BECKWITH & HANLON

April 2024

SuDS Maintenance & Management Schedule

23-026 Harras Road, Whitehaven
Prepared for John Swift Homes Ltd.

beckwithandhanlon.com

Revision	Description	By	Checked	Date
P1	First Issue	JM	NB	10.04.2024

CONTENTS

HARRAS ROAD, WHITEHAVEN – SUDS MAINTENANCE & MANAGEMENT SCHEDULE

1.0 INTRODUCTION

John Swift Homes Ltd. and their nominated management company are responsible for the below maintenance regime associated with the residential development at Harras Road, Whitehaven. John Swift Homes Ltd. and/or the management company will be responsible from completion of construction. This schedule is to be adopted and developed by the appointed management company.

The Schedules detailed below are in accordance with Table 32.1 of the CIRIA SuDS Manual (2015).

2.0 DRAINAGE ITEMS

The following drainage items are to be considered:

PIPEWORK, MANHOLES AND CHANNELS

The following maintenance items are recommended, for any pipework and manholes associated with the SuDS systems:

- Local repair or local replacement of damaged pipes or other structures in order to maintain the functioning of the sewer.
- Cleaning and removal of sediments, obstructions etc. to restore hydraulic capacity.
- Jetting/vacuum of sewers to be undertaken as often as necessary to remove silts and/or ordinary debris.
- In the event that any extraordinary issues are encountered during an inspection, further information may be required such as a CCTV survey report.
- Maintenance to be undertaken on a six-monthly schedule.
- All manhole covers should be lifted, and the manholes visually inspected for silt, debris and signs of blockages within the drainage system. Check manhole covers and frames for damage and ensure correctly bolted together. This should be undertaken on a six-monthly basis.
- Should any debris or blockages be detected, the manholes should be cleaned along with associated pipe runs using a high-pressure jetting unit. On completion, a CCTV surveyed should be undertaken to verify/identify that no further remedial works are required.
- To avoid damaging the pipe, PSI pressures need to be verified before jetting of plastic twin wall sewers. Cleaning of drainage systems may require the temporary sealing of the system and careful collection of the effluent for disposal off site.

Maintenance Schedule – Proprietary Drainage	
Drainage Element – Pipework and Manholes	
Required Action	**Typical Frequency**
	Regular
Inspection of inlets and outlets. Ensure they are clear and flows are not impeded.	Bi-annually and in addition following any significant storm event.
Inspection of manholes, gullies, sumps, channels and drains for debris and signs of blockages.	Quarterly
Inspection of manhole covers and frames for damage and ensure correctly bolted together.	Bi-annually
Inspection of water quality. Ensure water quality is free of algae, oils, or odours.	Bi-annually
Visual inspection for inefficiencies - such as surface water building up at the inlet.	Quarterly
Inspection of gullies, inlet/outlet pipework and control systems for blockages, clogging, standing water and structural damage.	Monthly for 1 year following construction completion, thereafter bi-annually.
	Regular Maintenance
Remove litter and debris from gully and drain surface.	Bi-monthly
Remove or control tree roots where they are encroaching the sides of drainage apparatus, using recommended methods (e.g. NJUG, 2007 or BS 3998:2010).	Bi-annually

FILTER DRAIN

Regular inspection and maintenance are important for the effective operation of the filter drains. The maintenance should be conducted by an experienced team that has the appropriate training and safety qualifications.

General maintenance requirements include inspection for clogging, litter, weeds and water ponding to identify the required remedial actions.

Maintenance Schedule – Sustainable Drainage	
Drainage Element – Filter Drains	
Responsibility of the appointed Management Company	
Required Action	**Typical Frequency**
	Regular
Remove litter (including leaf litter) and debris from filter drain surface, access chambers and pre-treatment devices.	Monthly or as required.

Inspect filter drain surface, inlet/outlet pipework and control systems for blockages, clogging, standing water and structural damage. Inspect pre-treatment systems, inlets, perforated pipework for silt accumulation, and establish appropriate silt removal frequencies. Remove sediment from pre-treatment devices.	Monthly Six monthly Six monthly or as required.
	Occasional Maintenance
Remove or control tree roots where they are encroaching the sides of the filter drain, using recommended methods (eg NJUG 2007 or BS3998:2010). At locations with high pollution loads, remove surface geotextile and replace and wash or replace overlying filter medium. Clear perforated pipework of blockages.	As required. Five yearly or as required. As required.

The above schedule is based upon '*Table 16.1 Operations and maintenance requirements for filter drains – CIRIA SuDS Manual 2015; Chapter 16: Filter Drains*.

ATTENUATION TANKS

Regular inspection and maintenance are required to ensure the effective long-term operation of below-ground attenuation systems.

The attenuation tanks will be maintained in accordance with advice provided by the manufacturer, while the responsibility for this maintenance will be placed with the landowner/tenant or appointed management company.

The maintenance tasks of the attenuation tanks generally include the inspection of the inlets, outlets, air vents and overflows to identify silt build up and/or structural damage to determine if remedial actions are required.

Maintenance Schedule – Proprietary Drainage	
Drainage Element – Attenuation Tank	
Required Action	**Typical Frequency**
	Regular
Inspect and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then annually

Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed.	Annually
	Regular Maintenance
For systems where rainfall infiltrates into the tank from above, check surface of litter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary.	Annually or as required
Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
Remove sediment from pre-treatment structures and / or internal fore bays	Annually
Repair/rehabilitate inlets, outlet, overflows and vents	As required
Survey inside of tank for sediment build-up and remove and clean if necessary	Annually

The above schedule is based upon 'Table 21.3 Operation and maintenance requirements for attenuation storage tanks – CIRIA SuDS Manual 2015; Chapter 21: Attenuation Storage Tanks'.

CONTROL MANHOLES (Hydrobrake Vortex Flow Control)

It is essential that the control manhole is checked regularly and especially after (significant) rainfall events, in order to maintain the effectiveness of the control. The control manhole will be maintained in accordance with the maintenance plan specified by the manufacturer, and it is recommended that the flow control device is inspected alongside pipework on site. A summary of the typical maintenance schedule is provided below.

Maintenance Schedule – Proprietary Drainage	
Drainage Element – Control Manhole	
Required Action	**Typical Frequency**
	Routine Maintenance
Inspect hydrobrake and inlet to ensure they are clear of blockages	Monthly for three months after installation. Biannually thereafter.

HYDRODYNAMIC SEPARATOR (Hydro Downstream Defender)

It is essential that the downstream defender is checked regularly and especially after (significant) rainfall events, in order to maintain the effectiveness of the control. The downstream defender will be maintained in accordance with the maintenance plan specified by the manufacturer, and it is recommended that the

downstream defender is inspected alongside pipework on site. A summary of the typical maintenance schedule is provided below.

Maintenance Schedule – Proprietary Drainage	
Drainage Element – Downstream Defender	
Required Action	**Typical Frequency**
	Routine Maintenance
Inspect downstream defender and inlet to ensure they are clear of blockages	Regularly during first year of installation. Biannually thereafter and in accordance with manufacturers recommendations.
Hydrocarbons (oils) and floatables removal	Once per year, or as needed with sediment material. Following a spill in the drainage area.
Sediment removal	As and when alerted by the Hydro-Logic® Smart Maintenance system, or At intervals as determined by the first year's inspections. Following a spill in the drainage area.

Note: For most clean outs it is not necessary to remove the entire volume of liquid in the vessel. Only removing the first few inches of oils/floatables and the sediment storage volume is required.

WATERCOURSE

Regular inspection and maintenance are important for the effective operation of the watercourse and associated structures. General maintenance requirements include inspection for silting, clogging, litter and weeds to identify the required remedial actions.

Maintenance Schedule – Sustainable Drainage	
Drainage Element – Watercourse	
Required Action	**Typical Frequency**
	Regular
Remove litter and debris.	Annually, after autumn leaf fall, or reduced frequency as required, based on site specific observations of clogging or manufacturers recommendations – pay particular attention to areas where water runs into culverts as this area is most likely to collect the most sediment.
Cut grass – to retain grass height within specified design range.	Monthly (during growing season) or as required (subject to landscape management plan).
Manage other vegetation and remove nuisance plants.	Monthly (subject to landscape management plan).
Inspect trash screens and headwalls for blockages and clear if required.	Monthly Monthly for 6 months, quarterly for 2 years, then half yearly.

Inspect vegetation coverage to banksides above gabion walls. Inspect gabion walls for structural integrity. Inspection of inlets and outlets for blockages and clear as required. Visual inspection for inefficiencies - such as surface water building up at the inlet to existing culvert. Inspect bed of watercourse for silt accumulation. Establish appropriate silt removal frequencies.	Monthly for 6 months, quarterly for 2 years, then half yearly. Monthly for 6 months, quarterly for 2 years, then half yearly or following periods of heavy rainfall and flooding. Half yearly Yearly
	Occasional Maintenance
Remove sediment from inlets and outlets.	Every 5 years, or as required.
	Remedial Actions
Repair gabion walls, outfall and trash screen. Relevel uneven surfaces and reinstate design levels. Repair inlets and outlets.	As required. As required. As required.

The above schedule is based upon guidance within *CIRIA SuDS Manual 2015*.

BECKWITH
& HANLON

CONTACT

2 Riverside Studios, Amethyst Road,
Newcastle Business Park, Newcastle NE4 7YL

Email: info@beckwithandhanlon.com
Tel: +44 (0) 191 273 7582

beckwithandhanlon.com