Norwich Western Link

Drainage Strategy Report Appendix 7 : Greenfield runoff rate estimation for sites

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1 Introduction

1.1.1 This document details the greenfield run-off rate for the Proposed Scheme as determined by the calculator available from HR Wallingford. A Summary of the outputs is summarised below:

Greenfield runoff rates	(l/s)
Q BAR	10.03
1 in 1 year	8.72
1 in 30 year	24.57
1in 100 year	35.7
1 in 200 year	42.22

1.1.2 We have included a summary of key information shown in this document in an accessible format. However, some users may not be able to access all technical details. If you require this document in a more accessible format please contact: norwichwesternlink@norfolk.gov.uk

Catchment 5

Source: Hydraulics Research Station, Wallingford

HR Wallingford
Working with water

Greenfield runoff rate estimation for sites

www.uksuds.com | Greenfield runoff tool

Calculated by:	Stephen Clark
Site name:	
Site location:	

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013) , the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Site Details

Latitude:	52.69291° N
Longitude:	1.15928° E
Reference:	3589830917
Date:	Jul 06 2022 16:09

Runoff estimation approach FEH Statistical

Site characteristics

Total site area (ha): 8.224

Methodology

Q_{MED} estimation method:	Calculate from BFI and SAAR
BFI and SPR method:	Specify BFI manually
HOST class:	N/A
BFI / BFIHOST:	0.697
Q_{MED} (l/s):	
Q_{BAR} / Q_{MED} factor:	1.12

Hydrological characteristics	Default	Edited
SAAR (mm):	630	636
Hydrological region:	5	5
Growth curve factor 1 year:	0.87	0.87
Growth curve factor 30 years:	2.45	2.45
Growth curve factor 100 years:	3.56	3.56
Growth curve factor 200 years:	4.21	4.21

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates 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 consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is 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 would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates	Default	Edited
Q_{BAR} (l/s):		10.03
1 in 1 year (l/s):		8.72
1 in 30 years (l/s):		24.57
1 in 100 year (l/s):		35.7
1 in 200 years (l/s):		42.22