

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          | 19/11/2025                                    |
| Calculated by | Elzbieta Szostak                              |
| Reference     | Halewood Grace Park - Greenfield runoff rates |
| Model version | 2.2.2                                         |

Location

|               |                                           |
|---------------|-------------------------------------------|
| Site name     | Proposed Development Entire Area (6.22ha) |
| Site location |                                           |



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|                                       |        |
|---------------------------------------|--------|
| Site easting (British National Grid)  | 344656 |
| Site northing (British National Grid) | 385268 |

Site details

|                      |      |    |
|----------------------|------|----|
| Total site area (ha) | 6.22 | ha |
|----------------------|------|----|

# Greenfield runoff

## Method

|        |                        |
|--------|------------------------|
| Method | FEH statistical (2008) |
|--------|------------------------|

## FEH statistical (2008)

|                                   | <u>My value</u>                    | <u>Map value</u>                                                    |
|-----------------------------------|------------------------------------|---------------------------------------------------------------------|
| SAAR6190 (mm)                     | <input type="text" value="791"/>   | <input type="text" value="mm"/>                                     |
| BFIHOST19                         | <input type="text" value="0.359"/> | <input type="text" value=""/>                                       |
| QMed-QBar conversion              | <input type="text" value="1.075"/> | <input checked="" type="radio"/> <input type="text" value="1.075"/> |
| QMed (l/s)                        | <input type="text" value="36.1"/>  | <input type="text" value="l/s"/>                                    |
| QBar (FEH statistical 2008) (l/s) | <input type="text" value="38.8"/>  | <input type="text" value="l/s"/>                                    |

## Growth curve factors

|                        | <u>My value</u>                   | <u>Map value</u>                                                 |
|------------------------|-----------------------------------|------------------------------------------------------------------|
| Hydrological region    | <input type="text" value="10"/>   | <input checked="" type="radio"/> <input type="text" value="10"/> |
| 1 year growth factor   | <input type="text" value="0.87"/> | <input type="text" value=""/>                                    |
| 2 year growth factor   | <input type="text" value="0.93"/> | <input type="text" value=""/>                                    |
| 10 year growth factor  | <input type="text" value="1.38"/> | <input type="text" value=""/>                                    |
| 30 year growth factor  | <input type="text" value="1.7"/>  | <input type="text" value=""/>                                    |
| 100 year growth factor | <input type="text" value="2.08"/> | <input type="text" value=""/>                                    |
| 200 year growth factor | <input type="text" value="2.37"/> | <input type="text" value=""/>                                    |

## Results

|                           |                                   |                                  |
|---------------------------|-----------------------------------|----------------------------------|
| Method                    | FEH statistical (2008)            |                                  |
| Flow rate 1 year (l/s)    | <input type="text" value="33.7"/> | <input type="text" value="l/s"/> |
| Flow rate 2 year (l/s)    | <input type="text" value="36.1"/> | <input type="text" value="l/s"/> |
| Flow rate 10 years (l/s)  | <input type="text" value="53.5"/> | <input type="text" value="l/s"/> |
| Flow rate 30 years (l/s)  | <input type="text" value="65.9"/> | <input type="text" value="l/s"/> |
| Flow rate 100 years (l/s) | <input type="text" value="80.6"/> | <input type="text" value="l/s"/> |
| Flow rate 200 years (l/s) | <input type="text" value="91.9"/> | <input type="text" value="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 these data in the design or operational characteristics of any drainage scheme.