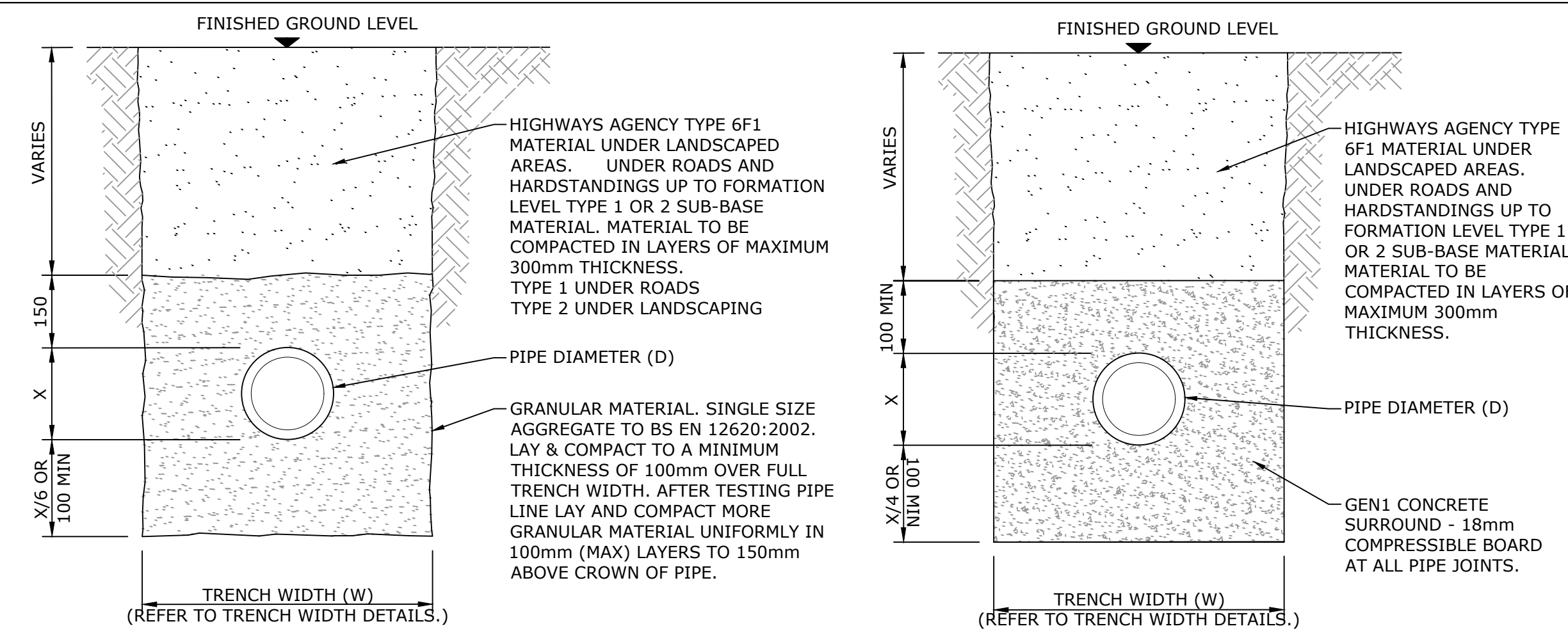
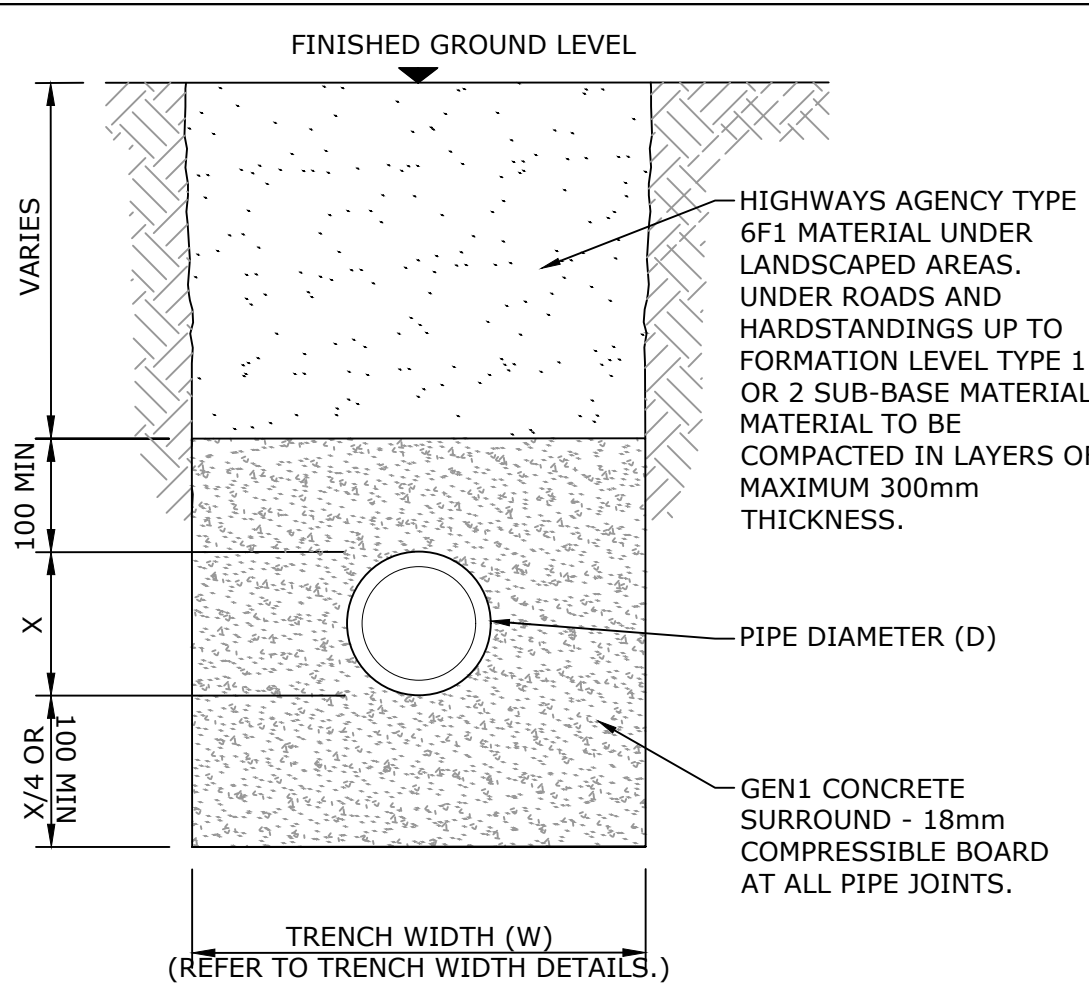




### CLASS S BEDDING

### TRENCH WIDTH DETAILS

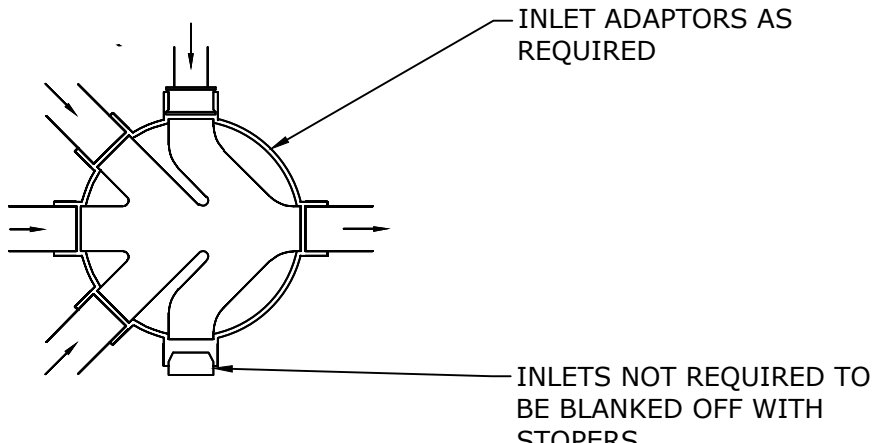
|   |     |     |     |     |
|---|-----|-----|-----|-----|
| D | 150 | 225 | 300 | 375 |
| W | 450 | 575 | 600 | 675 |



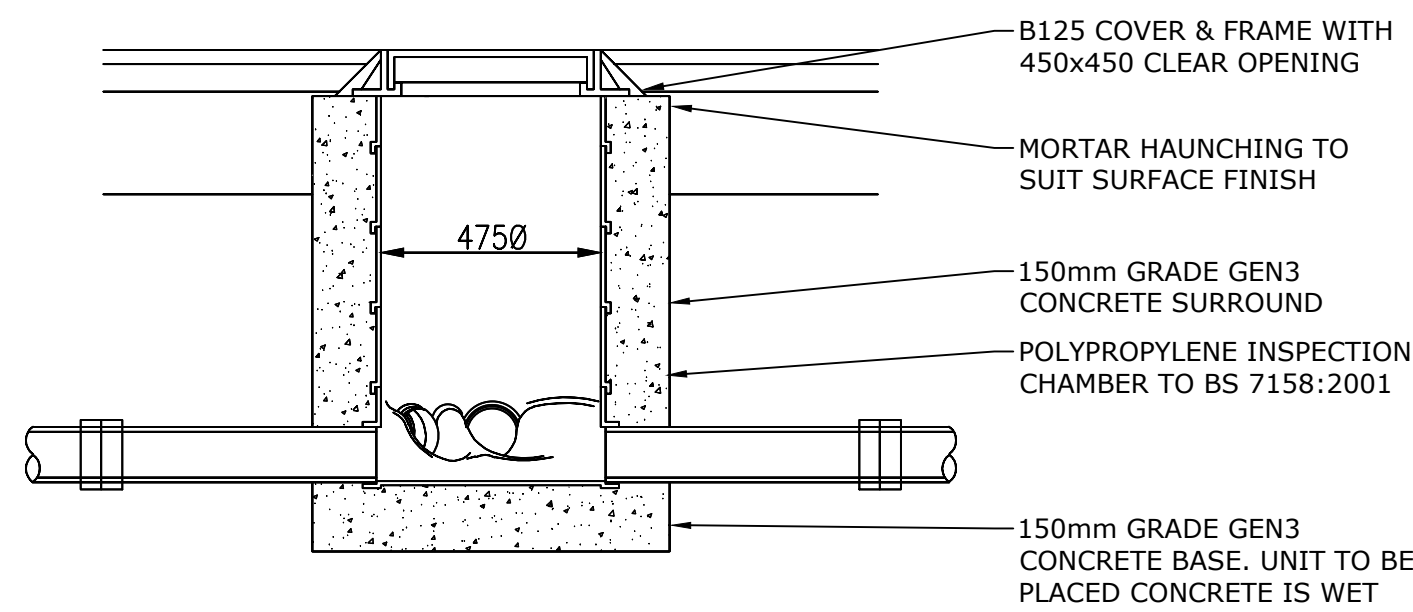
### CLASS Z BEDDING

NOTE: PIPES LAID BENEATH STRUCTURAL SLAB TO HAVE FLEXIBLE JOINTS AT 2m MAX CENTRES

| LOCATION                             | PIPE MATERIAL                                                                  |
|--------------------------------------|--------------------------------------------------------------------------------|
| HIGHWAY DRAINS                       | VITRIFIED CLAY                                                                 |
| ADOPTABLE SEWERS                     | VITRIFIED CLAY OR CONCRETE                                                     |
| PRIVATE SEWERS 1000 - 2250           | UPVC OR VITRIFIED CLAY                                                         |
| PRIVATE SEWERS ≥3000                 | TWIN WALL HDPE OR VITRIFIED CLAY OR CONCRETE                                   |
| PRIVATE SEWERS BELOW STRUCTURAL SLAB | FW - UPVC OR VITRIFIED CLAY<br>SW - TWIN WALL HDPE OR CONCRETE OR DUCTILE IRON |

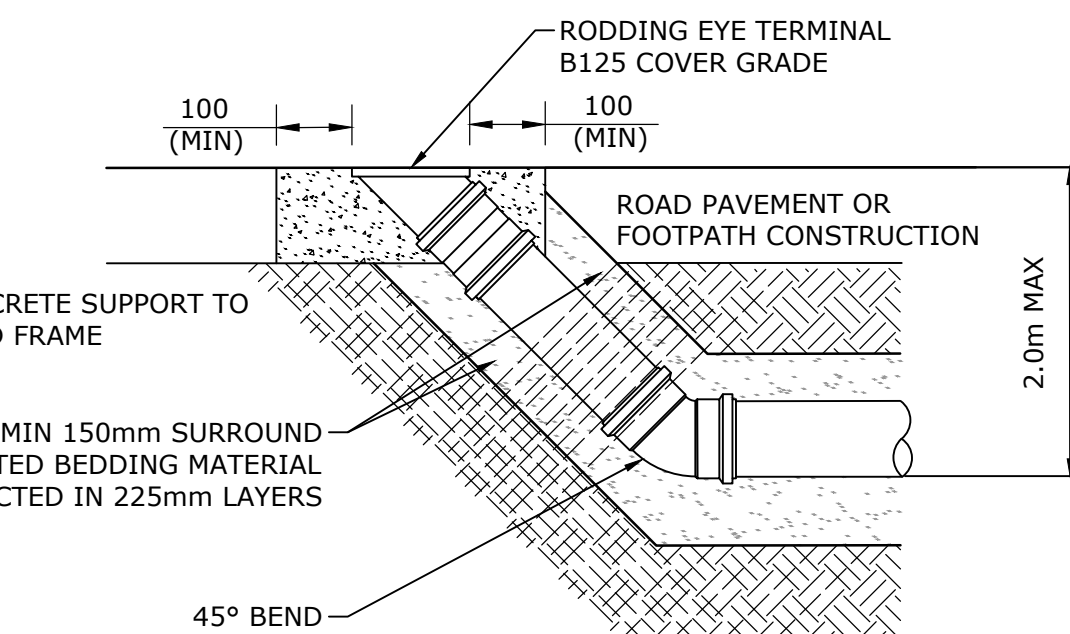


### TYPICAL PLAN

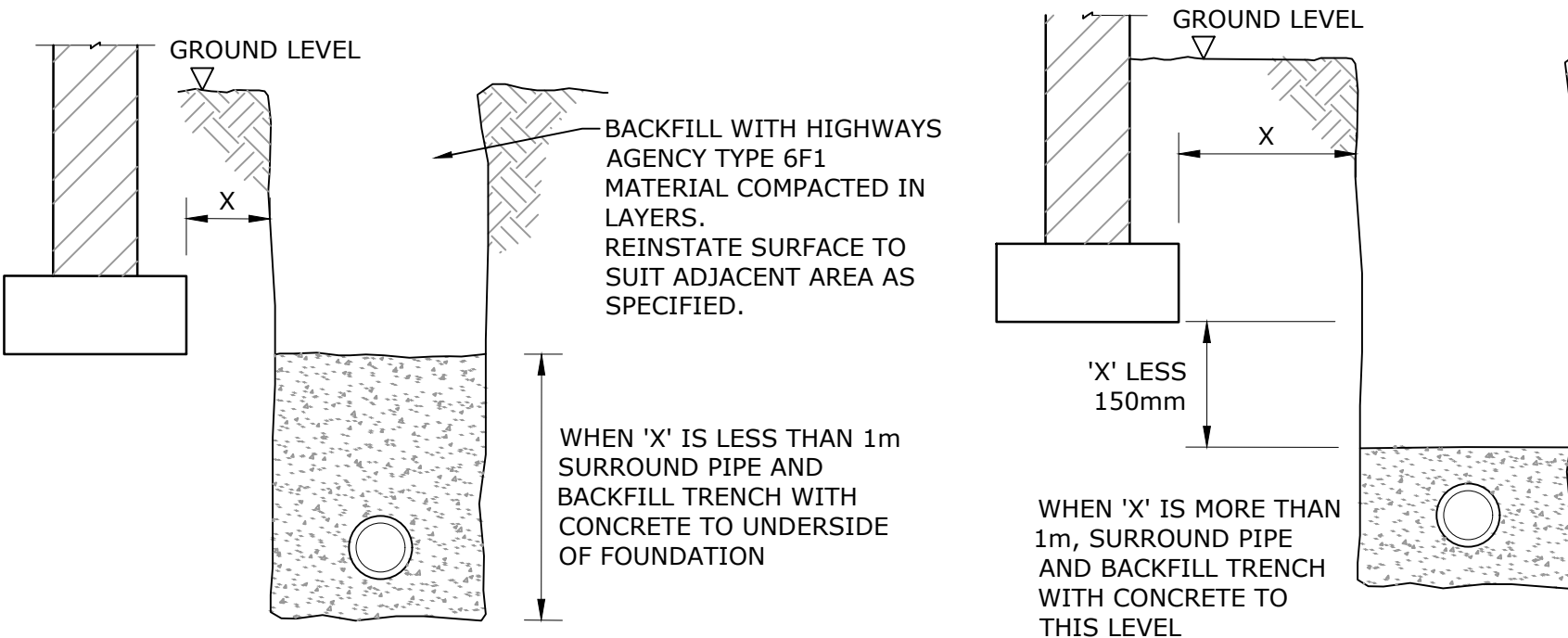


### SECTION

### TYPICAL POLYPROPYLENE INSPECTION CHAMBER (PPIC) DEPTH UP TO 2.00m



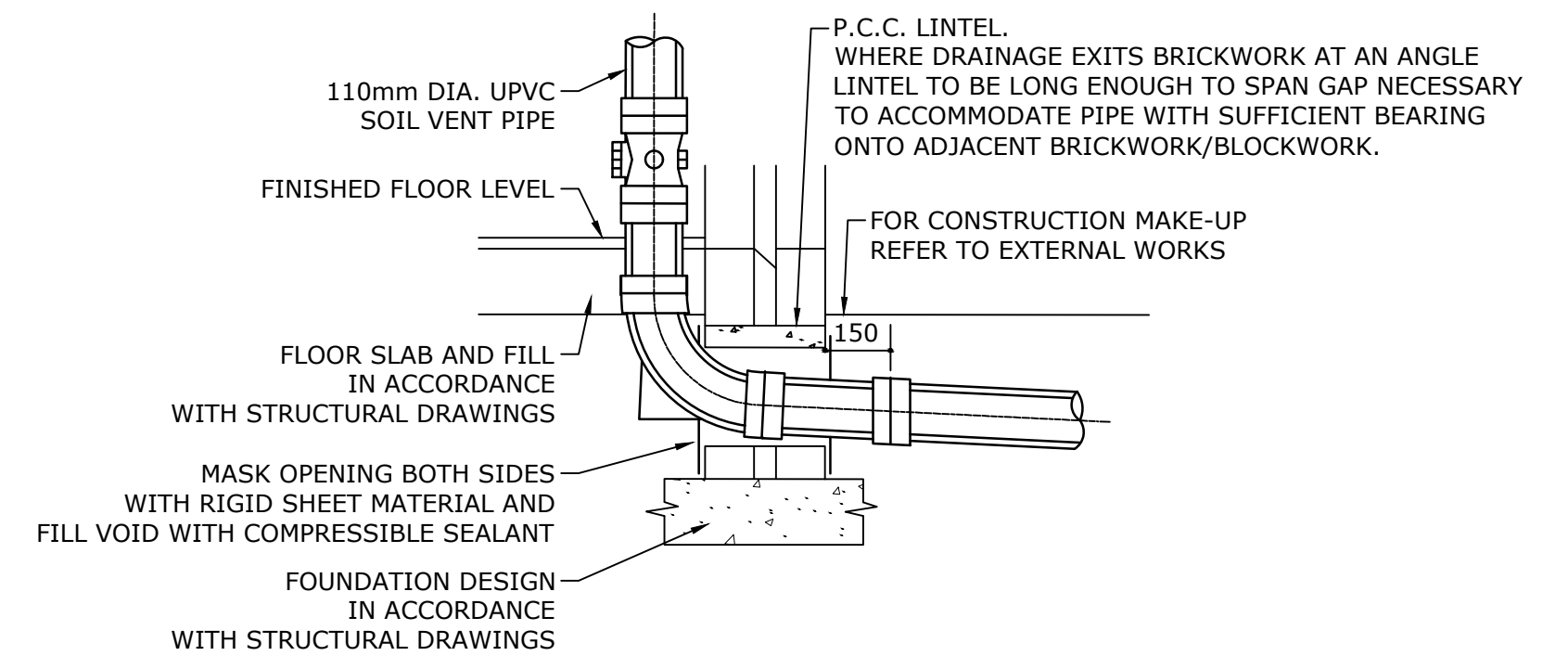
### LIGHT DUTY RODDING EYE DETAIL (PEDESTRIAN/LIGHTLY TRAFFICKED AREAS)



### WHERE 'X' IS LESS THAN 1m

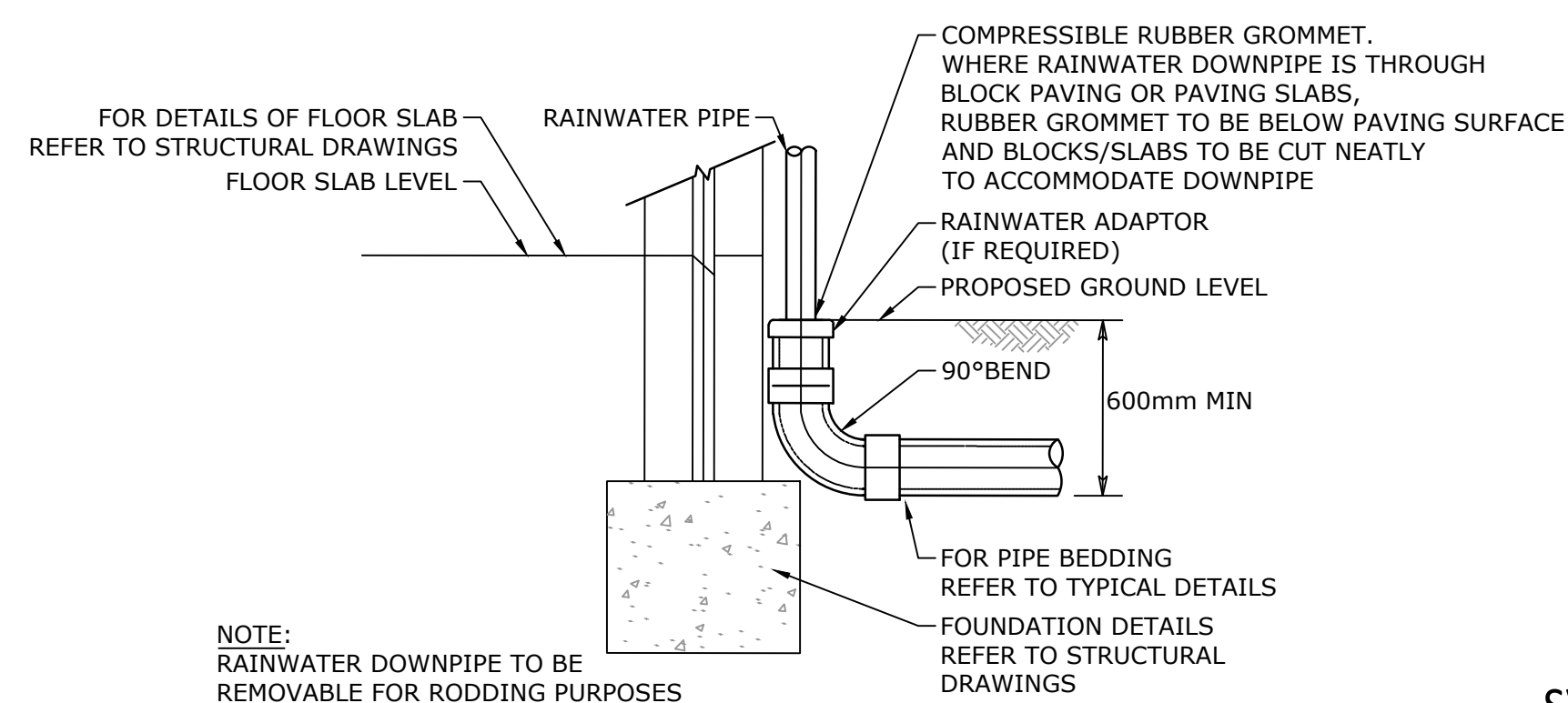
NOTES:  
1. GEN1 CONCRETE SURROUND, Min. 150mm ABOVE PIPE CROWN & 150mm BELOW PIPE INVERT.

### PIPE RUNS NEAR BUILDINGS & BELOW FOUNDATIONS

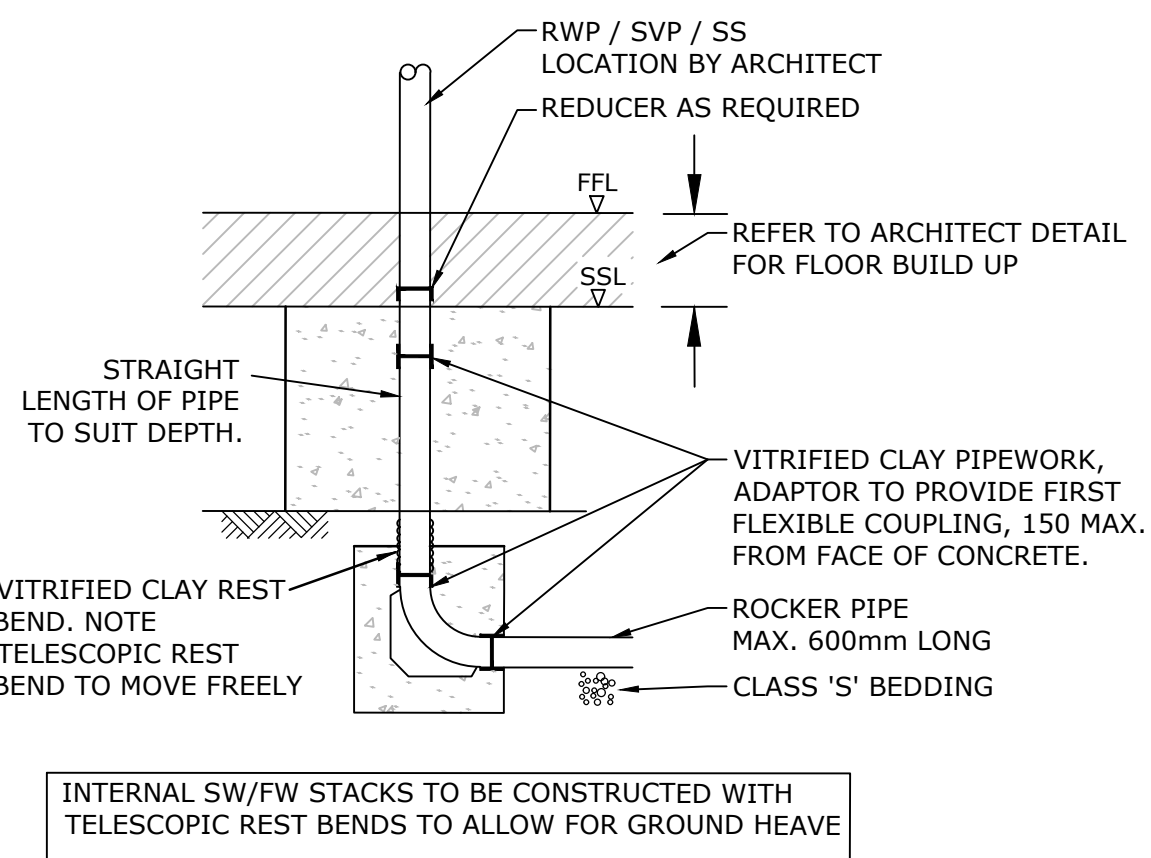


### WHERE 'X' IS MORE THAN 1m

### SOIL VENT PIPE CONNECTION

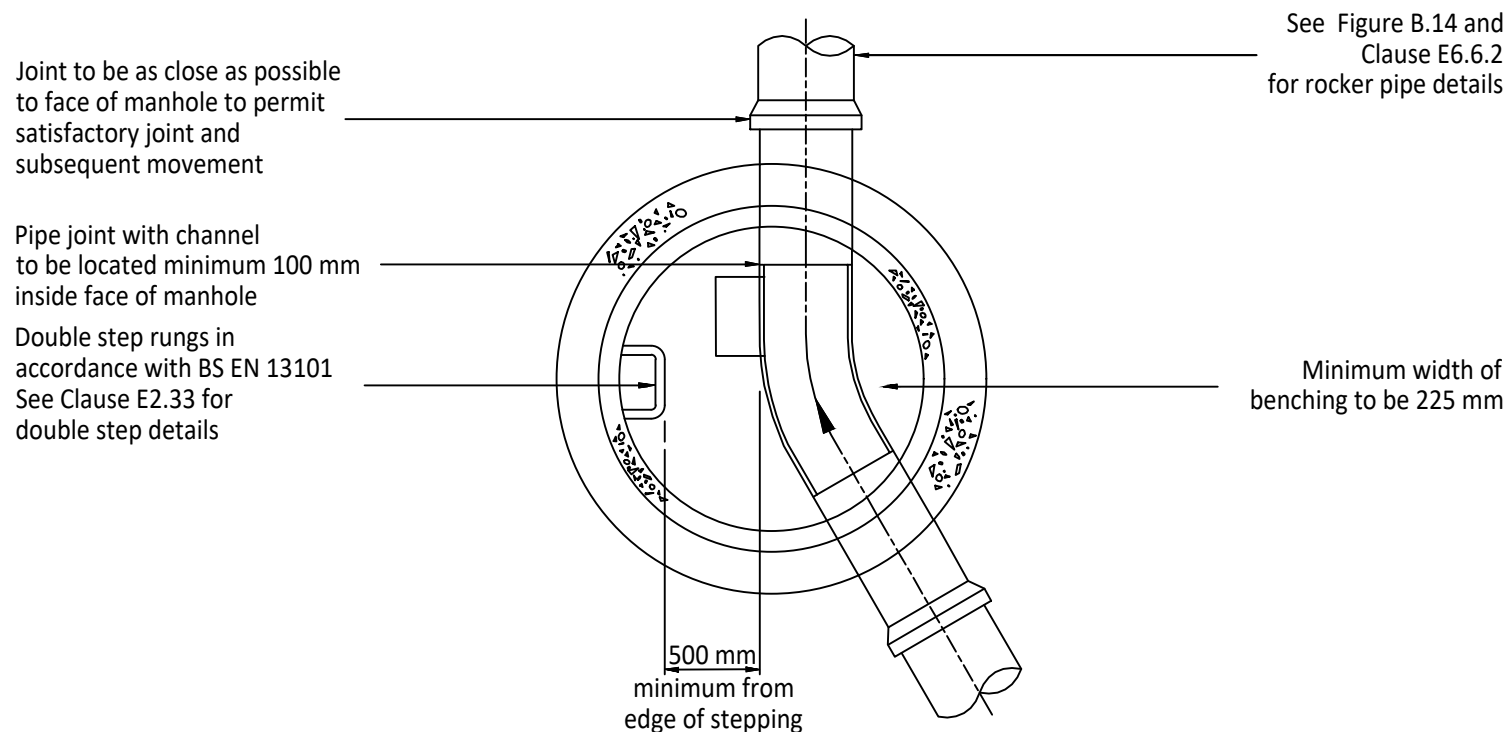
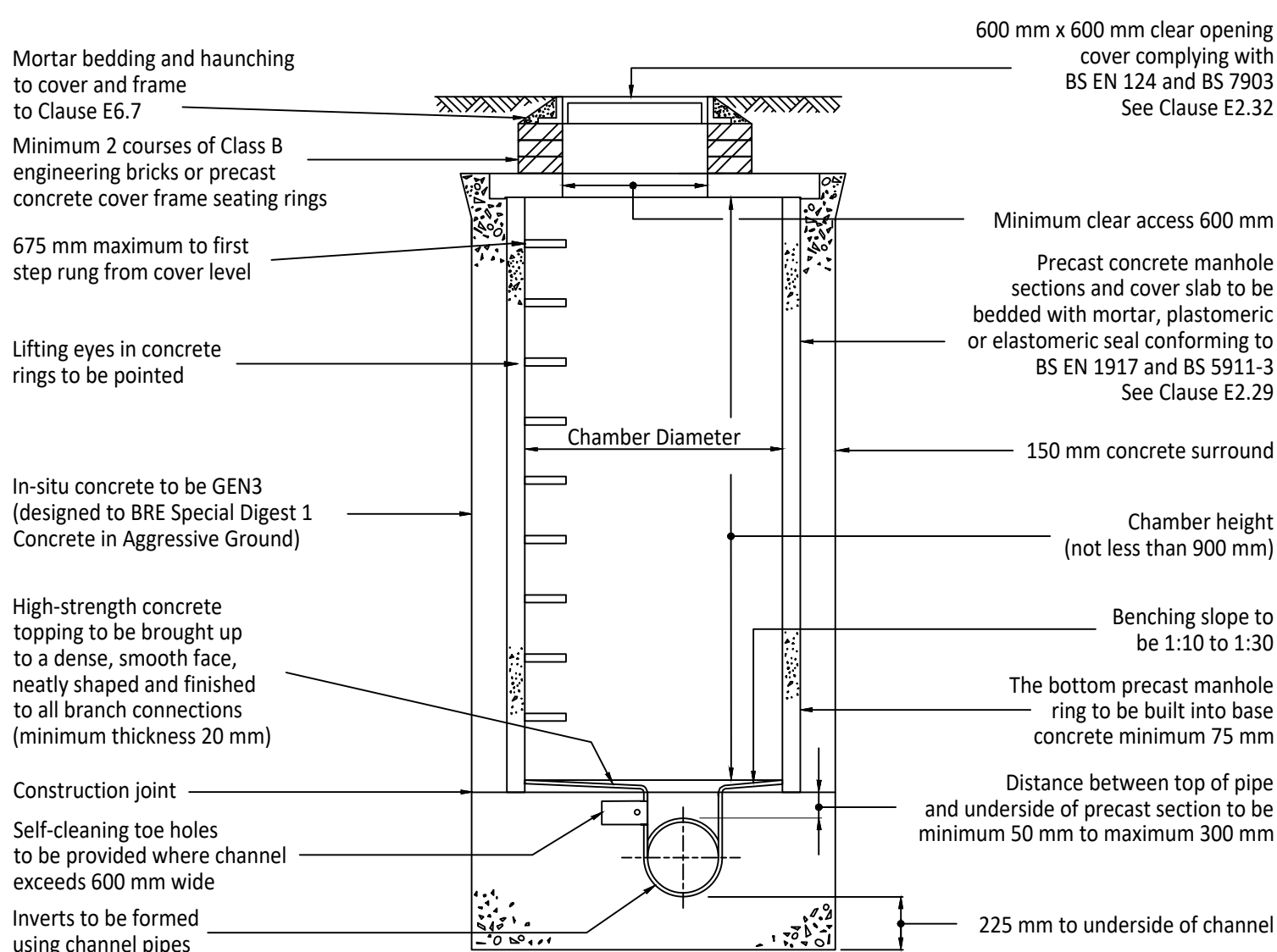


### RAINWATER PIPE CONNECTION

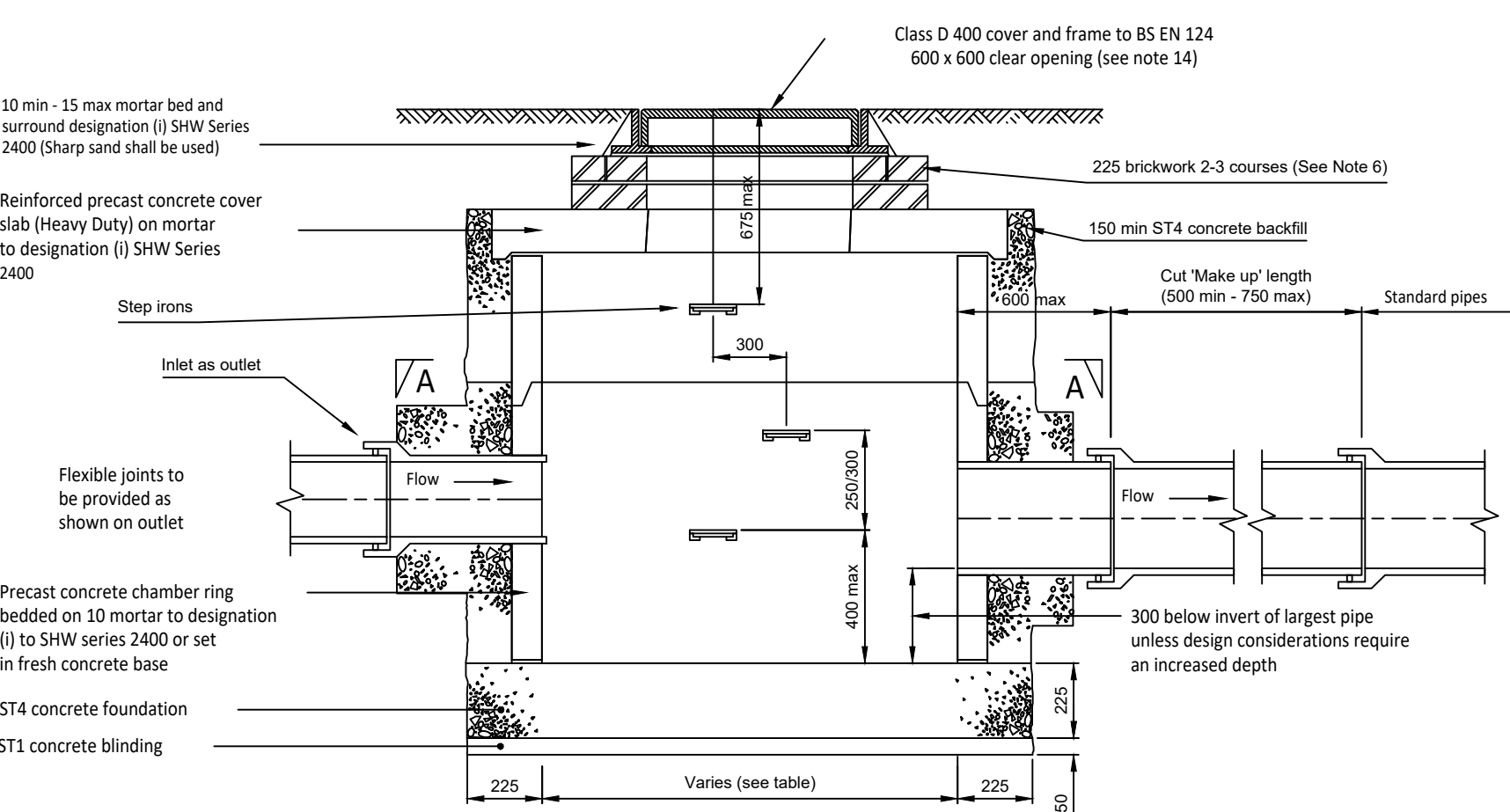


### SVP/SS/ DRAINAGE CHANNEL OUTLET THROUGH FLOOR SLAB

### ADOPTABLE MANHOLE DETAIL - TYPE 2 Maximum depth from cover level to soffit of pipe 3.0 m



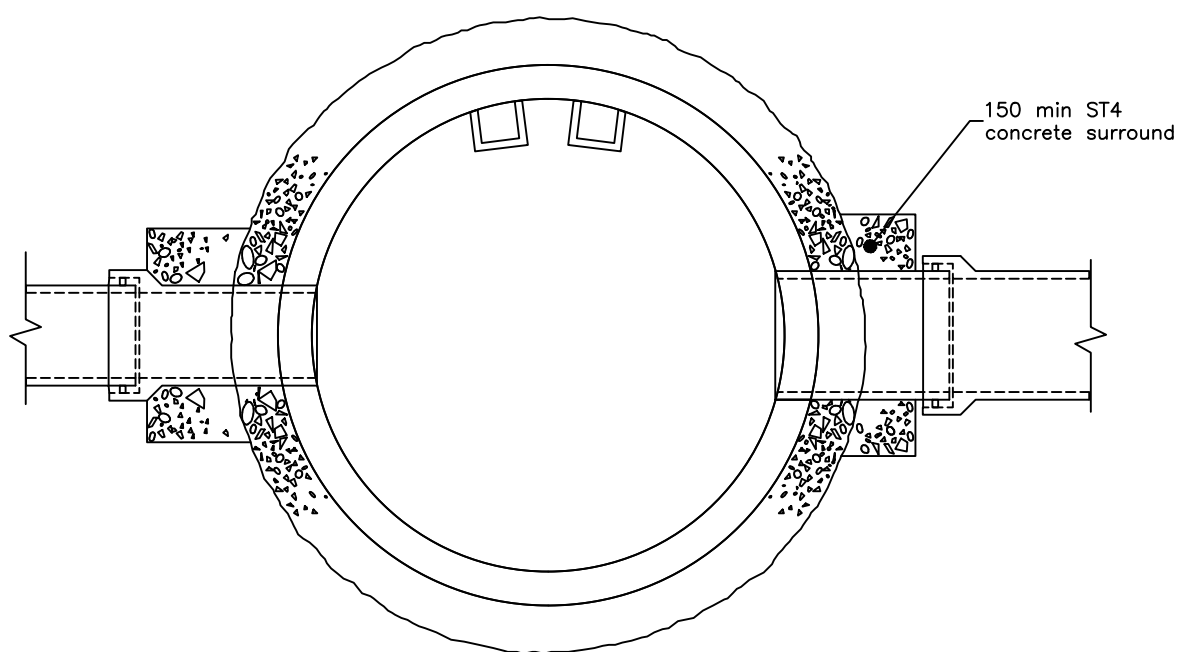
### Catchpit Manhole



1. All dimensions are in millimetres
2. Water Authorities Association guide Sewers for Adoption applies except where modified by this drawing.
3. Cover and frame to be Class D400 Badgemarked, HD, and Kitemarked and have a protective coating complying with BS EN 124: 1994.
4. Catchpits to be positioned so that no part of the structure is under the kerb.
5. Entrance to catchpits to be positioned with consideration for safety.
6. Bricks to be Engineering Class B to BS 3921 laid in English Bond in mortar to designation (i) to SHW series 2400.
7. Pre-cast concrete chambers shall comply with BS 5911 Part 200.
8. Mortar to designated (i) to SHW series 2400 or a proprietary sealant shall be used in all joints between precast concrete units.
9. Finish to internal concrete to be F1 on formed surfaces and U2 on unformed surfaces.
10. All voids beneath the catchpit structure shall be backfilled with ST1 concrete.
11. Ends of pipes shall be neatly built into the chamber and finished flush with mortar to designation (i) to SHW series 2400.
12. The nearest joints to chamber shall not be restricted by concrete
13. Safety chains or grills must be provided where pipe diameter exceeds 600.
14. Surface level tolerance +6 -15 in paved areas -15 min. -50 max. in verges.

| Internal diameter of chamber | Diameter of largest pipe in chamber |
|------------------------------|-------------------------------------|
| 1200                         | Less than 375                       |
| 1350                         | 375 - 450                           |
| 1500                         | 500 - 700                           |
| 1800                         | 750 - 900                           |

### CATCHPIT SIZES



### Section A-A

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### DRAINAGE NOTES:

1. Do not scale.
2. Refer to all other Project Drawings and supporting notes.
3. All sewers to comply with the requirements of Design and Construction Guidance together with Southern Water's Addendum. All public sewers are to be the subject of a Section 104 agreement of the Water Industry Act 1991.
4. All public sewers are to be the subject of a Section 104 agreement of the Water Industry Act 1991.
5. Invert levels of existing manholes and sewers are to be checked on site before construction commences and results reported to engineers.
6. The Contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works for the duration of the project.
7. All manhole ironworks to comply with BS EN124, and be stamped with BSI Kitemark. Covers to suit loading as below;  
-Carriageways and Roads - D400  
-Driveways and Verges - C250  
-Footways and Pedestrian Areas - B125  
-Gardens/Landscaping - A15
8. All sewer pipes, up to, and including 225mm are to be vitrified clay to BS EN25. All sewer pipes 300mm diameter and above to concrete pipes to BS EN1916.
9. All drainage shall be installed and tested strictly in accordance with the Manufacturers' printed instructions, BS EN 752, BS EN 1601, Local Water Authority requirements and the Building Regulations.
10. All bedding shall be Class S unless noted otherwise.
11. All trenches under existing and proposed public highways are to be backfilled with thoroughly compacted Type 1 granular sub-base material.
12. Drainage laid beneath roads and areas of vehicular access (car parking etc) with less than 1200mm of cover shall be encased in concrete bed and surround with associated movement joints. Drainage laid beneath paths, footways and pedestrian areas with less than 900mm of cover shall be similarly treated.
13. Chambers with outgoing pipes greater than 600mm diameter shall be fitted with guard bars, safety chains or other approved safety devices.
14. The use of precast concrete products made with sulphate resisting cement is mandatory, unless a laboratory report proves such precautions are not necessary.
15. All gully connections to use a minimum diameter pipe of 150mm and to be surrounded by a minimum of 150mm of grade C8/C10 concrete over its full length (which should not exceed 15m) and its connection to the carrier system.
16. All sewers to be abandoned must be surveyed to identify any lateral connections that are still live with any found to be reported to the Engineer.
17. All laterals to be 150mm laid at 1:80 (surface) or 1:60 (foul) unless otherwise stated.
18. All private drains to be 100mm diameter unless otherwise stated.
19. All foul and storm water drains which are not to be adopted as public sewers shall be in accordance with Document H of the Building regulations, together with NHBC Standards Chapter 5.3 and BS8301.
20. Where pipes pass through footings, retaining or screen walls, laterals to be provided over drains.
21. Where inverts are less than 0.6m deep inspection chambers (min dia. 190mm) or access fittings (225 x 100mm) to be used, elsewhere proprietary plastic, brick or pcc is to be used and sized in accordance with Table 11 of Document H of the Building Regulations (<0.6m to invert min DN300, >0.6m to invert min DN475).
22. All gullies connected direct to drains to be roddable.
23. Rainwater downpipes to be easily removable for rodding or to be provided with rodding access at ground level.
24. Unless noted otherwise FW IC's and RE's to be 0.6m below DPC level, SW IC's and RE's to be 0.45m.
25. Adequate precautions in accordance with Approved Document H and manufacturers' recommendations to be taken to protect drains (particularly plastic) at shallow depths.
26. Catchpits to be as IC's but with 300mm sump below outgoing pipe invert level except where detailed elsewhere.
27. Trees and shrubs of a large size or heavy canopy with a moderate or high water demand must not be planted within any sewer easement.
28. Gullies within and adjacent to area of site works to be suction cleaned at commencement and completion of works.
29. 1m deep root barrier of an approved type to be installed vertically along the back edging kerb of all areas of footway/ demarcation to protect from both proposed and future plantation.
30. Where connections are being made to pipelines rather direct to manholes all connections are to be made using oblique 45 junctions.

| Rev | Date  | Description | Drawn | Checked |
|-----|-------|-------------|-------|---------|
| A   | 07/21 | First Issue | JS    | SL      |



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### Frontier

### Dappers Lane Angmering

### Drainage Details Sheet 1

### For Approval

| Scale      | Date     | Drawn | Checked |
|------------|----------|-------|---------|
| NTS        | Jul 21   | JS    | SL      |
| Drawing No | Revision |       |         |
| A360-07    | A        |       |         |