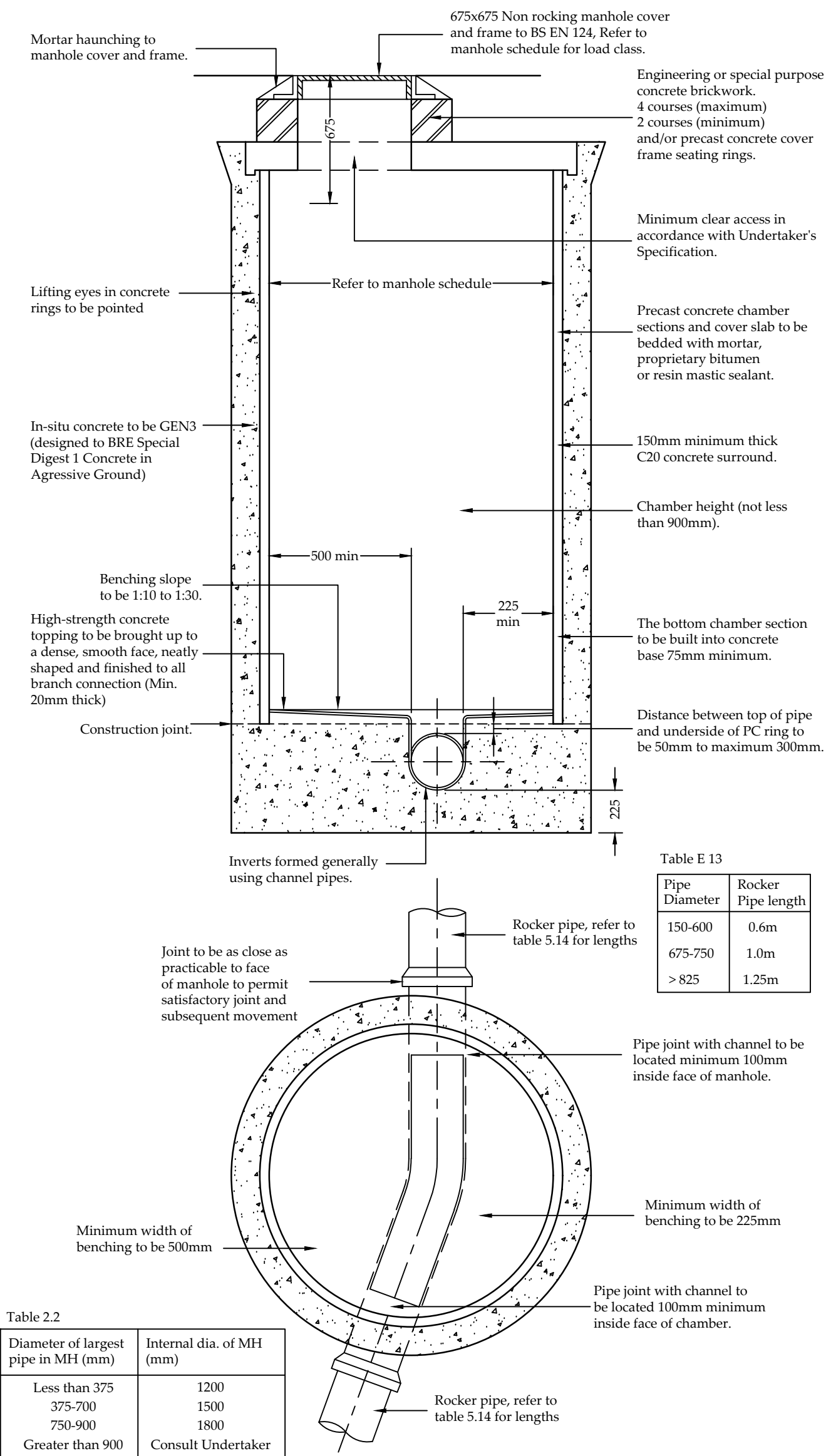
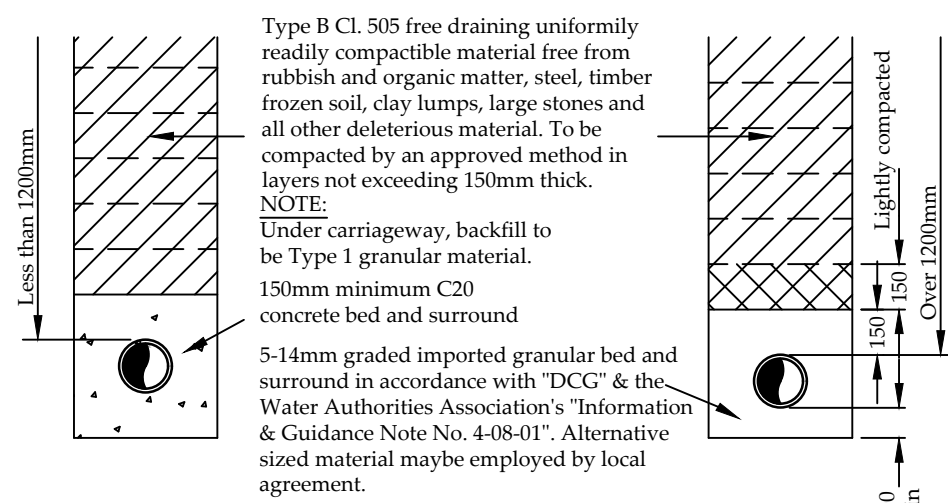




Typical Manhole Detail -Type B

Maximum depth from cover level to soffit of pipe 3.0m

The design of manholes will need to comply with the Undertaker's safety policy.



Under 1200mm

Over 1200mm

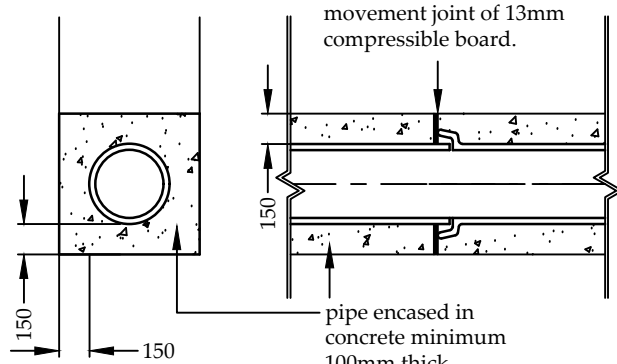
Pipe Bedding Details Concrete/Clay Pipes

1:25

NOTE: Pipe specification to "Sewers for Adoption" 6th edition. Vitrified Clayware to BS 65 and BS EN 295. OR Concrete to BS 5911 Part 100 Class M loading and flexibly jointed (Class 3 Sulphate resistant cement).

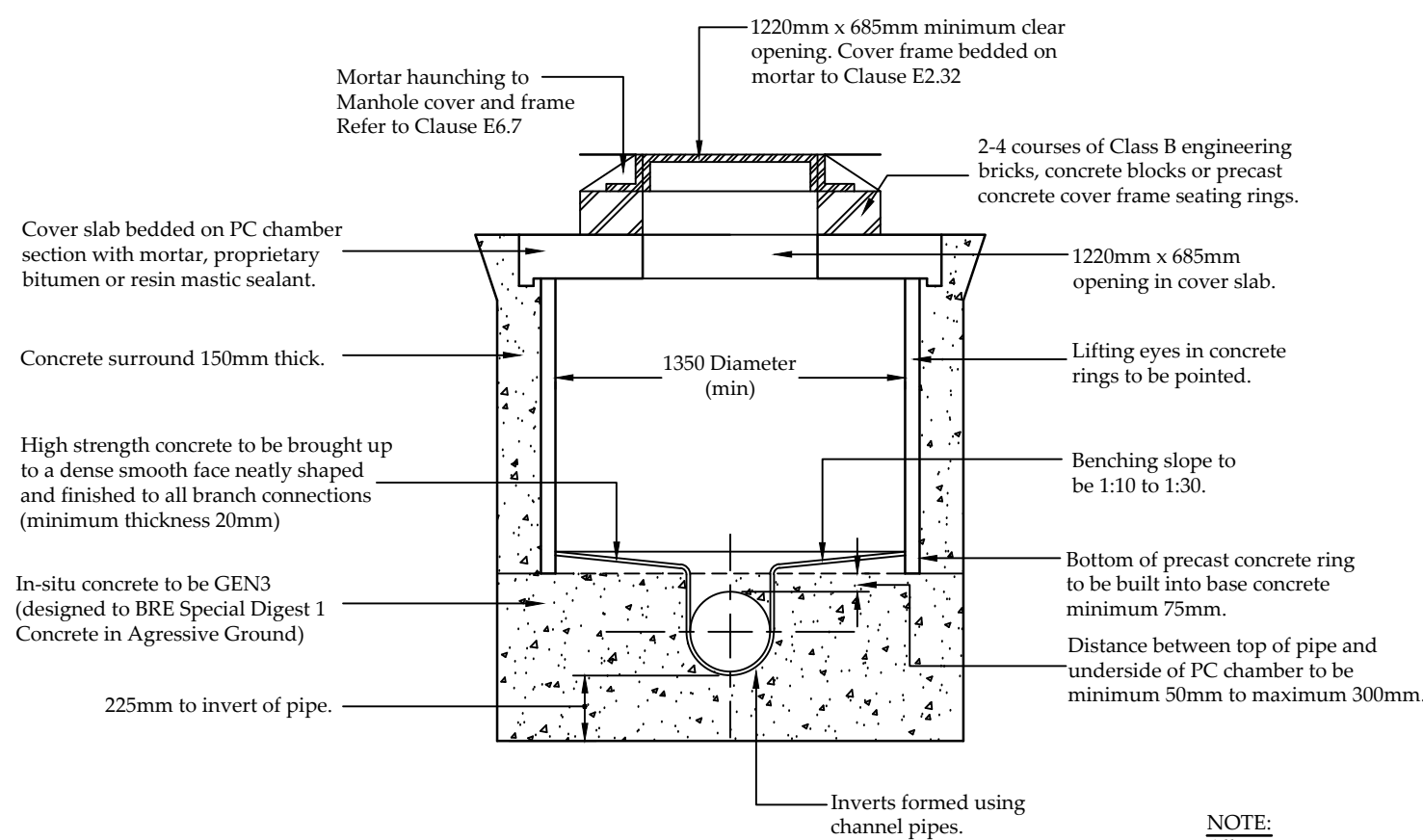
Plastic / UPVC pipes are not permitted at any point within the adoptable drainage network including demarcation chambers. UPVC pipes can only be used upstream of clay rocker pipe in demarcation chambers.

NOTE: For rigid pipes encased in concrete, movement joints of 13mm thick compressible board should be provided around the spigot next to the socket, either at each joint or at not more than 5m intervals.



Concrete surround to pipes where depth from finished road surface to pipe soffit <1.2m

1:25



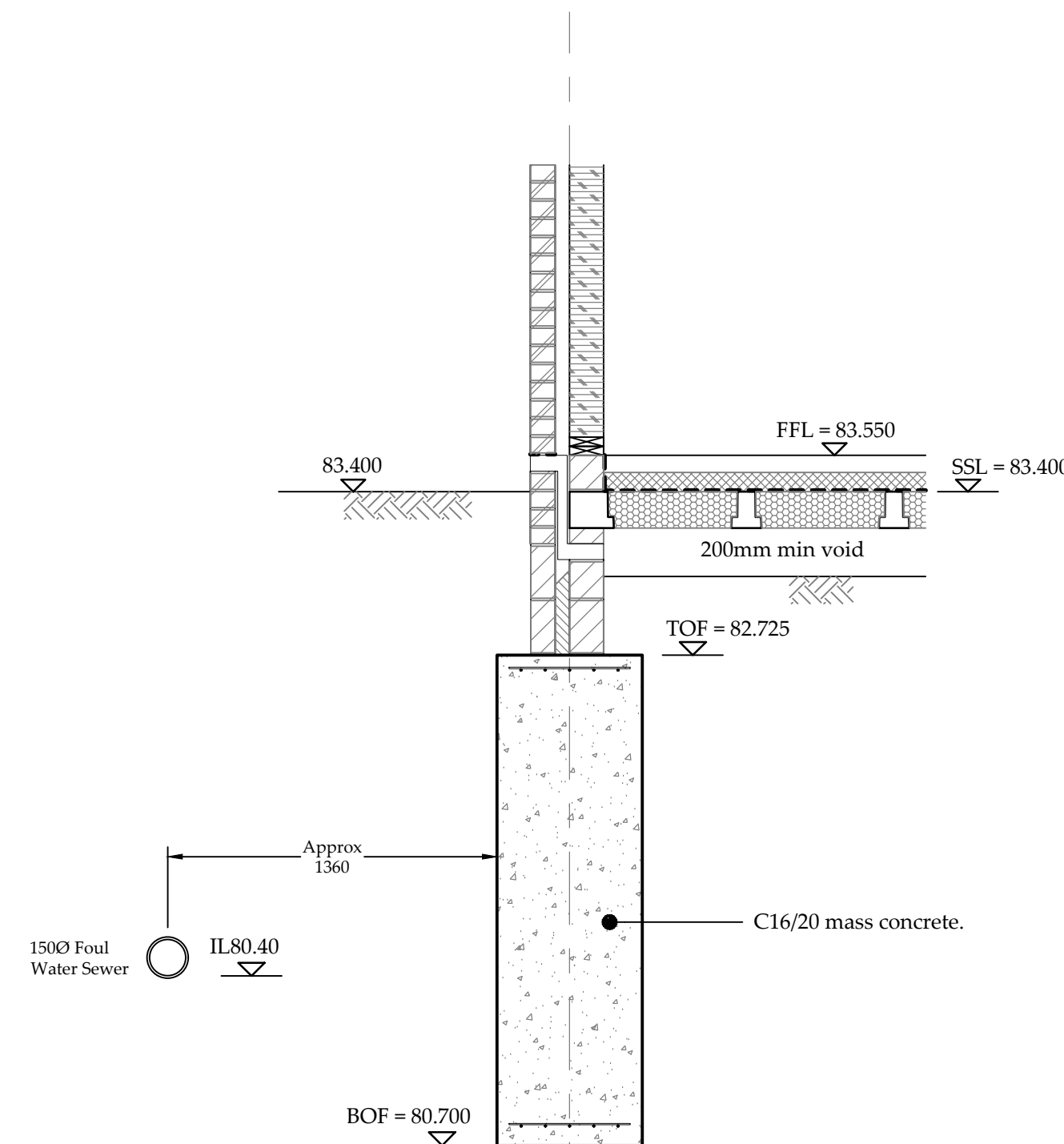
Typical Manhole Detail - Type C (B15)

Depth from cover level to soffit of pipe 1.0m to 1.5m

Maximum sewer diameter 450mm.

Approval of the undertaker must be given for installation of this type of manhole.

NOTE: All precast concrete sections/slab and in-situ concrete to be GEN3 (designed to BRE Special Digest 1 Concrete in Aggressive Ground).



Plot 23 Sewer Section

NOTE: All adoptable drainage works to be constructed as detailed in Sewerage Sector Guidance (SSG), or as stipulated in Anglian Water's Addendum.

ADOPTABLE DRAINAGE NOTES

2.1 All adoptable drainage works to be in accordance with the Sewerage Sector Guidance (SSG)

2.2 All adoptable drainage to be either:-
Vitrified Clayware to BS 65 and BS EN 295.
OR
Concrete to BS 5911 Part 100 Class M loading and flexibly jointed (Class 3 Sulphate resistant cement).

Contractor to confirm the approval for the type of pipe and bedding being used with the adopting Authority prior to any construction commencing.

2.3 All precast concrete units are to be to BS 5911 (Class 3 Sulphate resistant cement).

2.4 All manhole covers and frames are to be to BS EN 124 and kite marked (refer to schedule for load class) and badged 'FW' or 'SW' as appropriate.

2.5 All gully grates and frames to be to BS EN 124 Class D400

2.6 Where foul and surface water sewers cross and there is less than 100mm clearance short lengths of both runs are to be encased in concrete.

2.7 All gully connections are to be made via pre-formed junctions.

S104 Manhole Schedule

Rev C

Manhole Ref No.	Type of Manhole	Cover Level (approx)	Invert Level of Outlet Pipe	Approx Depth to invert level	Approx Depth to soffit level	Largest Pipe in Manhole (mm)	Internal size of Manhole	Cover Type		Remarks
								Clear Opening	Type	
F 1	C	83.350	81.800	1.550	1.400	150	1350dia	1220x675	B125	S104 Adoptable
F 2	B	83.100	80.750	2.350	2.200	150	1200dia	600x600	B125	S104 Adoptable
F 3	B	82.750	80.620	2.130	1.980	150	1200dia	600x600	B125	S104 Adoptable
F 4	B	82.750	80.550	2.200	2.050	150	1200dia	600x600	B125	S104 Adoptable
F 5	C	81.830	80.330	1.500	1.350	150	1350dia	1220x675	D400	S104 Adoptable
F 6	C	80.750	79.250	1.500	1.350	150	1350dia	1220x675	D400	S104 Adoptable

Notes:

- 1.1 Do not scale from this drawing.
- 1.2 All dimensions are in m unless otherwise specified.
- 1.3 In case of any discrepancies in drawings or details refer to engineer for clarification. Unilateral decisions by the contractor will not be accepted.
- 1.4 This drawing is to be read in conjunction with all related Architects, Consultants & Sub-Contractors drawings and specifications.
- 1.5 The Contractor is to ensure that all design drawings and information are read concurrently and any discrepancies or omissions reported directly to Aventus Design.
- 1.6 The Contractor must check the levels of all existing drainage outfalls prior to construction of any drainage, unless otherwise agreed, to ensure the proposed design may be achieved. Any discrepancies must be reported immediately to Aventus Design.
- 1.7 Sulphates have been determined as class 1 (DS-1) for design purposes in accordance with BRE Special Digest 1 (2001). Buried Concrete to be in accordance with ACEC Site Class AC-1.
- 1.8 All adoptable highway works to be in accordance with the Local Authorities Specifications.
- 1.9 All adoptable drainage works to be in accordance with the Water Authorities standard guidelines for connections etc.
- 1.10 Formation to road/hardstanding to be proof rolled and any soft spots in subgrade of road/Hardstanding areas are to be excavated and replaced with well compacted sub-base or free draining granular material to Department of Transport Specification for Highway Works Part 2' Table 6/1 Class 1 (General Granular Fill) and compacted in accordance with Table 6/4.

CDM REGULATIONS 2015

Aventus Design have considered and where reasonably practicable avoided foreseeable risks in the preparation of the design shown on this and related drawings. Significant risks which remain and associated control measures are identified in the Risk Register and should be given particular attention by the main contractor on site.

RISKS RELATING TO THIS DRAWING:

RISK NUMBERS 6 - 9 on Risk Register

NOTE: The Risk Register records only those elements considered unusual, difficult to manage or outside the anticipated expertise of a competent contractor.

Drawing Status	PRELIMINARY ISSUE	
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Manhole schedule updated, details amended to suit AWU comments, plot 23 Sewer Section added.				
C	24.04.25	Manhole schedule updated.	SU	-
B	31.07.24	Manhole schedule updated.	SU	-
A	06.12.23	Manhole schedule updated.	SU	-
REV.	DATE	DESCRIPTION	CHK	APP

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Aventus DESIGN
Civil & Structural Engineers

Client: **Cala Homes**

Site: **Oughtonhead Lane,
Hitchin,
Herts. SG5 2NA**

Title: **S104 Adoptable Drainage Details**

Drawing no. BA00378-C23		Aventus Ref. H1402	
Issue: C	Scale: 1:20 @ A1	Checked: -	Date: -
Drn: S.U.	Date: Oct '23	Approve: -	Date: -

50mm
100mm
150mm
200mm
250mm
ORIGINAL SIZE - A1