Appendix 7-1

Greenfield Runoff Rate Calculations



Calculated by:	Fergal Timlin
Site name:	Crown Square Development
Site location:	Monivea Road, Galway

This is an estimation of the greenfield runoff rate limits that are needed to meet normal best practice criteria in line with Environment Agency guidance "Preliminary rainfall runoff management for developments", W5-074/A/TR1/1 rev. E (2012) and the SuDS Manual, C753 (Ciria, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Greenfield runoff estimation for sites

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Site coordinates

Latitude:	53.28796° N
Longitude:	9.02134° W
Reference:	6484561
Date:	2018-10-25T10:07:56

Methodology	IH124					
Site characteristics						
Total site area (ha)			5.4			
Methodology						
Qbar estimation method Calculate fro			om SPR and SAAR			
SPR estimation method Calculate fro			om SOIL type			
			Default	Edited		
SOIL type			1	1		
HOST class						
SPR/SPRHOST			0.1	0.1		
Hydrological characteristics Default Edited						
SAAR (mm)			1281	1281		
Hydrological region			13	13		
Growth curve factor: 1 year			0.85	0.85		
Growth curve factor: 30 year			1.65	1.65		
Growth curve factor: 100 year			1.95	1.95		

Notes:

(1)	ls	Q	<	2.0) l/s/ha?
(' /	10	× D A D		2.0	1/0/1101

Normally limiting discharge rates which are less than 2.0 l/s/ha are set at 2.0 l/s/ha.

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consents are usually set at 5.0l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set in which case blockage work must be addressed by using appropriate drainage elements

(3) Is SPR/SPRHOST ≤ 0.3 ?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite may be a requirement for disposal of surface water runoff.

Greenfield runoff rates	Default	Edited
Qbar (l/s)	1.84	1.84
1 in 1 year (l/s)	1.56	1.56
1 in 30 years (l/s)	3.04	3.04
1 in 100 years (l/s)	3.59	3.59
	Qbar (l/s) 1 in 1 year (l/s) 1 in 30 years (l/s)	Qbar (l/s) 1.84 1 in 1 year (l/s) 1.56 1 in 30 years (l/s) 3.04

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.uksuds.com. The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at http://uksuds.com/terms-and-conditions.htm. The outputs from this tool have been used to estimate storage volume requirements. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrosolutions or any other organisation for use of this data in the design or operational characteristics of any drainage scheme.