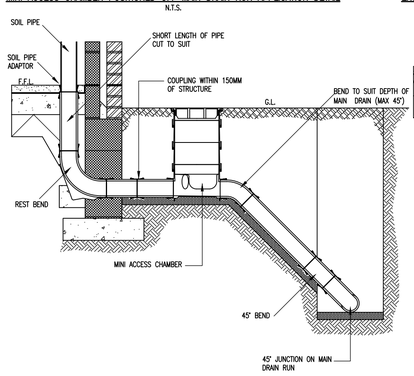
MINI ACCESS CHAMBER POSITIONED OFF MAIN DRAIN RUN APPLICATION DETAIL

N.T.S.



EXTERNAL RAINWATER PIPE CONNECTION DETAIL

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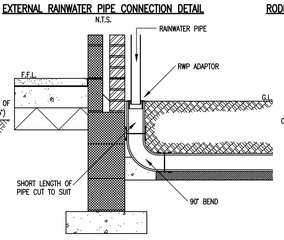

RODDING POINT INSTALLATION DETAIL

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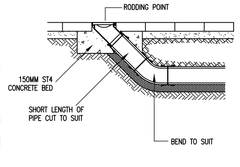
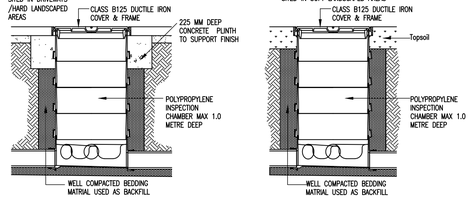


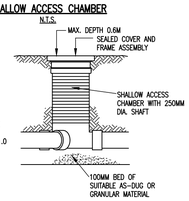
POLYPROPYLENE INSPECTION CHAMBER INSTALLATION DETAIL

N.T.S.



SHALLOW ACCESS CHAMBER

N.T.S.



DOMESTIC DRAINAGE NOTES

All Domestic Drainage to comply with the British Standard BS EN 752:2008 'Drain and Sewer Systems Outside Buildings' and Part H of the Building Regulations 2000.

Domestic drainage to be 100mm dia. laid at a minimum gradient of 1 in 80 unless stated otherwise on the drawings. All spur connections to be laid at 1 in 80 unless otherwise stated on the drawings. Minimum cover to be 350mm (600mm for UpVC) unless concrete bed and surround is provided.

Pipe bedding as specified by the drainage manufacturer. All pipes that pass under buildings to have a minimum 100mm granular surround. Where drains pass through external walls the pipe is to be lintelled over with a minimum 50mm clear space around the pipe. Rigid pipes to be fixed to the wall externally and internally to prevent movement within the granular material.

Where required, Step Irons to be built into the inspection chamber in accordance with the requirements of the aforementioned British Standard and Building Regulations. The top step iron shall be fixed not more than 750mm below the surface and the lowest step to be fixed not more than 300mm above the benching.

Manhole Cover's and Frames to comply with BS EN 124.

Class D400 for areas with frequent vehicular usage such as roads.
Class C250 for areas with light vehicular usage such as car parks.
Class B125 for pavements and pedestrian areas.
Class A15 for areas inaccessible to motor vehicles.

TABLE 1: PROCESSED AND AS-DUG GRANULAR BEDDING AND SIDEFILL MATERIALS FOR RIGID PIPES

Pipe nominal size (DN)	Nominal maximum particle size (mm) See note (c)	Class of bedding See note (d)	Suitable Materials	
			EITHER: Maximum CF value for acceptability See note (b)	OR: Materials specified in British Standards See note (a)
100	10	S	0.15	10mm nominal single-size
		B	0.30	
		F	0.15	
		N	0.30	Fine aggregate
Over 100 to 150	16	S	0.15	10mm or 14mm nominal single-size or 14mm to 5mm graded
		B	0.30	
		F	0.15	
		N	0.30	Fine aggregate
Over 150 to 300	20	S	0.15	10, 14 or 20mm nominal single-size or 14mm to 5mm graded or 20 to 5mm graded
		B	0.30	
		F	0.15	
		N	0.30	All-in aggregate or fine aggregate
Over 300 to 550	20	S	0.15	14mm or 20mm nominal single-size or 14mm to 5mm graded or 20 to 5mm graded
		B	0.30	
		F	0.15	
		N	0.30	All-in aggregate or fine aggregate
Over 550	40	S	0.15	14, 20 or 40mm nominal single-size crushed rock or 14mm to 5mm, 20 to 5mm or 40 to 5mm graded
		B	0.30	
		F	0.15	
		N	0.30	All-in aggregate or fine aggregate

Notes:

(a) Processed granular materials to include aggregates to BS EN 13242.

(b) Compaction Fraction value (CF), see Appendix B of Wls IGN No. 4-08-02.

(c) The nominal maximum particle sizes apply both to processed and as-dug materials (see Section 4 of IGN No. 4-08-01-Issue 4 and No.4-08-01 Amendment [Nov 2008]).

(d) Bedding classes are defined in:- BS EN 1295-1:1997 Structural Design of Buried Pipelines under various conditions of loading. TRRL – Simplified Table of External Loads on Buried Pipelines.

(e) The sulphate content of bedding and sidefill materials for use with cementitious pipe should not be greater than 0.3% as sulphur trioxide.

TABLE 2: PROCESSED GRANULAR BEDDING AND SIDEFILL MATERIALS FOR FLEXIBLE PIPES

Pipe nominal bore (mm) (See note (d))	Nominal maximum particle size (mm)	Suitable Materials		
		EITHER: Maximum CF value for acceptability See note (b)		OR: Materials specified in British Standards See note (a)
		Non-pressure pipe	Pressure pipe	
100	10	0.15	0.30	10mm nominal single-size
Over 100 to 150	16	0.15	0.30	10 or 14mm nominal single-size or 14mm to 5mm graded
Over 150 to 300	20	0.15	0.30	10, 14 or 20mm nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded
Over 300 to 550	20	0.15	0.30	14mm or 20mm nominal single-size or 14mm to 5mm graded or 20 to 5mm graded
Over 550	40	0.15	0.30	14, 20 or 40mm single-size or 14mm to 5mm graded or 20mm to 5mm graded or 40 to 5mm graded.

Notes:

(a) Processed granular materials to include aggregates to BS EN 13242.

(b) Compaction Fraction value (CF), see Appendix B of Wls IGN No. 4-08-02.

(c) For the purpose of this table, PE pipes of 630mm OD can be regarded as having nominal bores of over 550mm, irrespective of wall thickness.

(d) Nominal bore is used in preference to DN because of the different nominal size classification for flexible pipes.

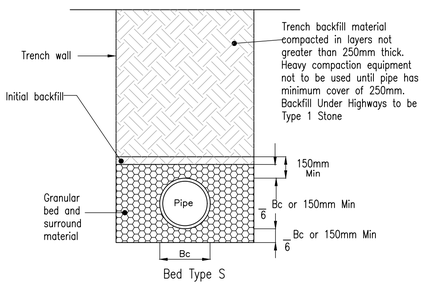
(e) For PE80 and PE100 polyethene pipe complying with current relevant Water Industry Specifications, the maximum sidefill particle size may be increased to 10% of the pipe nominal size.

(f) For E' values for processed granular materials reference should be made to Table A.3 of Wls IGN No. 4-08-02 where specific site tests have not been performed.

(g) For ferrous cementitious pipeline materials, the sulphate content of bedding and sidefill materials should not be greater than 0.3% as sulphur trioxide.

NOTES

1. At the commencement of works on site the contractor is to carry out trial pits and liaise with Utility Companies in order to establish the exact position of all existing statutory utility plant in the vicinity of works and take adequate precautions for their protection.
2. All manhole covers/valves/inspection covers in existing carriageway/verges to be adjusted where necessary to suit design levels.
3. Where the works involve the obstruction of a footway the Contractor shall provide an alternative safe footway properly signed, guarded and lit.
4. All Highway works to be carried out in accordance to the satisfaction of the Highway Authority Section 38 Inspector and in accordance with the Specification for Highway Works.
5. All excavation and backfilling work in the existing highway to be in accordance with the provisions of the New Street Works Act 1991 or that specified within the Working Drawings.
6. The Contractor is to comply fully with the CDM Regulations in the course of constructing the works.
7. Any highway or drainage works constructed prior to issue of Technical Approval is entirely at the risk of the Contractor/Client.
8. The Contractor shall ascertain the CBR of the subgrade in order to determine the required sub-base / capping thickness.
9. Prior to laying any material the subgrade must be inspected and any soft spots removed and filled with 6F2 capping material.
10. Prior to construction of any drainage works, the Contractor is to confirm the invert levels of existing manholes and sewers. Any variations from the designed levels shown on the drawings shall be reported to the Engineer in advance of construction works commencing. The Contractor shall also apply best practice and lay all drainage upstream from the outfall, where any variations from the design shall be reported to the Engineer prior to progressing the drainage works
11. All drain and sewer pipes to be laid soffit to soffit, unless shown otherwise.
12. Contractor to refer to Health & Safety Executive Note 47-Avoiding Danger from Underground Services and Document GS6 – Avoiding Danger from Overhead Electric Lines.
13. Where one way traffic is unavoidable, traffic shall be controlled by a proper system of vehicle actuated traffic signals or manual Stop/Go signs and during the hours of darkness by a proper system of vehicle-actuated traffic signals all to the approval of the Highway Authority.
14. Traffic signs and carriageway markings shall comply with the Traffic Signs Regulations and General Directions 2002. Any plates removed as part of the works to be mounted on new poles where appropriate.
15. Where existing junctions and accesses remain in operation within the works during the construction process, the Contractor shall ensure that access to these units remains available at all times.
16. Highways in the vicinity of the works must be kept free from mud, debris and dust falling from vehicles or the wheels of vehicles connected with the works.
17. Where the deposits of debris and mud are unavoidable warning signs must be exhibited whilst work is in progress and affected carriageways / footways must be regularly cleaned.
18. Do not scale from this drawing, work only from stated dimensions or setting out details.
19. The Contractor shall be responsible for the traffic safety and management associated with the construction of the works.
20. Work's on or adjacent to existing public highway shall be executed in accordance with the Traffic Safety Code for Roadwork's and Chapter 8 of the Traffic Signs Manual.
21. All levels are in metres above Ordnance Datum.
22. All foul and storm water drains which are not subject to adoption as public sewers under a Section 104 Agreement must be constructed in accordance with the latest Building Regulations, BS8301, and, where appropriate, the relevant agreement certificates.
23. Private drainage pipework to be 100mmø unless shown otherwise on Engineering Layout Plans.
24. 100mmø private foul water & storm water drainage shall be laid no flatter than 1/80. 150mmø shall be laid no flatter than 1/150.
25. Depths given for exposed brickwork, retaining walls & tanking represent maximum depth's to proposed ground level.



Pipe Bedding Detail

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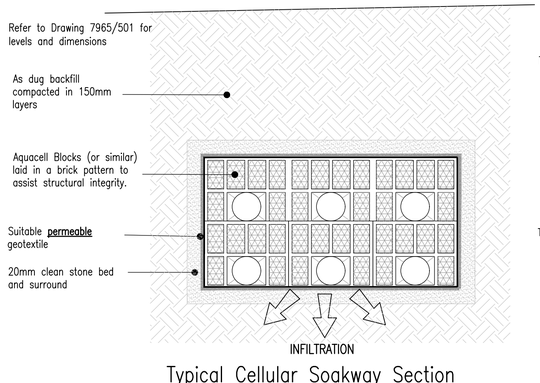
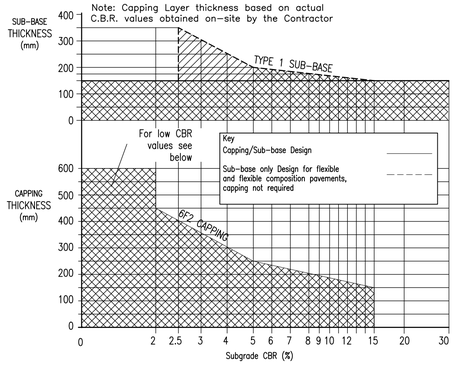


Typical Cellular Soakway Section

(AQUACELL CORE R OR SIMILAR APPROVED.
TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS)
NTS



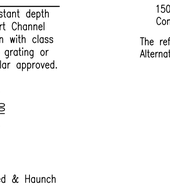
CBR and Capping / Sub Base Table (Table 1)

Bedding and Sidefill Material

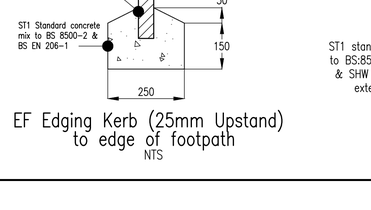
Bedding, sidefill and surround materials shall comply with Water Industry Specification No. 4-08-02. Bedding and sidefill material may be selected as-dug granular material or processed granular material complying with Tables 1 and 2 for rigid and flexible pipes respectively. Material excavated from trenches dug through land contaminated with domestic, building or industrial waste should not be used as bedding and sidefill material. Selected excavated material should be readily compactable and be free from organic matter and combustible materials. Frozen soil should not be used. During selection, soil containing clay lumps larger than 75mm and stones larger than those permitted in Tables 1 or 2 as appropriate should be discarded. All selected as-dug granular bedding and sidefill material should be evaluated using the Compaction Fraction Test detailed in Appendix B of the Wls No. 4-08-02. Materials are suitable if the values obtained do not exceed those given in Table 1 and 2 as appropriate.

Trench Backfill Material

Type 1 under Highway. Trench backfill material, whether selected from locally excavated material or imported, shall consist of uniform, readily compactable material, free from vegetable matter, building rubbish and frozen material, or materials susceptible to spontaneous combustion, and excluding clay of liquid limit greater than 80 and/or plastic limit greater than 55 and materials of excessively high moisture content. Clay lumps and stones shall be retained on 75mm and 37.5mm sieves respectively. Where pipe trenches lie beneath road, footway and parking areas trench backfill material shall be locally extracted ballast up to formation level.



Root barrier to be installed, where trees are in close proximity to permeable construction/services/built form. Installation of root barriers will endeavour to provide the largest possible area of growing space for the tree.

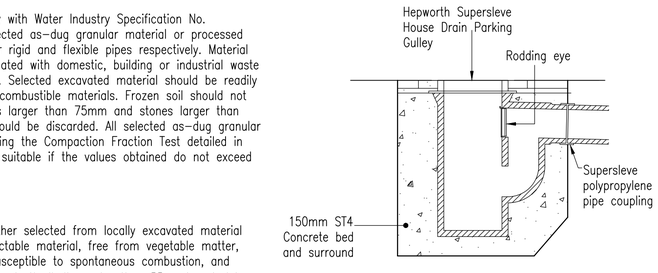


TYPICAL TREE PIT & ROOT PROTECTION DETAIL

NTS

Detail Of Cover In Traffiсed Area

NTS



Private Yard Gully

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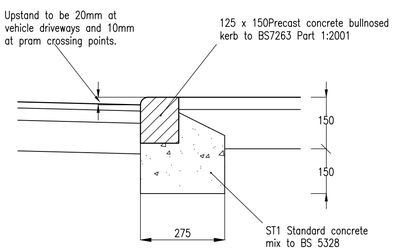
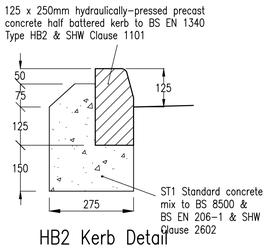


NOTE Ramp half battered to bullnosed kerb to BS 7263 Type DL1/DR1 to be at each end of crossing. Crossing upstand to change from 125mm to 0-6mm

Typical BN Dropped Kerb Detail to Shared Driveway

NTS



HB2 Kerb Detail

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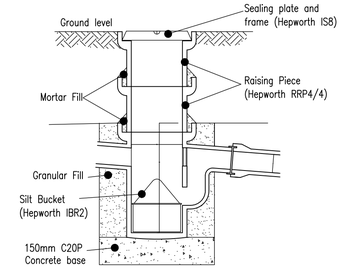
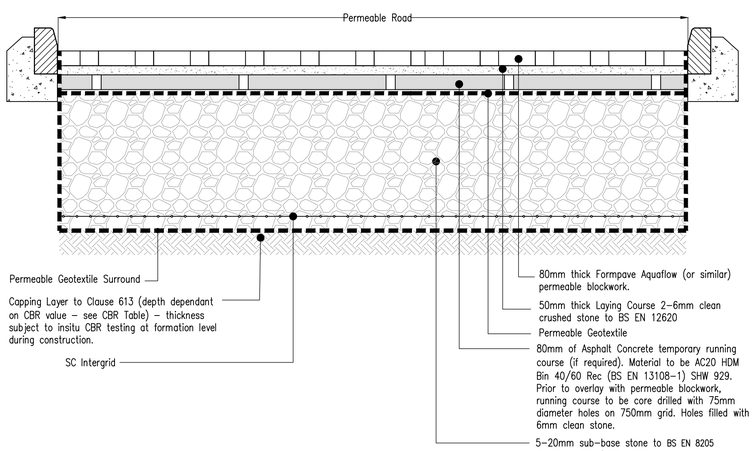


The references on this detail refer to 'Hepworth Clay Drainage' products. Alternatives using similar approved products are also acceptable.

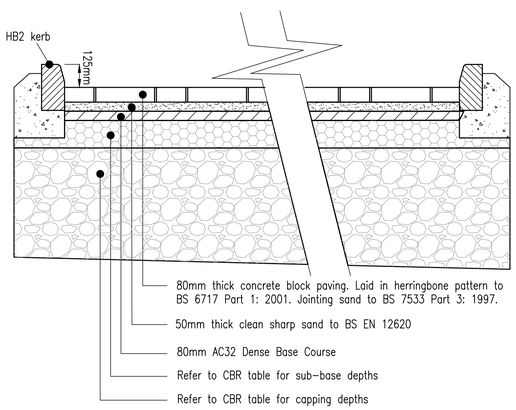
Catchpit Detail

NTS



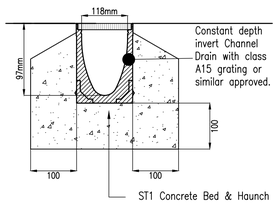
Typical Permeable Block Paved Road Detail

(Minimum Sub-base thickness to be 350mm)
NTS



Non Permeable Block Paving Construction Detail

(To be installed in accordance with manufacturers instructions)
NTS

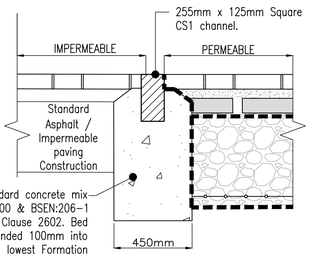


Channel Drain 'ACO' Detail

NTS

EF Edging Kerb (25mm Upstand) to edge of footpath

NTS



FULL HEIGHT RESTRAINT DETAIL

NTS

No.	By	Date	Revision Details

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Client
White Horse Housing Association Ltd

Job Title
6 Dwellings at
Land off Knighton Road
Broad Chalke

Drawing Title
Private Construction Details

Drawing Status:

FOR COMMENT	FOR PLANNING	FOR TENDER	FOR APPROVAL	FOR CONSTRUCTION	AS BUILT

CONSTRUCTION AT CLIENT / CONTRACTOR RISK

Designed by:	Drawn by:	Checked by:
NP	MR	NP

Date	Scale
January 2022	NTS

Drg. No.	Rev.
7965/07	-