



Greenfield runoff  
estimation for sites

www.ukrunds.com | Greenfield runoff tool

Calculated by:

GEOFF HARDMAN

Site name:

GRESFORD ROAD

Site location:

LLAY

Site coordinates

Latitude: 53.00610° N

Longitude: 2.39° W

This is an estimation of the greenfield runoff rate which that are needed to meet normal best practice criteria in line with Environmental Agency guidance. Preliminary rainfall runoff rates are based on the UK Meteorological Service's long-term average rainfall data for the area. The actual runoff rate may vary due to local conditions and the specific characteristics of the site.

Reference: 5875027  
Date: 2017-06-29 15:27:33

| Methodology | HR24 |
|-------------|------|
|-------------|------|

Site characteristics

Total site area (ha)

12.16

Methodology

Check estimation method

Calculate from SFR and SAAR

SFR estimation method

Calculate from SOIL type

SOIL type

Default

4

HOST class

...

...

SFR/SFR-HOST

0.47

0.47

Hydrological characteristics

SAAR (mm)

Default

745

Hydrological region

9

Growth curve factor: 1 year

0.88

Growth curve factor: 30 year

1.78

Growth curve factor: 100 year

2.18

2.18

Notes:

(1) Is  $Q_{100} < 2.0$  l/s/ha?

(2) Are flow rates  $< 5.0$  l/s?

(3) Is  $SFR/SFR-HOST \leq 0.37$

APPROXIMATELY 0.109ha  
HARD PAVED AREA FROM  
CONVERTED BUILDINGS  
GENERATING CIRCA.  
11.73 L./SECOND UN-  
RESTRICTED RUN OFF FROM  
1 IN 1 YEAR EVENT  
(38.7mm/hr)  
TO BE CONNECTED TO NEW  
SEWERS



TOTAL SITE AREA FROM PLANNING RED EDGED BOUNDARY = 14.560 ha  
TOTAL SIGNIFICANT POS AREAS SHADED GREEN = 2.400 ha  
THUS TOTAL AREA FOR NEW DEVELOPMENT GREEN FIELD  
RUN OFF CALCULATION = 12.16 ha

BASED ON THE ABOVE THE GREENFIELD RUN OFF IS  
55.57 L./SEC. + 11.73 L./SEC = 67.30 L./SECOND  
WHICH WILL BE THE LIMITING FIGURE FOR THE  
PROPOSED DEVELOPMENT

| Greenfield runoff rates |         |        |  |
|-------------------------|---------|--------|--|
| Check (l/s)             | Default | Edited |  |
| 1 in 1 year (l/s)       | 63.15   | 63.15  |  |
| 1 in 30 years (l/s)     | 55.57   | 55.57  |  |
| 1 in 100 years (l/s)    | 112.4   | 112.4  |  |
| 1 in 100 years (l/s)    | 137.66  | 137.66 |  |

Notes: The runoff rates are based on the UK Meteorological Service's long-term average rainfall data for the area. The actual runoff rate may vary due to local conditions and the specific characteristics of the site.

1 IN 1 YEAR GREENFIELD RUN OFF RATE  
TO BE USED AS REQUIRED BY LLFA

|                       |          |                                        |          |
|-----------------------|----------|----------------------------------------|----------|
| Rev. Revision details |          | Date                                   |          |
| Drawing Stage         |          | Drawing Status                         |          |
| 1                     | Initial  | 2                                      | Revised  |
| 3                     | Approved | 4                                      | As Built |
| Client                |          | ANWYL HOMES LTD.<br>BELLWAY HOMES LTD. |          |
| Drawing title         |          | GRESFORD ROAD<br>LLAY, WREXHAM         |          |
| Drawing title         |          | GREENFIELD RUN<br>OFF CALCULATION      |          |
| Scale                 |          | 1:1000                                 |          |
| Date                  |          | 12/18                                  |          |
| Drawing No            |          | 17040/09/1                             |          |

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