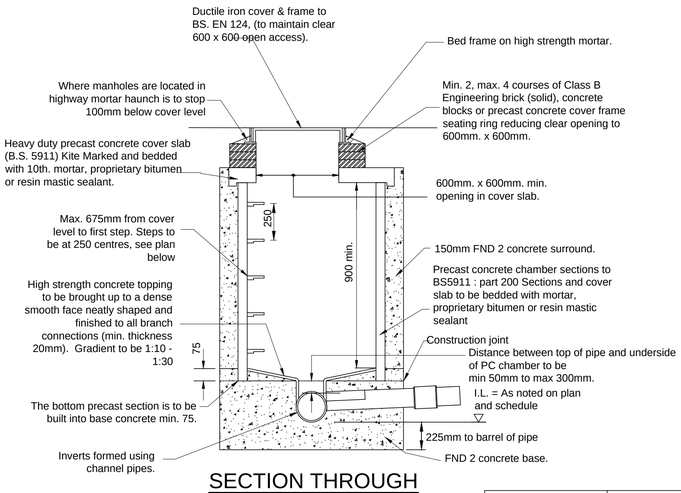
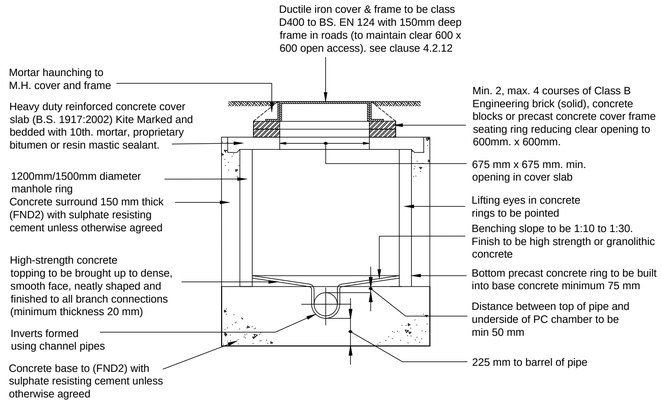



## SECTION THROUGH TYPICAL MANHOLE UP TO 3000 DEEP

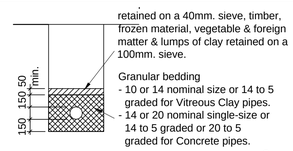
| Dia of largest pipe | Internal Dia of Manhole |
|---|---|
| 150 - 375 | 1200 |
| 375 - 700 | 1500 |
| 750 - 900 | 1800 |
| 1000 -1200 | 2100 |



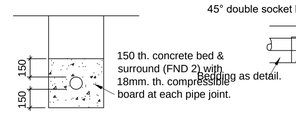

## TYPICAL MANHOLE DETAIL - TYPE B1/E

Depth from cover level to soffit of pipe less than 1.5m

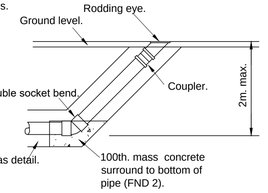
NOTE: Manholes less than 1.5m to soffit with 1500mmØ chamber size or larger should have a 1200 x 675 (central or eccentric) sited over the channel with double twin 600 x 600 covers.




## BEDDING DETAIL CLASS S



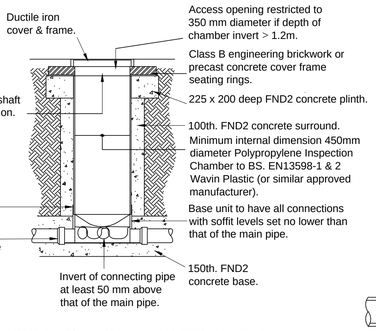

## PIPE BEDDING DETAIL DEPTH OF COVER LESS THAN 1.2m. CLASS A - PRIVATE DRAINAGE



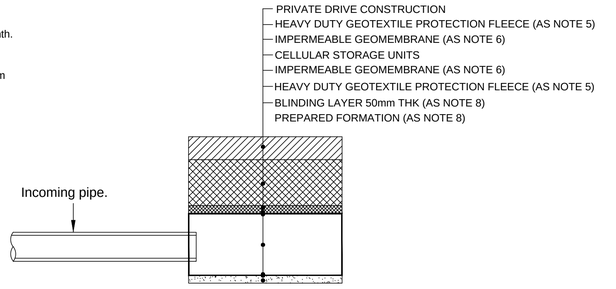

## RODDING EYE DETAIL

## NOTES

1. DO NOT SCALE - Use figured dimensions only.
2. All dimensions shown are in millimetres unless otherwise stated.
3. The Contractor is to verify all dimensions on site before commencing work or preparing shop drawings.
4. This drawing is to be read in conjunction with all Engineers and Architects drawings and specifications.
5. Heavy duty geotextile fleece to be non-woven needle-punched polypropylene. Geotextile to be laid with minimum 300mm overlaps and to be applied to all external surfaces of storage drainage units. To be installed in accordance with the manufacturer's recommendations
6. Waterproof geomembrane to be single layer cold applied robust welded flexible membrane suitable for waterproofing to structures and for water containment. Membrane to be nominal 1mm thick laid with minimum 120mm laps and welded seams. To be installed with the manufacturer's recommendations, under approved CQA protocal that includes testing of welds.
7. Units shall be manufactured with integral interlocking ties to maintain rigidity and minimise deflection. Geocellular units to be fully encapsulated with Heavy duty geotextile fleece (as Note 2) and impermeable membrane (as Note 3). All to be installed with the manufacturer's recommendations
8. Cellular units units to be laid on a prepared even formation that shall be free from undulations, sharp steps or protruding stones/rocks. The formation shall be graded to achieve a maximum deviation of 5mm in 3.0m in any direction. the formation shall have an equilibrium CBR value greater than 2%. A 50mm thick blinding layer of crushed clean rock may be used to achieve a suitable bedding surface. The crushed clean rock shall be 2/6.3 aggregate in accordance with BS EN 13242:2002 that meets the specification physical properties for a coarse graded aggregate specified in the guide to design, construction and maintenance of concrete permeable pavements, Edition 5, Published by Interpave.The blinding layer shall be lightly compacted to give a smooth, even and firm formation.
9. Where appropriate, the constructed tanks, associated pipe work and connections shall be air and water tested in line with manufacturer's instructions to demonstrate air and watertightness of the impermeable membrane, where attenuation tanks are specified.
10. Pre-cast concrete products shall comply with the relevant provisions of BS 5911 and be 'Kite Marked'.
11. All pipes and pipe fittings shall be HDPE twinwall and have current British Board of Agrement Certification.
12. Manhole covers and frames, grids and frames shall comply with the relevant provisions of BS EN 124.

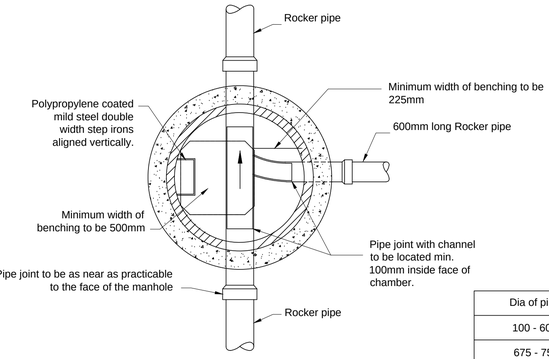



## DEMARCATION CHAMBER DETAIL 100 & 150 DIA. Max Depth 2m




## TYPICAL PRIVATE CELLULAR STORAGE TANK DETAIL

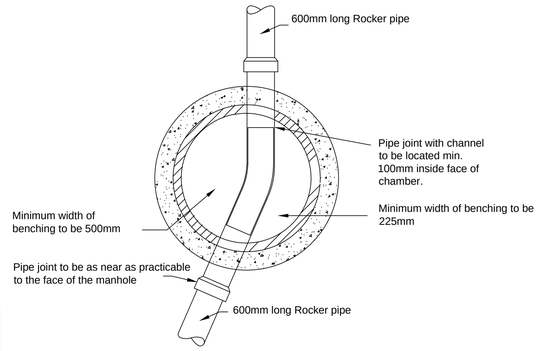
SCALE 1:25



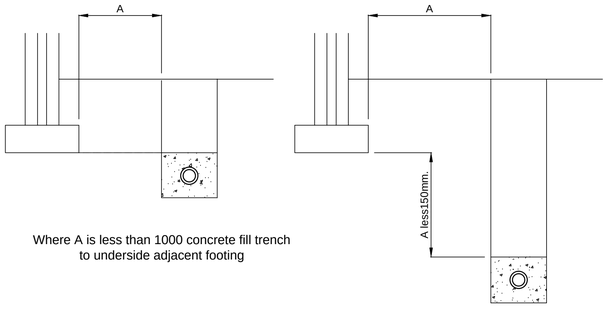

## PLAN OF TYPICAL MANHOLE UP TO 3000 DEEP MANHOLE DETAIL TYPE 'B'

Maximum depth from ground level to soffit of pipe 3000

| Dia of pipe | Length of rocker pipe |
|---|---|
| 100 - 600 | 600 |
| 675 - 750 | 1000 |
| over 750 | 1250 |



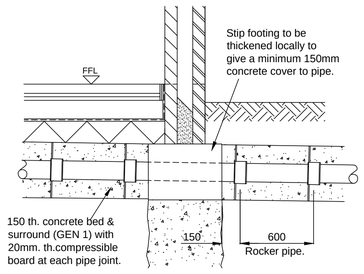

## PLAN TYPE B1/E MANHOLE



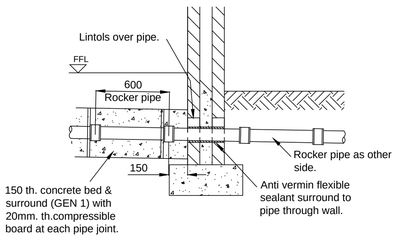

Where A is less than 1000 concrete fill trench to underside adjacent footing

Where A is 1000 or more concrete fill as shown

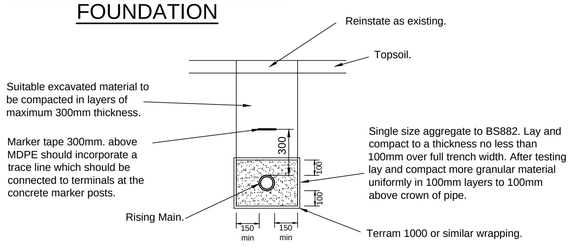
## DETAIL OF DRAINAGE PROTECTION ADJACENT TO BUILDINGS




## DETAIL OF PIPE THROUGH FOUNDATION

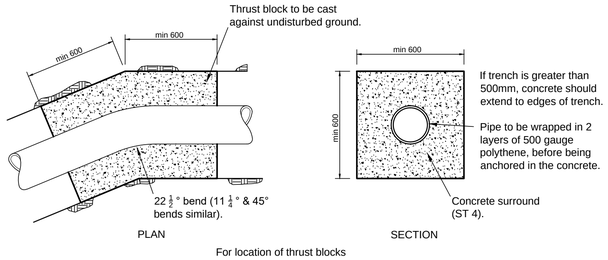



## DETAIL OF PIPE THROUGH WALL




## TRENCH DETAIL FOR RISING MAIN TYPE S

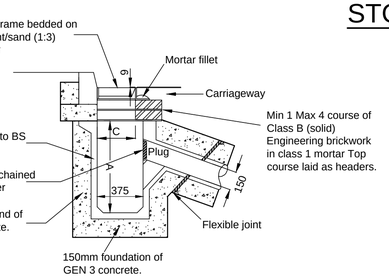
SCALE 1:20




For location of thrust blocks refer to drainage plan.

## TYPICAL THRUST BLOCK TO FOUL WATER RISING MAIN

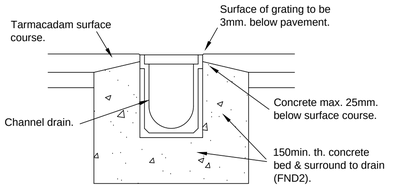
SCALE 1:20




Type 4 & 5 Roads
A=750mm B=375mm

Minimum clear opening between gully pot and gully frame to be (C=300min) in any concrete or clayware

## GULLY DETAIL




## CHANNEL DRAIN DETAIL (Tarmacadam)

| P1 | PRELIMINARY ISSUE | RKG | JR | 03.07.2017 |
|---|---|---|---|---|
| Rev | Description | Dr | Ch | Date |

Client: D J Atkinson Construction Ltd

Project: PROPOSED RESIDENTIAL DEVELOPMENT ELSECAR

Title: DRAINAGE DETAILS SHEET 1

J ROBERTS DESIGN LTD

| Sheet Size | A1 | Scale | As Shown |
|---|---|---|---|
| Drawn | RKG | Drawing Number | 1316/37 |
| Checked | | Rev | P1 |
| Approved | | | |

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