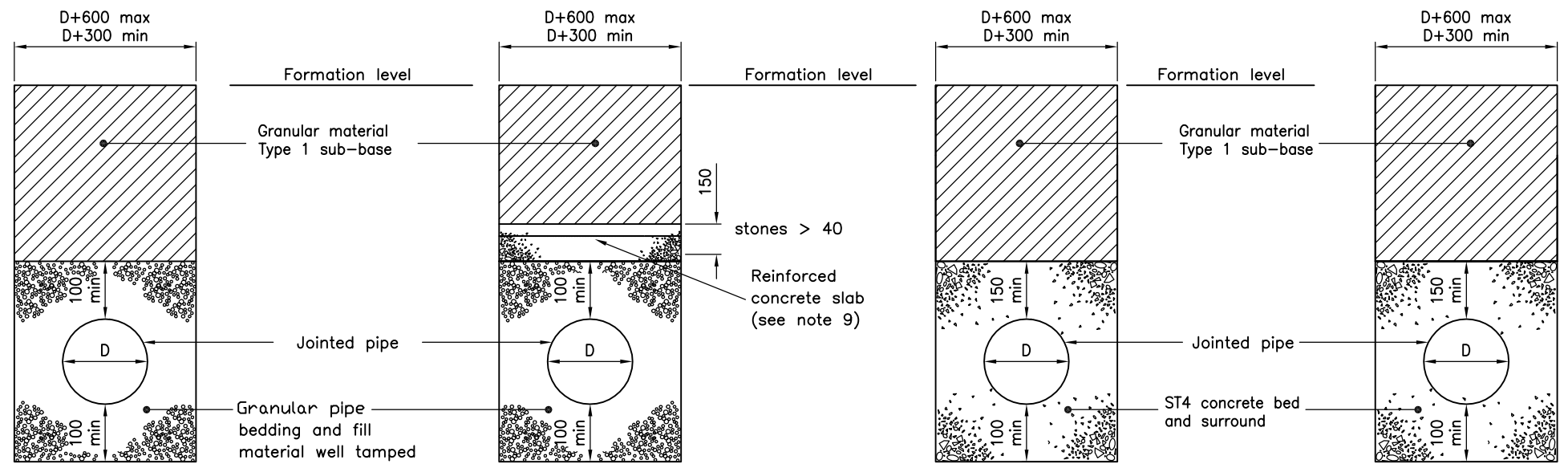


- Notes
- All dimensions are in millimetres
 - Water Authorities Association guide Sewers for Adoption and Specification for Highway Works (SHW) applies except where modified by this drawing.
 - Pipes shall be :
Vitrified clay pipes to BS 65 and BS EN 295
Concrete pipes to BS EN 1916
PVCU structured wall pipe to MCHW Clause 518 SDR 34 min.
Concrete to accord with:
BS EN 206-1
BS 8500-1 & 2
BS 8000
 - Minimum cover without concrete protection is 1200
Concrete protection to terminate at suitable pipe joint.
 - Flexible joints must be provided in concrete bed and surround or reinforced slab
 - The structural design of pipelines shall generally accord with the provisions of BS EN 1295
- CONCRETE AND CLAY PIPES
- Determination of pipe and bedding combinations shall be in accordance with DTp advice Note HA 40/01
 - If maximum trench width is exceeded it may be necessary to increase the strength of the pipe
- PVCU PIPES
- PVCU Pipes must be laid in accordance with BS 5955 PART 6.
 - RC 30 concrete slab with BS 4483: 2005 A193 mesh reinforcement (or equivalent) may be used as an alternative to concrete surround. Design to be approved by the Engineer.
- ALL PIPES
- Pipe and bedding must be adequate for the worst conditions and materials must not be changed between chambers.
 - Minimum pipe diameter to be 225 for carrier drains.
 - Saddle connections may only be used with the approval of the Engineer.
 - Carrier drains will not normally be permitted in footways or cycleways.
 - Existing public highway shall be reinstated in accordance with HAUC Specification for Reinstatement of Openings in Highways.
 - Section 38 estate roads and footways shall be reinstated with lapped joints and materials to match existing.

A	Mar 11	Various BS EN amendments	KPT
Rev	Date		Checked

Drawing No. SD/500/1A	
Scale NOT TO SCALE	Date MAY 04

Department of Environment,
Culture & Communities

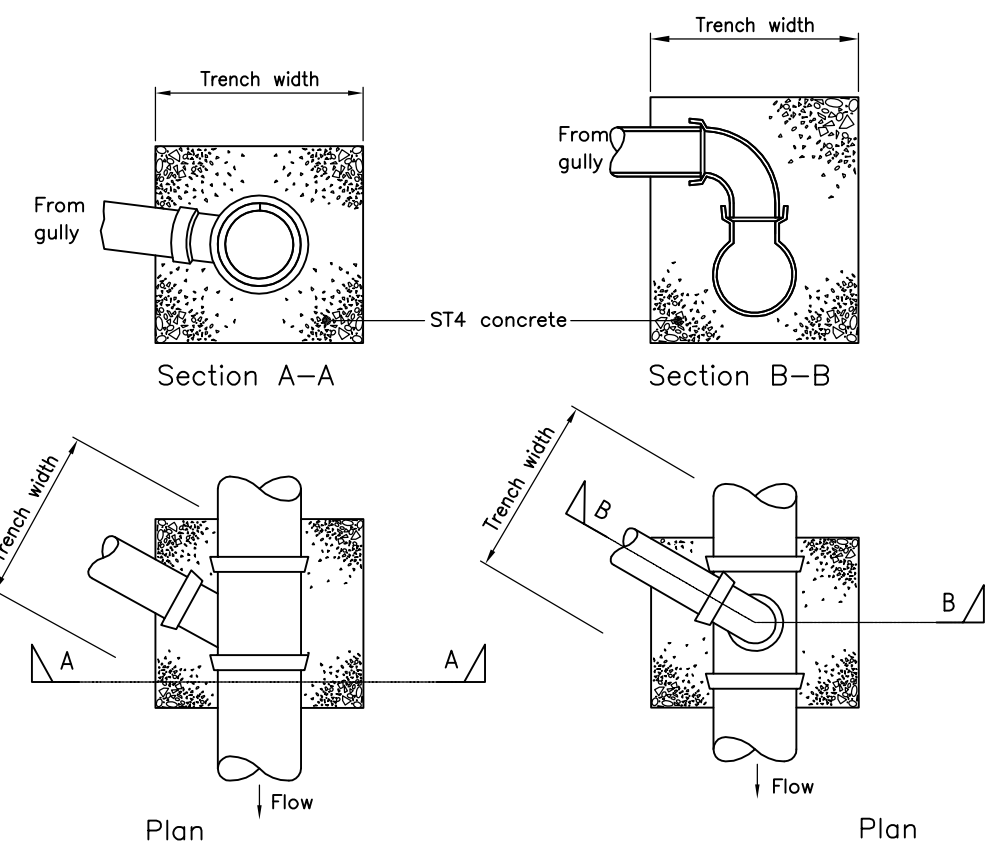


CARRIAGEWAY DRAIN TYPE D1 ALL PIPES
More than 1200 cover
Bedding Factor 2.2

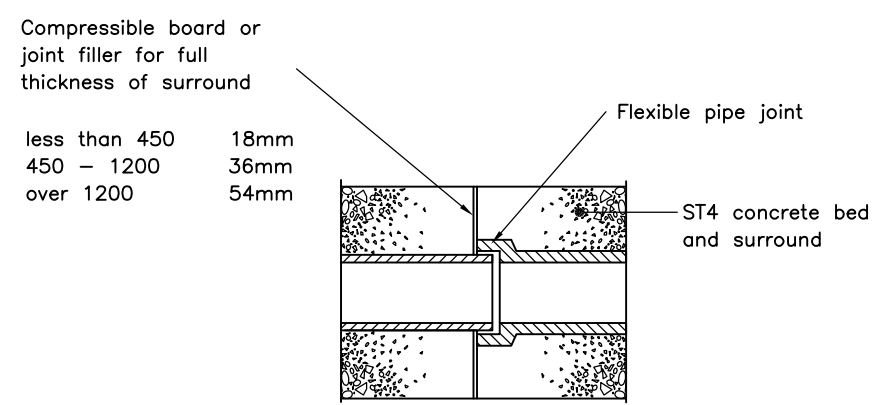
CARRIAGEWAY DRAIN TYPE D2 PLASTIC
Less than 1200 cover

CARRIAGEWAY DRAIN TYPE D3 CONCRETE, CLAY OR PLASTIC
Less than 1200 cover
Bedding Factor 2.6

FOOTWAY / CYCLEWAY DRAIN TYPE D4
Less than 1200 cover
Bedding Factor 2.6



GULLY CONNECTION DETAILS



FLEXIBLE JOINT FOR CONCRETE SURROUND
(Reinforced slab similar)

Safe supporting strength of pipe $Ws = \frac{Wt \cdot Fm}{Fs}$

Where
 Wt = Crushing strength – see British Standards
 Fm = Bedding Factor
 Fs = Factor of Safety = 1.25

Do not scale this drawing



Project	STANDARD DRAWINGS	
Title	PIPES UNDER PAVED AREAS	