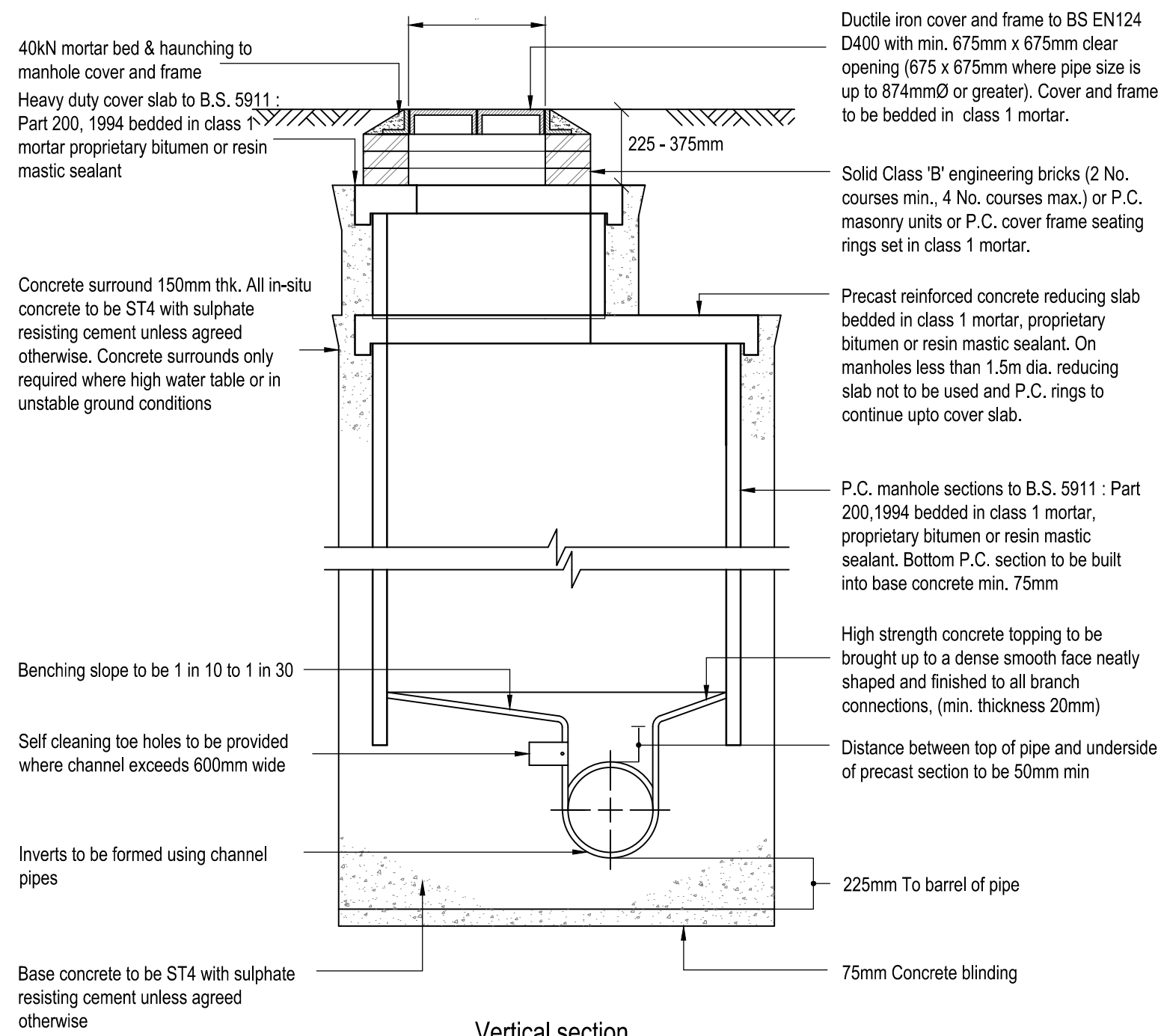
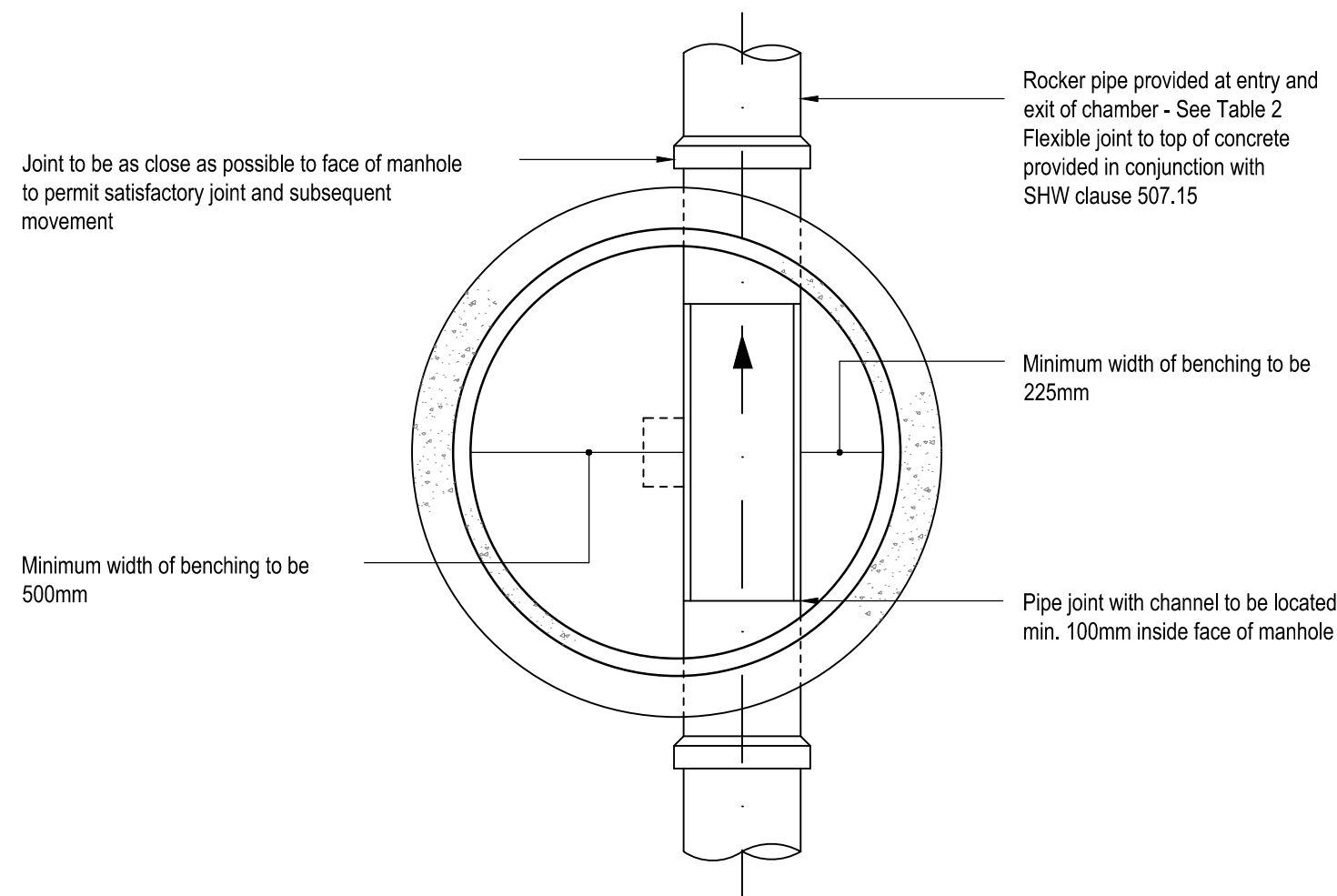




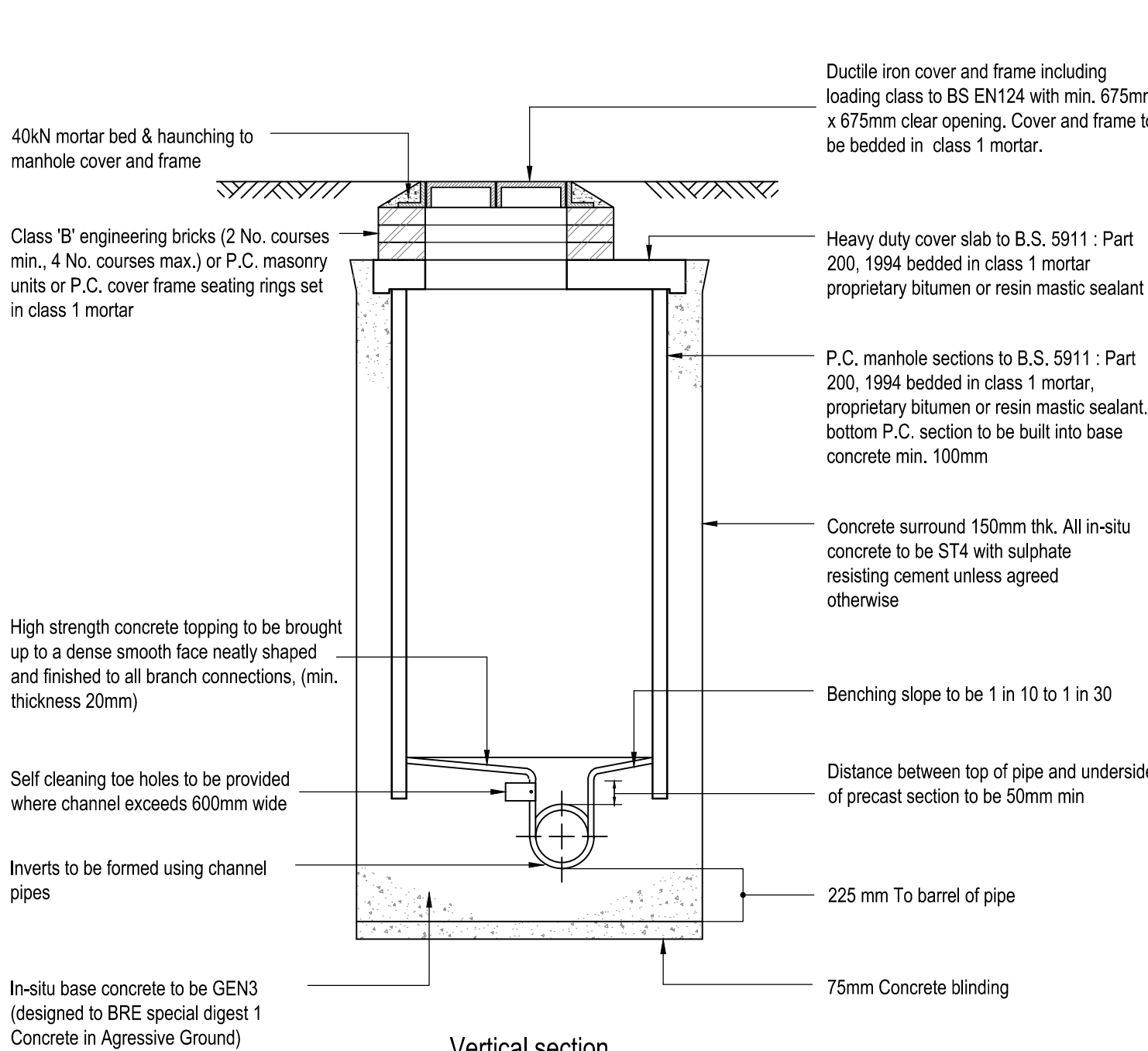
Vertical section



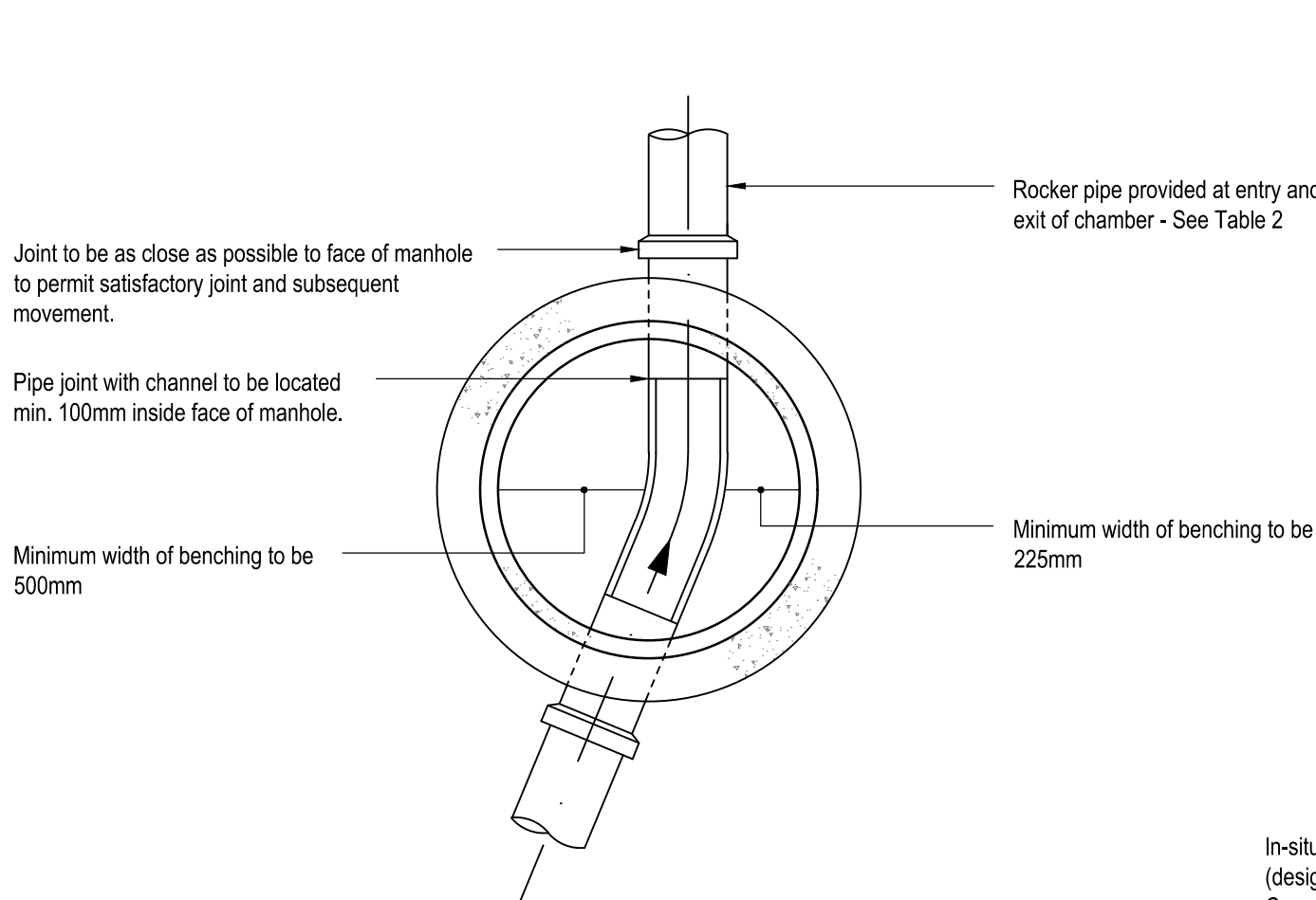
Plan section

Typical manhole detail - Type 'A'
Depth from ground level to soffit of pipe 3.0m to 6.0m

(1:25)



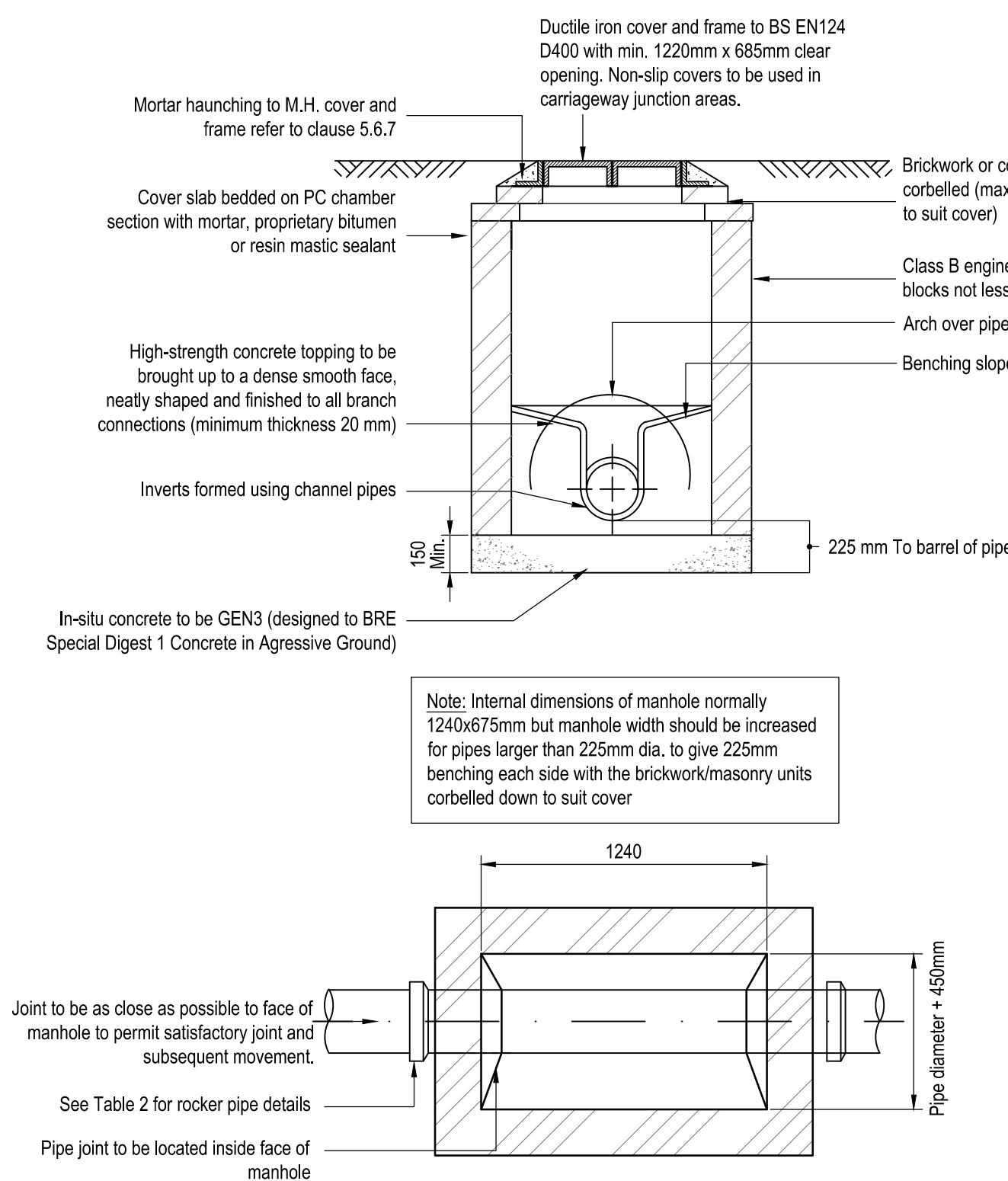
Vertical section



Plan section

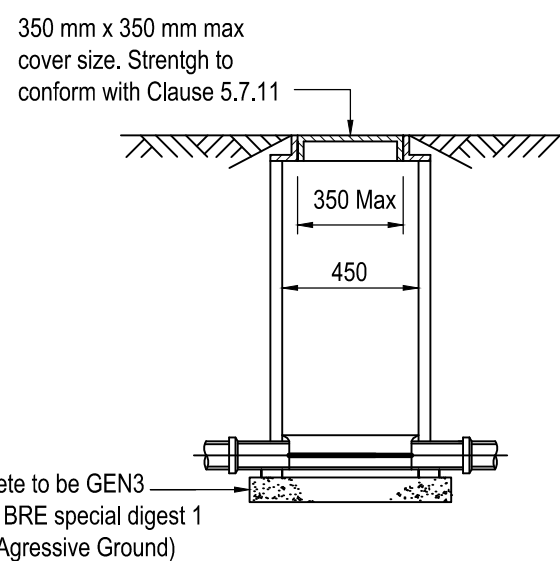
Typical manhole detail - Type 'B'
Max. depth from ground level to soffit of pipe 3.0m

(1:25)

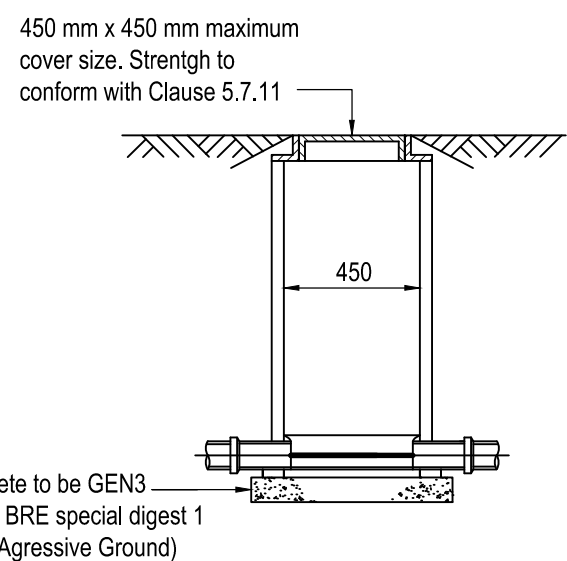


Typical manhole detail - Type 'C'
Depth from ground level to soffit of pipe 1.0m to 1.5m

(1:25)



Depth from cover level to invert to pipe
chamber greater than 1.2m.
Maximum lateral drain diameter 150mm



Depth from cover level to invert to pipe
chamber less than 1.2m.
Maximum lateral drain diameter 150mm

Typical demarcation chamber detail

1:25

All buried concrete Design Class DS -2 and ACEC site classification of AC-1s. For existing ground conditions refer to Phase II Ground Investigation Report by Soils Limited, document ref. 16524/GIR, dated October 2017 and Supplementary Geotechnical Investigation Report by JNP Group, dated August 2018.

Drainage & Road Layout Standard Drawing Notes

- The contractor is to check and verify all buildings, site dimensions and levels, including sewer invert levels, before works start on site.
- The contractor is to comply in all aspects with the current building legislation, British Standards, building regulations etc.
- The contractor is to check the level of existing sewers which are to be used as an out-fall prior to commencement of any onsite drainage works. Any discrepancies are to be reported to the Engineer.
- This drawing is to be read in conjunction with and checked against all other drawings, Engineering Details, specifications and any structural, geotechnical or other specialist document provided.
- Any anomaly or contradiction between any of the above or difference between actual and drawn details is to be reported to Bellway Homes (Wessex)
- Drainage to be adopted under Section 104 of the Water Industries Act 1991, shall be constructed and tested in accordance with Sewers for Adoption 6th Edition published by WRC plc and the combined addendum to SFA.
- Roads, footpaths and parking areas which form part of the highway to be adopted under Section 278 or 38 of the Highways Act 1980 shall comply with the Hampshire County Council's Highway Specification and Standard Details.
- All substrata structures and unconsolidated material within the road construction width to be removed
- Formation preparation to be in accordance with Highways Agency Specification for Highway Works (SHW) cl. 616. No prepared formation to be continuously exposed to rain causing degradation below design CBR or to be left uncovered overnight.
- Any soft, damaged or weak spots including peat contaminated material are to be excavated and replaced with SHW Type 1 in accordance with SHW cl.803 laid and compacted to cl.802, Table 8/4
- Where ground conditions are deemed to be frost susceptible, refer to Ground Investigation report, carriageway thickness shall be 450mm minimum thickness. All material within 450mm of road construction to be non-frost susceptible.
- Positions of existing services/statutory undertaker's apparatus adjacent to or crossing proposed sewers are to be checked by the contractor prior to starting work.

- All adoptable drainage and highway works to be installed in accordance with;
 - S104 & S185 Sewers - Sewers for Adoption 6th edition, including all applicable local Southern Water addendums
 - S278 and S38 Highways - Hampshire County Council Specification and Standard Details.

Existing Utilities

The contractor shall refer to the existing and proposed services information, provided by Bellway Homes (Wessex).

It is the Contractor's responsibility to liaise with all relevant services companies to ensure that all existing services are accurately located and adequately protected during construction.

It is the Contractor's responsibility to liaise with the Developer and all relevant services companies to ensure that all new and diverted services are accurately located and adequately protected during construction.

All works to existing services to be undertaken as required by the Developer. Refer to Developer design.

Notes:-

- Where this drawing has been issued in electronic .dwg format it has been done so in good faith. jnpgroup do not take any responsibility for any inaccuracies in the electronic data, which should be checked against the paper (or .pdf) drawing issue. Any apparent discrepancies should be immediately reported to jnpgroup. The electronic .dwg file should not be assumed to be to scale and should not be used for 'overlying', setting out or checking of any third party information. All dimensions should be taken from the paper (or .pdf) version of the drawing. Electronic drawings may contain third party information, jnpgroup take no responsibility for this information, which should be checked against the originators paper drawing(s).
- All working dimensions to be checked on site.
- Do not scale.
- Any discrepancies between drawings of different scales, and between drawings and specification where appropriate to be notified to The Engineer for decision.
- Copyright reserved. This drawing may only be used for The Client and location specified in the title block. It may not be copied or disclosed to any third party without the prior written consent of jnpgroup.
- This drawing should only be used for construction if the drawing status is "Construction"; jnpgroup take no responsibility for construction works undertaken to drawings which are not marked with this status.

Health and Safety Note:

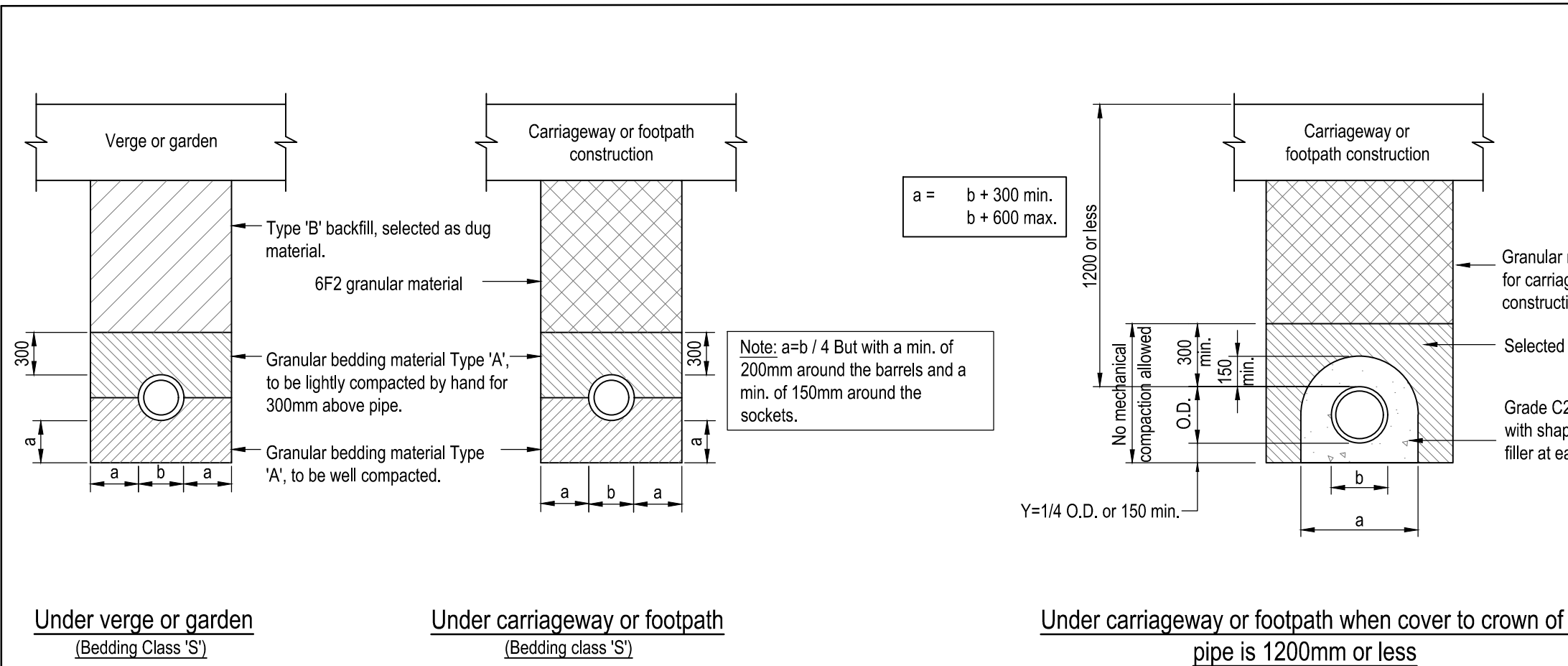
The details on this drawing have been prepared on the assumption that a competent contractor will be carrying out the works. If the contractor(s) considers that there is insufficient Health and Safety information on this drawing, this should immediately be brought to the attention of the designer.

Rev.	Date	Amendment	By	Chk.
B	07.12.18	Ladders removed from manholes. Class Z bedding added.	CT	KM
A	13.09.18	Concrete classification updated. Status revised to construction issue.	CT	KT
Status				
Construction				



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Client	Bellway Homes		
Job	Bartons Road Havant, Hampshire		
Title	S104 & S185 Adoptable Drainage Construction Details		
Scale	As shown	@ A1	Date July 2018
Drawn by	CT	Checked by	KT
			
		Accredited Contractor	
			Supplier No. 020020
Drawing No.	C85850-D107		Rev. B



Pipe bedding details (Sewers)

(NTS)

Note: At each flexible pipe joint a joint filler (e.g. fibreboard or polystyrene) shall be used (see table below), and shall extend through the full thickness of any concrete in contact with the pipe. The concrete bed shall be cut away at each joint to give a clearance of at least 50mm, so that the joint does not bear on the bed.

Pipe bedding material details

- Material designated Type 'A' shall consist of angular gravel or crushed rock graded in accordance with B.S. 882 : 1992, or air cooled blast furnace slag to B.S. 1047 : 1983, or sintered pulverised fuel ash to B.S. 3797 : 1990, selected according to pipe size as follows:-

Nominal size of pipes (mm)	Maximum particle size (mm)	Imported granular materials
100 - 125	10	10mm Nominal single-size
150 - 200	15	10 or 14mm Nominal single-size or 14mm to 5mm graded
225 - 300	20	10, 14 or 20mm Nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded
375 - 500	20	14 or 20mm Nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded
OVER 500	40	14, 20 or 40mm Single-size or 14mm to 5mm graded or 20mm to 5mm graded or 40mm to 5mm graded

- Material designated Type 'B' used under gardens and verges shall consist of uniform readily compactable material, free from tree roots, vegetable matter, building rubbish and frozen soil, and excluding clay lumps retained on a 75mm sieve and stones larger than 37mm. Bedding to be compacted in 225mm layers.

- Material designated Type 'B' used under roads and footpaths shall consist of granular material as used for carriageway sub-base construction.

Compressible filler and packing for pipelines	
Nominal diameter of pipe (mm)	Thickness of compressible filler (mm)
Less than 450	18
450 - 1200	36
Exceeding 1200	54