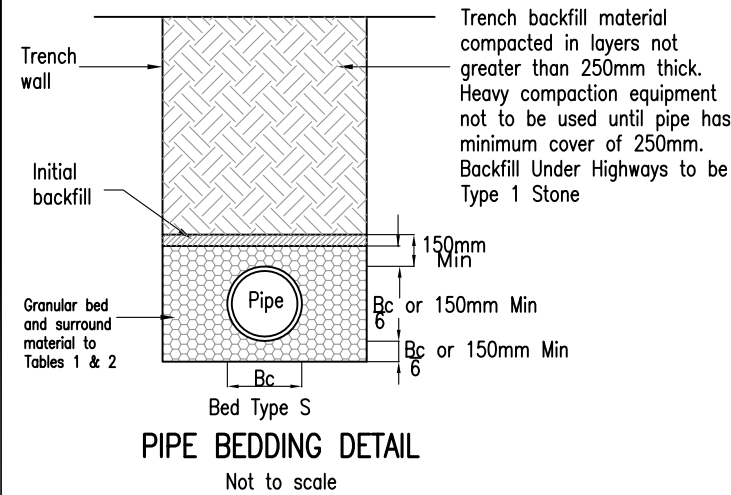


(Flexible material detail)

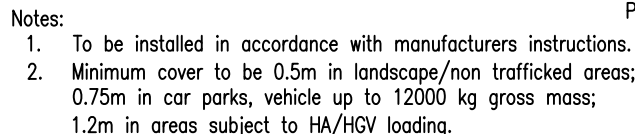
Areas subject to vehicle loading

Areas subject to light vehicle loading and soft landscaped areas



Bedding, siltfill and surround materials shall comply with Water Industry Specification No. 4-08-02. Bedding and siltfill material may be selected as sub-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 siltfill 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 siltfill material should be evaluated using the Compaction Fraction Test detailed in Appendix B of the WIs No. 4-08-02. Materials are suitable if the values obtained do not exceed those given in Table 1 and 2 as appropriate.

Where pipe trenches lie beneath road, footway and parking areas trench backfill material shall be type 1 up to formation level. 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



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

- (a) Processed granular materials to include aggregates to BS EN 13242.
- (b) Compaction Fraction value (CF), see Appendix B of Ws 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 2006]).
- (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.

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.

- (a) Processed granular materials to include aggregates to BS EN 13242.
- (b) Compaction Fraction value (CF), see Appendix B of Wis 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 polyethylene 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 Wis 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.

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.

Types of access and minimum internal dimensions to be as follows:—

or 450mm dia.

or 1200mm dia

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.

Pipes built into manholes shall have a flexible joint as close as feasible to the external face of the structure and the length of the first pipe and rocker pipe shall be as shown.

A	NP	20.09.18	- Cellular soakaway details added for underneath pavement areas.
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No.	By	Date	Revision Details
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Client

Job Title	
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Redevelopment at 58 Ferringham Lane,
Ferring
Worthing

Drawing Title

Standard Drainage Constuction Details

Drawing Status

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

Drawn by
NP

Checked by:
RB

Date
Sept 2018

Scale
Not to scale

Drq. No.

6470/502

Rev.

A