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Surface water storage requirements for sites

www.eksuds.com | Storage estimation tool

Calculated by:

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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

		Methodology	
Total site area (ha):	0.03	estimation method:	IH124
Significant public open space (ha):	0	Q _{BAR} estimation method:	Calculate from SPR and SAAR
Area positively drained (ha):	0.03	SPR estimation method:	Calculate from SOIL type
Impermeable area (ha):	0.03	Soil characteristics	
Percentage of drained area that is impermeable (%):	100	SOIL type:	Default Edited 4 4
Impervious area drained via infiltration (ha):	0	SPR:	0.47 0.47
Return period for infiltration system design (year):	100	Hydrological characteristics	
Impervious area drained to rainwater harvesting (ha):	0	Rainfall 100 yrs 6 hrs:	Default Edited -- 63
Return period for rainwater harvesting system (year):	10	Rainfall 100 yrs 12 hrs:	-- 91.63
Compliance factor for rainwater harvesting system (%):	66	FEH / FSR conversion factor:	1.19 1.19
Net site area for storage volume design (ha):	0.03	SAAR (mm):	632 632
Net impermeable area for storage volume design (ha):	0.03	M5-60 Rainfall Depth (mm):	20 20
Pervious area contribution to runoff (%):	30	'r' Ratio M5-60/M5-2 day:	0.4 0.4
* 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.		Hydrological region:	6 6
		Growth curve factor 1 year:	0.85 0.85
		Growth curve factor 10 year:	1.62 1.62
		Growth curve factor 30 year:	2.3 2.3
		Growth curve factor 100 years:	3.19 3.19
Design criteria		Q _{BAR} for total site area (l/s):	0.13 0.13
Climate change allowance factor:	1.4	Q _{BAR} for net site area (l/s):	0.13 0.13
Urban creep allowance factor:	1.1		
Volume control approach	Flow control to max of 2 l/s/ha or Qbar		
Interception rainfall depth (mm):	5		
Minimum flow rate (l/s):	2		

Site discharge rates

1 in 1 year (l/s):

	Default	Edited
1 in 1 year (l/s):	2	2
1 in 30 years (l/s):	2	2
1 in 100 year (l/s):	2	2

Estimated storage volumes

Attenuation storage 1/100 years (m³):

	Default	Edited
Attenuation storage 1/100 years (m ³):	8	8
Long term storage 1/100 years (m ³):	0	0
Total storage 1/100 years (m ³):	8	8

This report was produced using the storage estimation tool developed by HRWallingford and available at 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 <http://uksuds.com/terms-and-conditions.htm>. The outputs from this tool have been used to estimate storage volume requirements. 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, CEH, Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.