





- Notes**
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- All dimensions in millimeters unless otherwise stated.
 - The specification referred to in this drawing is the *Specification for Highway Works (SHW)* published by T.S.O. (The Stationery Office).
 - Dimension X is the external diameter of the pipe.
 - Dimension Z is the cover below finished surface level.
 - Minimum trench width $Y = X + 300$ for drains not exceeding 1.5m cover below finished surface level. $Y = X + 450$ for drains exceeding 1.5m cover below surface finished level.
 - Pipes shall comply with the requirements for filter drain pipes in SHW Table 5/1.
 - Pipes shall be laid with the slots or perforations facing upwards.
 - Filter material Types B and C to be non-frost susceptible. The maximum absorption value permitted to be 3.5% by weight.
 - Waterproof geotextile membrane to have minimum overlap 300mm in accordance to SHW CI 609 and BS EN 13251. Each side of the waterproof geotextile membrane shall be protected by a layer of non-woven geotextile.
 - The geotextile shall sustain a tensile load of not less than 5.0kN/m at break and have a minimum failure strain of 10% when determined in accordance with BS EN ISO 10319, and have a minimum static puncture resistance of 1200N when determined in accordance with BS EN ISO 12236, in accordance to SHW CI 514.4. The pore size distribution (090) of the geotextile shall be 100 microns. The permeability of the geotextile shall be above 30 litres/m²/sec, to the test method described in SHW CI 514.4(v).
 - Alternatively, filter material to surface level instead of Topsoil.
 - Parent soil must be considered when selecting Type of filter drain. Laboratory soil tests might be required. Guidance on design of filter trenches can be found on *DMRB, CD 524: Edge of pavement details* and *CIRIA: The SuDS Manual (C753)*.
 - This drawing is based on the *Manual of Contract Documents for Highway Works, F Series - Drainage, Drawing F2*.

KEY

-  Type A or C filter material to SHW Clause 505.8(i) or granular material to SHW Clause 503.3(i).
-  Type B filter material to SHW Clause 505.8(ii) and Table 5/5.
-  ST2 Concrete to SHW Clause 2602.
-  Turf or seeded Class 5A or 5B topsoil to SHW Clause 618. See Note 11.

Filter drain options: trench and bedding details

Revision Details			
Drawn by	Checked by	Checked Date	Checked Surf.x



Project	Standard details. Series 0500: Drainage and service ducts		
Title	Filter drains: Trench and bedding		
Scale (at A4)	Not to scale		
Drawn	JC	Date	11/2023
Checked	CHK	Date	11/2023
Drawing No.	SD/0500/07	Rev.	1