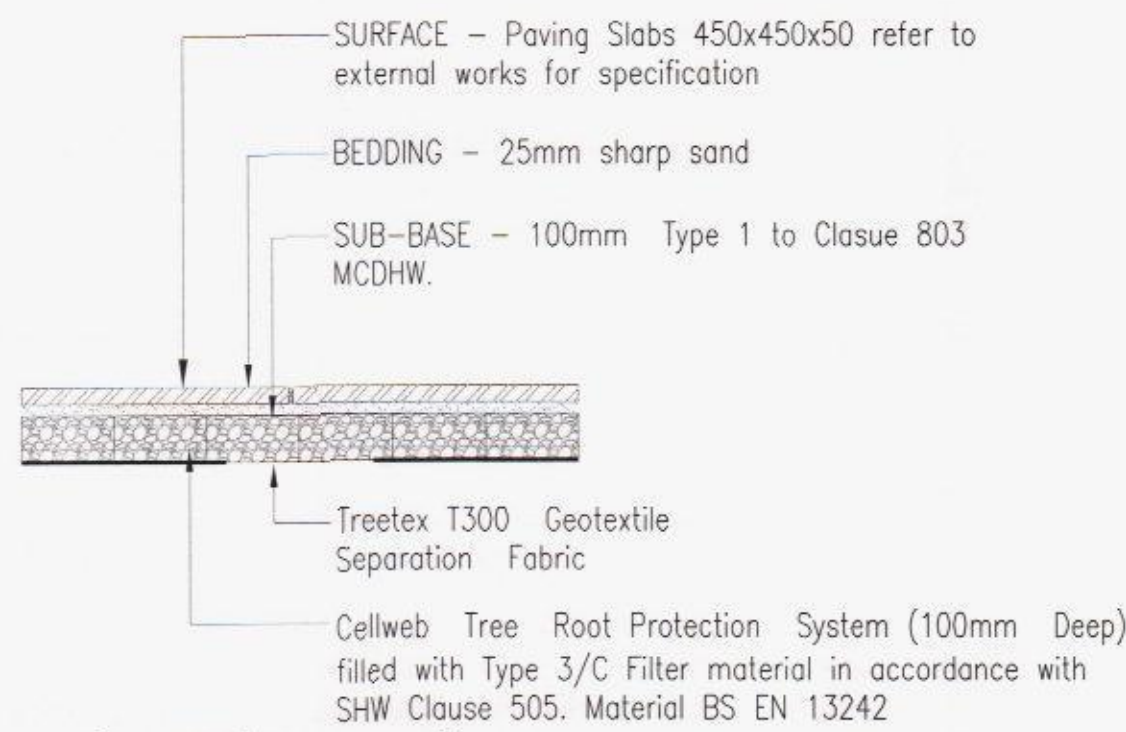
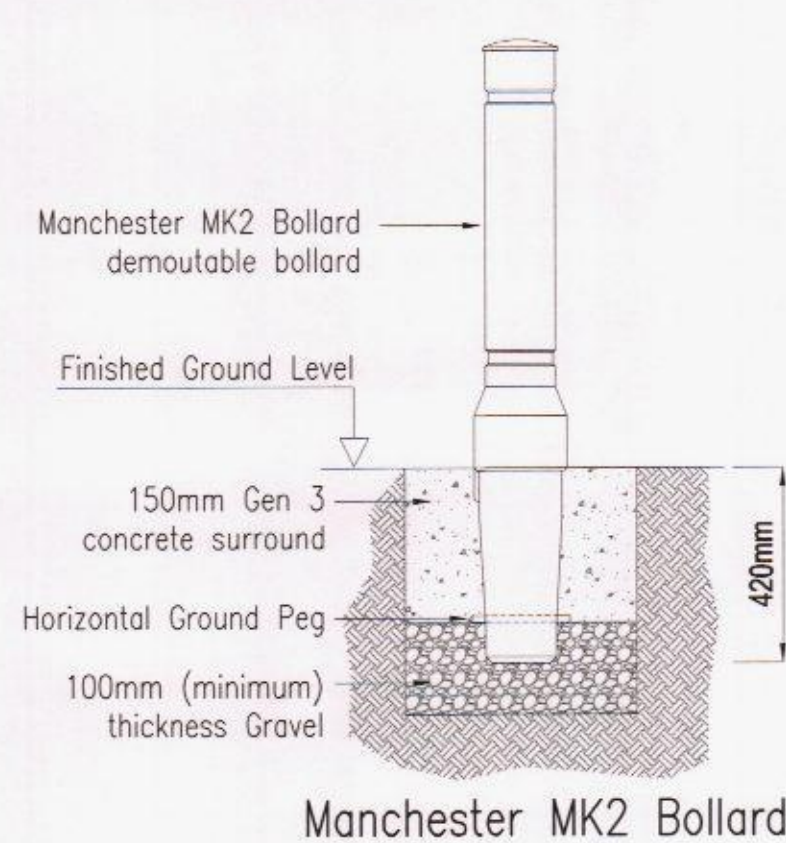
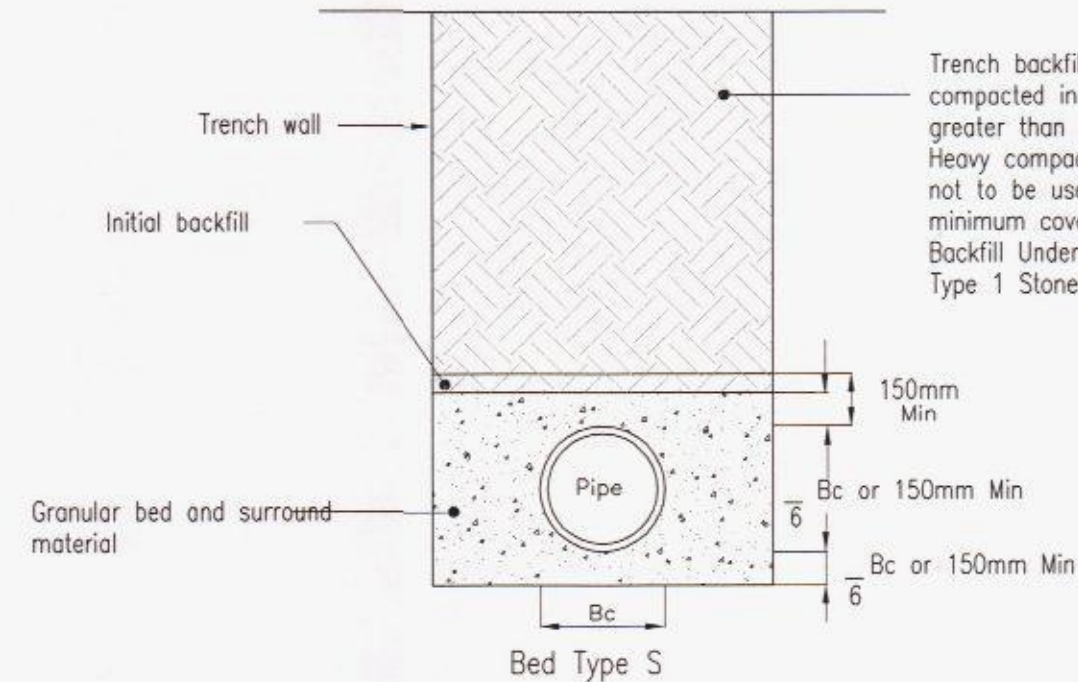




'No DIG' Construction
Paving Slab Footpath Construction
(refer to tree protection and external works for location)



Manchester MK2 Bollard



PIPE BEDDING DETAIL
Not To Scale

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)	EITHER: Maximum CF value for acceptability See note (b) OR: Materials specified in British Standards See note (a)
100	10	S B F N	0.15 0.30 0.15 0.30 10mm nominal single-size
Over 100 to 150	16	S B F N	0.15 0.30 0.15 0.30 10mm or 14mm nominal single-size or 14mm to 5mm graded
Over 150 to 300	20	S B F N	0.15 0.30 0.15 0.30 10, 14 or 20mm nominal single-size or 14mm to 5mm graded or 20 to 5mm graded
Over 300 to 550	20	S B F N	0.15 0.30 0.15 0.30 14mm or 20mm nominal single-size or 14mm to 5mm graded or 20 to 5mm graded
Over 550	40	S B F N	0.15 0.30 0.15 0.30 14, 20 or 40mm nominal single-size crushed rock or 14mm to 5mm, 20 to 5mm or 40 to 5mm graded

- Notes:
- Processed granular materials to include aggregates to BS EN 1242.
 - Compaction Fraction value (CF), see Appendix B of BS EN No. 4-08-02.
 - The nominal maximum particle sizes apply both to processed and as-dug materials (see Section 4 of IG 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 bore (mm) See note (d)	Nominal maximum particle size (mm)	EITHER: Maximum CF value for acceptability See note (b) OR: Materials specified in British Standards See note (a)
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:
- Processed granular materials to include aggregates to BS EN 1242.
 - Compaction Fraction value (CF), see Appendix B of BS EN No. 4-08-02.
 - 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 BS EN 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.

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.

Step Irons to be built into the inspection chamber in accordance with the requirements of the 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 Covers 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.

NOTES

1. The Contractor shall ascertain the CBR of the subgrade in order to determine the required sub-base thickness.

2. Prior to laying any material the subgrade must be inspected and any soft spots removed and filled with Type 2 material to SHW Clause 804.

3. Use of this drawing does not absolve the client from their responsibilities under Health and Safety: The Construction (Design and Management) Regulations 2007. The CDM Co-ordinator is required to contact Cole Easdon Consultants prior to permitting this drawing to be used in connection with any construction works.

4. All manhole access to be to National Annex NB to BS EN 752-3

A MR 25/9/14 Construction issue

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E-mail cec@ColeEasdon.com

Client
Bellway Homes (Wessex)

Job Title
Haywards
Hayling Island
Hampshire



Drawing Title
Domestic Construction Details

Designed by
CEC

Drawn by
NP

Checked by
RB

Date
June 2014

Scale
NTS @ A1

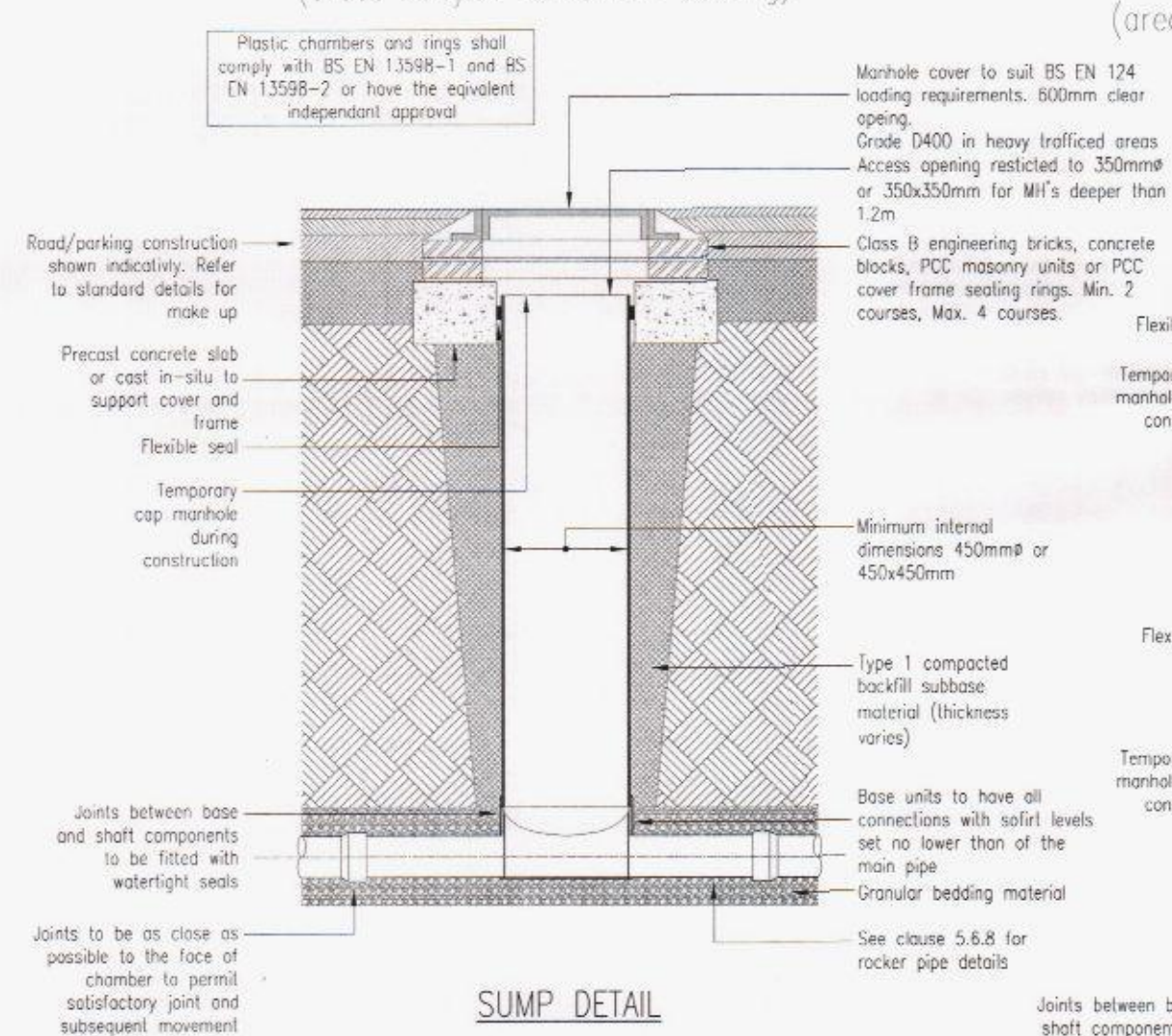
Dwg No.
4159/07

Rev.
A

TYPICAL ACCESS CHAMBER DETAIL - TYPE 3

(Flexible pipe construction)

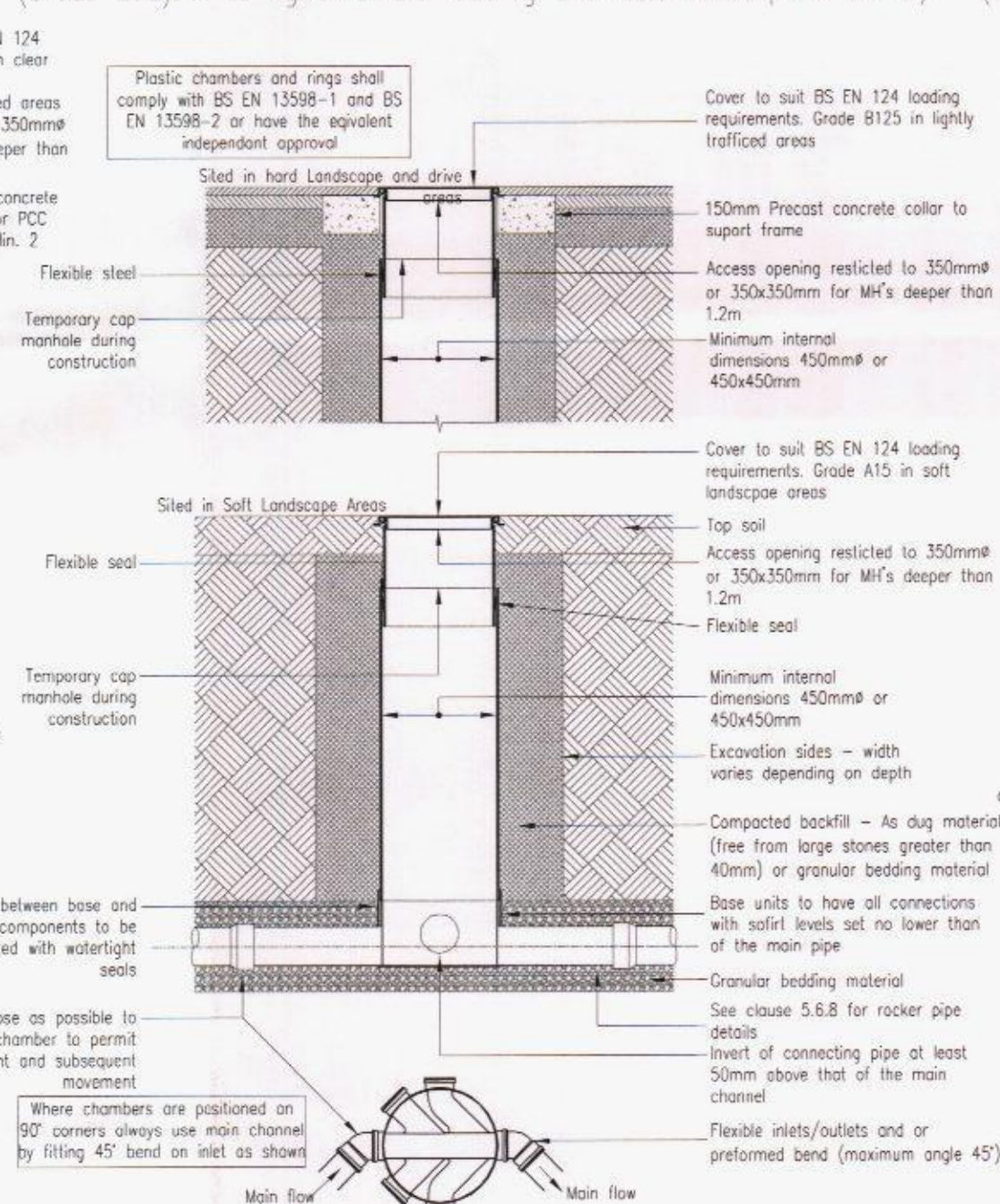
Maximum depth of 3m from cover level to soffit of pipe (areas subject to vehicle loading)



TYPICAL ACCESS CHAMBER DETAIL - TYPE 4

(Flexible pipe construction)

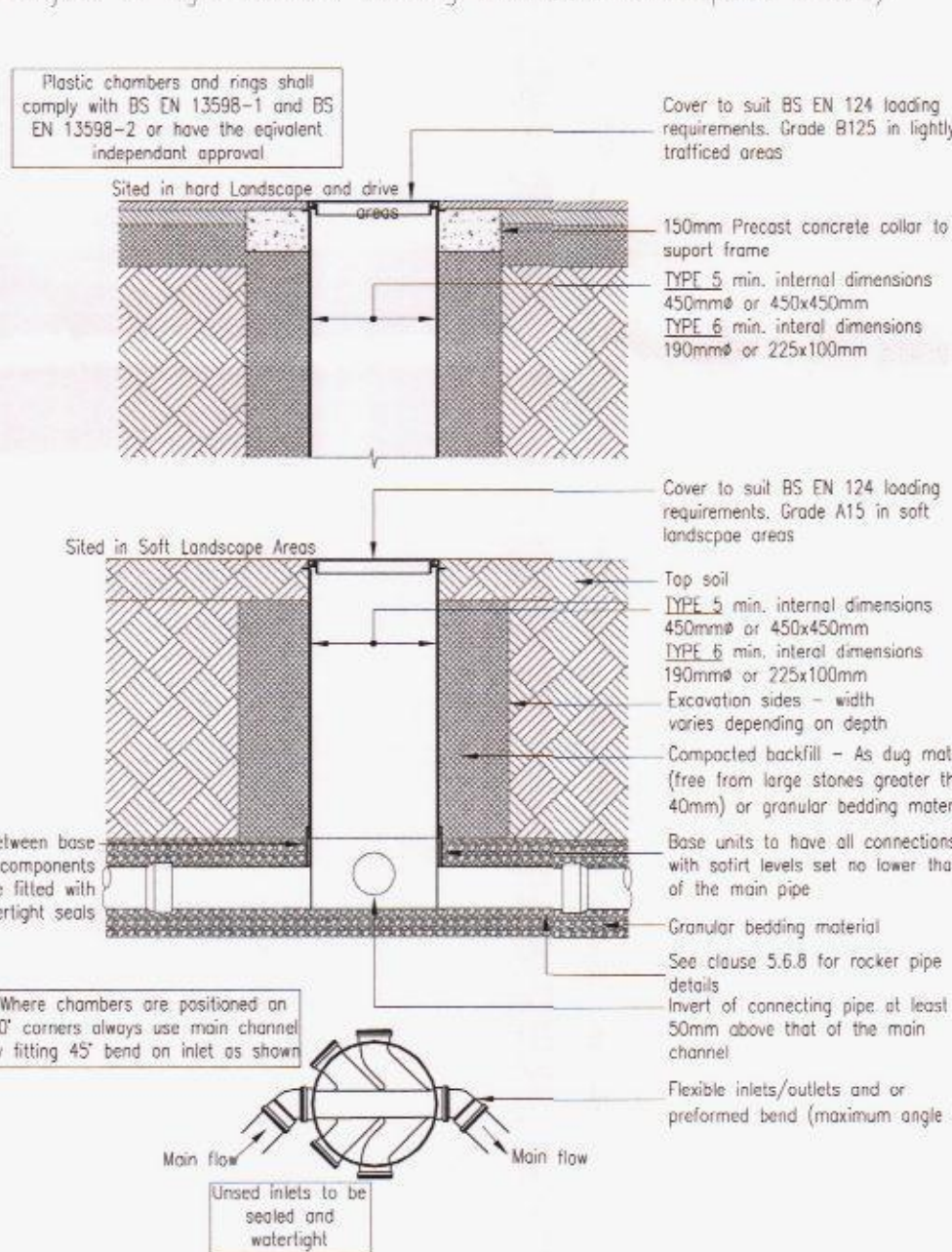
Maximum depth of 3m from cover level to soffit of pipe (areas subject to light vehicle loading and soft landscaped areas)



TYPICAL ACCESS CHAMBER DETAIL - TYPE 5-6

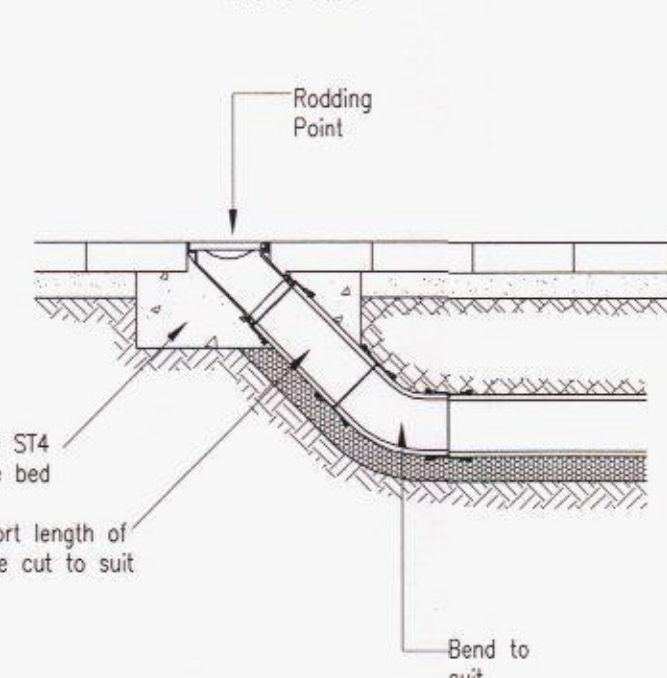
(Flexible pipe construction)

Maximum depth of 3m from cover level to soffit of pipe (areas subject to light vehicle loading and soft landscaped areas)

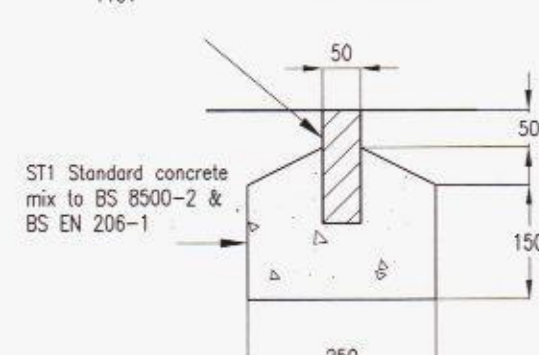


RODDING POINT INSTALLATION DETAIL

Not To Scale



50 x 150mm hydraulically-pressed precast concrete edging kerb to BS EN 1340-2003 Type EF, and SHW Clause 1101



KERB TYPE EF-EDGING

Not To Scale

TYPICAL ASPHALT CONCRETE DRIVEWAY DETAIL

Scale 1:20

Minimum sub-base thickness for paved areas:

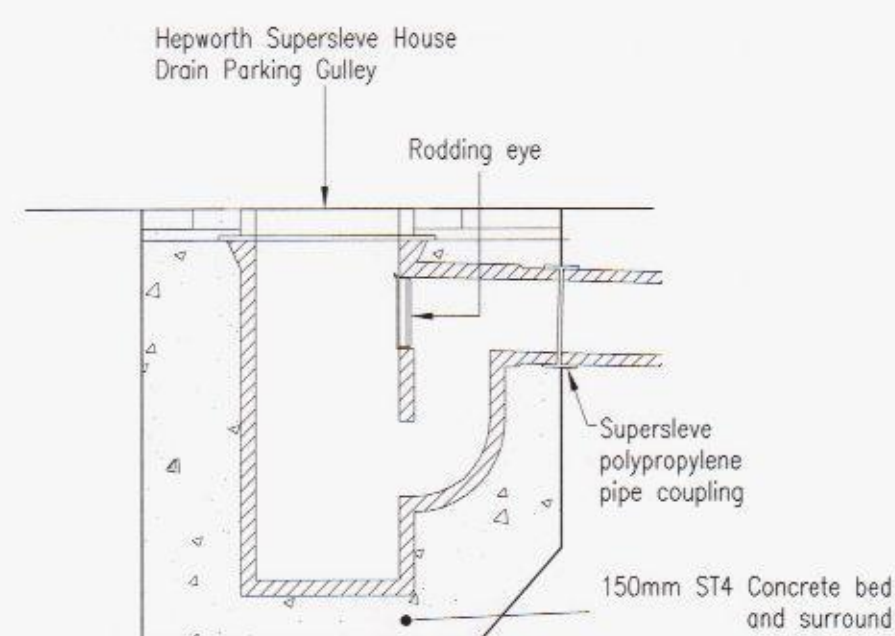
California Bearing Ratio (CBR) values Minimum thickness (mm) of sub-base (Consolidated in accordance with MCHW Volume 1 clause 801, table 8/1).

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 load susceptibility of the sub-grade.
Where the tests indicate that the sub-grade is not 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.

PRIVATE YARD GULLY

Not To Scale



Typical Patio/Paving Slab Footpath Construction

