

Calculation Sheet

REF:

CLIENT: Barratt Homes	PROJECT: Manchester Road, Chapel-en-le-Frith	JOB NO.: ST12424	CALC. REF. NO.:
			PAGE: OF
CALCULATION	CALC. BY:	CHECKED BY:	APPROVED BY:
Estimation of Greenfield Runoff	(NAME AND SIGNATURE)	(NAME AND SIGNATURE)	(NAME AND SIGNATURE)
	DATE:	DATE:	DATE:

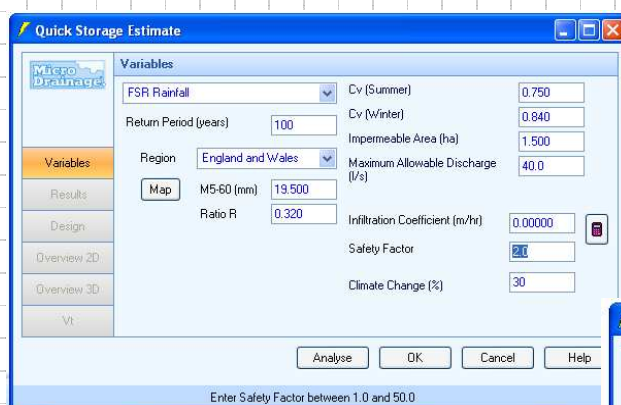
Following IH 124 method

SAAR 1123 obtained from the Wallingford Procedure
SOIL 0.53 obtained from the Wallingford Procedure (SOIL = 0.1SOIL₁ + 0.3SOIL₂ + 0.37SOIL₃ + 0.47SOIL₄ + 0.53SOIL₅)
Site Area 0.037 (square kilometers)

$$\begin{aligned}
 \text{QBAR}_{\text{RURAL}} &= 0.00108 \text{AREA}^{0.89} \cdot \text{SAAR}^{1.17} \cdot \text{SOIL}^{2.17} \\
 &= 0.00108 \times 0.5^{0.89} \times 1123^{1.17} \times 0.53^{2.17} \\
 &= \mathbf{0.5447} \text{ m}^3/\text{second over 50 hectares}
 \end{aligned}$$

ICP SUDS (to pro-rata IH124 method for sites less than 50 hectares)

$$\begin{aligned}
 &= \text{QBAR}_{\text{RURAL}} / 0.5 \times \text{Site area} \\
 &= 1.089 \times 0.037 \\
 &= 0.04031 \text{ m}^3/\text{second over site area} \\
 &= \mathbf{40.3053} \text{ litres/second over site area} \\
 &= \mathbf{10.89} \text{ litres/second/hectare}
 \end{aligned}$$



Quick Storage Estimate

Variables

FSR Rainfall: [Dropdown]

Return Period (years): 100

Region: England and Wales

Map: M5-60 (mm) 19,500

Ratio R: 0.320

Cv (Summer): 0.750

Cv (Winter): 0.840

Impermeable Area (ha): 1,500

Maximum Allowable Discharge (l/s): 40.0

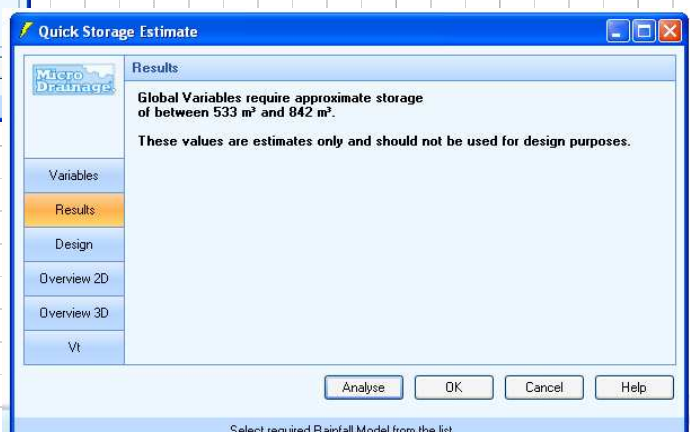
Infiltration Coefficient (m/hr): 0.00000

Safety Factor: 2.0

Climate Change (%): 30

Analyse OK Cancel Help

Enter Safety Factor between 1.0 and 50.0



Quick Storage Estimate

Results

Global Variables require approximate storage of between 533 m³ and 842 m³.

These values are estimates only and should not be used for design purposes.

Variables

Results

Design

Overview 2D

Overview 3D

Vt

Analyse OK Cancel Help

Select required Rainfall Model from the list