

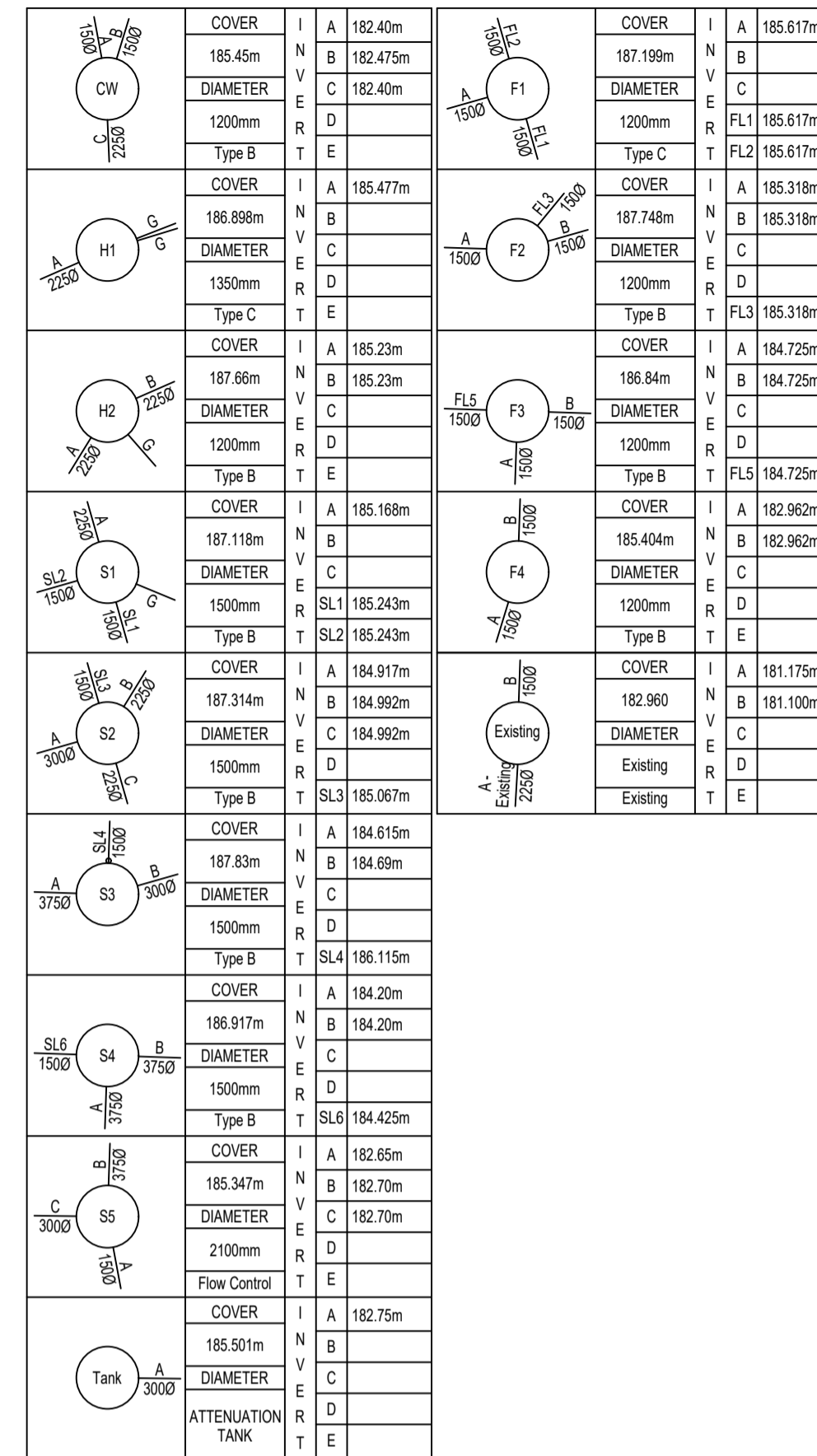
PHASE: 0

MH No.	MANHOLE DIMENSION (mm)	MANHOLE TYPE	COVER TYPE	COVER Size	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH TO SOFFIT (m)	EASTING (m)	NORTHING (m)
H1	1350Ø	Type C	D400	600 x 600	186.898	185.477	1.196	420473.425	428493.054
H2	1200Ø	Type B	D400	600 x 600	187.660	185.230	2.205	420439.622	428478.202
S1	1500Ø	Type B	D400	600 x 600	187.118	185.168	1.725	420431.303	428451.936
S2	1500Ø	Type B	D400	600 x 600	187.314	184.917	2.097	420428.814	428460.647
S3	1500Ø	Type B	D400	600 x 600	187.830	184.615	2.840	420407.680	428454.611
S4	1500Ø	Type B	D400	600 x 600	186.917	184.200	2.342	420346.365	428456.584
S5	2100Ø	Flow control	D400	Twin 600 x 600 or Twin 610 x 675	185.347	182.650	2.547	420345.557	428433.061
Tank									
CW	1200Ø	Type B	D400	600 x 600	185.400	182.400	2.650	420346.440	428428.331
F1	1200Ø	Type C	D400	600 x 600	187.199	185.617	1.432	420432.123	428459.079
F2	1200Ø	Type B	D400	600 x 600	187.748	185.318	2.280	420409.113	428452.515
F3	1200Ø	Type B	D400	600 x 600	186.840	184.725	1.965	420348.619	428454.477
F4	1200Ø	Type B	D400	600 x 600	185.404	182.962	2.292	420347.865	428432.985

S5 - Flow Control, see drawing 48785-ECE-XX-XX-DR-C-0013 Flow Control Detail  
 Tank - See Carlow Concrete drawings - STS4287 001-007

TANK TURRET SCHEDULE

Manhole	Easting	Northing	Cover Level	Cover Size	Cover
Tank 1	420337.168	428433.456	185.600	Twin 600 x 600 or Twin 610 x 675	D400
Tank 2	420337.633	428438.619	185.880	600 x 600	D400
Tank 3	420313.150	428430.202	185.100	600 x 600	D400
Tank 4	420313.446	428439.398	185.100	600 x 600	D400



ALLOWABLE DEMARCATION CHAMBER MANUFACTURERS

Manufacturer	Product Name	Material	Max Depth	Cover Type
Naylor	Plastic Inspection Chamber	Polypropylene	Up to 3000mm	Class B125
Hepworth	PPIC	Polypropylene	Up to 3000mm	Class B125
Uponor	Inspection Chamber (450mmØ)	Polypropylene	Up to 3000mm	Class B125
Marshalls	Inspection Chamber to BS5911 pt 2	PCC	Up to 3000mm	Class B125
Wavin	Osma UltraRib Inspection Chamber	Polypropylene	Up to 3000mm	Class B125
Wavin	OsmaDrain Universal Inspection Chamber	Polypropylene	Up to 3000mm	Class B125
Marley	Inspection Chamber (450mmØ)	Polypropylene	Up to 3000mm	Class B125
Polypipe	110mm Inspection Chamber (460mmØ)	Polypropylene	Up to 3000mm	Class B125

All lateral pipes to have a class S bed and surround as detailed, and the trench backfilled with Type B excavated material in landscaped areas and Type 1 granular material elsewhere.

MINIMUM LATERAL GRADIENTS

Diameter (mm)	Gradient	
	Foul	SW
100Ø	1:40	1:100
150Ø	1:80	1:150
225Ø	1:125	1:225

ALLOWABLE LATERAL PIPE MANUFACTURERS

Product Name	Diameter (mm)	Manufacturer	Material
SuperSleeve	100 & 150 (ID)	Hepworth	Vitrified Clay
SuperSeal	150 & 225 (ID)	Hepworth	Vitrified Clay
Densleeve	100, 150 & 225 (ID)	Naylor	Vitrified Clay
Denseal	100, 150 & 225 (ID)	Naylor	Vitrified Clay
Ultra-Drain	110 & 160 (OD)	Uponor	uPVC
Plastidrain	110 & 160 (OD)	Hepworth	uPVC
OsmaDrain	110 & 160 (OD)	Wavin	uPVC
Osma UltraRib	150 & 225 (ID)	Wavin	uPVC
Solid Wall	110 & 160 (OD)	Marley	uPVC
Quantum	150 & 225 (ID)	Marley	uPVC
Underground Drain	110 & 160 (OD)	Polypipe	uPVC
Ridgisewer	150 & 225 (ID)	Polypipe	uPVC

FOUL WATER DEMARCATION CHAMBER SCHEDULE																			
Chamber	Easting	Northing	Cover Level	Invert Level	Depth to Soffit	Depth to Invert	Chamber Type	Restrictor Cap	Pipe Length	Pipe Diameter	Pipe Material	Pipe Manufacturer	Chamber Diameter	Chamber Material	Chamber Manufacturer	Cover	Cover Size	Gradient	IL at Connection
FL01	420435.748	428446.389	187.10	185.82	1.13	1.28	C	No	11.848	150	VC	See table below	1200	See table below	See table below	D400	600 x 600	58	185.617
FL02	420428.261	428472.600	187.70	186.55	1.00	1.15	D	No	13.312	150	VC	See table below	450	See table below	See table below	B125	450dia	14	185.617
FL03	420416.471	428461.469	187.80	186.40	1.25	1.40	D	Yes	10.989	150	VC	See table below	450	See table below	See table below	B125	450dia	10	185.318
FL04	420354.013	428448.425	186.75	184.36	2.24	2.39	D	Yes	5.603	150	VC	See table below	450	See table below	See table below	B125	450dia	10	183.795
FL05	420341.392	428454.709	186.45	184.81	1.49	1.64	D	Yes	6.631	150	VC	See table below	450	See table below	See table below	B125	450dia	78	184.725

SURFACE WATER DEMARCATION CHAMBER SCHEDULE																			
Chamber	Easting	Northing	Cover Level	Invert Level	Depth to Soffit	Depth to Invert	Chamber Type	Restrictor Cap	Pipe Length	Pipe Diameter	Pipe Material	Pipe Manufacturer	Chamber Diameter	Chamber Material	Chamber Manufacturer	Cover	Cover Size	Gradient	IL at Connection
SL01	420433.057	428445.746	187.15	185.42	1.58	1.73	B	Yes	5.234	150	VC	See table below	1200	See table below	See table below	D400	600 x 600	30	185.243
SL02	420427.513	428450.849	187.30	185.51	1.64	1.79	D	Yes	3.343	150	VC	See table below	450	See table below	See table below	B125	450dia	13	185.243
SL03	420426.422	428469.022	187.60	185.88	1.57	1.72	D	Yes	8.110	150	VC	See table below	450	See table below	See table below	B125	450dia	10	185.067
SL04	420407.827	428459.199	188.00	186.50	1.35	1.50	D	Yes	3.875	150	VC	See table below	450	See table below	See table below	B125	450dia	10	186.115
SL05	420352.955	428447.001	186.60	185.45	1.00	1.15	D	No	6.695	150	VC	See table below	450	See table below	See table below	B125	450dia	32	185.243
SL06	420342.063	428456.723	187.05	184.47	2.43	2.58	D	Yes	3.554	150	VC	See table below	450	See table below	See table below	B125	450dia	79	184.425

Yorkshire Water Notes

- All adoptable sewer works and material to be in accordance with "Code for Adoption", The Relevant British/European and Yorkshire Water's Standards/Requirements/Local Practice for the Adoption of Small Submersible Foul and Surface Water Pumping Stations and must be Kitemarked.
- Manhole covers shall have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
- Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
- 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.

- 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.
- Sulphate resistant cement (**C20-DC2**) and precast concrete products must be used or a laboratory report provided proving that such precautions are

not necessary.

- The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
- Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height. (please also refer **Design and Construction Guidance for restrictions on tree planting adjacent to sewers**).
- 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.
- Bedding and backfill material to conform to the

requirement of Water Industry Specification 4-08-02 (**Table A1**).

- 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.
- Yorkshire Water policy is that brick manholes and 1050mm dia. manhole rings are not preferred. Instead it is preferred that you use a type "B" manhole with 1200mm dia., 1350mm dia. or 1500mm dia. rings, with opening sited over the channel where depth of cover to pipe soffit is 1-1.5m.
- 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.

- 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.
- There should be enough clearance to accommodate the bedding for both pipes, approx. 300mm; if crossover is near the rocker then the clearance needed may be increased
- 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

EN1916/BS5911-1 2002). Plastic pipes should conform to WIS 4-35-01 and BE EN13476.

**For all clause and table references please refer to the Design and Construction Guidance contained within Code for Adoption**

REV	DESCRIPTION	SIG	CHK	DATE
P04	Updated to suit S104 comments	EL	GH	19/11/2025
P03	Updated to suit YW comments. Updated to suit latest drainage layout	EL	GH	03/10/2025
P02	Updated to suit YW comments. YW notes, cover sizes and demarcation schedules added.	GT	MA	01/01/2001
P01	First issue.	MA	GH	10/03/2025

RIVA HOMES

CROFT ST, BIRKENSHAW, BRADFORD, BD11 2HT

MANHOLE SCHEDULE

St Andrew's House  
23 Kingfield Road  
Sheffield, S11 9AS

T: 0114 255 4554  
E: mail@eastwoodce.com  
eastwoodce.com

ECE PROJECT No	SCALE AT A1	STATUS	SUITABLE FOR
<b>48785</b>	1:250	<b>S3</b>	<b>Comment</b>
DRAWING NUMBER			
<b>48785 - ECE - XX - XX - DR - C - 0017</b>			REV
Project	Originator	Zone	Level
		Type	Role
			Number