworth Drive, Emley

Client:
Barratt Homes

Drawing:
Section 104 Manhole Schedule

Drawn By:	Date:
TM	05/01/2022
Checked:	Scale:
GS	-

A1

Drawing No: AMA/21311/D/504

Rev: P3