

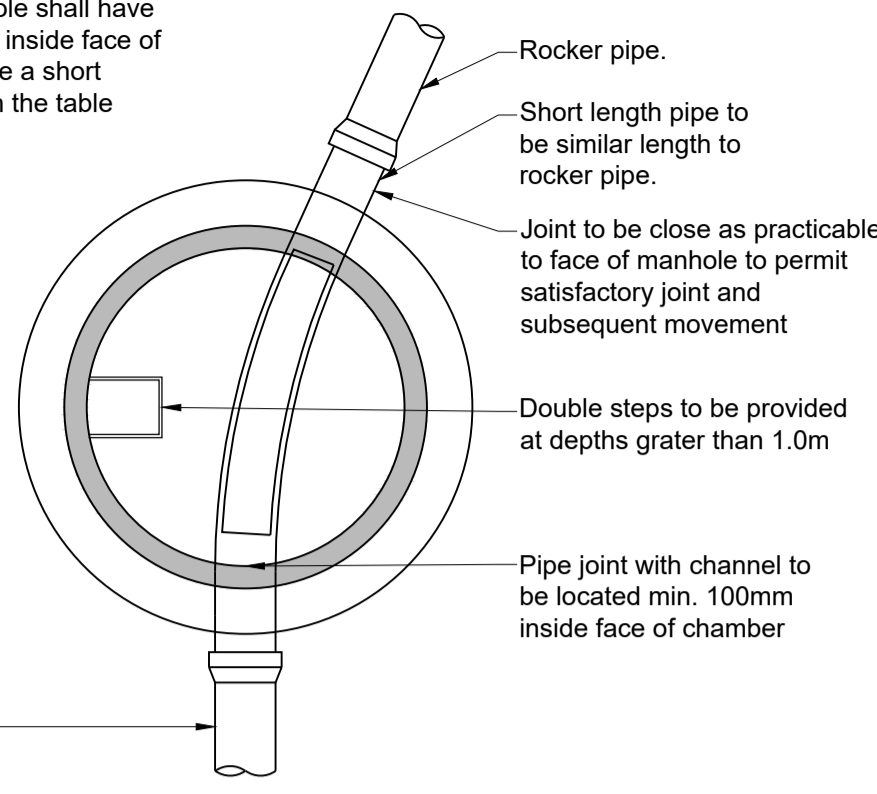
TYPICAL MANHOLE DETAIL (MH)

Scale 1:25

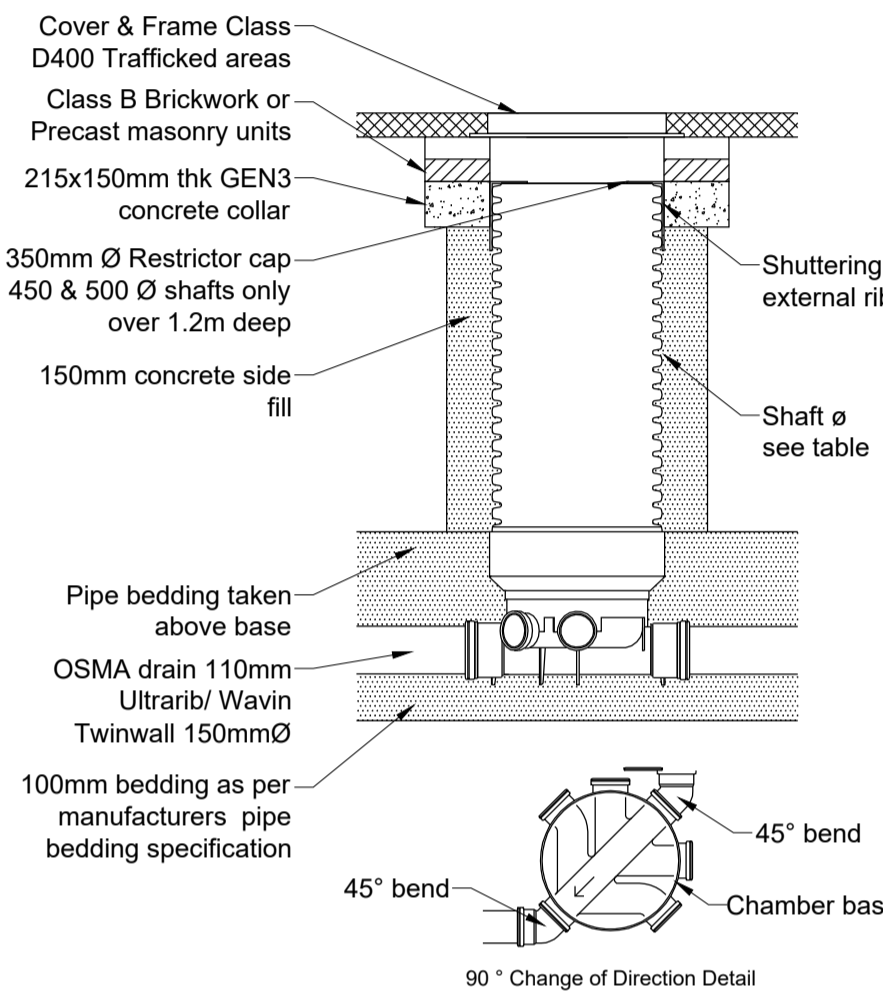
All pipes entering or leaving manhole shall have a flexible joint within 600mm of the inside face of the manhole. The next pipe shall be a short rocker pipe with length as shown in the table below.

| Dia of largest pipe in MH (mm) | Int. Dia. of MH (mm) |
|--------------------------------|----------------------|
| Less than 375 | 1200 |
| 375 to 700 | 1500 |
| 750 to 900 | 1800 |

| Pipe Dia | Rocker Pipe Length |
|--------------|--------------------|
| 150-600 | 600mm |
| 675-750 | 1000mm |
| 825 and over | 1250mm |



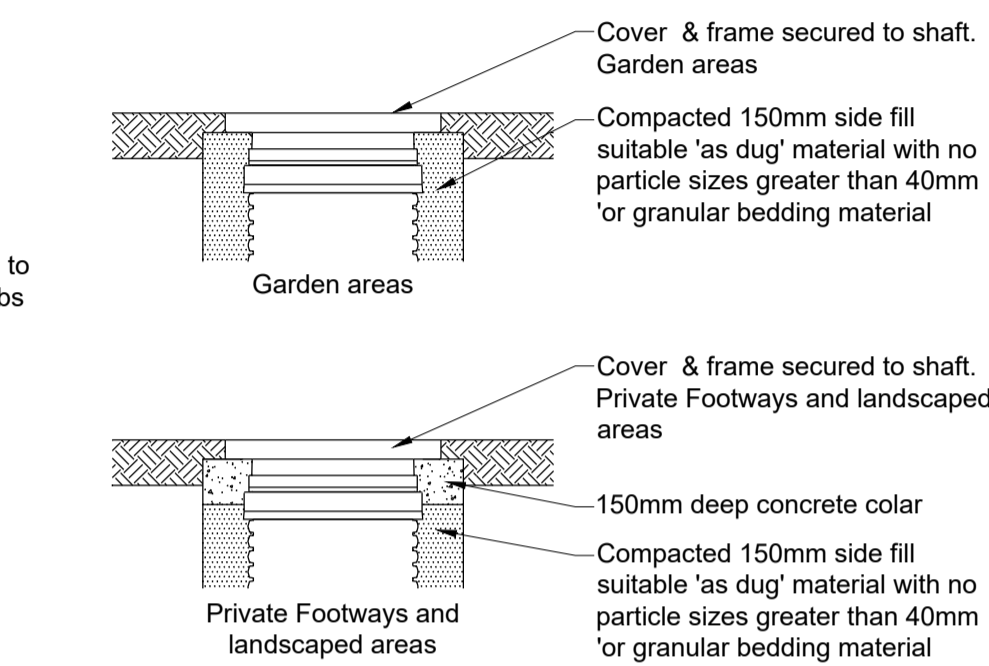
PLAN



Typical Inspection Chamber Detail (IC)

Note: The above detail provided for guidance only up to date detail to be sourced from manufacture

Scale 1:25

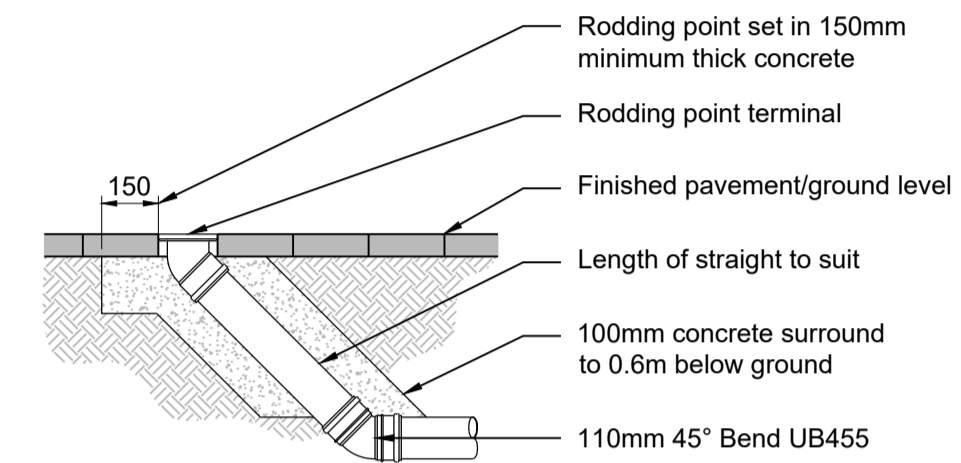


TYPICAL CATCHPIT MANHOLE BASE

DETAIL

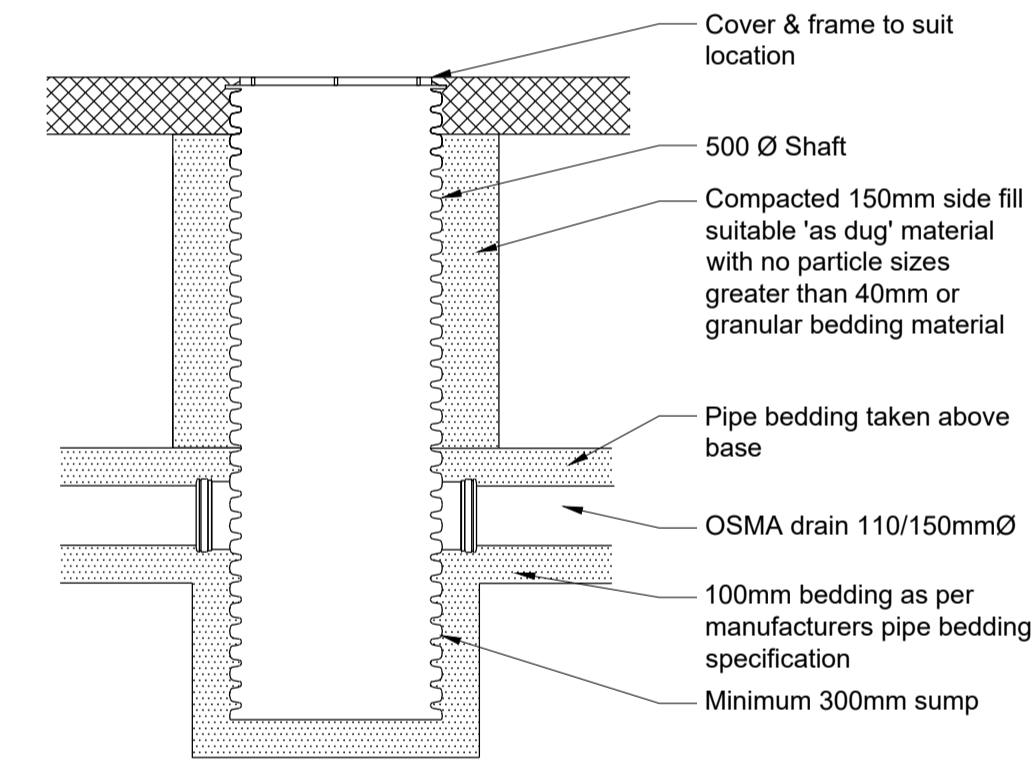
Scale 1:25

| Base Type | Osma/Wavin Inspection Chambers | | | | | | | |
|----------------------|--------------------------------|---------------|-----------|----------|-----------|-----------|-----------|--------------|
| | Shallow IC | Multi-Base IC | Universal | NIC | Range 200 | Range 315 | Range 450 | Range 600 |
| Shaft Dia (mm) | 250 | 300 | 450 | 500 | 200 | 315 | 450 | 600 |
| Max Invert Depth (m) | 0.600 | 0.6-0.9 | 1.200 | 3.000 | 0.6-2.0 | 0.6-2.0 | 1.2-3.0 | 1.2-3.0 |
| Max No. Inlets | 3 | 3 | 5 | 5 | 1 | 3 | 5 | 3 |
| Inlet Sizes (mm) | 110 | 110 | 110/ 160 | 110/ 160 | 110/ 160 | 110/ 160 | 110/ 160 | 150/225/ 300 |



Typical Rodding Eye Access Point Detail

Scale 1:20



Typical Silt Trap (ST)

Arrangement installed as inspection chamber

Scale 1:20

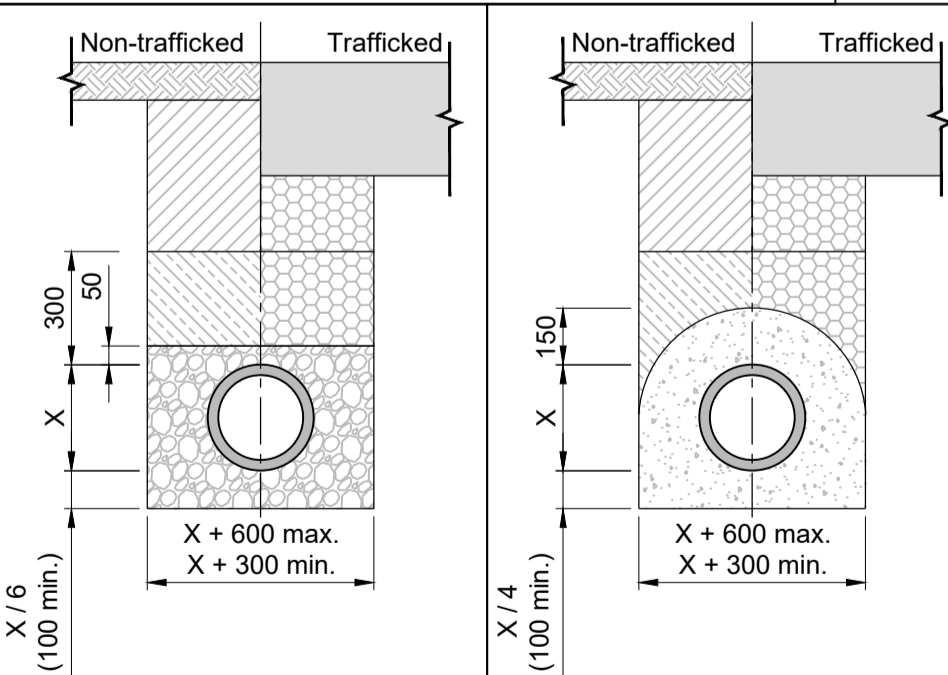
Details Key:

- Class 8 material to S.H.W. Clause 503.3 (iv)
- Concrete to S.H.W. Clause 503.3 (iii)
- General fill to S.H.W. Clause 505.2
- Topsoil
- Carriageway construction
- Granular material Type 1 sub-base to S.H.W. Clause 803 compacted in accordance with Clause 612, table 6/4 method 6
- Granular material to S.H.W. Clause 503.3 (i) Table 1 below (processed granular bedding and sidefill)

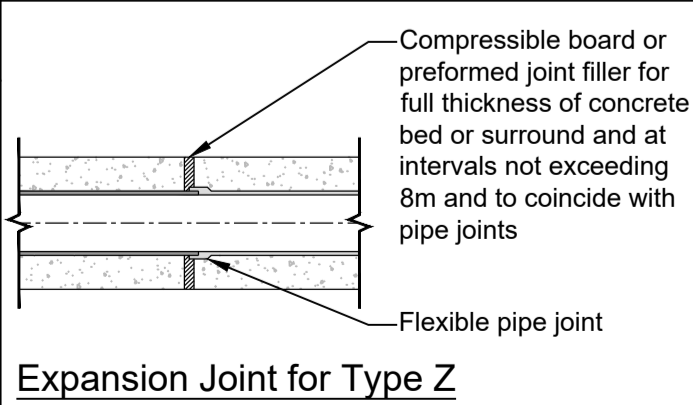
S.H.W. = Specification for Highway Works
X = Pipe Diameter Ø

Standard Notes:

1. All dimensions are in millimetres unless stated otherwise.
2. Refer to Appendix 5/1 of S.H.W. for pipe and bedding alternatives.
3. The joint detail for pipe surround on Type Z drains is for flexible joints only.
4. For pipes with nominal diameter below 450mm, the thickness of compressible joint filler board shall be 18mm. For pipes with a nominal diameter of 450mm or greater, but not exceeding 1200mm, the thickness of joint filler board shall be 36mm. For pipes exceeding 1200mm nominal diameter, the thickness of joint filler board shall be 54mm.
5. The minimum or maximum width of the trench applies on and below a line 300mm above the outside top of the pipe. Above the 300mm line the trench backfill material shall be as described in Clause 505 of S.H.W.
6. The concrete bed or surround may extend to the sides of the trench or be a minimum width. Class 8 material is to be used to fill any voids formed.
7. Granular pipe bed and surround material, consisting of natural and/or recycled coarse aggregate or recycled concrete aggregate, should have the following specification (in accordance with clause 503.3 MCDHW).
8. For Type Z trench the concrete cover may be formed to a radius batter or horizontal surface. Minimum cover of concrete shall be 150mm.



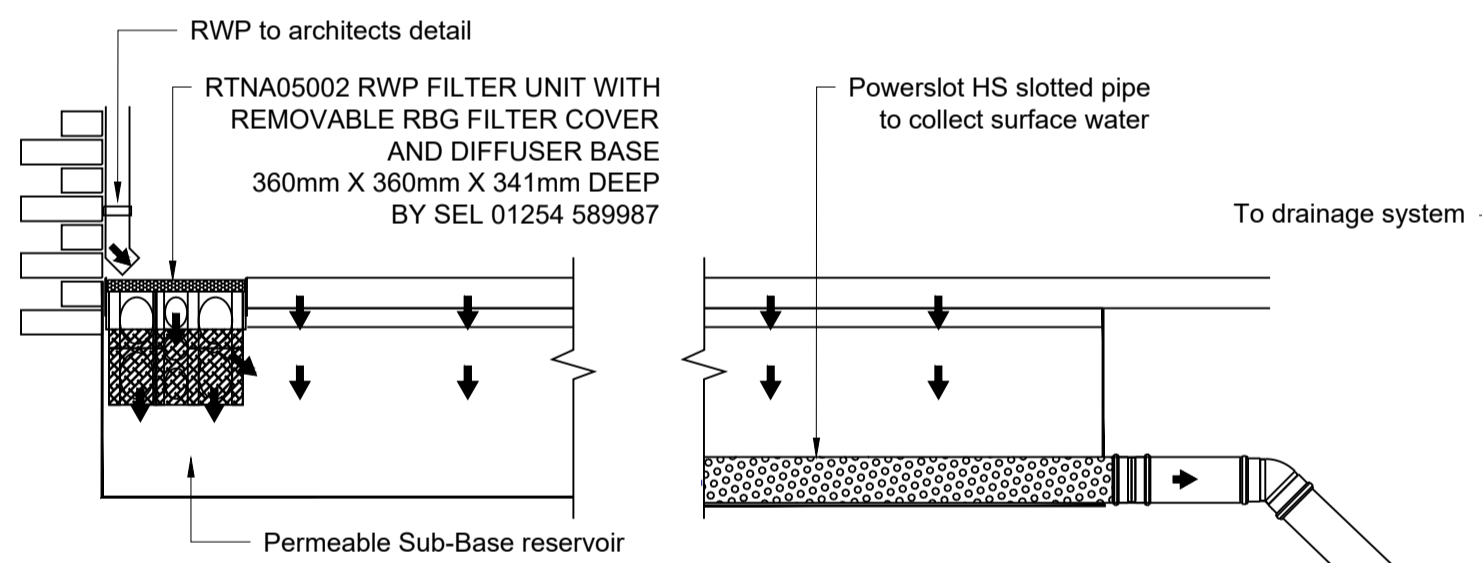
| Table 1 Processed Granular Bedding and Sidefill | | |
|---|-----------------------------------|---|
| Nominal pipe bore (mm) | Nominal maximum partial size (mm) | Material specification |
| 100 | 10 | 10mm nominal single sized |
| 100 TO 150 | 15 | 10 or 14mm nominal single sized or 14mm to 5mm graded |
| 150 TO 300 | 20 | 10, 14 or 20mm nominal single sized or 14mm to 5mm graded or 20mm to 5mm graded |



TYPICAL BEDDING DETAILS

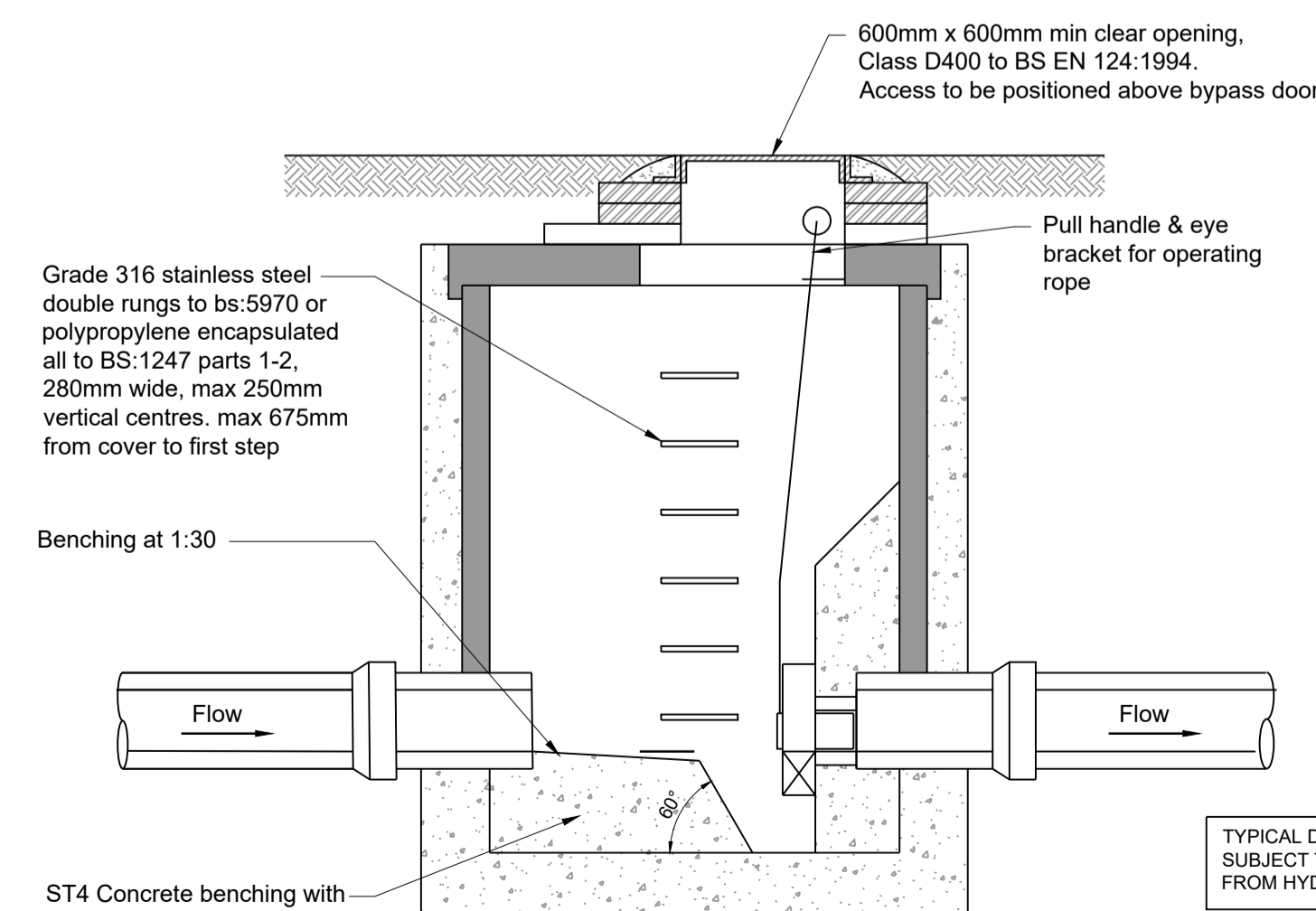
Note: The above details provided for guidance only, refer to manufacturers technical manual for installation guidance and further details.

Scale 1:20



Section through RWP discharging to permeable construction and outlet

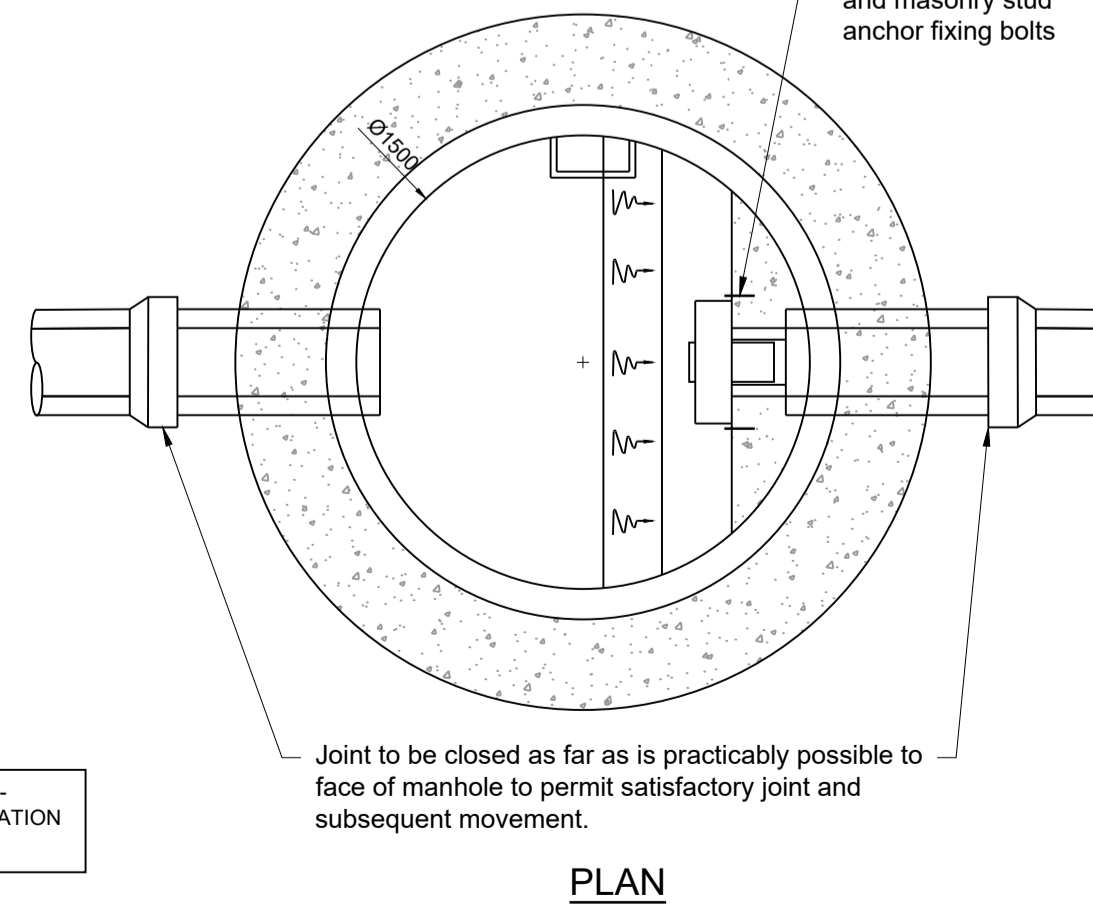
Scale 1:20



Flow Control Chamber - Typical Section

Scale 1:25

Note: Refer to Typical Manhole Detail for details of manhole construction



Note General:

1. All levels relate to Topographical Survey .
2. This document has been created in accordance with PDC Engineering Ltd. terms & conditions along with the scope of works provided by the client to PDC Engineering Ltd. Any use of this document other than for its original purpose is prohibited, PDC Engineering Ltd. accepts no liability for any third party use of this document.
3. PDC Engineering Ltd. is to be informed immediately of any alterations/deviations identified on-site from the information shown on the engineering drawings.
4. PDC Engineering Ltd. to be immediately notified of any suspected omissions or discrepancies.
5. All proprietary materials to be fixed strictly in accordance with manufacturer's recommendations using materials approved by the manufacturer.
6. Inspections by the Local Authority, shall be arranged by the contractor to suit their program.
7. Until technical approval has been obtained from the relevant authorities it should be understood that all drawings issued are preliminary and not for construction. Should the contractor start site work prior to approval being given, it is entirely at their own risk.

This drawing and the works depicted thereon are the copyright of Plandescil Consulting Engineers Ltd. Unauthorised reproduction infringes copyright.

PRELIMINARY

| Rev | Date | Rev By | Chkd | Description |
|-----|----------|--------|------|-------------|
| 0 | 26-02-24 | MJH | | First Issue |

plandescil
consulting engineers

Connaught Road Attleborough Norfolk NR17 2BW
Telephone: (01953) 452001 Fax: (01953) 456955
E-mail: pdc@plandescil.co.uk www.plandescil.co.uk

civil / structural / environmental / surveying

Client

Herin Property Investments LLP

Project

Willisham Hall Barns
Willisham Hall Road,
Willisham, Ipswich, IP8 4SL

Drawing Title

Drainage Details

Scale U.N.O. Date Drawn By

As Noted (A1) February 2024 MJH

Drawing No. **29478/010** Rev **0**