



Kit Fletcher
10, McIntyre Road
Stocksbridge
Sheffield
S36 1DG

kitbuildingdesign@gmail.com

Home: 01142 888987

Mobile: 07962 041639

- Consultation & Design
- Detailed Technical Plans
- Planning Applications
- Building Regulations

Surface Water Strategy

24 Birks Lane
Millhouse Green
S36 9NB

Author: Kit Fletcher

1st June 2026

Introduction

The alterations to the property are modest with the removal of the exiting garages and replacement with new larger one and the adjustment to the driveway and patio area. The adjustments to the driveway and patio do not increase the hard landscaping, therefore not increasing the flood risk but the garage is larger and needs consideration. The proposal is to capture additional rainwater captured as well as improve the quality of the water using Free Flush Water Management - Prestige 225 Litre BioRetention + SuDS Planters.

Calculations

Using BRE Digest 365 the standard rainfall per hour is 20mm, allowing for current upper climate change rate of 45% gives the anticipated rainfall, for an hour event as 29mm.

	<u>1 in 30 Year Rainfall Event</u>
Exiting roof area	34.40m ²
Proposed roof area	51.10m ²
Additional roof area	16.70m²

Volume of additional water in storm event

$$29 / 1000 * (16.7) = 0.484\text{m}^3$$

$$0.739 * 1000 = \underline{\underline{484\text{ltrs of storage required}}}$$

Mitigation required during storm event

Using Prestige 225 Litre BioRetention+ SuDS Planter provides 192ltrs of water storage.

$$\text{Therefore } 484 / 192 = 2.52 \text{ units}$$

Therefore using three of the planters covers the storage required and improves the water quality. There will be two located to the garage and one to another downfall pipe to the main house.

Planter positions are shown on the proposed ground floor plan (FL26/11) and the proposed site plan