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Manchester
M15 5RL

SuDS MAINTANENCE PLAN

For
Proposed New Development
At
72 Errwood Road,
Manchester

Project: J7036

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Author: RH

Revision: --

The Owner's manual

This will include the following:

- This document.
- Location of all SuDS component on site (drainage and suds drawings).
- Operation and maintenance schedule (below) and a maintenance record.
- Emergency Plan (below)
- Explanation of the consequences of not carrying out the maintenance that is specified (below)
- Identification of areas where certain activities are prohibited for example, stockpiling materials on pervious surfaces (below).

General Requirements

Collection of all litter and debris from communal areas is to be undertaken on a monthly basis by the facility owner.

Financial Management

It is proposed that all SuDS facilities will be managed and maintained in perpetuity by the facility owner. The maintenance will be carried out by an appointed specialist engineer retained by the facility owner on a fixed contract (of at least 1 year). This will be paid for by the facility owner in perpetuity via an annual maintenance fee for the upkeep of the communal areas including the SUDs system.

Inlet Structures and Inspection Chambers

Inlet structures such as rain water down pipes, road gullies and channel drawings. They should be free from obstruction at all times to allow free flow through SuDS. Inspection chambers and rodding eyes are used on bends or where pipes come together. They allow access and cleaning to the system if necessary.

Maintenance Schedule	Required Action	Recommended Frequency
Regular maintenance	Inspect rainwater down pipes and Aco drains, removing obstructions and silt as necessary. Check there is no physical damage.	Monthly
	Strim vegetation 1m min surround to structure and keep area free from silt and debris	Monthly
	Remove inspection chamber cover and inspect. Water should be free flowing and the exist route is unobstructed. Remove debris and silt. Undertake inspection after leaf fall in Autumn.	Annually
	Check topsoil levels are 20mm above edges of chambers to avoid mover damage.	As necessary
Remedial Actions	Repair physical damage if possible or replace if required.	As required / annual
Monitoring	Visual inspections to check for damage as required	As required

Below Ground Drainage Pipes

Below ground drainage pipes convey water to the SuDS system. They should be free from obstruction at all times to allow free flow.

Maintenance Schedule	Required Action	Recommended Frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. If require take remedial action.	Monthly for the first 3 months, then annually.
	Remove debris from the catchment surface (where it may cause risks to performance).	Monthly
	Remove sediment from pre-treatment inlet structure and inspection chambers.	Annually or as required
	Maintain vegetation within the vicinity of the below ground drainage pipes and tanks to avoid damage.	Monthly or as required
Remedial Actions	Repair physical damage if possible or replace if required.	As required / annual
Monitoring	Inspect all inlets, outlets and vents to ensure that they are in good condition and operating as designed.	Annually
	Survey inside of pipe runs for sediment build up and remove if necessary.	Every 5 years or as required.

Vortex Flow Controls

These are proprietary systems which are custom made to control the discharge off site to greenfield or brownfield levels. The maintenance of the flow control is to be undertaken by the appointed management company. The operation and maintenance requirements are given in the table below;

Maintenance Schedule	Required Action	Recommended Frequency
Regular maintenance	Remove litter and debris and grass cuttings (if applicable) from the upstream SUDs systems to prevent these being washed into the control. Inspection of control chamber and removal of any sediments, debris etc.	Quarterly or as required following monitoring
Remedial Actions	Check drain down doors are operational, check the vortex flow control fixing to manhole chamber and access into the control chamber is functional	Quarterly or as required following monitoring
Monitoring	Inspect flow controls and check flow is not impeded	Monthly or after periods of heavy rainfall

Cellular Attenuation

Storage is provided within the SuDs system by cellular units. They should be free from obstruction at all times to allow free flow and maximum storage capacity.

Maintenance Schedule	Required Action	Recommended Frequency
Regular maintenance	Remove debris from the catchment surface (where it may cause risks to performance). Inspect the tank inlet and outlet for debris and blockages. Remove sediment from silt traps and sumps.	Monthly for the first 3 months, then every 6 months. Bi-Annually
Remedial Actions	Repair physical damage if possible or replace if required.	As required / annual
Monitoring	Inspect all inlets, outlets and vents to ensure that they are in good condition and operating as designed. Survey inside of tank for sediment build up and remove if necessary.	Annually Every 5 years or as required.

Design Life

The design life of the development is likely to exceed the design life of each of the SUDs components listed above. During the routine inspections of any drainage components, it may become apparent that they have reached the end of their functional lifetime. In the interest of sustainability repairs should be the first-choice solution where possible. If this is not the case then it may be necessary for the property owners (if on their property) to undertake complete replacement of the component in question.

Emergency Plan

Key indicators to prevent flooding;

1. Manholes over flowing
2. Vent pipe overflowing
3. Gullies overflowing or water taking a long time to disperse
4. Aco channels overflowing or water taking a long time to disperse
5. Any other unusual visual items not normally seen such as waterlogged ground

In the event of the above occurring, action is required to be undertaken as outlined below;

1. Check for obvious blockages in area where flooding is occurring (blocked gully's / drains / flow control units etc).
2. If there is nothing obvious as to why there is a blockage, call the statutory wastewater provider – United Utilities to make them aware and report the problem on 0345 672 3723
3. Call a suitable drain inspection company such as 'Lanes for Drains' to survey and possibly jet any blockages. Local depot contact number – 0161 788 2222 and inform them of the problems.

Ensure that in the event of the above, the operation, maintenance and emergency plans as well as the drainage drawings for the development are available to the contractors.

Spillage – Emergency action

Most spillages on a development are of compounds that do not pose a serious risk to the environment if they enter the drainage system in a slow and controlled manner with available time for natural breakdown. Therefore, small spillages of oil, milk or other known organic substances should be removed where possible using soak mats as recommended by the Environment Agency, with residual spillage allowed to bioremediate in the drainage system.

In the event of a serious spillage, either by volume of unknown or toxic compounds, then isolate the spillage with soil, turf or fabric and block outlet pipes from chambers downstream of the spillage with a bung.

Contact the Environment Agency immediately. Tel: 03708 506 506