

Site name: Mill Road Depot  
Site location: Cambridge

Site coordinates  
Latitude: 52.19991° N  
Longitude: 0.14084° E  
Reference: u120gnww9b9b / 2  
Date: 19 Jan 2016

This is an estimation of the storage volume requirements that are needed to meet normal best practice criteria in line with Environment Agency guidance "Preliminary rainfall runoff management for developments", W5-074/A/TR1/1 rev. E (2012) and the CIRIA SUDS Manual (2007). It is not to be used for detailed design of drainage systems. It is recommended that every drainage scheme uses hydraulic modelling software to finalise volume requirements and design details before drawings are produced.

## Site characteristics

Total site area	2.7	ha
Significant public open space	0.7	ha
Area positively drained	2	ha
Impermeable area	1.7	ha
Percentage of drained area that is impermeable	85	%
Impervious area drained via infiltration	0	ha
Return period for infiltration system design	10	year
Impervious area drained to rainwater harvesting systems	0	ha
Return period for rainwater harvesting system design	10	year
Compliance factor for rainwater harvesting system design	66	%
Net site area for storage volume design	2	ha

## Methodology

Greenfield runoff method	IH124
Volume control approach	Flow control to max of 2 l/s/ha or

Qbar estimation method	Calculate from SPR and SAAR
SPR estimation method	Calculate from SOIL type
SOIL type	4
HOST class	N/A
SPR	0.47

## Hydrological characteristics

	Default	Edited	
SAAR	540	540	mm
M5-60 Rainfall Depth	20	20	mm
'r' Ratio M5-60/M5-2 day	0.4	0.4	
FEH/FSR conversion factor	0.84	0.84	
Hydrological region	5	5	
Growth curve factor: 1 year	0.87	0.87	
Growth curve factor: 10 year	1.65	1.65	
Growth curve factor: 30 year	2.45	2.45	
Growth curve factor: 100 year	3.56	3.56	

## Design criteria

Climate change allowance factor	1.3	
Urban creep allowance factor	1.1	
Interception rainfall depth	5	mm

## Greenfield runoff rates

	Default	Edited	
Qbar	2.69	7.13	l/s
1 in 1 year	5.00	5.00	l/s
1 in 30 years	5.00	5.00	l/s
1 in 100 years	5.00	5.00	l/s

Please note that a minimum flow of 5 l/s applies to any site

## Estimated storage volumes

	Default	Edited	
Interception storage	68.00	68.00	m <sup>3</sup>
Attenuation storage	1,732.64	1,507.32	m <sup>3</sup>
Long term storage	0.00	0.00	m <sup>3</sup>
Treatment storage	204.00	204.00	m <sup>3</sup>
Total storage	1,800.64	1,575.32	m <sup>3</sup>

Site name: Mill Road Depot  
Site location: Cambridge

Site coordinates  
Latitude: 52.19991° N  
Longitude: 0.14084° E

This is an estimation of the storage volume requirements that are needed to meet normal best practice criteria in line with Environment Agency guidance "Preliminary rainfall runoff management for developments", W5-074/A/TR1/1 rev. E (2012) and the CIRIA SUDS Manual (2007). It is not to be used for detailed design of drainage systems. It is recommended that every drainage scheme uses hydraulic modelling software to finalise volume requirements and design details before drawings are produced.

Reference: u120gnww9b9b / 2  
Date: 19 Jan 2016

## Site characteristics

Total site area	2.7	ha
Significant public open space	0.7	ha
Area positively drained	2	ha
Impermeable area	1.7	ha
Percentage of drained area that is impermeable	85	%
Impervious area drained via infiltration	0	ha
Return period for infiltration system design	10	year
Impervious area drained to rainwater harvesting systems	0	ha
Return period for rainwater harvesting system design	10	year
Compliance factor for rainwater harvesting system design	66	%
Net site area for storage volume design	2	ha

## Methodology

Greenfield runoff method	FEH
Volume control approach	Flow control to max of 2 l/s/ha or

Qmed estimation method	Calculate from BFI and SAAR	
BFI and SPR estimation method	Calculate from dominant HOST	
HOST class	N/A	
BFI / BFIHOST	0.00	
SPR / SPRHOST	0.0	
Qmed	N/A	l/s
Qbar / Qmed Conversion Factor	N/A	

## Hydrological characteristics

	Default	Edited	
SAAR	540	540	mm
M5-60 Rainfall Depth	20	20	mm
'r' Ratio M5-60/M5-2 day	0.4	0.4	
FEH/FSR conversion factor	0.84	0.84	
Hydrological region	5	5	
Growth curve factor: 1 year	0.87	0.87	
Growth curve factor: 10 year	1.65	1.65	
Growth curve factor: 30 year	2.45	2.45	
Growth curve factor: 100 year	3.56	3.56	

## Design criteria

Climate change allowance factor	1.3	
Urban creep allowance factor	1.1	
Interception rainfall depth	5	mm

## Greenfield runoff rates

	Default	Edited	
Qbar	---	---	l/s
1 in 1 year	---	---	l/s
1 in 30 years	---	---	l/s
1 in 100 years	---	---	l/s

Please note that a minimum flow of 5 l/s applies to any site

## Estimated storage volumes

	Default	Edited	
Interception storage	---	---	m <sup>3</sup>
Attenuation storage	---	---	m <sup>3</sup>
Long term storage	---	---	m <sup>3</sup>
Treatment storage	---	---	m <sup>3</sup>
Total storage	---	---	m <sup>3</sup>