

# Greenfield runoff rate estimation for sites

www.uksuds.com | Greenfield runoff tool

Calculated by:

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:

Longitude:

Reference:

Date:

## Runoff estimation approach

## Site characteristics

Total site area (ha):

## Methodology

$Q_{BAR}$  estimation method:

SPR estimation method:

## Soil characteristics

|              | Default                          | Edited                           |
|--------------|----------------------------------|----------------------------------|
| SOIL type:   | <input type="text" value="2"/>   | <input type="text" value="2"/>   |
| HOST class:  | <input type="text" value="N/A"/> | <input type="text" value="N/A"/> |
| SPR/SPRHOST: | <input type="text" value="0.3"/> | <input type="text" value="0.3"/> |

## Hydrological characteristics

|                                | Default                           | Edited                            |
|--------------------------------|-----------------------------------|-----------------------------------|
| SAAR (mm):                     | <input type="text" value="611"/>  | <input type="text" value="611"/>  |
| Hydrological region:           | <input type="text" value="6"/>    | <input type="text" value="6"/>    |
| Growth curve factor 1 year:    | <input type="text" value="0.85"/> | <input type="text" value="0.85"/> |
| Growth curve factor 30 years:  | <input type="text" value="2.3"/>  | <input type="text" value="2.3"/>  |
| Growth curve factor 100 years: | <input type="text" value="3.19"/> | <input type="text" value="3.19"/> |
| Growth curve factor 200 years: | <input type="text" value="3.74"/> | <input type="text" value="3.74"/> |

## 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 <sub>BAR</sub> (l/s): | 0.16    | 0.16   |
| 1 in 1 year (l/s):      | 0.13    | 0.13   |
| 1 in 30 years (l/s):    | 0.36    | 0.36   |
| 1 in 100 year (l/s):    | 0.5     | 0.5    |
| 1 in 200 years (l/s):   | 0.58    | 0.58   |

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