

Operation & Maintenance Plan for Sustainable Drainage Systems Jefferson Park, Whitehaven – Phase 2

Thomas Armstrong and Home Group

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5 INTRODUCTION

5.1 BACKGROUND

R. G. Parkins & Partners Ltd (RGP) has been appointed by Thomas Armstrong on behalf of Home Group to provide an Operation and Maintenance plan for surface water drainage systems for a proposed residential development at Jefferson Park, Whitehaven.

In reviewing the enclosed information, reference should be made to the latest revisions of the following RGP drawings:

- K38379-10 Outline Foul and Surface Water Drainage Layout

5.2 SUDS COMPONENTS

The proposed residential development at Jefferson Park utilises a series of Sustainable Drainage Systems (SuDS) as part of the overall surface water drainage strategy for the site.

- All private parking areas / driveways and roof drainage will drain into shared geocellular attenuation crates located in the driveways/parking areas of adjoining dwellings. These areas are to be privately maintained by the site owner.

All drainage systems have been designed to provide sufficient storage for the critical duration, 1 in 100-year design storm event with a 40% allowance for the future effects of climate change.

6 OPERATION AND MAINTENANCE REQUIREMENTS

As with all traditional drainage systems, SuDS need to be inspected and maintained regularly to ensure that they operate correctly and efficiently. If SuDS are not properly maintained then there is a risk that the systems will become overloaded during periods of prolonged heavy rainfall, potentially resulting in localised flooding of the development. Recommendations for the SuDS maintenance activities for the privately maintained areas are detailed below.

All maintenance activities should be detailed in the Health and Safety Plan and a risk assessment should be undertaken in accordance with CDM regulations.

6.1 GEOCELLULAR STORAGE SYSTEMS

Regular inspection and maintenance is important for the effective operation of below ground storage systems. Maintenance responsibility for the domestic systems will be placed with the homeowners. The following requirements refer to the recommendations in The SuDS Manual (CIRIA C753) [1].

Table 6.1 Attenuation Storage Maintenance Activities and Schedule

Maintenance Schedule	Required Action	Recommended Frequency
Regular maintenance	Inspect and identify any areas upstream of the system that are not operating correctly (i.e. rainwater pipe gullies, channel drains, silt traps, inspection chambers). If required, take remedial	Monthly for first 3 months, then six monthly thereafter
	Remove debris from any upstream catchment surfaces (may cause risks to performance)	Monthly for first 3 months, then six monthly thereafter (and after large storm events)
	Visual inspection of silt traps, access turrets and flow control chamber to ensure no obvious build-up of silt or other blockages. De-silt as required. Check to ensure there is no standing water in the chambers	Monthly for first 3 months, then six monthly thereafter (and after large storm events)
	Inspect external vent pipe and associated pipework to ensure free from blockage or damage	Annually, or as required
Remedial actions	Repair/rehabilitation of inlets, outlets and vents. De-silt as required.	As required
Monitoring	Inspect/check all upstream drainage inlets, outlets, vents and gullies to ensure that they are in good condition and operating effectively. Inspect access turrets and de-silt inside of tank if required	Monthly for first 3 months, then six monthly thereafter (and after large storm events)

7 REFERENCES

- [1] CIRIA, *The SUDS Manual*, Report C753, 2015.