Greenfield runoff rate estimation tool

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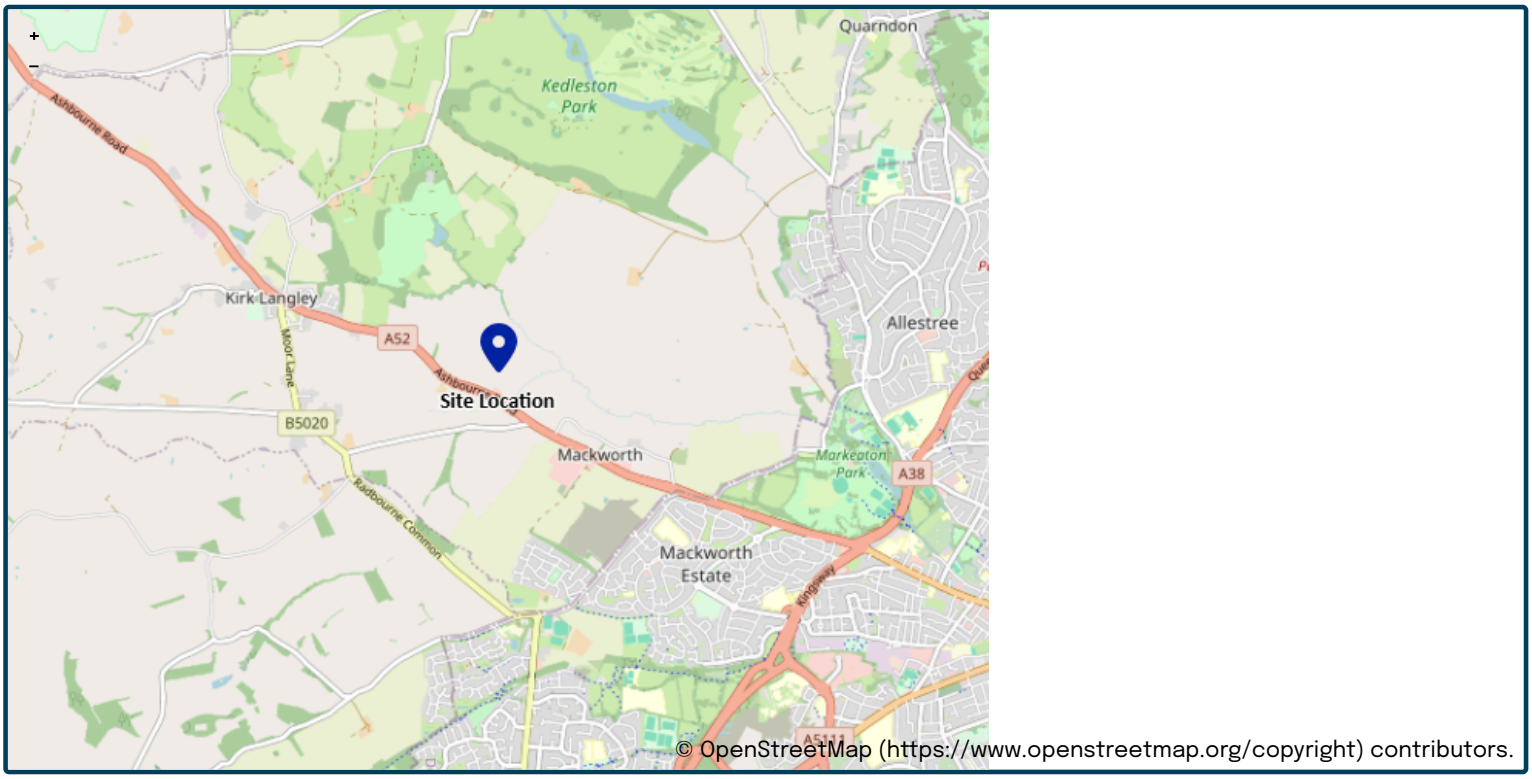
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). 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	08/07/2026
Calculated by	Harriet Tuck
Reference	CHL03023
Model version	2.2.3

Location

Site name	Bowbridge Garage
Site location	Mackworth



Site easting (British National Grid)	430587
Site northing (British National Grid)	338132

Site details

Total site area (ha)	1.174 ha

Greenfield runoff

Method

Method	IH124

IH124

	My value		Map value
SAAR (mm)	718 mm		718
How should SPR be derived?	WRAP soil type		
WRAP soil type	4		4
SPR	0.47		
QBar (IH124) (l/s)	5.8 l/s		

Growth curve factors

	My value		Map value
Hydrological region	4		4
1 year growth factor	0.83		
2 year growth factor	0.89		
10 year growth factor	1.49		
30 year growth factor	2		
100 year growth factor	2.57		
200 year growth factor	3.04		

Results

Method	IH124
Flow rate 1 year (l/s)	4.8 l/s
Flow rate 2 year (l/s)	5.2 l/s
Flow rate 10 years (l/s)	8.7 l/s
Flow rate 30 years (l/s)	11.7 l/s
Flow rate 100 years (l/s)	15.0 l/s
Flow rate 200 years (l/s)	17.7 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

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