

NOTES:

- Drainage design and construction to be in accordance with sewers for adoption 7th edition and the requirements of the statutory undertaker.
- Refer to drawing no. 001 for general notes.
- For drainage layout refer drawing no 002
- 100mm diameter plastic pipe shall comply with the relevant provisions of BS EN 1401-1, BS EN 1852 and BS EN 12666-1. thermoplastic chambers and rings shall comply with BS EN 13598-1 and BS EN 13598-2 and be kite marked.
- All pipes running through walls to have at least 50mm clearance all round and the opening masked with rigid sheet material.

NOTES:
This drawing and associated .dwg and or .dxf files are not to be used for dimensional information. Refer to Architects drawings for dimensions or obtain on site as appropriate UNO.

CONSTRUCTION (DESIGN & MANAGEMENT) REGULATIONS 2015:

DESIGNERS HAZARD INFORMATION FOR CONSTRUCTION

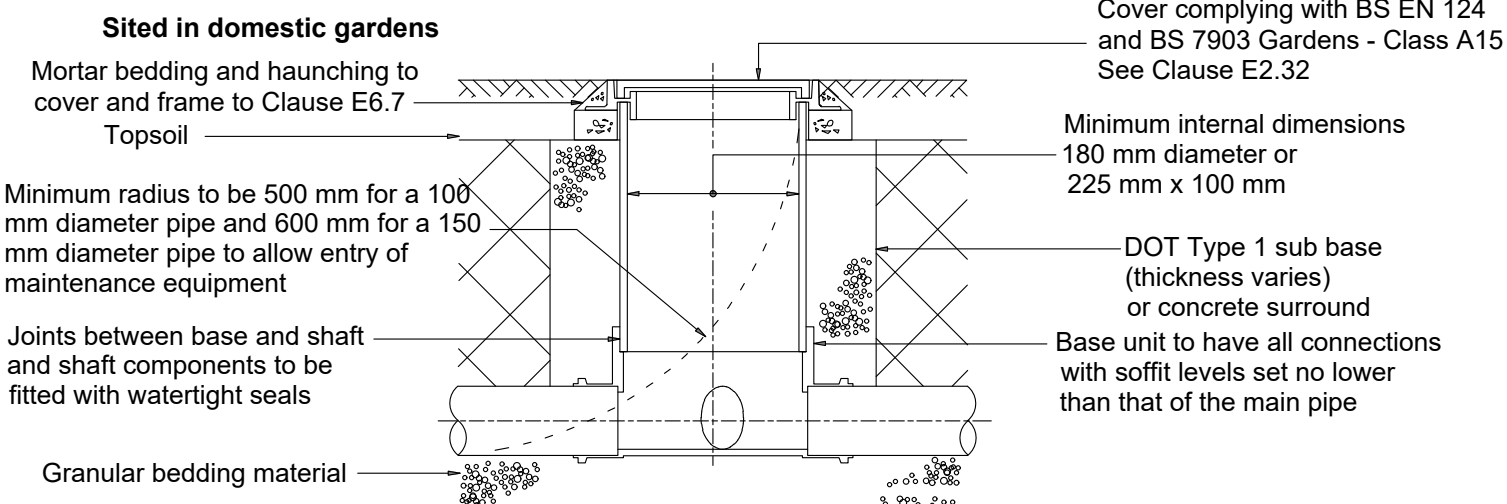
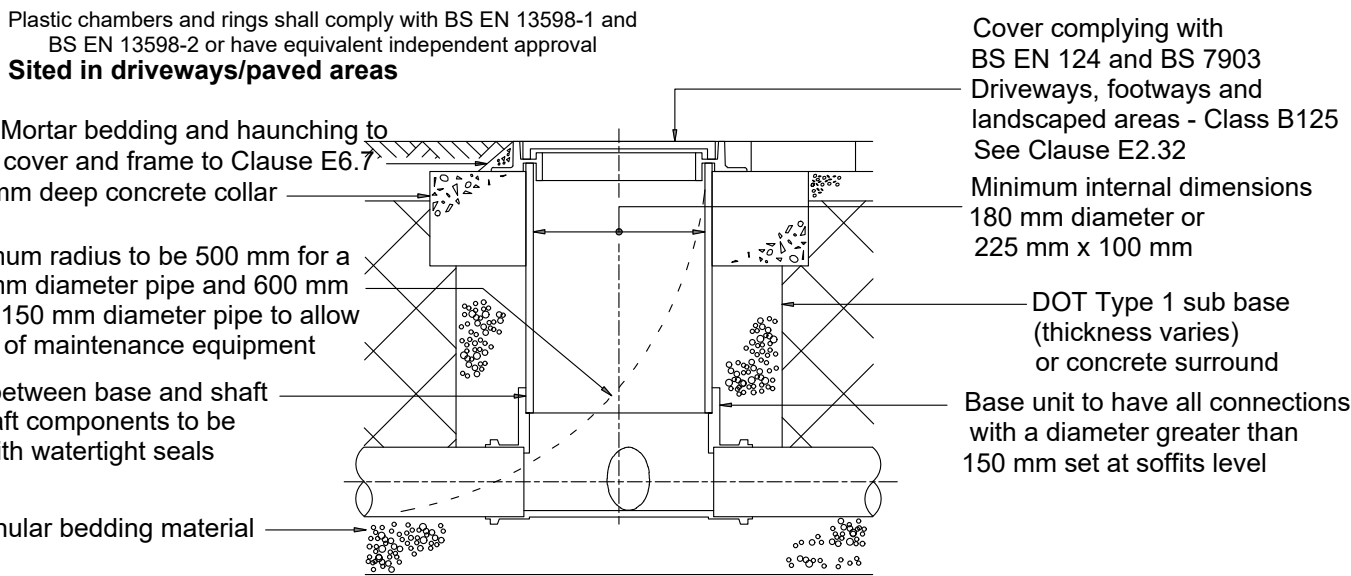
if you do not understand the risks involved during the construction of items indicated on this drawing please consult your manager, safety advisor, CDM coordinator or a member of the design team. Under no circumstances should you proceed until you fully understand the risks involved.
Utility services to be located
Live traffic flow
Construction traffic
Deep excavation - Collapse / Falling
Live sewers - Flows / Leptospirosis
Manual lifting / handling
Hot material working
Cutting / Dust

TABLE 12 MINIMUM DIMENSIONS FOR MANHOLES					
TYPE	SIZE OF LARGEST PIPE (DN)	MIN. INTERNAL DIMENSIONS (1) RECTANGULAR LENGTH AND WIDTH	CIRCULAR DIAMETER	MIN. CLEAR OPENING SIZE (1) RECTANGULAR LENGTH AND WIDTH	CIRCULAR DIAMETER
MANHOLE <1.5m deep to soffit <=	150	750 x 675 (7)	1000 (7)	750 x 675 (2)	na (3)
	225	1200 x 675	1200	1200 x 675 (2)	
	>300	1200 x 750	1200		
		1800 x (DN+450)	The larger of 1800 or (DN+450)		
>1.5m deep to soffit	<= 225	1200 x 1000	1200	600 x 600	600
	300	1200 x 1075	1200		
	375-450	1350 x 1225	1200		
	>450	1800 x (DN+775)	The larger of 1800 or (DN+775)		
MANHOLE SHAFT (4)	Steps (5)	1050 x 800	1050	600 x 600	600
	Ladder (5)	1200 x 800	1200		
	Winch (6)	900 x 800	900	600 x 600	600

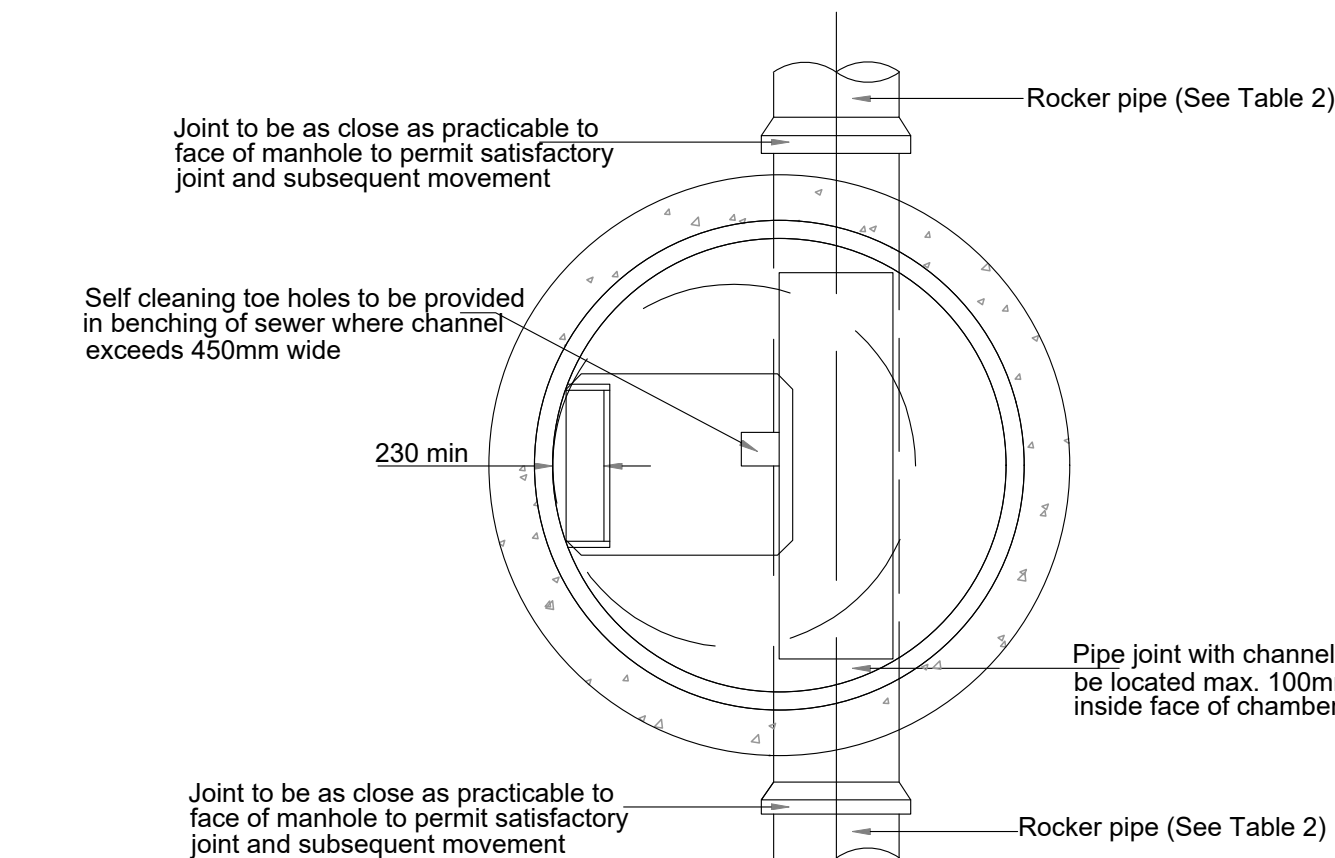
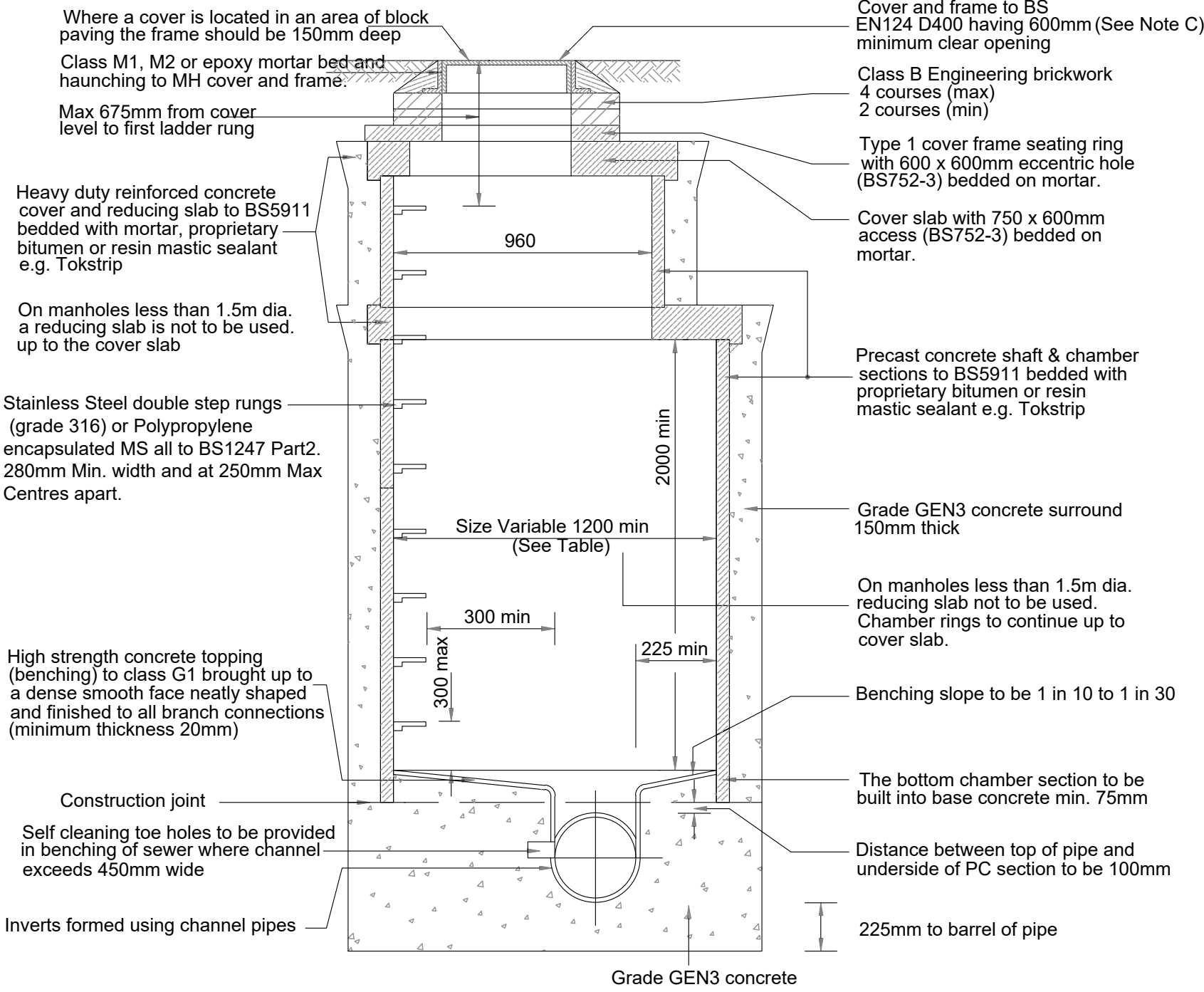
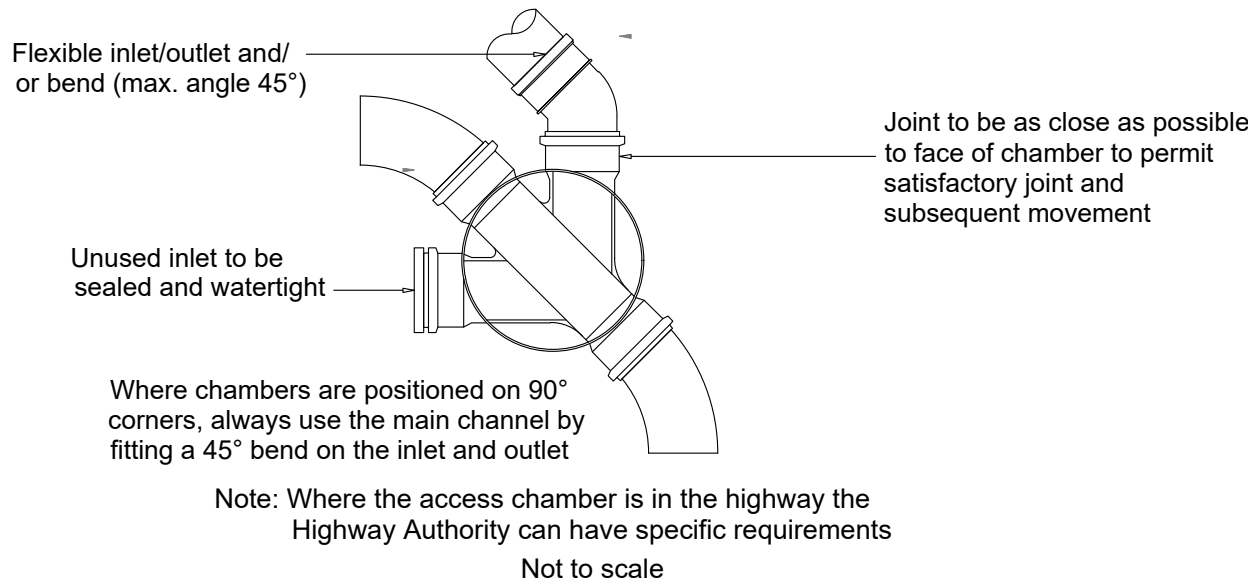
Notes:
(1) Larger sizes may be required for manholes on bends or where there are junctions.
(2) May be reduced to 600 by 600 where required by highway loading considerations, subject to a safe system of work being specified.
(3) Not applicable due to working space needed.
(4) Minimum height of chamber in shafted manhole 2m from benching to underside of reducing slab.
(5) Min clear space between ladder or steps and the opposite face of the shaft should be approximately 900mm.
(6) Winch only - no steps of ladders, permanent or removable.
(7) The minimum size of any manhole serving a sewer (i.e. any drain serving more than one property) should be 1200mm x 675mm rectangular or 1200mm diameter.

TABLE 11 MIN. DIMENSIONS FOR ACCESS FITTINGS AND INSPECTION CHAMBERS					
TYPE	DEPTH TO INVERT FROM COVER LEVEL (m)	INTERNAL SIZES		COVER SIZES	
		RECTANGULAR LENGTH AND WIDTH	CIRCULAR DIAMETER	RECTANGULAR LENGTH AND WIDTH	CIRCULAR DIAMETER
Rodding Eye		As drain but min 100			Same size as pipework (1)
Access Fittings small 150 dia	0.6 or less, except where situated in a chamber	150x100	150	150x100 (1)	Same size as access fitting
large 225x100		225x100	225	225x100 (1)	
Inspection Chamber Shallow	0.6 or less	225x100	190 (2)	-	190 (1)
Deep	1.2 or less >1.2 but <3.0	450x450 450x450	450 450	Min 430x430 max 300x300 (3)	430 Access restricted to max 350 (3)

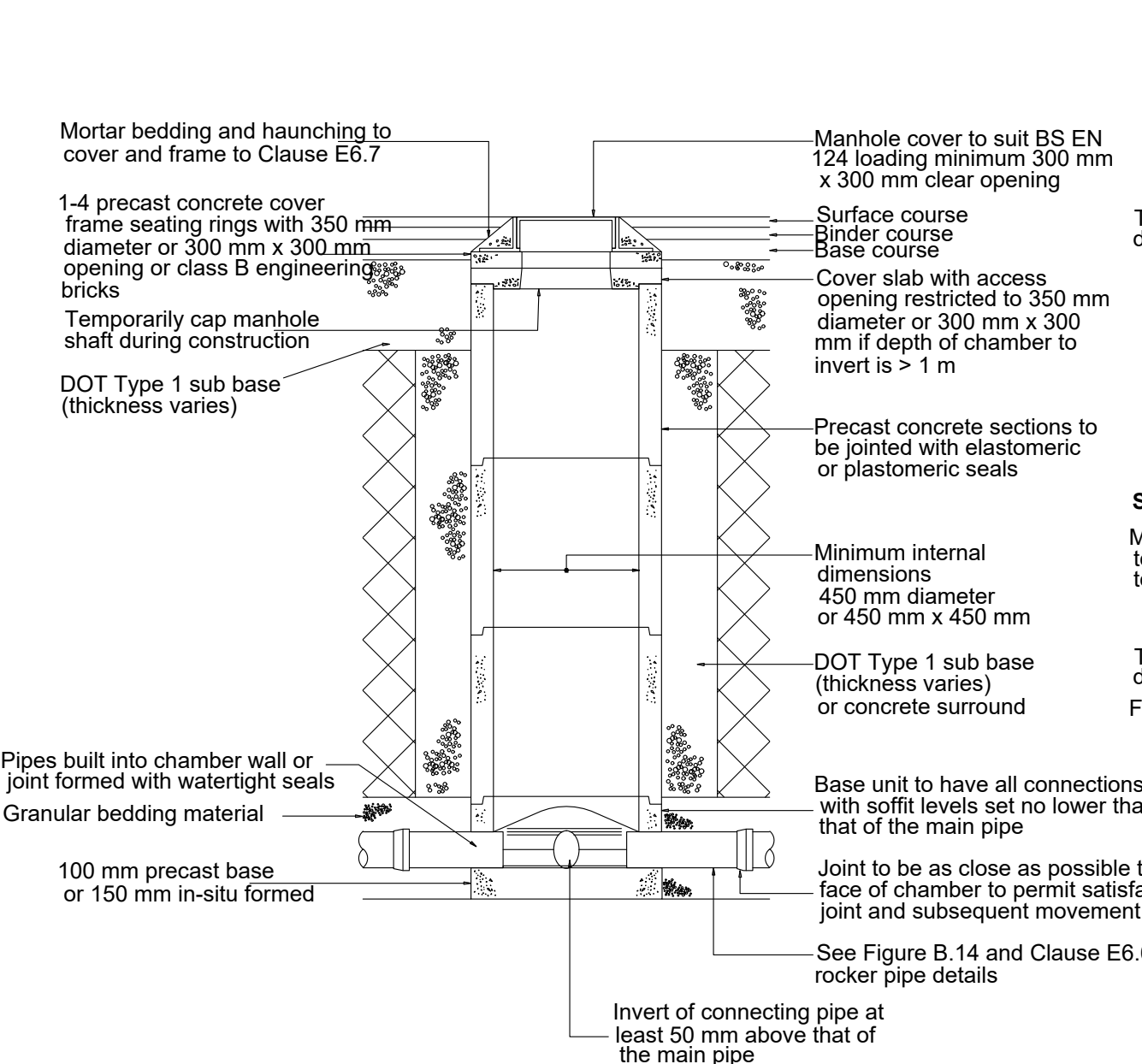
Notes:
(1) The clear opening may be reduced by 20mm in order to provide proper support for the cover and frame.
(2) Drains upto 150mm.
(3) A larger clear opening may be used in conjunction with a restricted access. The size is restricted for health and safety reasons to deter entry.



TYPICAL INSPECTION CHAMBER DETAIL - TYPE 4 (Flexible material detail)
Maximum depth from cover level to soffit of pipe 2 m, non-entry



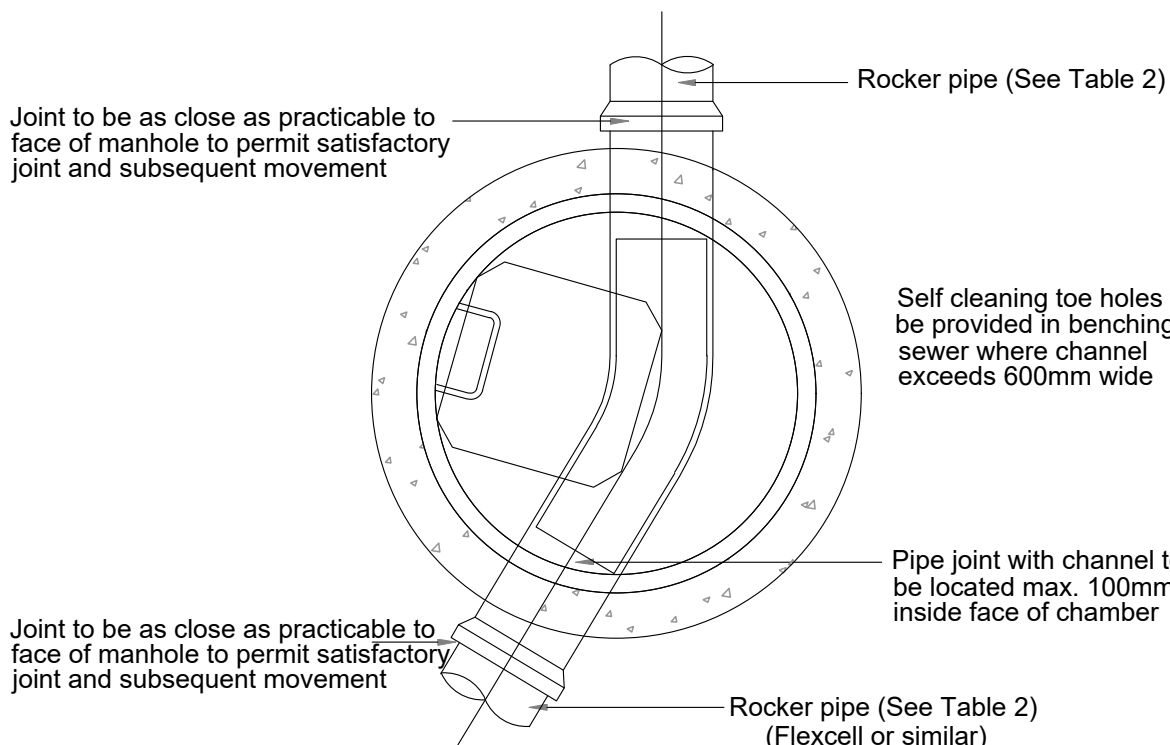
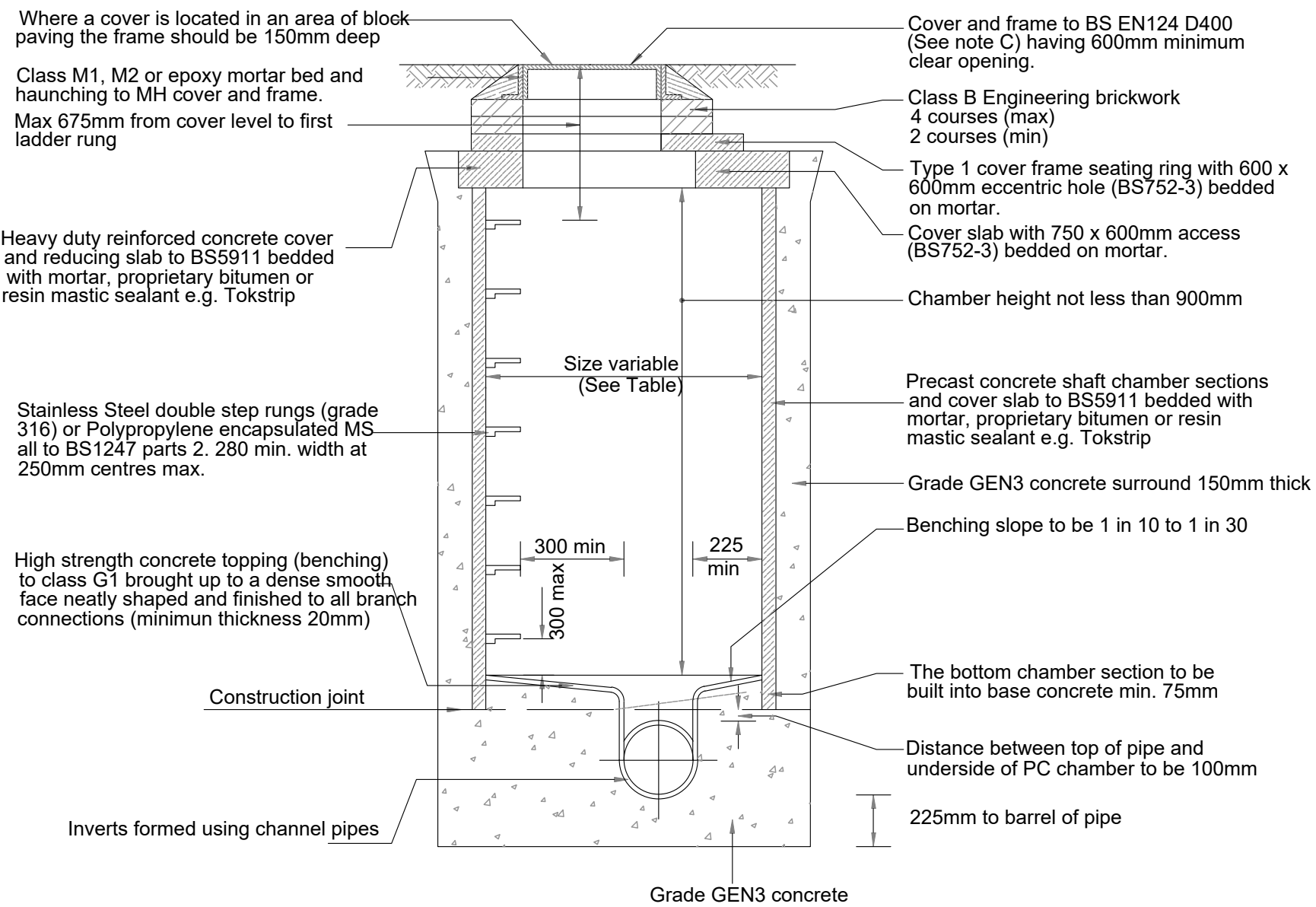
TYPICAL MANHOLE DETAIL - TYPE 1 DEPTH TO SOFFIT 3m to 6m



Note: Where the access chamber is in the highway the Highway Authority can have specific requirements

TYPICAL INSPECTION CHAMBER DETAIL - TYPE 3. (Rigid Material Detail)

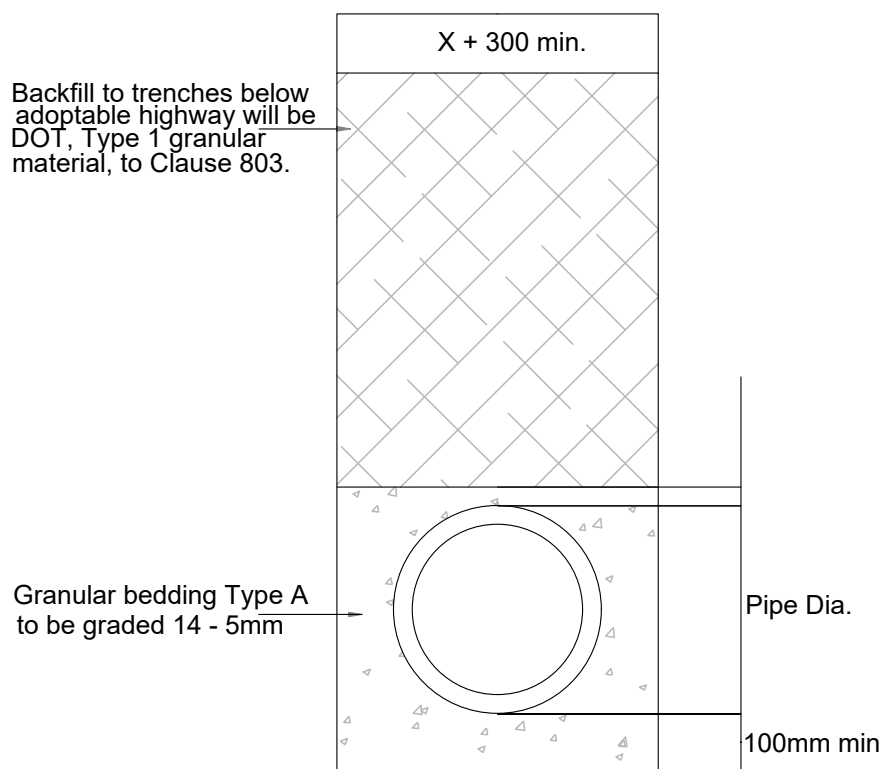
MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE IN AREAS SUBJECT TO VEHICLE LOADING 3 m, NON-ENTRY



TYPICAL MANHOLE DETAIL - TYPE 2 MAX. DEPTH TO SOFFIT 3m

25mm expanded polystyrene or 32mm impregnated fibre-board

**FLEXIBLE JOINT IN CONCRETE BED AND SURROUND.
Sited in domestic driveways or footways**



CLASS S BEDDING

ALTERNATIVE TOP DETAILS FOR LIGHT VEHICLE LOADING AND LANDSCAPED AREAS - TYPE 3

MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE IN AREAS SUBJECT TO VEHICLE LOADING 3 m, NON-ENTRY