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Greenfield runoff rate estimation for sites

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Calculated by: Michael Micklethwaite

Site name: Redby Street

Site location: Manchester

Site Details

Latitude: 53.47339° N

Longitude: 2.18479° W

Reference: 2965608102

Date: Jul 29 2022 08:15

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.

Runoff estimation approach IH124

Site characteristics

Total site area (ha): 0.266

Methodology

Q_{BAR} estimation method: Calculate from SPR and SAAR

SPR estimation method: Calculate from SOIL type

Soil characteristics

Default Edited

SOIL type: 4 4

HOST class: N/A N/A

SPR/SPRHOST: 0.47 0.47

Hydrological characteristics

Default Edited

SAAR (mm): 900 900

Hydrological region: 10 10

Growth curve factor 1 year: 0.87 0.87

Growth curve factor 30 years: 1.7 1.7

Growth curve factor 100 years: 2.08 2.08

Growth curve factor 200 years: 2.37 2.37

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 $SPR/SPRHOST \leq 0.3$?

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): 1.72 1.72

1 in 1 year (l/s): 1.5 1.5

1 in 30 years (l/s): 2.93 2.93

1 in 100 year (l/s): 3.58 3.58

1 in 200 years (l/s): 4.08 4.08

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