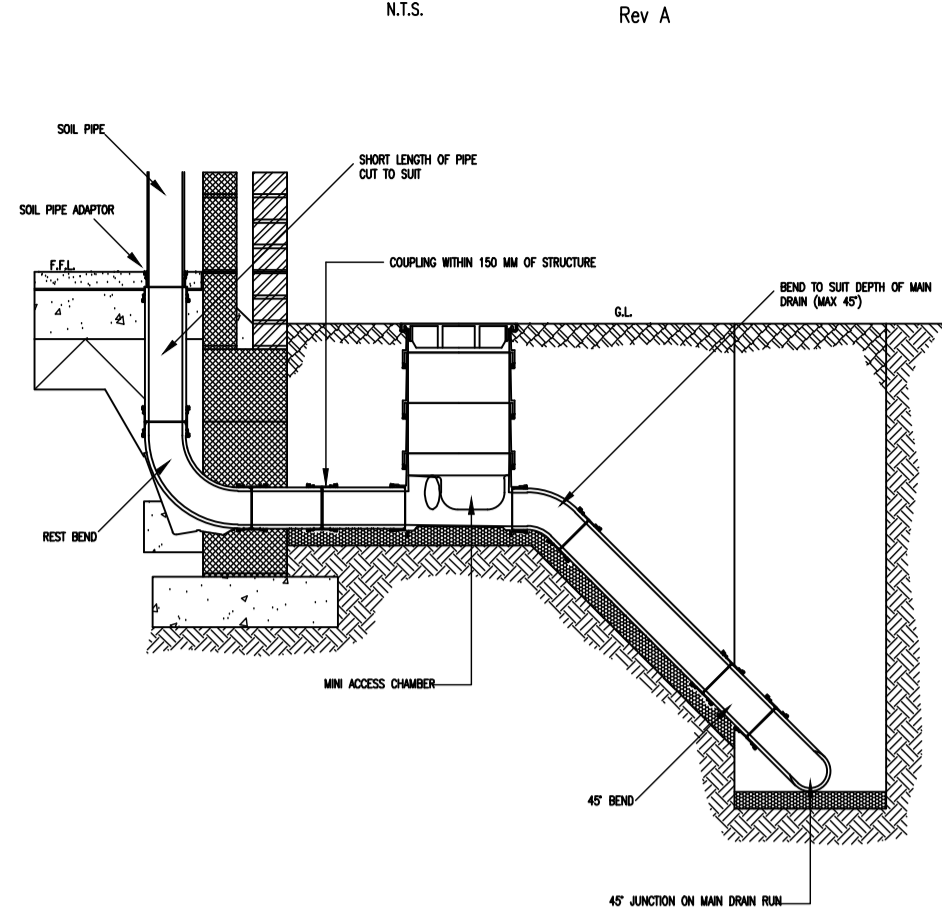
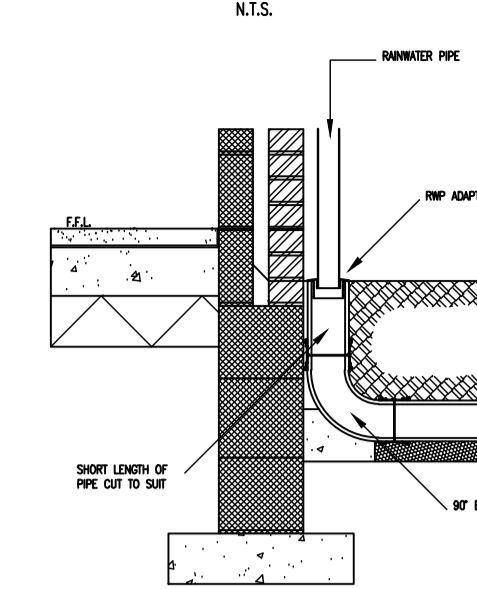


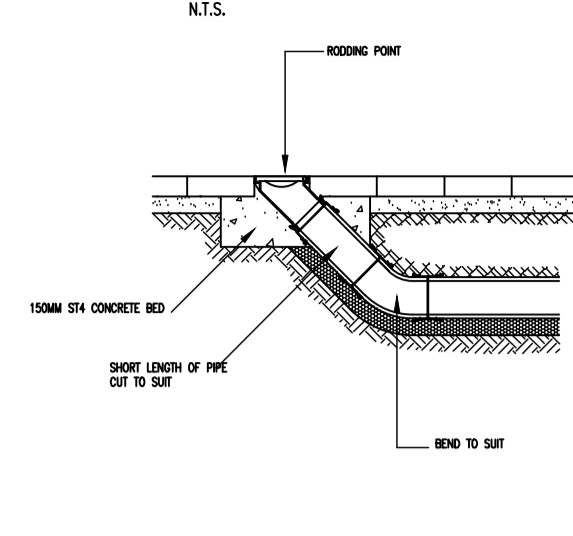
MINI ACCESS CHAMBER POSITIONED OFF MAIN DRAIN RUN APPLICATION DETAIL
N.T.S. Rev A



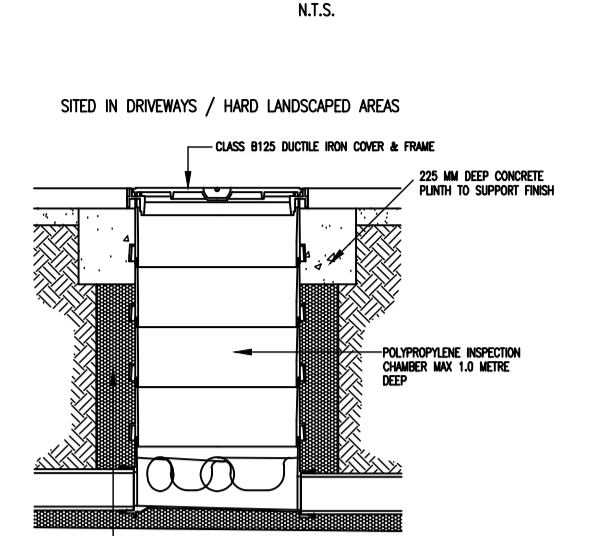
EXTERNAL RAINWATER PIPE CONNECTION DETAIL
N.T.S.



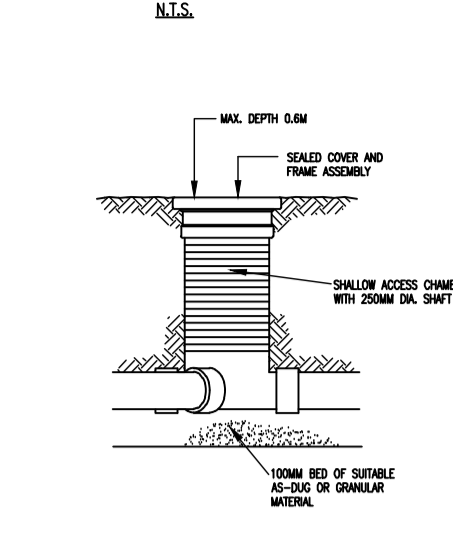
RODDING POINT INSTALLATION DETAIL
N.T.S.



POLYPROPYLENE INSPECTION CHAMBER INSTALLATION DETAIL
N.T.S.



SHALLOW ACCESS CHAMBER
N.T.S.



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

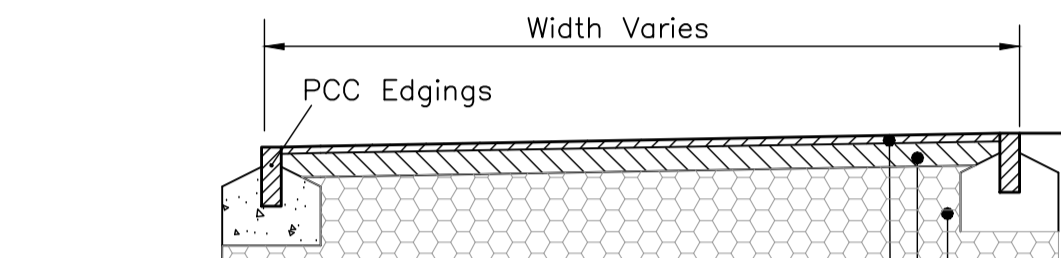
Pipe nominal size (DN)	Nominal maximum particle size (mm) See note (c)	Class of bedding See note (d)	SUITABLE MATERIALS	
			ETHER: Maximum CF value for acceptability See note (e)	OR: Materials specified in British Standards See note (a)
100	10	S	0.15	10mm nominal single-size
		B	0.30	
		F	0.15	
		N	0.30	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
		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:
- Processed granular materials to include aggregates to BS EN 12620.
 - Compaction Fraction value (CF), see Appendix B of Wis IGN No. 4-08-02.
 - 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]).
 - 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.
 - 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 size (See note (d))	Nominal maximum particle size (mm)	SUITABLE MATERIALS	
		ETHER: Maximum CF value for acceptability See note (e)	OR: Materials specified in British Standards See note (a)
100	10	0.15	10mm nominal single-size
Over 100 to 150	16	0.15	10 or 14mm nominal single-size or 14mm to 5mm graded
Over 150 to 300	20	0.15	10, 14 or 20mm nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded
Over 300 to 550	20	0.15	14mm or 20mm nominal single-size or 14mm to 5mm graded or 20 to 5mm graded
Over 550	40	0.15	14, 20 or 40mm single-size or 14mm to 5mm graded or 20mm to 5mm graded or 40 to 5mm graded

- Notes:
- Processed granular materials to include aggregates to BS EN 12620.
 - Compaction Fraction value (CF), see Appendix B of Wis IGN No. 4-08-02.
 - For the purpose of this table, PE pipes of 630mm OD can be regarded as having nominal bores of over 500mm, irrespective of wall thickness.
 - Nominal bore is used in preference to DN because of the different nominal size classification for flexible pipes.
 - For PE80 and PE100 polyethylene pipe complying with current relevant Water Industry Specifications the maximum sidefill particle size may be increased to 10% of the pipe nominal size.
 - For 'E' values for processed granular materials reference should be made to Table A.3 of Wis IGN No. 4-08-02 where specific site tests have not been performed.
 - For ferrous cementitious pipeline materials, the sulphate content of bedding and sidefill materials should not be greater than 0.3% as sulphur trioxide.



20mm thickness of Dense Bitumen Macadam Surface Course, 100/150 Pen, 0/6mm size aggregate to BS EN 13108-1

60mm thickness of Dense Bitumen Macadam Binder Course, 100/150 Pen, 0/20mm size aggregate to BS EN 13108-1

Granular sub-base material Type 1 See Sub Base / CBR table

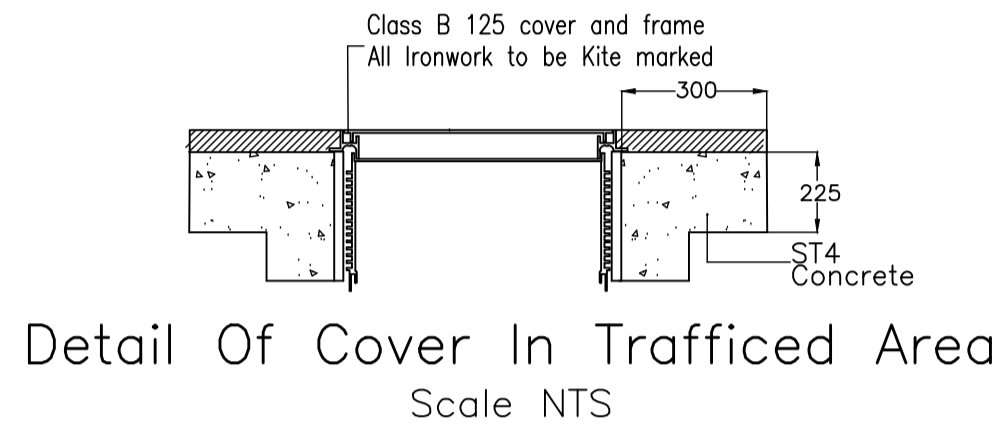
Private Macadam Driveway (Use by Cars and light vehicles - Part 9 NHBC Standards)

Minimum sub-base thickness for paved areas:

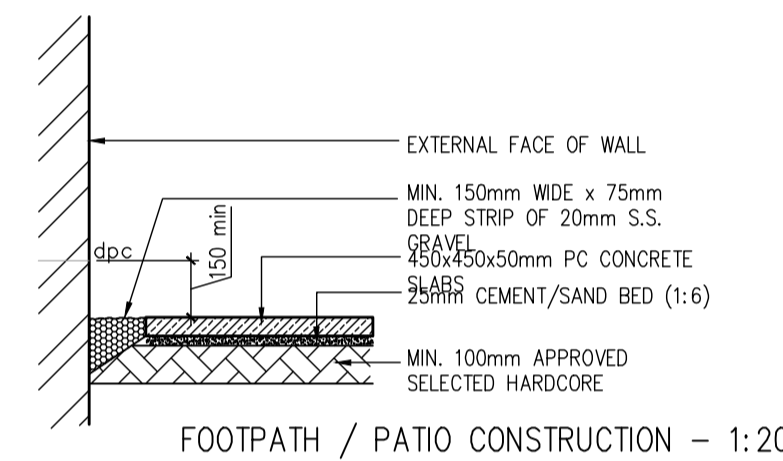
California Bearing Ratio (CBR) values Minimum thickness (mm) of sub-base (Consolidated in accordance with MCHW Volume 1 clause 801, table 8/1).

In-Situ CBR Value	Without Geotextile underneath	With Geotextile underneath
Less than 2%	N/A	300
2% - 3%	325	225
3% - 5%	250	150
5% - 7%	150	
7% - 20%	100	

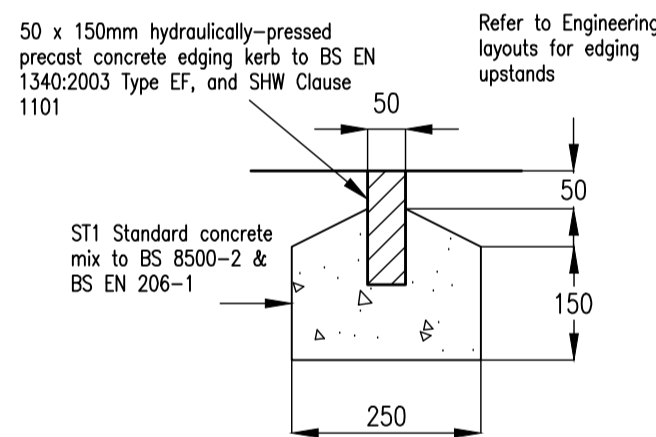
Notes
The thickness of any required capping layer and the sub-base should be determined after investigations and on-site tests have been carried out relating to the California Bearing Ratio (CBR) value and frost susceptibility of the sub-grade.
Where the tests indicate that the sub-grade is frost susceptible a suitable capping layer should be included below the sub-base, to a depth that will ensure that the construction will not be affected by frost heave.



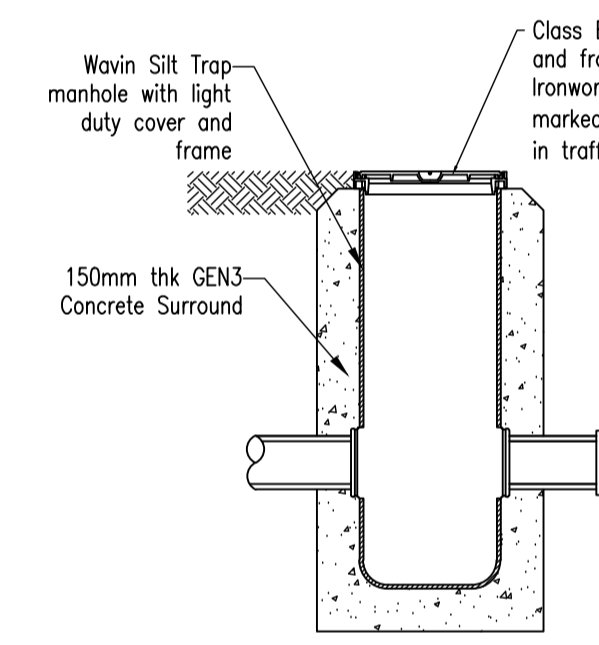
Detail Of Cover In Trafficked Area
Scale NTS



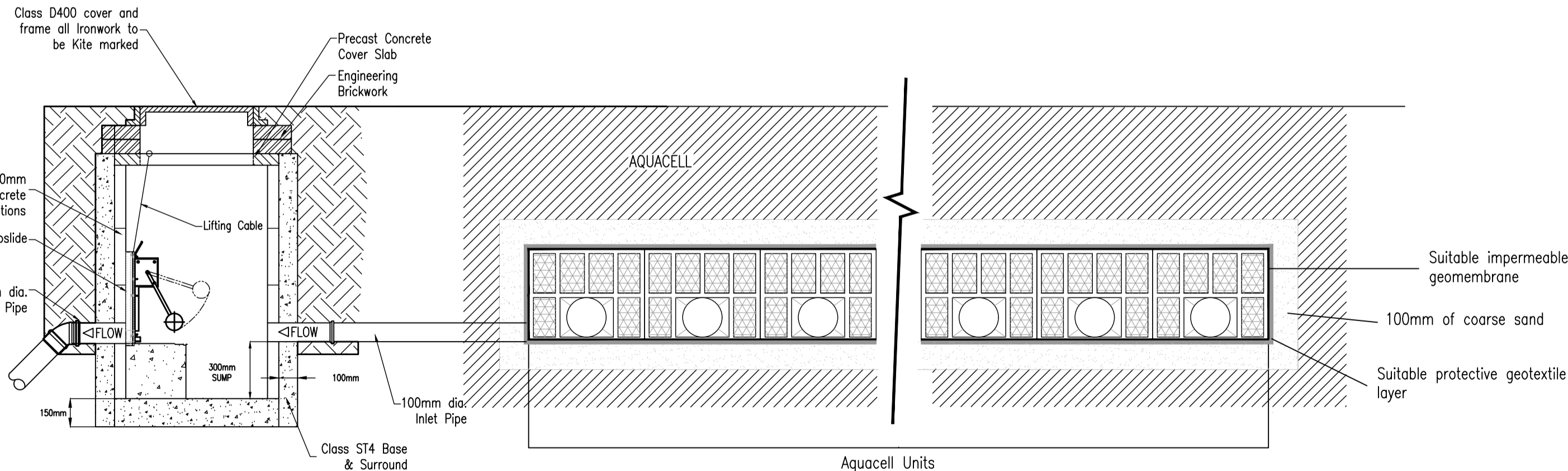
FOOTPATH / PATIO CONSTRUCTION - 1:20



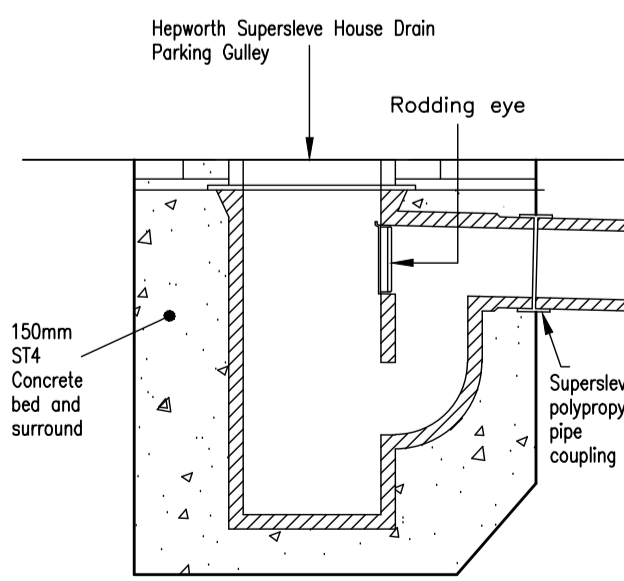
TYPICAL KERB TYPE EF-EDGING
1:10



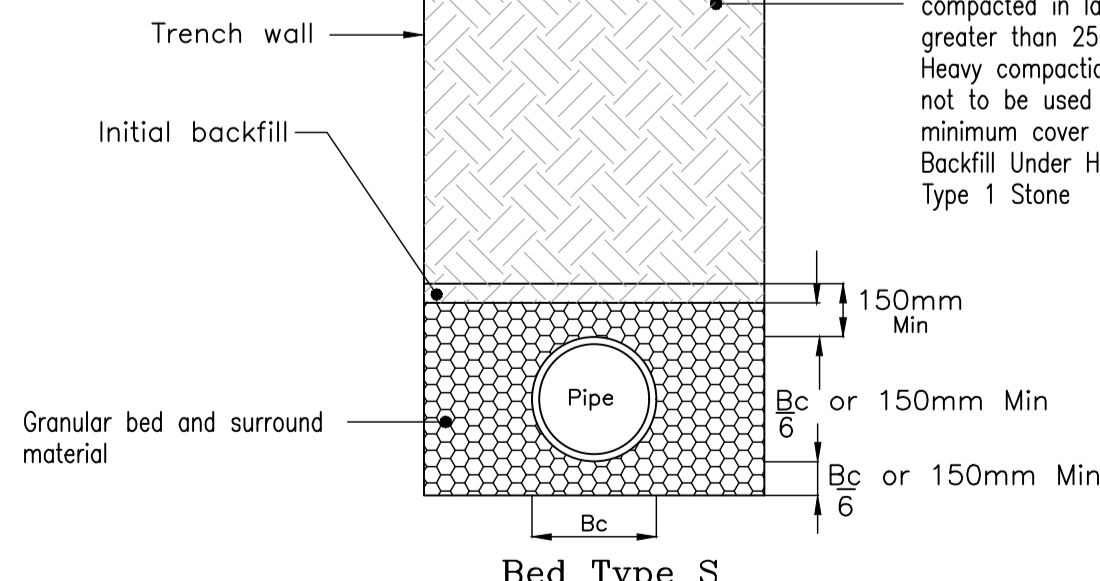
Catchpit Detail
Scale: NTS



Flow Control Chamber and Aquacell Tank Section
(To Be Installed In Accordance With Manufacturers Instructions)
Scale NTS



Private Yard Gully
Scale NTS



Pipe Bedding Detail
Scale 1:10

1. NOTES

- At the commencement of works on site the contractor is to carry out trial pits and tests 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.
- All manhole covers/valves/inspection covers in existing carriageway/verges to be adjusted where necessary to suit design levels.
- Where the works involve the obstruction of a footway the Contractor shall provide an alternative safe footway properly signed, guarded and lit.
- All Highway works to be carried out to the satisfaction of the Highway Authority Section 38 Inspector and in accordance with the Specification for Highway Works.
- 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.
- The Contractor is to comply fully with the CDM Regulations in the course of constructing the works.
- Any highway or drainage works constructed prior to issue of Technical Approval is entirely at the risk of the Contractor/Client.
- Prior to laying any material the subgrade must be inspected and any soft spots removed and filled with 6F2 capping material.
- 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.
- All adaptable foul sewer drainage works must comply with 'Sewers for Adoption, 6th Edition' and to Thames Water Addendum and to the satisfaction of Thames Water.
- All adaptable drainage pipes shall have 360° Class S granular bed and surround. However, any pipes below the adoptable carriageway with less than 1.2m of cover (900mm in verge and untrafficked areas), shall be Class Z surrounded with 150mm of ST4 concrete with flexible joints.
- All drain and sewer pipes to be laid soffit to soffit, unless shown otherwise.
- Sewer trench backfill to be in accordance with the Adoptable Drainage Details (Drg No. 6008 / 05).

- Contractor to refer to Health & Safety Executive Note 47-Avoiding Danger from Underground Services and Document G56 - Avoiding Danger from Overhead Electric Lines.
- 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.
- Traffic signs and carriage 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.
- Where existing junctions and accesses remain in operation within the works during the construction process, the Contractor shall ensure that access to these remains available at all times.
- 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.
- 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.
- Do not scale from this drawing, work only from stated dimensions or setting out details.
- The Contractor shall be responsible for the traffic safety and management associated with the construction of the works. The Contractor shall not commence any works on the existing highway until his traffic management proposals have been agreed with Oxfordshire County Council.
- 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.
- All levels are in metres above Ordnance Datum.
- Gullies, gully connections, drains, manholes, catchpits, soakways, headwalls, and other drainage structures intended to convey only highway water are to be constructed in accordance with the specifications of Oxfordshire County Council and to the satisfaction of the Highway Inspector.
- 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.
- All private lateral connections to public sewers shall be 150mm unless shown otherwise.
- Where grass service strips are present a requirement is to be placed on the owner/occupier to maintain the grassed areas and to ensure that no planting is carried out which is injurious to the underlying services. Vehicle crossings and personal paths to be constructed to adoptable standards.
- 65mm minimum thickness tactile paving, coloured buff, shall be incorporated at all pedestrian crossing locations in accordance with the Department of Transport and General Directions document, 'Guidance On The Use Of Tactile Paving Surfaces (DETR Nov.1998).
- Private drainage pipework to be 100mm unless shown otherwise on Engineering Layout Plans.
- 100mm private foul water & storm water drainage shall be laid no flatter than 1/80. 150mm shall be laid no flatter than 1/150.
- Depths given for exposed brickwork, retaining walls & tanking represent maximum depths to proposed ground level.

A	MR	07.04.21	Macadam Driveway updated
No.	By	Date	Revision Details
© Copyright			
		YORK HOUSE EDISON PARK DORCAN WAY SWINDON WILTSHIRE SN3 3RB Tel : 01793 619965	
		Web Site www.ColeEasdon.com E-mail cec@ColeEasdon.com	

Client
Linden Homes

Job Title
**Proposed Residential Development
Three Plot Triangle Parcel
Kingsmere
Bicester**

Drawing Title
Private Construction Details

Drawing Status

FOR COMMENT	FOR TENDER	FOR APPROVAL	FOR CONSTRUCTION	AS BUILT

Designed by: **RT** Drawn by: **RT** Checked by: **RB**

Date: **May 2019** Scale: **NTS @ A1**

Drg. No. **6008/302** Rev. **A**