



APPENDIX 2

UK SUDS GREENFIELD RUNOFF CALCULATION

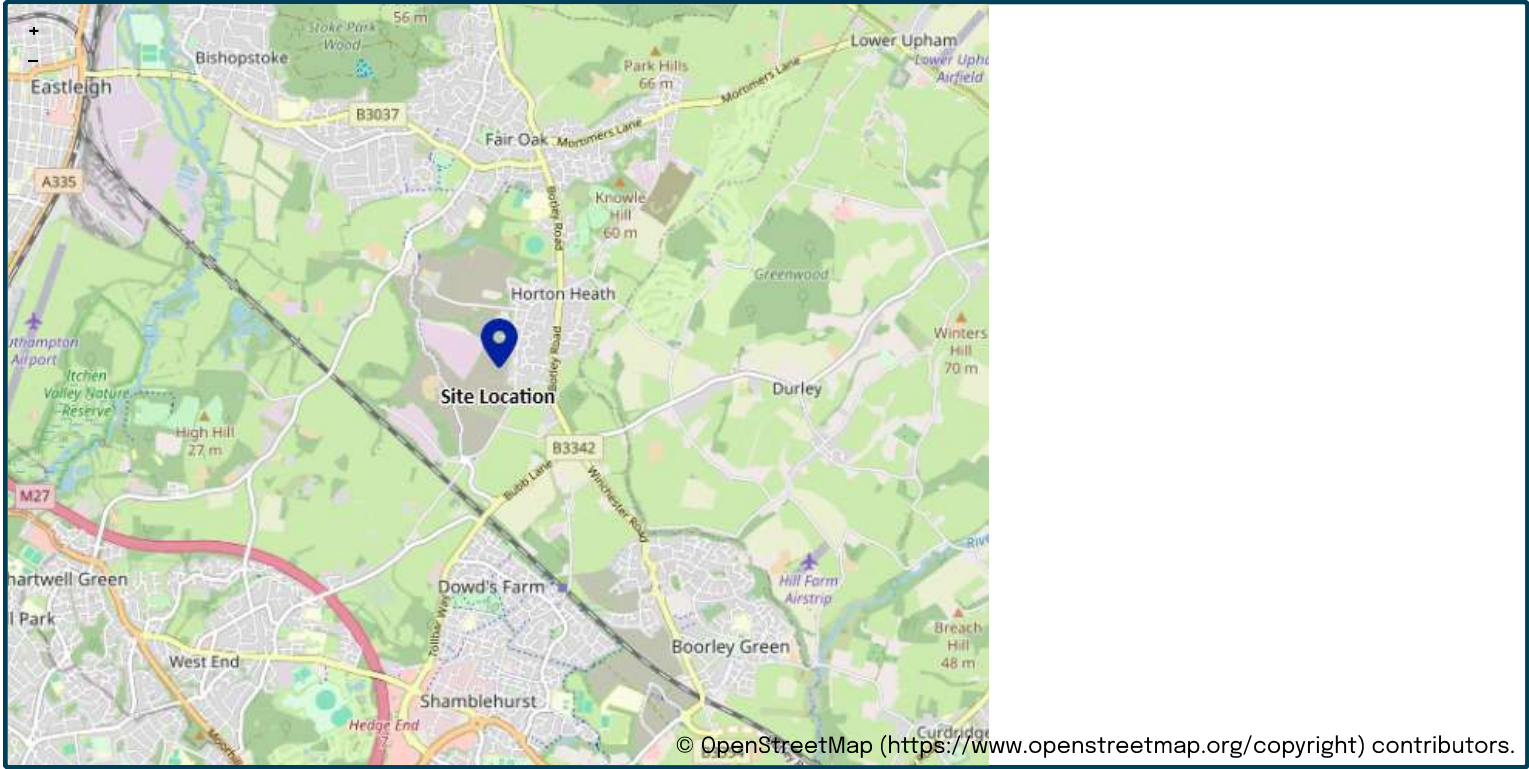
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). 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	31/01/2026
Calculated by	Arch Associates Ltd
Reference	Upper Acre
Model version	2.2.2

Location

Site name	Upper Acre
Site location	One Horton Heath



Site easting (British National Grid)	449131
Site northing (British National Grid)	116619

Site details

Total site area (ha)	9.2561	ha
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MORE INFO

Greenfield runoff

Method

Method	FEH statistical (2025)
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FEH statistical (2025)

	My value		Map value
SAAR9120 (mm)	876		mm
BFIHOST19scaled	.282		
QMed-QBar conversion	1.136		1.136
QMed (l/s)	74.3	l/s	
QBar (FEH statistical 2025) (l/s)	84.5	l/s	

Growth curve factors

	My value		Map value
Hydrological region	7		7
1 year growth factor	0.85		
2 year growth factor	0.88		
10 year growth factor	1.62		
30 year growth factor	2.3		
100 year growth factor	3.19		
200 year growth factor	3.74		

Results

Method	FEH statistical (2025)	
Flow rate 1 year (l/s)	71.8	l/s
Flow rate 2 year (l/s)	74.3	l/s
Flow rate 10 years (l/s)	136.8	l/s
Flow rate 30 years (l/s)	194.2	l/s
Flow rate 100 years (l/s)	269.4	l/s
Flow rate 200 years (l/s)	315.9	l/s

Please note runoff estimation is subject to significant uncertainty. Results are therefore normally reported to only 1 decimal place. Where 2 decimal places are provided, this does not indicate accuracy to this level, it has been adopted to prevent ‘zero’ figures from being reported. Outputs less than 0.01 l/s are reported as 0.01 l/s.

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.2.2) 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>). 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 the data in the design or operational characteristics of any drainage scheme.

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