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# Surface water storage requirements for sites

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Calculated by:

Carlos Vazquez

Site name:

Parkway, Hillingdon

Site location:

This is an estimation of the storage volume requirements that are needed 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). It is not to be used for detailed design of drainage systems. It is recommended that hydraulic modelling software is used to calculate volume requirements and design details before finalising the design of the drainage scheme.

## Site Details

Latitude:

51.54508° N

Longitude:

0.4505° W

Reference:

3799159579

Date:

May 29 2023 10:38

Site characteristics

Total site area (ha):

0.03

Significant public open space (ha):

0

Area positively drained (ha):

0.03

Impermeable area (ha):

0.03

Percentage of drained area that is impermeable (%):

100

Impervious area drained via infiltration (ha):

0

Return period for infiltration system design (year):

100

Impervious area drained to rainwater harvesting (ha):

0

Return period for rainwater harvesting system (year):

10

Compliance factor for rainwater harvesting system (%):

66

Net site area for storage volume design (ha):

0.03

Net impermeable area for storage volume design (ha):

0.03

Pervious area contribution to runoff (%):

30

\* where rainwater harvesting or infiltration has been used for managing surface water runoff such that the effective impermeable area is less than 50% of the 'area positively drained', the 'net site area' and the estimates of  $Q_{BAR}$  and other flow rates will have been reduced accordingly.

Methodology

esti

$Q_{BAR}$  estimation method:

SPR estimation method:

Soil characteristics

SOIL type:

SPR:

Default	Edited
4	4
0.47	0.47

Hydrological characteristics

Rainfall 100 yrs 6 hrs:

Rainfall 100 yrs 12 hrs:

FEH / FSR conversion factor:

SAAR (mm):

M5-60 Rainfall Depth (mm):

'r' Ratio M5-60/M5-2 day:

Hydological region:

Growth curve factor 1 year:

Growth curve factor 10 year:

Growth curve factor 30 year:

Growth curve factor 100 years:

$Q_{BAR}$  for total site area (l/s):

$Q_{BAR}$  for net site area (l/s):

Default	Edited
--	63
--	91.63
1.19	1.19
632	632
20	20
0.4	0.4
6	6
0.85	0.85
1.62	1.62
2.3	2.3
3.19	3.19
0.13	0.13
0.13	0.13

Design criteria

Climate change allowance factor:

Urban creep allowance factor:

Volume control approach

Interception rainfall depth (mm):

Minimum flow rate (l/s):

1.4

1.1

Flow control to max of 2 l/s/ha or  $Q_{bar}$

5

2

## Site discharge rates

1 in 1 year (l/s):

Default

2

Edited

2

1 in 30 years (l/s):

2

2

1 in 100 year (l/s):

2

2

## Estimated storage volumes

Default

8

Edited

8

Attenuation storage 1/100 years (m³):

Long term storage 1/100 years (m³):

0

0

Total storage 1/100 years (m³):

8

8

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