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1. Introduction

This outline maintenance proposal is to be read in conjunction with SWF Consultants Drainage Strategy drawing which employs a hierarchical approach to considering the storm water management for the proposed development.

The considered drainage solution comprises an attenuated network with discharge rates to public sewer limited by a flow control unit to control water quality. Storage volume is provided in an underground tank constructed from modular cell units.

The attenuated (storage) system differs from traditional unrestricted drainage system and requires different maintenance regime as the consequence of poor maintenance upon these systems is likely to be more onerous than with a traditional unrestricted piped system.

Therefore, a plan of routine inspection maintenance should be adopted and adhered to in order to prevent failure due to inadequate maintenance. This document describes the drainage systems used and provides a framework for future maintenance procedures.

2. Site Drainage Components

The site drainage network is shown on SWF Consultants drawing reference CLL7749-03-P4 Proposed Drainage Layout which is also included in the drainage strategy.

The main drainage components are:-

1. Roof water from the building is collected in pipe work and routed to storage tank. Requires periodic inspection and de-silting as required
2. External paved areas are collected by trapped gullies and channels into piped network and conveyed to the storage tank. Requires periodic inspection and de-silting as required.
3. Storage tank is formed with modular crate system wrapped with an impermeable membrane to prevent escape of water and ingress of soil particles. Requires periodic inspection and de-silting.
4. Flow control unit limits the discharge of surface water to the receiving sewer to an agreed rate. Requires periodic inspection for blockages

3. Maintenance Schedule

The drainage systems will be fully maintained by the Management Company and the Management Company will bear all costs associated with cleaning and regular inspections as required.

The rate of build-up of silt and debris within a drainage system varies from site to site and is dependent upon individual site characteristics. Therefore, the frequency of actions below should be adopted as a MINIMUM standard for a period of 24 months after development completion. This period will be sufficient to assess the system performance over 2 complete seasonal cycles after which the maintenance activity schedule may be reviewed accordingly.

Action	Frequency
Clear external areas of litter	Monthly
Clear guttering of leaves and debris.	Twice yearly. Spring and Autumn after leaf fall
Inspect all rainwater manhole chambers for debris and blockages.	6 Monthly and after heavy rainfall. Remove debris / silt as encountered.
Inspect all tank access points for sediment.	Monthly for 3 months, then 6 Monthly and after heavy rainfall. Remove debris /silt as encountered.
Flow Control	6 monthly Inspect and remove debris
Remove sediment from catch-pits	Minimum 6 monthly. More frequently if required.

4. Storage Tank – Additional Notes

Upon completion of the works the appointed maintenance contractor will carry out regular monthly inspections for the first 3 months and thereafter at 6 monthly intervals.

The cellular storage SUDS system as specified allows almost the entire volume of the system to be inspected via CCTV.

Flushing of the system can be achieved using a jetting system with a 150 bar pump pressure. The jet nozzle should be introduced to the system via the Cellular unit maintenance access. The silt should be flushed to the inspection manhole and removed from there.