

The Gate House Bays 2&3 Pattenden Lane Marden Tonbridge TN12 9QS

> 01732 617555 mail@hodel.uk

CULL FARM, DEAN STREET MAIDSTONE ME15 OPS

DDVINIVEE	RAARIACERAERIT 9.	NAVINITENIVNICE	DEVILIDENTERIE
DRAINAGE	MANAGEMENT &	IVIAIIVIEIVAIVLE	<b>RECOUNCIVIEIVIS</b>

Prepared By: RR Approved By:

 Project No.
 19-014
 Revision
 Date
 28/03/24



## Contents

1	DRAINAGE SYSTEM MAINTENANCE	1
	1.2 Responsibility for maintenance.	1
2	Maintenance Schedule	2
	2.2 Attenuation Storage Tanks	
	2.3 Swales	
	2.4 Detention Basins	5
	2.5 Soakaways	6

## **Document Control**

Revision	Purpose	Date	Ву	Approved
-	Initial issue	28/03/24	RR	



#### 1 DRAINAGE SYSTEM MAINTENANCE

- 1.1.1 The below ground surface water drainage system at the site comprises of a traditional piped system, which is supported by the implementation of SuDS.
- 1.1.2 The pipework has been designed to be self-cleansing and as such should require no maintenance. If a blockage occurs, the system has been designed so that easy rodding or jetting can take place.
- 1.1.3 Inspections should be undertaken after any adverse weather event with the required maintenance or remediation works undertaken to ensure the system remains fully operational.

### 1.2 Responsibility for maintenance.

1.2.1 As per the Defra document "Delivering Sustainable Drainage Systems" dated September 2014, maintenance responsibility can reside with several parties.

#### Service management companies

Responsible for the maintenance of public spaces within new developments inclusive of, the maintenance of sustainable drainage systems. This option householders and premises occupiers would pay for sustainable drainage systems maintenance as part of the annual service charge. Developers will need to ensure that any requirement to pay fees is binding.

#### Water and sewerage companies

If a Company and a developer agreed, the developer could build (or contribute towards the construction of) a sustainable drainage system that the Company would subsequently own. The sustainable drainage system would be included within a Water and Sewerage Company's ordinary charging scheme, and maintenance costs would be funded through the surface water drainage element of household water bills

#### Local government

Some local authorities may wish to take on responsibility for the maintenance of sustainable drainage systems as part of their wider public open space and amenity management function and/or where the sustainable drainage system provides advantages for the wider community.

### Private Individuals: property owners or occupiers

The owners/occupiers of properties drained by sustainable drainage systems that do not also drain other properties to maintain their own sustainable drainage system.



### 2 MAINTENANCE SCHEDULE

2.1.1 Below is a table setting out the various elements of the drainage system and maintenance requirements. The list is of actions is not exhaustive and some actions may not always be required.

Drainage Feature	Inspection Frequency / Requirement	Maintenance Requirement	Responsibility
Gullies/channels	Every 6 months, for silt and debris.	Silt and debris to be cleared from gully pots.	Private Individuals / Service Management Company
Rainwater Downpipes	Every 12 months, for silt and leaves.	Silt to be cleared from gully pot, leaves to be cleared from gutters and downpipes.	Private Individuals / property owners or occupiers
Pipework	If a problem occurs, by CCTV survey.	As recommended by CCTV survey company.	Private Individuals / Service Management Company
Catchpits/sumps	First 3 months	Soon after site works have completed, a large amount of build-up is normally expected within the drainage system. Lift the cover to the silt trap chamber and assess any silt build up. Any build up should be removed and disposed of.	Private Individuals / Service Management Company
	Every 6 months, for silt and debris.	Silt and debris to be cleared.	Private Individuals / Service Management Company
Attenuation Storage Tanks	Refer to section 2.2	Refer to section 2.2	Service Management Company
Swales	Refer to section 2.3	Refer to section 2.3	Service Management Company
Detention Basins	Refer to section 2.4	Refer to section 2.4	Service Management Company
Soakaways	Refer to section 2.5	Refer to section 2.5	Service Management Company
ACO V-Septor	As per manufacturer recommendations.	As per manufacturer recommendations.	Service Management Company





## 2.2 Attenuation Storage Tanks

# 2.2.1 Operations and maintenance requirements for attenuation storage tanks as per Table 21.3 of the CIRIA SuDS Manual 2015

Maintenance Schedule	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.
	Remove debris from the catchment surface (where is may cause risk to performance)	
	Remove sediment from pre-treatment structures and/or internal forebays	Annually or as required.
Remedial actions	Repair/rehabilitate inlets, outlets, overflows and vents.	As required.
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed.	Annually
	Survey the inside of the tank for sediment build-up and remove if necessary.	Every 5 years or as required.



## 2.3 Swales

# 2.3.1 Operations and maintenance requirements for swales as per Table 17.1 of the CIRIA SuDS Manual 2015

Maintenance Schedule	Required Action	Typical Frequency	
	Remove Litter and Debris.	Monthly.	
Regular Maintenance	Cut Grass – to retain grass height within specified design range.	Monthly during growing season or as required.	
	Inspect vegetation coverage.	Monthly or when required.	
	Manage vegetation and remove nuisance plants.	Monthly at start, then as required.	
	Inspect inlets, outlets, and overflows for blockages and clear if required.	Monthly.	
	Inspect infiltration surfaces for ponding, compaction, silt accumulation, record areas where water is ponding for > 48 hours.	Monthly or when required.	
	Inspect vegetation coverage.	Monthly for 6 months, quarterly for 2 years then half yearly.	
	Inspect inlets and facility surface for silt accumulation, establish appropriate removal frequencies.	Half yearly.	
Occasional Maintenance	Reseed areas of poor vegetation growth, alter plant types to better suit conditions, if required.	As required or if bare soil is exposed over > 10% of the filter strip area.	
	Repair erosion or other damage by reseeding or returfing.	As Required.	
Remedial Actions	Relevel uneven surfaces and reinstate design levels.	As required.	
	Scarify and spike topsoil layer to improve infiltration performance, break up silt deposits and prevent compaction of the soil surface.	As Required.	
	Remove build-up of sediment on upstream gravel trench, flow spreader or at top of filter strip.	As required.	
	Remove and dispose of oils or petrol residues using safe standard practices.	As required.	



## 2.4 Detention Basins

# 2.4.1 Operations and maintenance requirements for detention basins as per Table 22.1 of the CIRIA SuDS Manual 2015

Maintenance Schedule	Required Action	Typical Frequency	
5 1	Remove Litter and Debris.	Monthly.	
Regular Maintenance	Cut Grass – for spillways and access routes.	Monthly during growing season or as required.	
	Cut Grass – meadow grass in and around basin.	Half yearly (spring before nesting season, and autumn).	
	Manage vegetation and remove nuisance plants.	Monthly at start, then as required.	
	Inspect inlets, outlets and overflows for blockages, and clear if required.	Monthly	
	Inspect banksides, structures, pipework etc. for evidence of physical damage.	Monthly.	
	Inspect inlets and facility surface for silt accumulation, establish appropriate removal frequencies.	Monthly (for first year) then annually or as required.	
	Check any penstocks and other mechanical devices.	Annually	
	Tidy all dead growth before start of growing season.	Annually.	
	Remove sediment from inlets, outlets and forebay.	Annually or as required.	
	Manage wetland plants in outlet pool – where provided.	Annually.	
Occasional Maintenance	Reseed areas of poor vegetation growth.	As required.	
Maintenance	Prune and trim any trees and remove cuttings.	Every 2 years or as required.	
	Remove sediment from inlets, outlets and forebay and main basin when required.	Every 5 years, or as required (likely to be minimal requirements where effective upstream source control is provided.	
Remedial	Repair erosion or other damage by reseeding or returfing.	As Required.	
Actions	Realignment of rip-rap	As Required.	
	Repair/rehabilitation of inlets, outlets & overflows.	As Required.	
	Relevel uneven surfaces and reinstate design levels.	As required.	



## 2.5 Soakaways

# 2.5.1 Operations and maintenance requirements for soakaways as per Table 13.1 of the CIRIA SuDS Manual 2015

Maintenance Schedule	Required Action	Typical Frequency
Regular  Maintenance  Inspect for sediment and debris in pre-treat components and floor of inspection tube or chamber and inside of concrete manhole ri		Annually.
	Cleaning of gutters and any filters on downpipes	Annually (or as required based on inspections)
	Trimming any roots that may be causing blockages	Annually (or as required)
Occasional maintenance	Remove sediment and debris from pre-treatment components and floor of inspection tube or chamber and inside of concrete manhole rings	As required, based on inspections.
Remedial actions	Reconstruct soakaway and/or replace or clean void fill, if performance deteriorates or failure occurs Replacement of clogged geotextile (will require reconstruction of soakaway)	As required.
	Replacement of clogged geotextile (will require reconstruction of soakaway)	As required.
Monitoring	Inspect silt traps and note rate of sediment accumulation.	Monthly in the first year and then annually.
	Check soakaway to ensure emptying is occurring.	Annually.