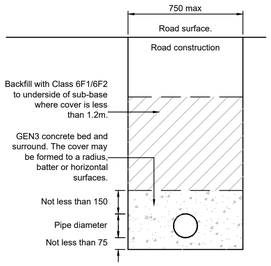
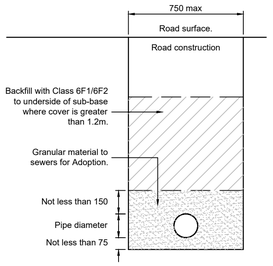
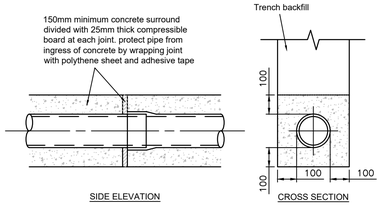


CLASS 'Z' PIPE BEDDING
(Depth of cover less than 1.2m)

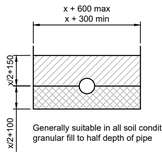


CLASS 'S' PIPE BEDDING
(Minimum depth of cover 1.2m)

PIPE BEDDING DETAILS (UNDER HIGHWAYS)
(Scale 1:20)



CONCRETE BED AND SURROUND TO PIPES UNDER DRIVES AND GARDENS
Depth of cover less than 0.35m under private gardens and 0.5m under private drives
(Scale 1:20)



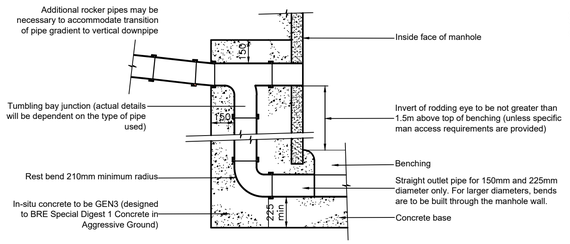
Generally suitable in all soil conditions granular fill to half depth of pipe

LEGEND:

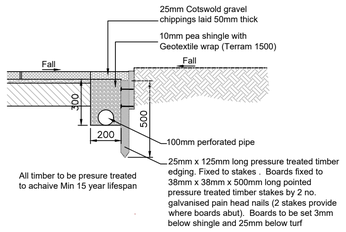
- Selected fill: free from stones larger than 40mm, lumps of clay over 100mm, timber frozen material and vegetable matter.
- Granular material: should conform to BS 882:1983 table 4 or BS8301:1985 Appendix D. Compaction fraction > 0.3 for class N > 0.2 for class F and B.

'x' - Denotes external pipe diameter.

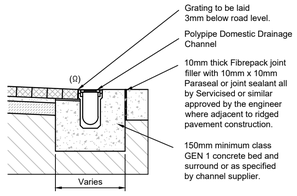
PIPE BEDDING DETAIL UNDER DRIVES AND GARDENS
Min depth of cover 0.35m under private gardens and 0.5m under private drives
(Scale 1:20)



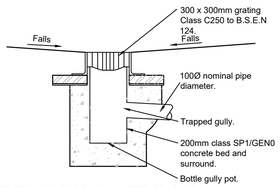
VERTICAL BACKDROP DETAIL
(Scale 1:20)



PATIO/GARDEN DRAIN
(1:20)



TYPICAL CHANNEL DRAIN
(Scale 1:20)



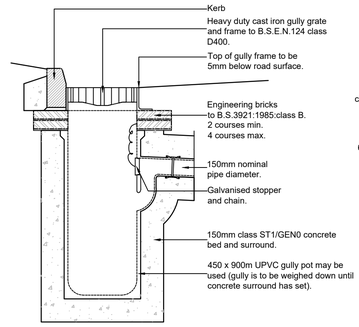
TYPICAL YARD (BOTTLE) GULLY
(VEHICULAR LOADING)
(Scale 1:20)

Minimum Dimensions for Access Fittings and Chambers						
Type	Internal Sizes				Cover Sizes	
	Depth to invert (m)	Size of largest pipe (DN)	Length x Width (mm)	Circular (mm)	Length x Width (mm)	Circular (mm)
Rodding Eye	As Drain but Minimum 100mm					
Shallow Access Small Large	0.6 or less	150	150x100 225x100	150	150x100 225x100	150
Inspection Chamber	0.6 or less 1.2 or less 1.2 - 3.0	150	450x450 450x450	190 450 450	450x450 300x300	190 450 350
Manhole	1.5 or less	150 225 300 >300	675x750 675x1200 675x1200 DN+450 x1800	1200 1200 1200 The larger of 1800 or (DN+450)	675x750 1200x675 1200x675 1200x675	n/a n/a n/a n/a
	Over 1.5	225 300 375-450 >450	1200x1000 1200x1075 1350x1225 DN+775 x1800	1200 1200 1200 The larger of 1800 or (DN+775)	600x600 600x600 600x600 1200x675	600 600 600 600
Manhole Shaft	Over 2.7		900x840	900	600x600	600

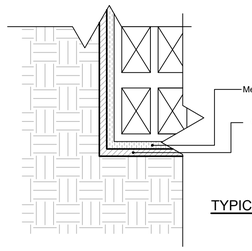
BUILDING REGULATIONS MINIMUM DIMENSIONS FOR MANHOLES
(Not to Scale)

This plan complies with the Building Regulations 2002 Section 'H' - Drainage & Waste Disposal.

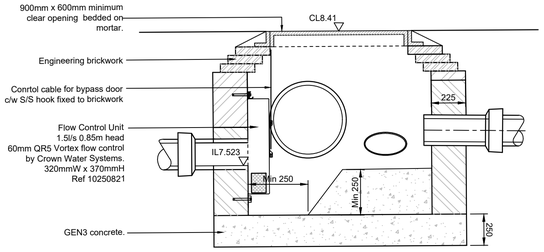
NOTE:
Polypipe products shall be used where possible for below ground drainage



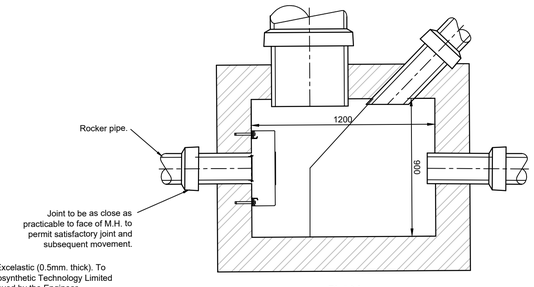
TYPICAL ROAD GULLY
(Scale 1:20)



TYPICAL TANK LINING DETAIL
(Scale 1:10)

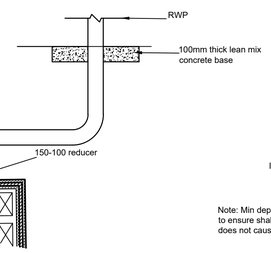


SECTION

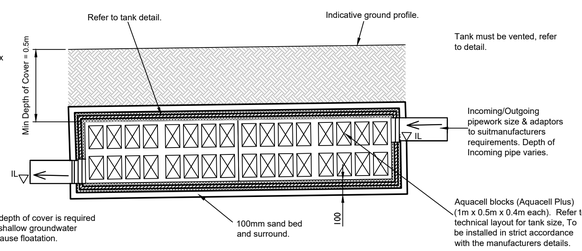


PLAN

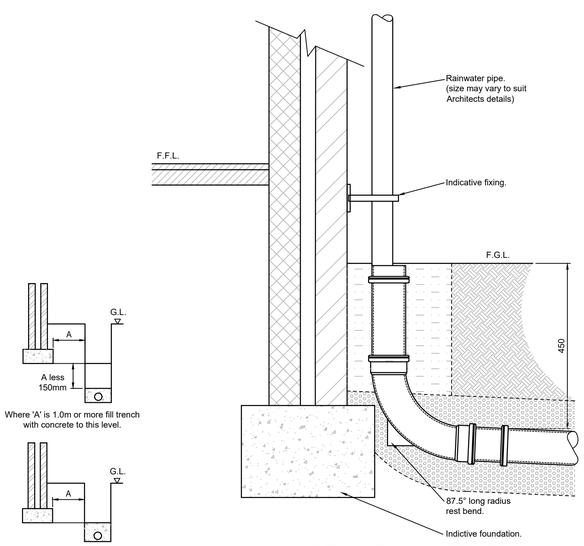
FLOW CONTROL CHAMBER S102
(Scale 1:20)
The details shown above are indicative only and should not be used as a scaled drawing. Please refer to manufacturers installation.



AQUACELL TANK VENT
(Scale 1:20)

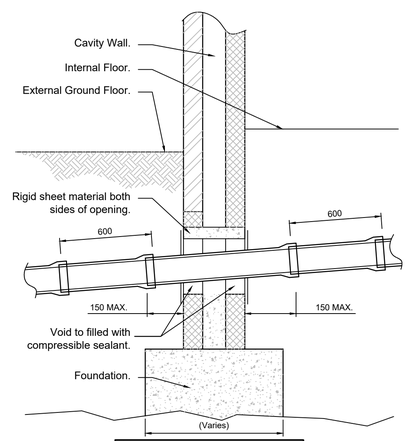


AQUACELL SURFACE WATER STORAGE TANK
(Scale 1:20)



DETAIL OF RAINWATER PIPE
(Scale 1:20)

DETAIL OF PIPE RUNS NEAR BUILDINGS
(Not to Scale)



Note:
Arched or lintelled opening to give 50mm min clearance all around the pipe. mask opening both sides with rigid sheet material to prevent overspill of fill or entry for vermin.

TYPICAL SECTION PIPE PASSING THROUGH WALL PIPE THROUGH LINTELLED OPENING
(Scale 1:20)

DRAINAGE NOTES:

1. ALL DRAINAGE WORKS TO BE CONSTRUCTED IN STRICT ACCORDANCE WITH SPECIFICATION OF THE LOCAL AUTHORITY, BUILDING REGULATIONS, SEWERS FOR ADOPTION, BS8301 & BSEN.752-1.
2. FOR LOCATION AND SETTING OUT OF BUILDING DRAINAGE POINTS REFER TO ARCHITECTS DRAWINGS.
3. ALL PIPE RUNS NEAR BUILDINGS TO COMPLY WITH THE BUILDING REGULATIONS 2002 PART H1. WHERE A PIPE IS WITHIN 1m OF A FOUNDATION THE TRENCH SHALL BE FILLED WITH CLASS GEN3 CONCRETE UP TO THE LOWEST LEVEL OF THE FOUNDATION. WHERE THE TRENCH IS FURTHER THAN 1m FROM THE FOUNDATION, THE TRENCH SHALL BE FILLED WITH CLASS GEN3 CONCRETE TO A LEVEL BELOW THE LOWEST LEVEL FOR THE FOUNDATION EQUAL TO THE DISTANCE FROM THE FOUNDATION LESS 150mm. IN BOTH CASES THE PIPE SHALL BE BEDDED AND SURROUNDED IN 150mm THICK CLASS GEN3 CONCRETE.
4. WHERE PIPES, EXTERNAL TO THE STRUCTURES, HAVE A DEPTH TO SOFFIT FROM GROUND LEVEL OF LESS THAN 450mm THEY SHALL HAVE A CLASS GEN3 CONCRETE ENCASEMENT (150mm THICK).
5. WHERE A PIPE, UNDER A VEHICULAR AREA, HAS A DEPTH OF COVER OF LESS THAN 0.9m THE PIPE SHALL BE LAID IN A CONCRETE BED AND SURROUND.
6. IN ANY CIRCUMSTANCES WHERE PIPES ARE BEDDED AND SURROUNDED IN CONCRETE FLEXIBLE JOINTS SHOULD BE PROVIDED. COMPRESSIBLE BOARDS (FIBREBOARD OR POLYSTYRENE) SHALL BE PROVIDED AT A MAXIMUM OF 8m CENTRES (COINCIDING WITH PIPE JOINTS). THE BOARDS SHALL BE PRE-CUT TO PIPE DIAMETER AND TO A HEIGHT AND WIDTH EQUAL TO THE CONCRETE CROSS SECTION. A BOARD THICKNESS OF 18mm FOR PIPES UP TO 450mm NOMINAL DIAMETER AND 36mm FOR PIPES OVER 450mm NOMINAL DIAMETER.
7. ALL PRIVATE BUILDING DRAINAGE SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH BSEN.752-1. UNLESS OTHERWISE SPECIFIED BUILDING DRAINAGE SHALL BE 100mm DIAMETER AND SHALL BE LAID AT A MINIMUM GRADIENT OF (<1L/S = 1 IN 40>1L/S = 1 IN 80) FOR FOUL DRAINS AND 1 IN 80 FOR SURFACE WATER DRAINS. ALL BUILDING DRAINS SHALL BE LAID IN CONJUNCTION WITH 'NON ADOPTIVE BEDDING DETAILS' (CLASS D, N OR B) UNLESS OTHERWISE SPECIFIED. TWIN WALL PIPES ARE NOT PERMITTED FOR PRIVATE BUILDING DRAINAGE.
8. ALL PIPES, BENDS AND JUNCTION FOR PRIVATE BUILDING DRAINAGE SHALL BE UPVC CONFORMING TO BS4660 AND BS5481 AS APPROPRIATE AND SHALL BE LAID IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION. ALL PIPES, BENDS AND JUNCTION MATERIALS FOR ADOPTABLE DRAINAGE SHALL BE VITRIFIED CLAY, EXTRA STRENGTH OR SUPER STRENGTH TO BSEN295, WITH FLEXIBLE JOINTS AND KITEMARK CERTIFIED
9. ALL BACK INLET GULLIES TO BE RODDABLE OR CONNECTED TO INSPECTION CHAMBERS.
10. ALL GULLY CONNECTIONS OTHER THAN AT MANHOLES TO BE 'Y' JUNCTIONS.
11. ALL ROAD GULLY CONNECTIONS TO BE 150mm DIAMETER.
12. ALL STUB STACKS TO BE FITTED WITH AIR ADMITTANCE VALVES WHERE BRANCH DRAIN EXCEEDS 12m EXCEPT AT THE HEAD OF THE RUN. SOIL VENT PIPES LOCATED AT THE HEAD OF A RUN TO TERMINATE TO FRESH AIR.
13. ALL CONNECTIONS TO BE SOFFIT TO SOFFIT UNLESS OTHERWISE NOTED.
14. ALL CONCRETE AND CONCRETE PRODUCTS TO BE IN ACCORDANCE WITH BRE 363 FOR SULPHATES.
15. THE LOCATIONS OF ALL SVPS AND RWPS SHALL BE CROSS REFERENCED AGAINST THE ARCHITECTS DRAWINGS DURING SETTING OUT.
16. THE PRECISE DEPTH AND LOCATION AND SIZE OF EXISTING PIPES OR MANHOLES WHERE CONNECTIONS OR DIVERSION ARE PROPOSED MUST BE CONFIRMED AND REPORTED TO THE ENGINEER BEFORE WORKS START ON SITE.
17. WHERE PRIVATE ACCESS OR INSPECTION COVERS ARE INSTALLED IN AREAS OF BLOCK PAVING OR PAVING SLABS THEY SHALL BE FITTED WITH A RECESSED COVERED INFILLED WITH THE ADJACENT SURFACING MATERIAL

NOTES
A1

1. This drawing is to be read in conjunction with all other Bright Plan Civils drawings, and with all relevant Architect's and Engineer's drawings and specification. Any discrepancies found are to be reported immediately to the Engineer.
2. Bright Plan Civils accepts no responsibility for inaccuracies in data provided by third parties such as topographic surveys or Ordnance Survey mapping.
3. Do not scale, work to figured dimensions only. All dimensions are in millimeters unless noted otherwise and all levels are in metres from the topographic survey datum.
4. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main contractor is responsible for checking all information on site prior to work commencing and taking due care whilst undertaking the works.
5. All dimensions to be checked on site. All details and dimensions relating to sub-contractors work must be checked and agreed between the sub-contractor or supplier and the general contractor.
6. The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. Figured dimensions must be used for setting out and detailing. Bright Plan Civils logos and company information must be removed from copies if information is re-used.
7. The main contractor is responsible for the design of all temporary works, and is also responsible for the safe maintenance and stability of existing buildings at all times.
8. The main contractor is responsible for dealing with all occurrences of ground water during the construction period.
9. The contractor must comply with all current legislation relating to health & safety.
10. All products specified shall be installed in strict accordance with the manufacturers recommendations and instructions. If there are discrepancies between that information and the details on any Bright Plan Civils drawings, the manufacturers instructions must be used.
11. Contractor to confirm all invert levels where connections are proposed prior to commencing any drainage works. Contractor to commence drainage works at the point of discharge.

RESIDUAL HAZARDS

In addition to the hazards/risks normally associated with the type of work detailed on this drawing, note the following:

1. Uncharted buried services. Contractor to use CAT prior to excavating.
2. Working in live carriageway. Contractor to implement traffic management to ensure safety of the workforce and public.
3. Working in live sewers. Contractor to ensure operatives are familiar with the dangers of working in live sewers.
4. Excavations close to existing structures. Contractor to prepare method statement to ensure stability of existing structures.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved risk assessment and method statement

Rev.	Amendments	Date
A	Updated to suit clients comments	24/08/21

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www.bpcivils.co.uk enquiries@bpcivils.co.uk

Drawing Status: PRELIMINARY

Client: Thakeham

Project: Land at Lidsey Road Woddgate, West Sussex

Drawing Title: Private Drainage Details Sheet 2 of 2

Scale @A1	Date	Drawn By	Checked By
NTS	Jul 21	LDF	MJA

Drawing No. D1990-15.2 Rev. A