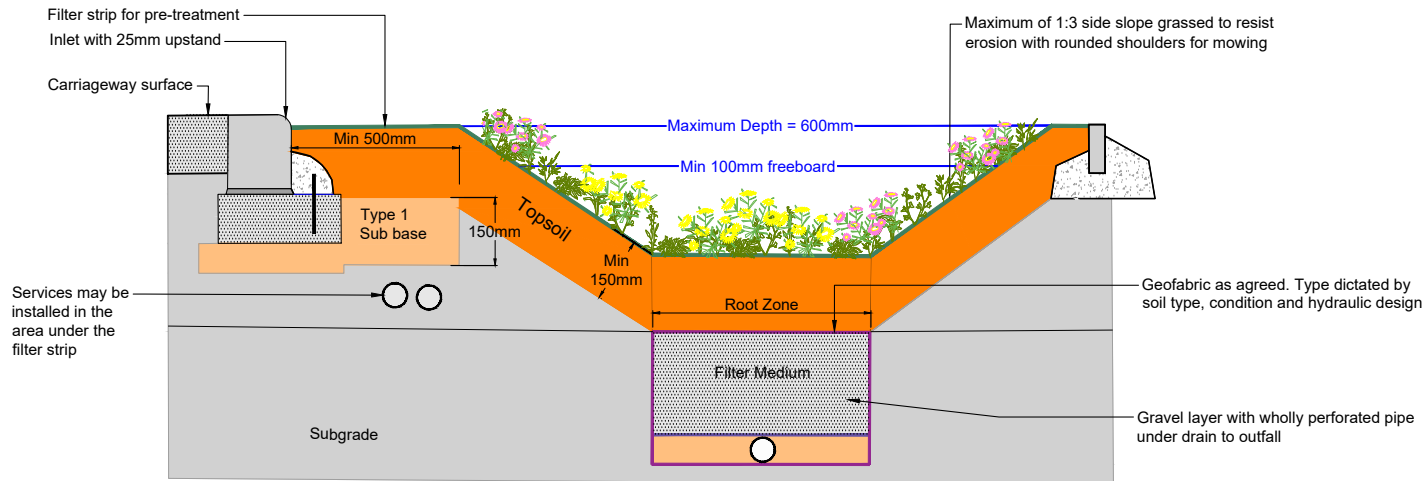


SWALES AND SURFACE WATER FLOW CONVEYANCE



Note:-The swale must be of sufficient depth to prevent carriageway run off over spilling beyond the highway boundary

DESIGN DATA		
Element	Summary Requirement	
1 Base width of swale	0.5m min	
2 Longitudinal bed of swale	0.5% to 6%	
3 Minimum longitudinal length of swale	5m	
4 "Drop from adjacent surface into swale (lateral surface flows)"	50mm to 100mm	
5 Permeable geotextile filter membrane	Permeable geotextile - for specification, refer to the drainage section within the specification	
6 Under drainage pipe and flow capacity	Perforated PVC min dia 150mm and min 2l/s/ha	
7 Gravel layer surrounding perforated pipe	Min 150mm thick clean gravel	
8 Filter medium under dry swale	Type B open graded granular material	
9 Positioning of "check dams"	10m to 20m internals on slopes greater than 3%. Details to be agreed	
10 Maximum groundwater level	Refer to ground water volume within the specification	
11 Under drains on conveyance swales	On slopes <1.5%	
12 Average velocity of flow	0.3m/s	
13 Excess flows velocity	Limited to between 1m and 3m/s	
14 Root Zone	70/30 mix of sand/topsoil	
15 Tree planting	All trees planted within grass areas to be fitted with Strimmer Tree Guard, base of guard to be bedded into the ground. Suitable staking method for trees as per DRS Trees may be positioned on the slopes of the swales rather than the base.	

This is a typical detail and may require conversion to a full scheme specific drawing.

NOT TO SCALE
(all units in millimetres)

Disclaimer : Before making use of this detail, any designer or third party must ensure that it satisfies all requirements of the scheme to which it is being applied. Lincolnshire County Council accept no responsibility for third party use of this Standard Detail.

Rev:	Date:	Description:	Approved by:
AMENDMENT DETAILS			

Lincolnshire
COUNTY COUNCIL

Checked by: -- Approved by: --

DRAFT

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Underdrained Swale

SD/5/138
Standard Detail Number

Revision Number