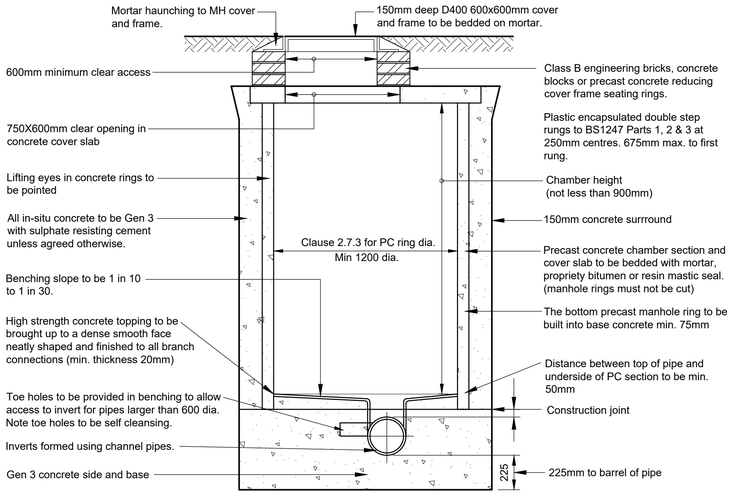
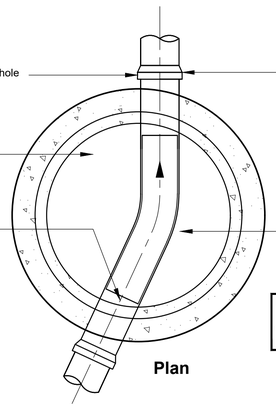
Typical 1200Ø Manhole Detail

N.T.S

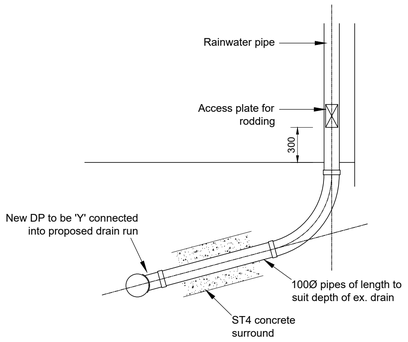




Plan

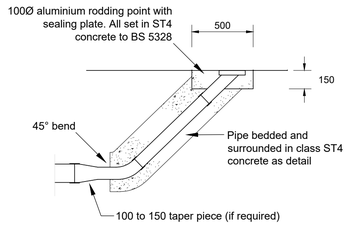
Manholes with outgoing pipes greater than 600mm dia. shall be fitted with guard bars, removable safety chains or other safety devices.

Precast concrete manhole rings will not be cut under any circumstances. Other options, manholes built up with concrete or brickwork to the top of the pipe.



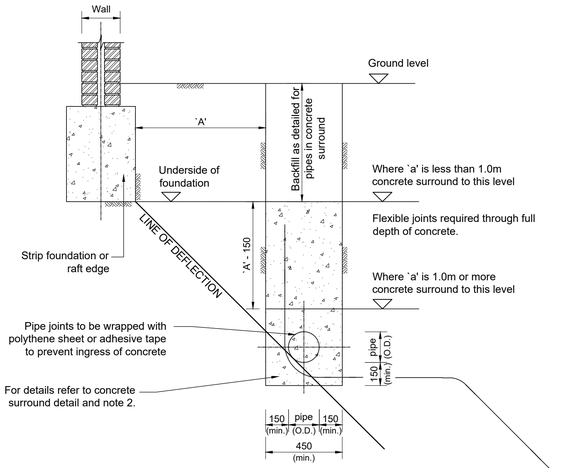
Downpipe Rodding / Connection Detail

N.T.S



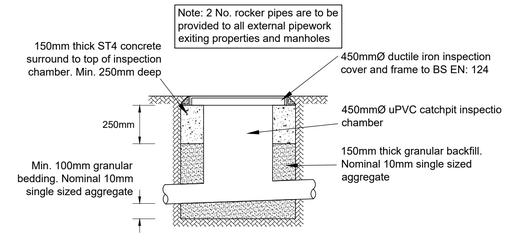
Rodding Eye Detail

N.T.S



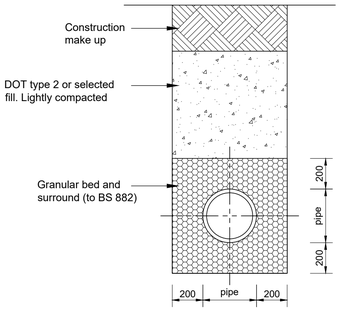
Pipe Runs Near Buildings

N.T.S



Typical 450mm uPVC inspection chamber detail (Max. depth to invert 3.0m)

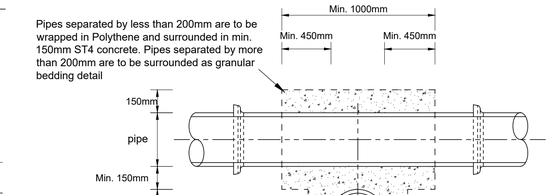
N.T.S



Granular Bed & Surround

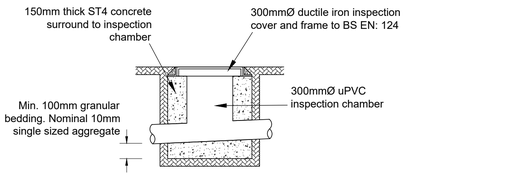
Granular bed and surround to be used where the depth between the finished construction level and the barrel of the drain exceeds 900mm
All dimensions are external pipe widths

N.T.S



Pipe Crossing Detail

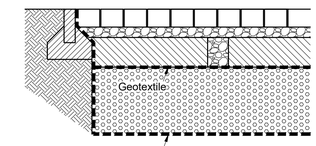
N.T.S



Typical 300mm uPVC Inspection Chamber Detail (Max. depth to invert 0.75m)

N.T.S

Granular Materials to BS 882 - Table 4.		
Nominal pipe diameter	Graded aggregate range	Single size aggregate
Not exceeding 140mm	n/a	10mm
Exceeding 140mm Not exceeding 400mm	14 to 5 or 20 to 5mm	10, 14 or 20mm
Exceeding 400mm	14 to 5, 20 to 5 or 40 to 5mm	10, 14, 20 or 40mm

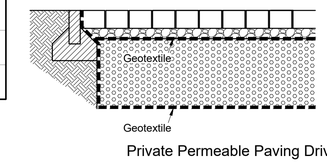


Permeable paving construction spec:
60mm concrete porous blocks
35mm clean stone (5mm granite chippings)
100mm Dense Bitumen Macadam, 25mm cores at 1.0m centres **(Accessway Only)**

Certified soakaway voided stone (10-63mm max nom size) - 225mm min.

Private Permeable Paving Accessway Specification

N.T.S

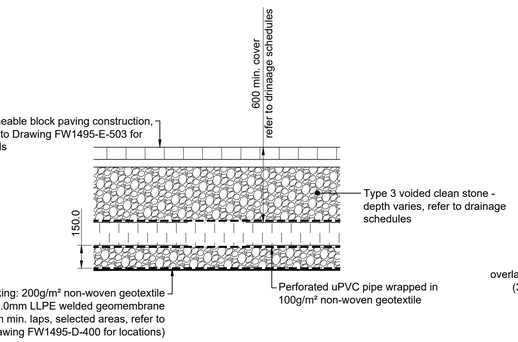


Permeable paving construction spec:
60mm concrete porous blocks
35mm clean stone (5mm granite chippings)

Certified soakaway voided stone (10-63mm max nom size) - 225mm min.

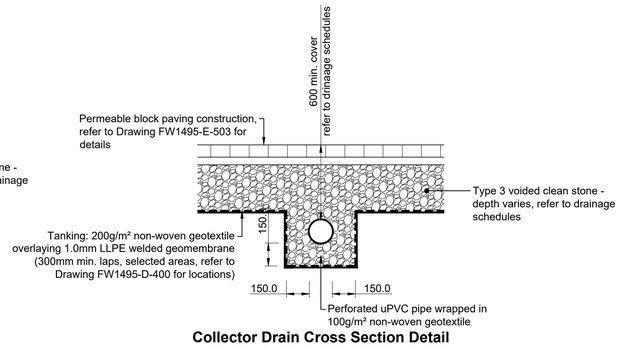
Private Permeable Paving Driveway Specification

N.T.S



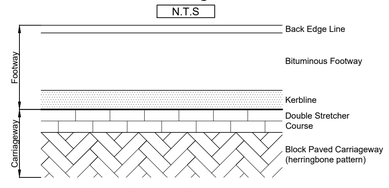
Collector Drain Long Section Detail

N.T.S



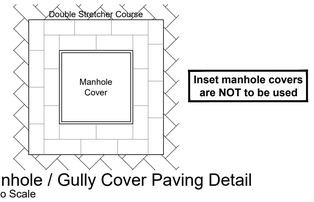
Collector Drain Cross Section Detail

N.T.S



Access Road Paving Detail

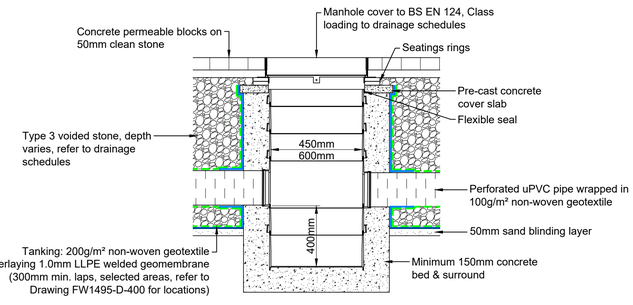
Not to Scale



Inset manhole covers are NOT to be used

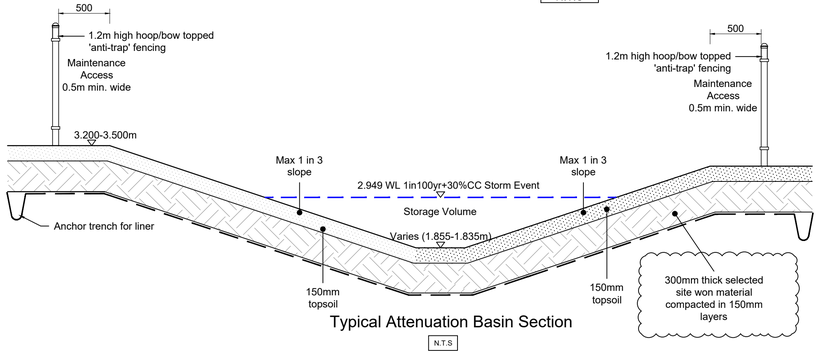
Manhole / Gully Cover Paving Detail

Not to Scale



Catchpit Chamber Detail

N.T.S



Typical Attenuation Basin Section

N.T.S

General Notes

1. DO NOT SCALE.
2. This drawing is to be read in conjunction with all other relevant drawings and details.
3. Should there be any conflict between the details indicated on this drawing and those on other drawings the Engineer should be informed PRIOR to construction on site.
4. Until technical approval has been obtained from the relevant Authority, it should be understood that all drawings issued are Preliminary and NOT for construction. Should the Contractor commence site work prior to such approval being given it is entirely at their own risk.
5. Sketch proposals are for illustrative purposes only and as such are subject to detailed site investigation including ground conditions / contaminants, drainage, design and planning / density negotiations.
6. All dimensions are in millimetres unless otherwise stated.
7. The Farrow Walsh Consulting Designers Risk Assessments for this project must be reviewed PRIOR to the commencement of any works on site.

1. This drawing to be read in conjunction with all other relevant Engineers and Architect's details
2. All work is to be carried out in accordance with the current British Standards, codes of practice, building regulations.
3. The exact position, level, size and use of existing sewers to be confirmed on site. Any discrepancies to be reported to the engineer prior to commencement of works.
4. All uncovered and shallow pipework to be protected against construction traffic as part of the contractors temporary works requirements.
5. Proposed drainage passing through new foundations to be sleeved with cast-in oversized pipework.
6. Exact location line and level of existing stubs to existing manholes in the road to be confirmed on site prior to construction.
7. See Architect's details for all setting out dimensions to buildings and boundaries etc
8. All connections to road gullies and channels shall be 150mm nominal bore pipework. Connections to RWPs to be 100mm nominal bore pipework subject to confirmation of RWP sizes and/or design flow. No pipe work to be downsized in the direction of flow.
9. Connections to foul terminal fittings to be 100mm nominal bore pipework subject to confirmation of above ground pipe diameters and/or design flow. No pipe work to be downsized in the direction of flow.
10. All pipework to be U-PVC type in accordance with WIS 4-35-01 unless otherwise noted.
11. All pipes connecting to adopted manholes up to and including 300mm dia. to be Wavin Ultrarib.
12. All pipes connecting to adopted manholes greater than 300mm dia. to be Concrete.
13. All pipework entering and exiting manholes to be connected with pipe soffits level.
14. Pre-formed channels to be used at all manholes.
15. High strength concrete benching to be steel trowelled to a dense smooth face neatly shaped and finished to all branch connections and laid in accordance with the specification.
16. Pipe bends to be provided to suit direction of flow.
17. All manhole covers and frames to be ductile iron heavy duty Grade D400 double triangular to BS EN 124 unless otherwise noted. Covers to be labelled 'FW' and 'SW' as appropriate.
18. Gully tops and manhole covers to be provided in accordance with BS EN 124.
19. All new drainage to be constructed adjacent new and proposed tree planting to be protected against root activity using 'rootcontrol' root barrier material by green-tech. All in accordance with the manufacturer's recommendations.
20. First flexible joint in pipes adjacent to a manhole shall be 600mm max. From inside face of manhole, connecting to rocker pipe. For pipe diameters 150mm - 450mm the rocker pipe length shall be 500mm - 750mm and for pipe diameters 451mm - 675mm the rocker pipe length shall be 750mm - 1000mm.
21. Manholes with outgoing pipes greater than 600mm dia. shall be fitted with guard bars, safety chains or other approved safety devices.
22. All soft spots encountered in the trench formation to be removed and replaced with graded granular material unless instructed otherwise.
23. Where a pipe trench is within 1m of a building, the pipe is to be provided with concrete protection and the trench filled with concrete up to a level below the building equal to the distance from the building less 150mm.
24. Where the formation of a pipe trench is above original ground level, levels are to be made up with compacted DTP Type 2 material or better.
25. All buried concrete must cater for Class 2 sulphates conditions in accordance with Table 1 of BRE digest 363.
26. Concrete protection shall be provided to all pipes with less than 300mm cover in pedestrian areas, to all pipes with less than 600mm cover in private driveways not used by commercial vehicles, and to all pipes with less than 1200mm cover in roads or private driveways used by commercial vehicles. Where concrete surround is specified flexibility of joints is to be maintained by using compressible bitumen impregnated fibreboard at each point.
27. The design of any temporary works required shall be the responsibility of the contractor.
28. Do not scale this drawing. All dimensions are in millimetres unless noted otherwise. Any discrepancies are to be recorded and reported to the engineers immediately.
29. All work is to be to the satisfaction of the Engineer and the building officer.
30. The contractor is responsible for and must take all necessary precautions to ensure the stability of the works at all times during construction.
31. All workmanship and materials are to be to current British standards.
32. All services are to be located and protected as necessary by the contractor prior to the commencement of the works.

Rev	Description of updates	Drawn	Checked	Apprd	Date
T5	Title amended to reflect additional sheet and note added to basin detail	JD	PU	DM	01.11.19
T4	Attenuation Basin detail updated	JD	CB	BM	01.10.19
T3	Attenuation Basin detail updated	JD	CB	BM	01.08.19
T2	Client updated to GEDA Construction Ltd.	CC	CB	BM	24.05.19
T1	Issued for Tender.	PU	CC	JD	18.04.19

Revision Schedule

farrow walsh CONSULTING
62 Highcross Street, Leicester LE1 4NN
321 Bradford Street, Birmingham B5 6ET
☎ 0330 100 0363
www.farrowwalsh.com

TENDER

Client: GEDA Construction Ltd.

Project: Station Road Long Sutton

Title: Private Drainage Construction Details Sheet 1 of 2

Drawn:	Checked:	Approved:	Date:	Scale:
PU	DM	JD	2019	As Shown @ A1

Drawing No. **FW1733-D-407-01** Revision: **T5**

This drawing and the building works depicted are the copyright of Farrow Walsh consulting Ltd. and may not be reproduced or amended except by written permission. No liability will be accepted for amendments made by other persons.