

TABLE (i)	
Diameter of largest pipe in manhole (mm)	Internal diameter of manhole (mm)
Less than 375	1200 (1050 where depth to soffit is 1.35m to 1.5m)
375 - 700	1500
750 - 900	1800
Greater than 900	Consult Undertaker/Engineer's Specification

TABLE (ii)	
Pipe Diameter (mm)	Rocker Pipe Length (mm)
150 - 600	600
601 - 750	1000
> 750	1250

ALL RCC RINGS ARE TO BE SPIGOT AND SOCKET BOND CONSTRUCTION.

MH Location	Cover Grade	Test Load
Non-trunked/ Pedestrian areas	A15	15
Private drives	B125	125
Parking courts	C250	250
Carriageway	D400	400
Airfields/Dockyards	E600	600
Airfields/Dockyards	F900	900

NRSWA Road Category	Description	Minimum Frame Depth (mm)
I	Trunk roads and dual carriageways	150
II	All other 'A' roads	150
III	Bus Services	150
IV	All other roads except residential cul-de-sacs	150
	Residential cul-de-sacs	100

HIGH STRENGTH TOPPING

1. High-strength concrete topping shall be produced, laid and finished in accordance with the relevant provisions of BS 8204: Part 2 and the following approximate proportions by weight shall be used: 1 part cement, 1 part natural sand and 2 parts single sized coarse aggregate.

RECESSED COVERS

1. Where inspection chamber is located in areas of block paving it shall be fitted with a recessed cover to accommodate paving blocks.

MANHOLE COVERS & FRAMES

1. Manhole cover and frames shall comply with the relevant provisions of BS EN 124, BS 7903 and Highway Agency Guidance Document HA 104/09. They shall be of a non-rocking design which does not rely on the use of cushion inserts.

2. All manhole covers shall be the non-ventilating type and shall have closed keyways.

3. Refer to Table iii for cover grades.

Pipe Depth	Catchpit Dia.
<1000mm	900Ø
1000-1350mm	1050Ø
1350-2700mm	1200Ø

PRE-CAST CONCRETE PRODUCTS

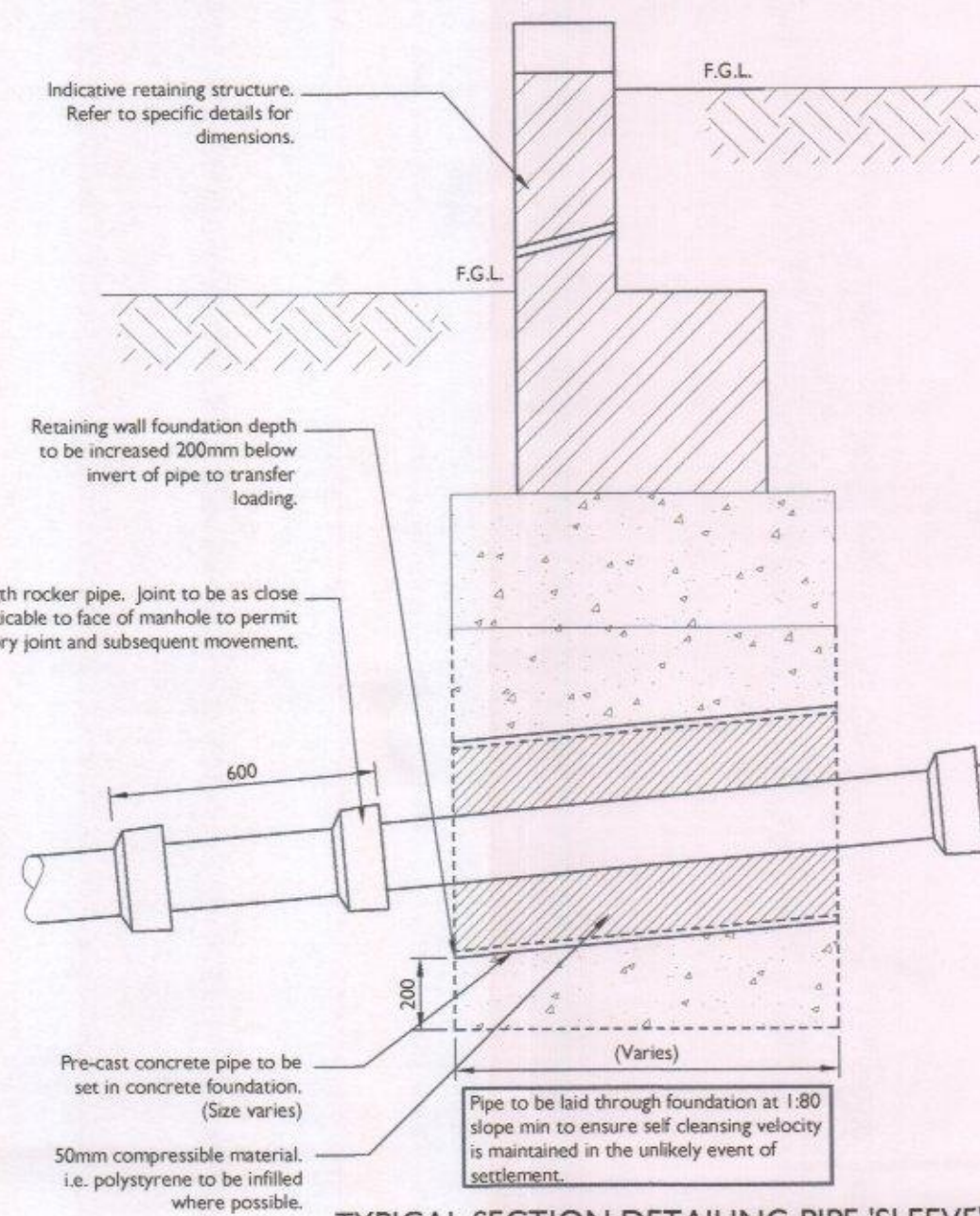
1. Products shall comply with the relevant provisions of BS 5911-4:2002

Minimum Dimensions for Access Fittings and Chambers					
Type	Internal Sizes			Cover Sizes	
	Depth to invert (m)	Length x Width (mm)	Circular (mm)	Length x Width (mm)	Circular (mm)
Rodding Eye	As Drain but Minimum 100mm				
Shallow Access					
Small	0.6 or less	150x100	150	150x100	150
Large	-	225x100	-	225x100	-
Inspection Chamber	0.6 or less	-	190	-	190
	1.0 or less	450x450	450	450x450	450
Manhole	1.5 or less	1200x750	1050	600x600	600
	Over 1.5	1200x750	1200	600x600	600
Manhole Shaft	Over 2.7	900x840	900	600x600	600

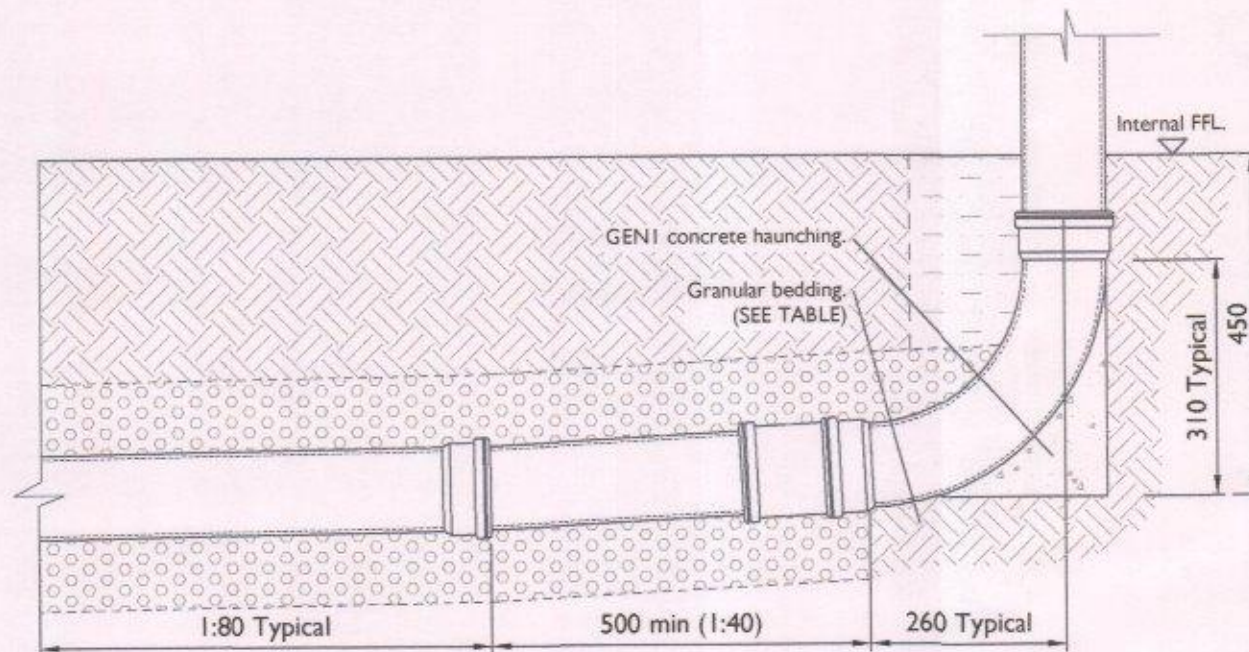
BUILDING REGULATIONS MINIMUM DIMENSIONS FOR MANHOLES
(Not to Scale)

This plan complies with the Building Regulations 2010 Section 'H' - Drainage & Waste Disposal.

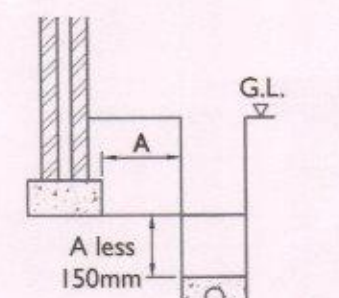
LIMITS OF COVER FOR STANDARD STRENGTH RIGID PIPE IN ANY WIDTH OF TRENCH							
PIPE BORE BEDDING CLASS		Fields and gardens		Light traffic roads		Heavy traffic roads	
		MIN	MAX	MIN	MAX	MIN	MAX
100mm	D or N F B	0.4	4.2	0.7	4.1	0.7	3.7
		0.3	5.8	0.5	5.8	0.5	5.5
		0.3	7.4	0.4	7.4	0.4	7.2
150mm	D or N F B	0.6	2.7	1.1	2.5	--	--
		0.6	3.9	0.7	3.8	0.7	3.3
		0.6	5.0	0.6	5.0	0.6	4.6
225mm	D or N F B	--	--	--	--	--	--
		0.6	2.5	1.2	2.1	--	--
		0.6	3.3	0.8	3.2	0.9	2.4



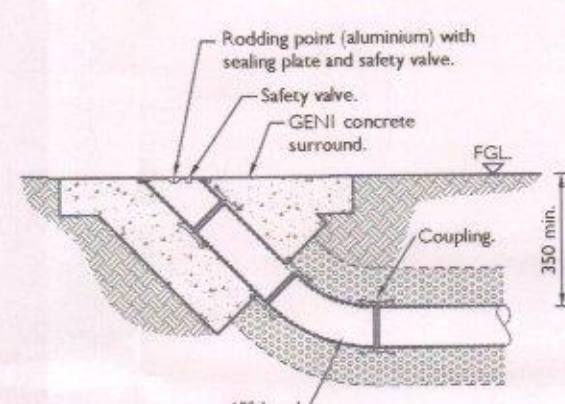
TYPICAL SECTION DETAILING PIPE 'SLEEVE' THROUGH BRICKWORK RETAINING WALL/FOUNDATION
(Scale 1:20)



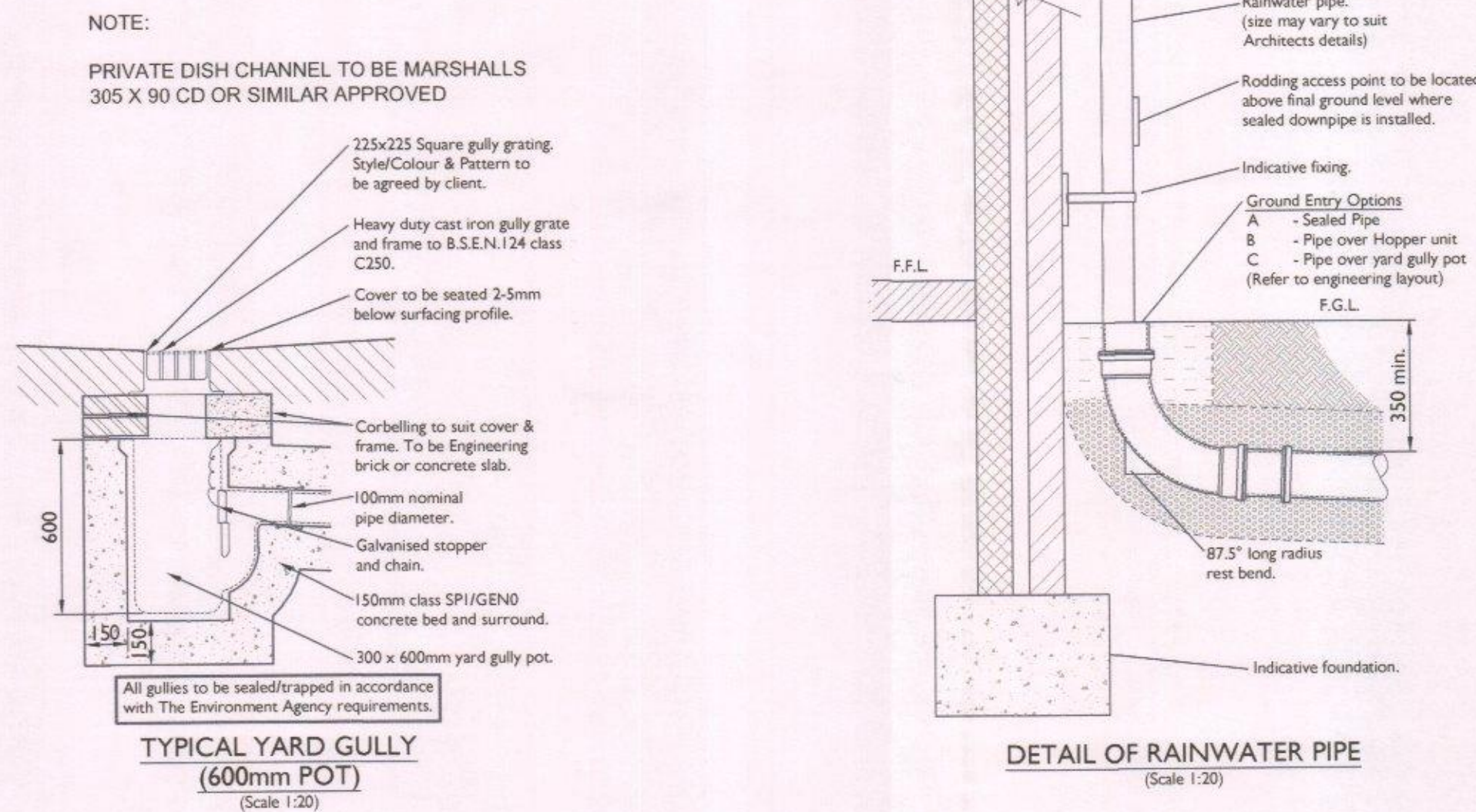
DETAIL OF FOUL REST BEND
(Scale 1:20)



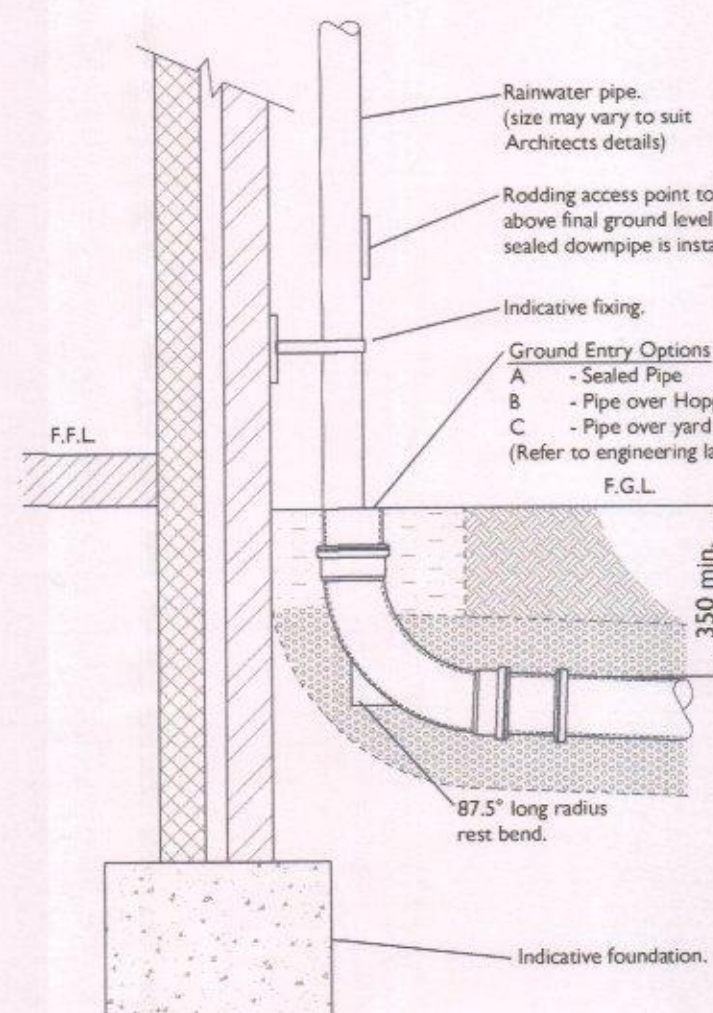
DETAIL OF PIPE RUNS NEAR BUILDINGS
(Not to Scale)



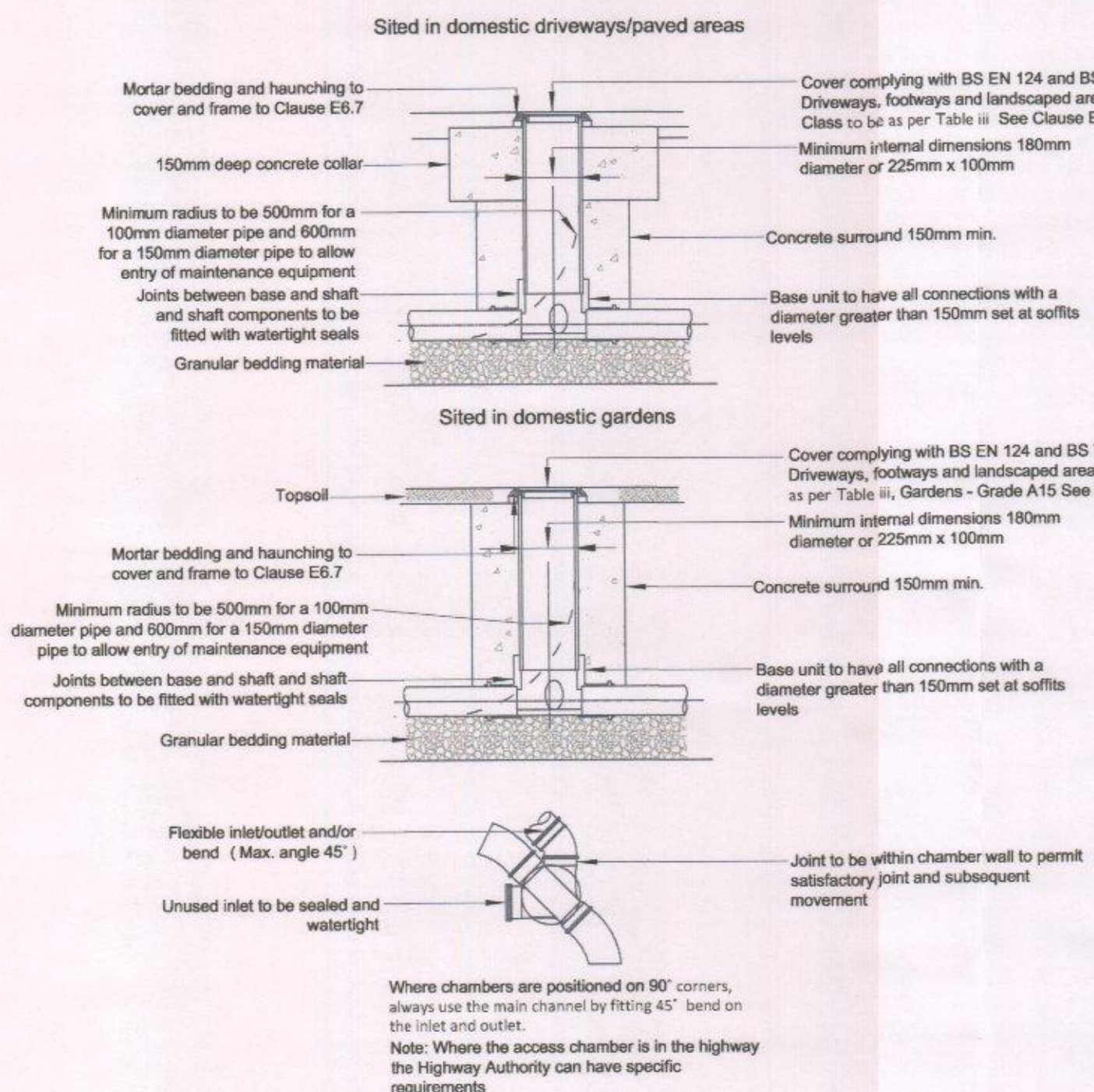
DETAIL OF RODDING EYE
(Scale 1:20)



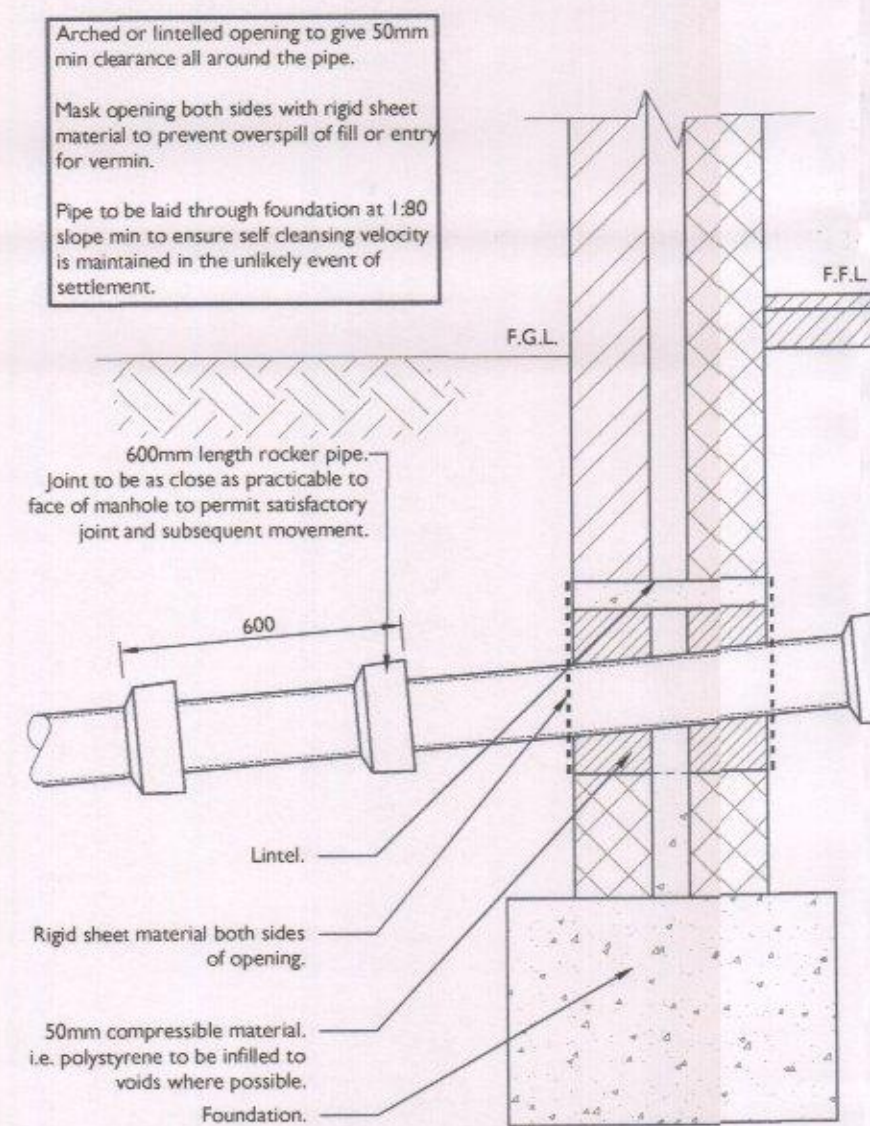
TYPICAL YARD GULLY (600mm POT)
(Scale 1:20)



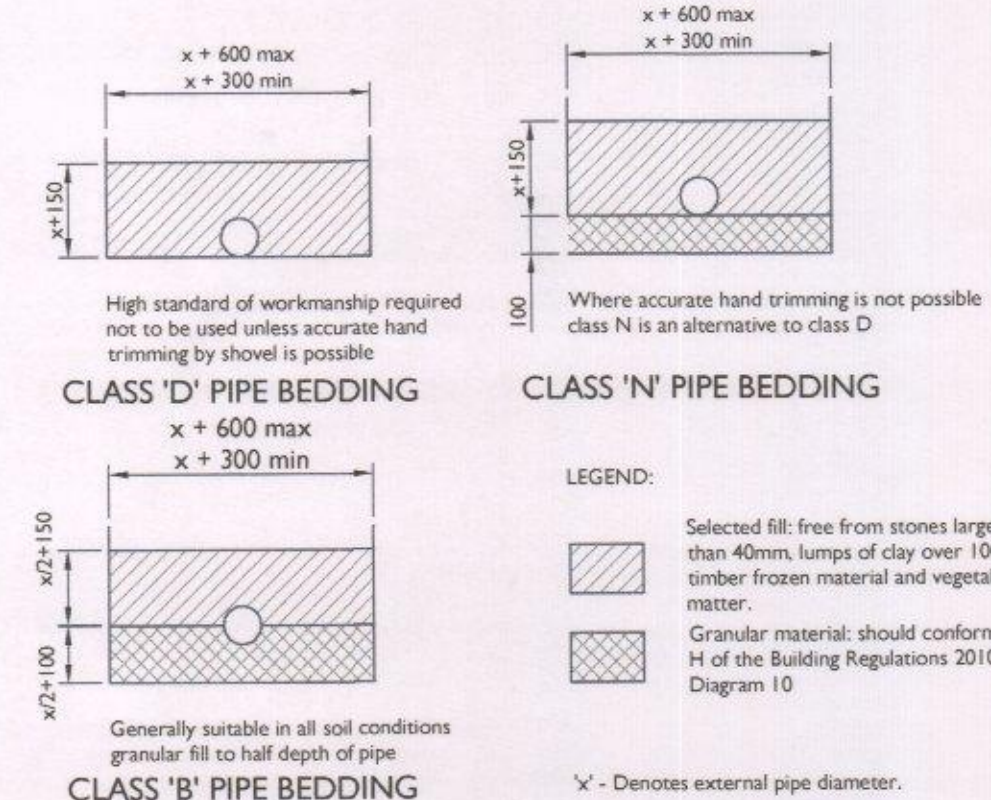
DETAIL OF RAINWATER PIPE
(Scale 1:20)



TYPICAL TYPE 4 INSPECTION CHAMBER DETAIL
(Scale 1:20)
Depth to soffit of up to 2.0m, non-entry
(To be read in conjunction with Sewers For Adoption 7th Edition)



TYPICAL SECTION DETAILING PIPE 'SLEEVE' THROUGH LINTEL OPENING
(Scale 1:20)



PIPE BEDDING DETAILS (PRIVATE DRAINS)
(Scale 1:20)



- STANDARD NOTES:**
- This drawing is to be read in conjunction with all other OPUS INTERNATIONAL CONSULTANTS (UK) LTD drawings, and with all relevant Architect's and Engineer's drawings and specification.
 - No dimensions are to be scaled from this drawing, but must be taken from site and / or the details.
 - Unless noted otherwise all dimensions are in millimeters and all levels are in metres from the site datum.
 - All dimensions to be checked on site. All details and dimensions relating to sub-Contractors work must be checked and agreed between the sub-Contractor or supplier and the general Contractor.
 - The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. Figured dimensions must be used for setting out and detailing. OPUS INTERNATIONAL CONSULTANTS (UK) LTD logos and company information must be removed from copies if information is re-used.
 - The main Contractor is responsible for the design of all temporary works, and is also responsible for the safe maintenance and stability of existing buildings at all times.
 - The main Contractor is responsible for all occurrences of ground water during the construction period.
 - Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main Contractor is responsible for checking all information on site prior to work commencing and taking due care and attention whilst undertaking the works.
 - The contractor must comply with all current legislation relating to Health & Safety.

ALL SERVICE PENETRATIONS THROUGH EXTERNAL WALLS BELOW GROUND LEVEL TO BE SEALED AGAINST VERMIN INGRESS, IN ACCORDANCE WITH THE BUILDING REGULATIONS, PART H1, SECTION I, PARA. 2.24.

PIPEWORK SPECIFICATIONS

Unless otherwise qualified on the drawings all pipe materials shall be selected as follows:

CLAY: (1000-1200Ø)
All pipe shall be Class 120 clayware to BS EN 295-1:2013.

UPVC: (1000-1100Ø)
All pipes shall be to BS EN 1401-1:2009.
All pipes shall be ribbed 'twin wall' to provide a suitable network (pipes & couplings).

CONCRETE: (2250-3000Ø)
All pipes shall be to BS EN 5911-1:2002.

All materials shall be BBA certified.

For Public Highway Drainage all materials shall comply with the Specification for Highway Works.

FOR PRIVATE HEADWALLS HCC STANDARD DETAILS ARE TO BE USED FOR CONSTRUCTION.

1:10 @ A1
1:20 @ A3
1:20 @ A1
1:40 @ A3

Revision	Amendment	Approved	Revision Date
R2	CONSTRUCTION ISSUE	CAA	11.12.2015
T1	GROUNDWORKS ISSUE	CAA	13.11.2015
P1	FIRST ISSUE	CAA	12.11.2015



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Modulus House,
Salterns Lane,
FAREHAM

Drawn	Designed	Approved	Revision Date
CAA	CAA	RM	
Project No.	Scale		
FA E-F1682.00	AS SHOWN		

Station Road,
Hayling Island

CONSTRUCTION DETAILS
Private Drainage

Drawing No.	Sheet No.	Revision
311	2 of 2	R2