



Appendix D2: Greenfield Runoff Rate Calculations

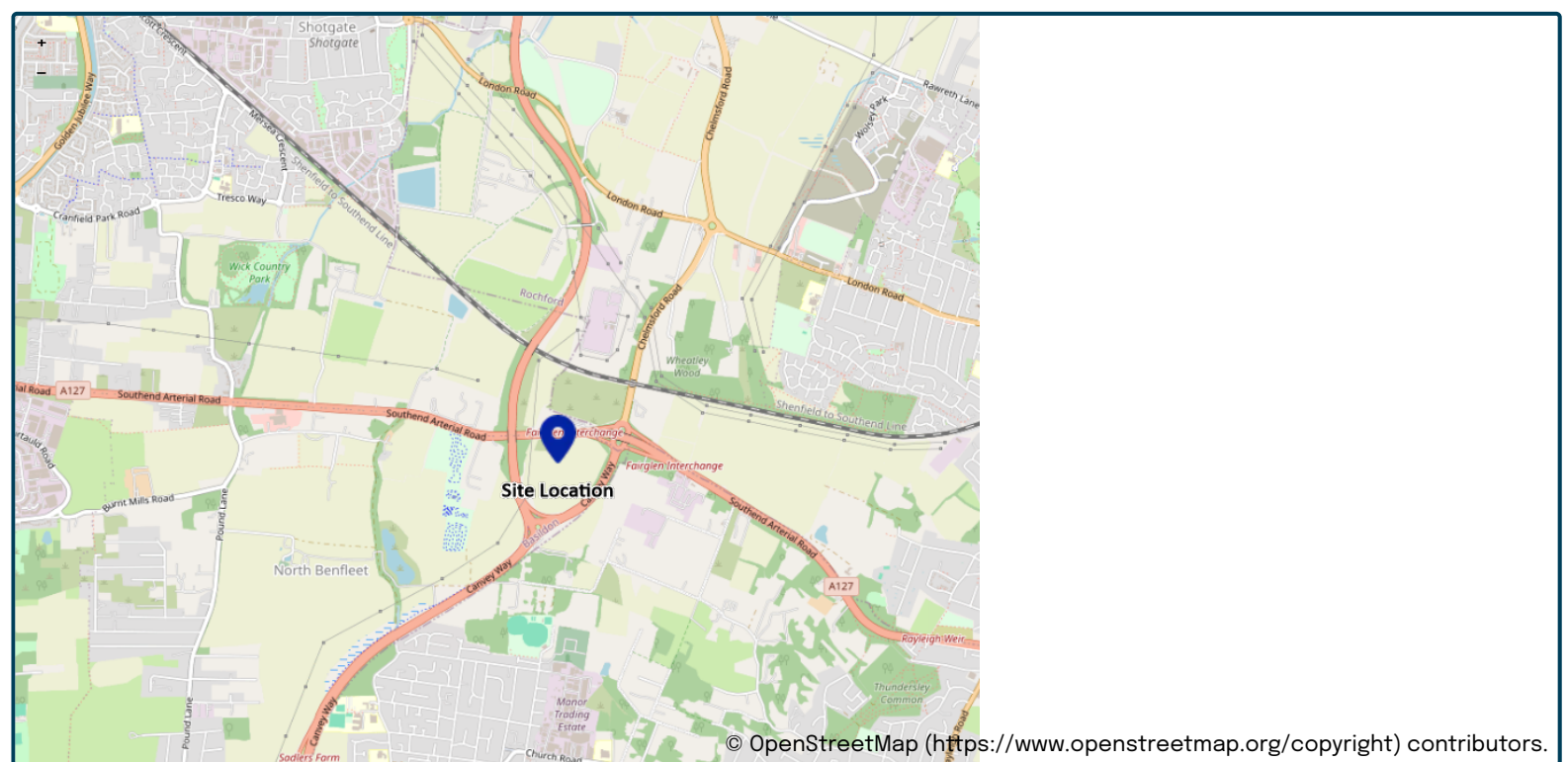
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015).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

Project details

Date	17/06/2025
Calculated by	TB
Reference	P24-3044
Model version	2.0.1

Location

Site name	Fairgreen
Site location	Land North of Rayleigh Spur Roundabout



Site easting	577657
Site northing	190516

Site details

Total site area (ha)	2.895	ha
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Greenfield runoff

Method

Method	FEH statistical
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FEH statistical

	<u>My value</u>		<u>Map value</u>
SAAR (mm)	<input type="text" value="547"/>	mm	<input type="text" value="547"/>
BFIHOST	<input type="text" value="0.223"/>		
QMed-QBar conversion	<input type="text" value="1.136"/>		<input type="text" value="1.136"/>
QMed (l/s)	<input type="text" value="7.45"/>	l/s	
QBar (FEH statistical) (l/s)	<input type="text" value="8.5"/>	l/s	

Growth curve factors

	<u>My value</u>		<u>Map value</u>
Hydrological region	<input type="text" value="6"/>		<input type="text" value="6"/>
1 year growth factor	<input type="text" value="0.85"/>		
2 year growth factor	<input type="text" value="0.88"/>		
10 year growth factor	<input type="text" value="1.62"/>		
30 year growth factor	<input type="text" value="2.3"/>		
100 year growth factor	<input type="text" value="3.19"/>		
200 year growth factor	<input type="text" value="3.74"/>		

Results

Method	FEH statistical	
Flow rate 1 year (l/s)	<input type="text" value="7.2"/>	l/s
Flow rate 2 year (l/s)	<input type="text" value="7.4"/>	l/s
Flow rate 10 years (l/s)	<input type="text" value="13.7"/>	l/s
Flow rate 30 years (l/s)	<input type="text" value="19.5"/>	l/s
Flow rate 100 years (l/s)	<input type="text" value="27"/>	l/s
Flow rate 200 years (l/s)	<input type="text" value="31.6"/>	l/s

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.0.1) developed by HR Wallingford and available at uksuds.com (<https://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 [uksuds.com/terms-conditions](https://www.uksuds.com/terms-conditions) (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate Greenfield runoff rates. 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, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.