hrwallingford

Surface water storage requirements for sites

www.uksuds.com | Storage estimation tool

Calculated by:	Luke Binns	Site Details		
Site name:	Dwelling at Breakmoor Avenue	Latitude:	53.91894° N	
Site location:	Silsden	Longitude:	1.93309° W	
This is an estimatio	n of the storage volume requirement	s that are needed to meet normal	451551446	

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.

Reference: Mar 15 2024 14:46

Date:

Methodology 0.05 IH124 esti **Q**BAR estimation 0 Calculate from SPR and SAAR method: 0.05 Calculate from SOIL type SPR estimation method: 0.025 Soil characteristics Default Edited 50 4 Δ SOIL type: 0 0.47 0.47 SPR: 10 Hydrological 0 characteristics Rainfall 100 yrs 6 hrs: 10 Rainfall 100 yrs 12 hrs: 66 FEH / FSR conversion factor. 0.05

0.03

30

Net impermable area for storage volume design (ha):

Pervious area contribution to runoff (%):

* 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 QBAR and other flow rates will have been reduced accordingly.

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.

Default	Edited		
	61		
	83.95		
1.15	1.15		
904	904		
17	17		
0.3	0.3		
3	3		
0.86	0.86		
1.45	1.45		
1.75	1.75		

Site characteristics Total site area (ha):

Significant public open space (ha):

Area positively drained (ha):

Impermeable area (ha):

Percentage of drained area that is impermeable (%):

Impervious area drained via infiltration (ha):

Return period for infiltration system design (year):

Impervious area drained to rainwater harvesting (ha):

Return period for rainwater harvesting system (year):

Compliance factor for rainwater harvesting system (%):

Net site area for storage volume design (ha):

Design criteria	3	Growth curve factor 100 years:	2.08	2.08
Climate change allowance factor.	1.4	Q _{BAR} for total site area (I/s):	0.33	0.33
Urban creep allowance factor:	1.1	Q _{BAR} for net site area (I/s):	0.33	0.33
Volume control approach	Use long term storage			
Interception rainfall depth (mm):	5			
Minimum flow rate (l/s):	2			

Site discharge rates	Default	Edited	Estimated storage volumes	Default	Edited
1 in 1 year (l/s):	2	2	Attenuation storage 1/100 years (m³):	3	3
1 in 30 years (l/s):	2	2	Long term storage 1/100 years (m³):	0	0
1 in 100 year (l/s):	2	2	Total storage 1/100 years (m³):	3	3

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.