

SuDS Maintenance Schedule

New Wharf, Shoreham- By- Sea

Planning Ref: AWDM/0671/25

For

Oakfield Construction Ltd

Rev - P

Reference **C3919**

Date **05th December 2025**

Revision	Date of Issue	Comments	Prepared By	Checked By
P	05/12/2025	Initial Issue	MR	CS

1 Maintenance

1.1 Introduction

- 1.1.1 During construction, the Contractor will be responsible for maintaining the drainage and SuDS (Sustainable Drainage Systems). Upon handover, the occupier will take on the responsibility of these duties as laid out in this report.
- 1.1.2 The maintenance schedule for the proposed development will be split down into two separate categories; SuDS features and regular private drainage.

1.2 SuDS at New Wharf, Shoreham-by-Sea

- 1.2.1 As listed above, in section 5.1.2, the SuDS features used on site will be **Bioretention System and Attenuation Tank**.
- 1.2.2 The SuDS features have been designed for easy maintenance and comprise:
- Regular Day-to-Day care – litter collection, regular gardening to control vegetation growth and checking inlets where water enters the SuDS features
 - Occasional tasks – checking the SuDS features and removing any silt that builds up in the SuDS feature
 - Remedial work – repairing damage where necessary

1.3 SuDS Drainage Maintenance Specification

1.3.1 Attenuation Tank

In order to maintain the functioning of the attenuation tank, the following maintenance requirements should be adhered to:

Operation and maintenance requirements for attenuation tank		
Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	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 it may cause risks to performance)	Monthly
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae, or other matter; remove and replace surface infiltration medium as necessary.	Annually
	Remove sediment from per-treatment structures and/or internal forebays	Annually, or as required
Remedial Actions	Repair/rehabilitate inlets, outlet, 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 inside of tank for sediment build-up and remove if necessary	Every 5 years or as required

1.3.2 Bio retention systems

In order to maintain the functioning of the bio retention systems, the following maintenance requirements should be adhered to:

Table 18.3 Operation and maintenance requirements for bio retention systems		
Maintenance Schedule	Required Action	Typical Frequency
Regular Inspections	Inspection infiltration surfaces for silting and ponding, record de-watering time of the facility and assess standing water levels in underdrain (if appropriate) to determine if maintenance is necessary	Quarterly
	Check operation of underdrains by inspection of flows after rain	Annually
	Assess plants for disease infection, poor growth, invasive species etc and replace as necessary	Quarterly
	Inspect inlets and outlets for blockages	Quarterly
Regular maintenance	Remove litter and surface debris and weeds	Quarterly (or more frequently for tidiness or aesthetic reasons)
	Replace any plants, to maintain planting density	As required
	Remove sediment, litter and debris build-up from around inlets or from forebays	Quarterly to biannually
Occasional maintenance	Infill any holes or scour in the filter medium, improve erosion protection if required	As required
	Repair minor accumulations of silt by raking away surface mulch, scarifying surface of medium and replacing mulch	As required
Remedial actions	Remove and replace filter medium and vegetation above	As required but likely to be > 20 years

1.4 General Drainage Maintenance Specification

1.4.1 Inlet Structures and Inspection Chambers

- Inlet structures such as rainwater downpipes, road gullies and channel drains should be free from obstruction at all times to allow free flow through the 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.

Inlet Structures and Inspection Chambers	
Regular Maintenance	Frequency
Inlet Structures Inspect rainwater downpipes, channel drains and road gullies, removing obstructions and silt as necessary. Check that there is no physical damage. Trim vegetation 1m min surround to structures and keep area free from silt and debris	Monthly
Inspection Chambers and below ground control chambers. Remove cover and inspect, ensuring that the water is flowing freely and that the exit route for water is unobstructed. Remove debris and silt. Undertake inspection after leaf fall in Autumn	Annually
Occasional Maintenance Check topsoil levels are 20mm above edges of chambers to avoid mower damage.	As necessary
Remedial Work Repair physical damage if necessary	As required

1.4.2 Below ground drainage pipes

- Below ground drainage pipes convey water to the SuDS system. They should always be free from obstruction to allow free flow.

Below Ground Drainage Pipes	
Regular Maintenance	Frequency
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 it may cause risks to performance)	Monthly
Remove sediment from pre-treatment inlet structures and inspection chambers.	Annually or as required
Maintain vegetation to designed limits within the vicinity of below ground drainage pipes and tanks.	Monthly or as required
Remedial Work	
Repair physical damage if necessary	As required
Monitoring	
Inspect all inlets, outlets and vents to ensure that they are in good conditions and operating as designed.	Annually
Survey inside of pipe runs for sediment build up and remove if necessary.	Every 5 years or as required

STORM SHARK

ADVANCED HYDRODYNAMIC VORTEX SEPARATOR

Operating Manual & Instructions for

PCC - Pre-cast Concrete Chamber Installation



turtle enviro
DRAINNOVATION



ATTENTION:

Important notes, please read
this document carefully
before commencement of
your STORMSHARK
installation



Contents

General Information

Product Description

Working Principles

Installation requirements

Installation into a PCC Pre- Cast Concrete Chamber

Operating and maintenance instructions

Maintenance Instructions

Example Record Sheets

Professional Approval Certificate Example

Commissioning and Audit Protocol

Maintenance Record Sheets

General Information

This Manual should be completed and a copy left with the owner of the STORMSHARK unit. The information below should be completed by the installer of the STORMSHARK or from the Construction Company or Management Company, who will be responsible for the plant once it is installed.

Location of the plant

Name of the site	
Address	
Postcode	
Telephone	
Email	

Operator of the plant

Company / Municipality	
Address	
Postcode	
Responsible Person	
Telephone	
Email	

Construction Company

Company / Municipality	
Address	
Postcode	
Responsible Person	
Telephone	
Email	

Design Details

Type of connected area	
Installation Date	
Commissioning Date	
No. of STORMSHARKS	

Product Description

All 8 sizes of the STORMSHARK have the same operational components.

1. Inlet

2. Deflector plate

3. Flow breakers

4. Sludge trap

5. Balancing weir

6. Outlet



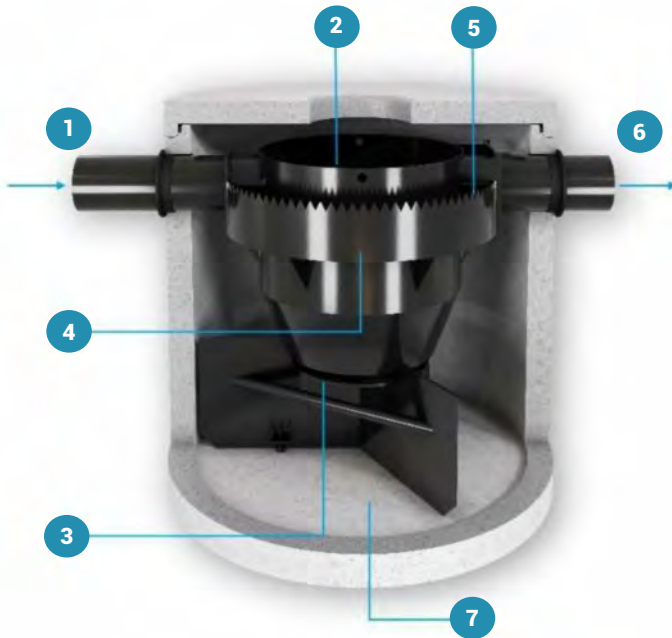
The STORMSHARK must only be handled and lifted by competent persons. Avoid any concentrated point loading. Unloading, storage and transport at site are the responsibility of the Purchaser.

Backfill and excavation works are by others, in accordance with site designs, site ground conditions and legal requirements.

If you are in any doubt as to the function, applicability or safety of the device as supplied at site, you must seek Professional Advice from your supplier and/or a Professional Engineer.

The water quality flow rates and hydraulic peak capacity for the site would have been fully designed.

Working Principles

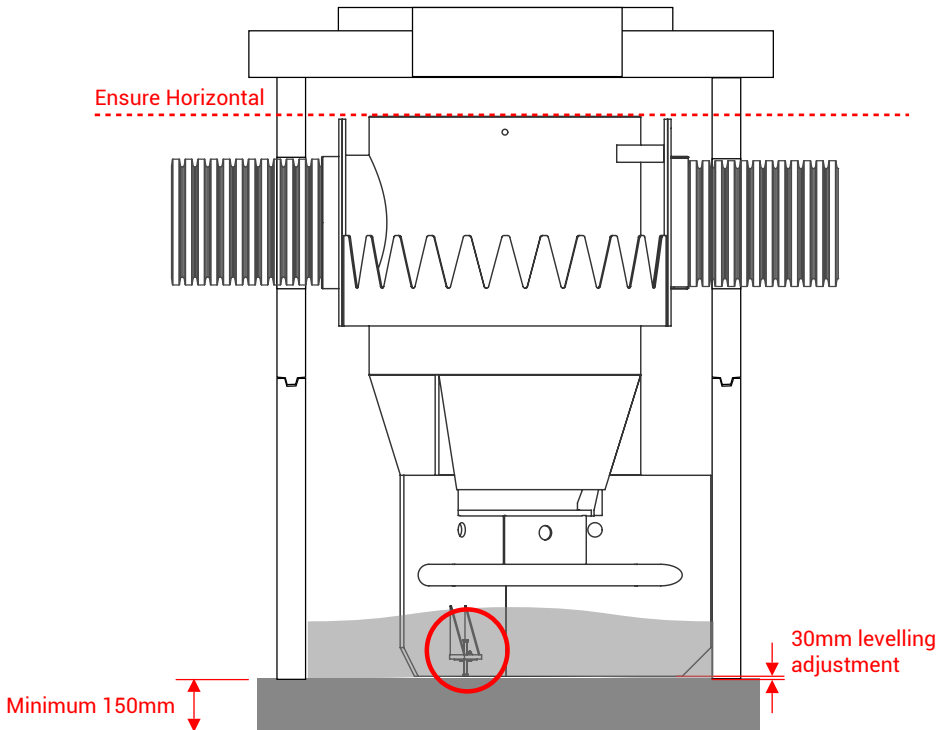


1. Incoming stormwater is deflected into a radial flow pattern.
2. Vortex flow ensures solids settle to the sludge chamber, floatable's are retained at surface.
3. Solids pass down into the sludge chamber below the treatment chamber. Remobilisation of the retained solids is not possible, flow baffles prevent this.
4. Cleaned water flows up the outer chamber in an even flow distribution.
5. Water flows over the toothed balancing weir to the annular flow channel surrounding the treatment chamber.
6. Clean stormwater passes to the outlet to discharge to the water environment.
7. Retained solids are easily removed by vacuum hose, once the retention safety grill* is lifted using the lifting chain supplied and fitted within the unit.

* The SSK750 models do not have the retention grill.

Installation requirements

For STORMSHARK models SSK1200, SSK1500, SSK1800, SSK2000, SSK2500 and SSK3000 installed into PCC Pre-cast concrete chambers of Ø 1200 mm - Ø 3000 mm



1. The installed product **MUST** be absolutely horizontal in its final position
2. The STORMSHARK unit may be delivered on 30mm high adjustable feet; if so, the inlet and outlet openings must be 30 mm higher to allow any adjustments to be made.
3. The chamber base or pad, should be minimum 150mm concrete or compacted sand, dependant on ground conditions and prevailing water table.
4. Please note that the STORMSHARK unit should be filled at the base with 100mm of concrete after installation within a concrete chamber, to stabilise the flow breaker plates. If using other chamber materials than concrete then consult your supplier.

Installation of a STORMSHARK

Application:

The STORMSHARK can be described as a an Advanced Hydrodynamic Separator or as a Vortex Particle Separator. It is intended to be used for the treatment of contaminated stormwater runoff from roofs, traffic areas and other contaminant generating areas (e.g. commercial sites, industrial sites, airports, harbours).

Important instructions: Please note!



The STORMSHARK insert must be protected against contamination and construction debris and physical damage during installation!



1. Excavate the chamber pit, whilst supporting the wall according to legal requirements and ground conditions.

Install a horizontal, 150mm thick support compacted sand or concrete pad.

***If in doubt you must consult a professional engineer.**

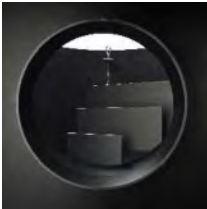


2. Place the chamber and check the horizontal positioning safely. Align the inlet opening to the correct position to suit the site layout. Maintain compliance with all site safety rules.

Installation of a STORMSHARK (continued)



3. Install the STORMSHARK insert within the chamber, so that the inlet and outlet are aligned correctly for the chamber and/or site drainage layout.



4. This slide shows which orifice is the STORMSHARKS inlet. This is the inlet pipe deflector plate on the inside of the treatment chamber.



5. Position the STORMSHARKS insert in the chamber so that the inlet and outlet are approximately aligned with the opening.



6. Make sure that the sides of the STORMSHARK unit are evenly spaced from the chamber walls around the whole of the unit. This optimises performance. It also facilitates the assembly of the stabilty anchors



7. Once the unit is centralized, undo the screws of the Lifting Bar and remove them and the Bar itself.

Installation of a STORMSHARK (continued)



8. The STORMSHARK insert now has to be aligned with the concrete chamber holes (where pre-drilled, or where drilled at site). The insertion of the grommet seal is necessary. If in doubt consult your chamber supplier



9. To align, use the adjustment options with the adjustable feet and the adjustable fitting plate for the pipework.

***Rocker pipes to inlet and outlet are always recommended, particularly where ground settlement might arise.**



10. Make good the pipe connections. Ensure that the seals are coated with sufficient lubricant (not containing oil). To connect, push the pipes from the outside through the seal of the chamber wall and the seal of the STORMSHARK insert.



11. Check the overall horizontal alignment of the STORMSHARK insert again and adjust, as described in point 9. Check there is no undue strain on both inlet and outlet pipes.



12. Now insert the fixing anti-buoyancy anchors through the wall of the STORMSHARK unit. Fasten them with the supplied threaded bar and bolt to the chamber wall using the fixing plates supplied.

Installation of a STORMSHARK (continued)



13. Secure the STORMSHARK unit to the wall anchors by locking the two nuts supplied. Cross check that the distance between the chamber wall and the balancing weir is evenly spaced all around the unit, i.e. that the unit is centred within the chamber.



14. After completing the installation, make one final audit of these check points again:

1. Seating and position of the pipes in the seals
horizontal position of the STORMSHARK insert
2. Central positioning of the unit, i.e. that the width between toothed balancing weir and the chamber wall is constant
3. Fixing anchors firmly locked and attached to the wall



15. Maintenance lifting cable must be extended to the appropriate length to suit the depth of chamber.



Please Note: As a further precaution, we recommend filling the base of the chamber with 100mm of concrete to prevent buoyancy, to enhance protection and stability of the unit overall at both high and excessive flow rates. This can be access via the rubbish/debris grid

Operating and maintenance instructions:

Due to the solids and pollutants in stormwater runoff, stormwater treatment systems must be checked and cleaned at regular intervals. The following Notes provide guidance for the typical work necessary or associated with the effective operation of a STORMSHARK:

Annual maintenance:

At intervals between 6 months and 3 years, the sludge trap must be emptied as site conditions or local regulations or site specific contracts require. The amount of sludge depends on the local stormwater conditions and will vary between sites.

For stormwater runoff with untypically low or high solids loads, these periods may vary. This can be observed and determined for a Programmed Maintenance Schedule, after the first few years of operation.

The STORMSHARK Chamber is a Confined Space. It is not necessary to enter a STORMSHARK for routine maintenance. Local regulations must be fully observed in the event of planned or unplanned man entry. If in doubt you must consult with a Professional Engineer who can advise you.

Equipment and materials typically required

Suction and flushing vehicle or submersible sludge pump with hoses

Generator when there is no power connection nearby

High-pressure cleaner or flushing lance for connection to the pump

Important Pollution Prevention Notes

The water pumped out of the chamber and the sludge trap may only be discharged into a foul sewer or a combined sewer where local regulations allow. In no case may the water be discharged into a surface water course, a stormwater sewer or a groundwater infiltration system.

If there is no possibility to discharge the water, a mobile water treatment system may be used.

The treated water can be discharged into a receiving water or storm sewer in accordance with local permits and regulations.

Maintenance Instructions

1. First remove the layer of floatables and oils on the water surface. Then lower the water level down to the level of the retention safety grill* by means of the suction hose
2. Remove any coarse debris from the retention safety grill and then pull up the grill using the maintenance lifting cable.
3. Suck the sludge and the solids from the sludge trap chamber. Make sure that you clear each section of the trap. If necessary, rinse with water.
4. Close the grate, check the lock and finally secure close the cover of the system.

*For the SSK1200 models it is preferable to use a 2" or 3" suction hose.

If you are in any doubt you must consult a Professional Engineer or Competent Person to advise you. Your supplier will be able to direct you if they do not provide such a service themselves.

Example Record Sheets

Professional Approval Certificate Example

For the construction or modification of stormwater treatment systems

Project details

Project name	
Designation of sedimentation plant	
Professional / Expert (Name)	
Address	
Postcode	
Telephone	
Email	

Contractor

Company (Name)	
Address	
Postcode	

Location of the STORMSHARK

Address	
Postcode	

1. I have installed the
- Piping system

Sedimentation plant

New system

Modified the installation checked the install as professional expert

The treated stormwater is/will be discharged into (tick as appropriate):

- ☐ a groundwater infiltration system
- ☐ receiving surface water
- ☐ stormwater sewer
- ☐ combined sewer

2. The drainage system complies with the requirements of the valid standards.
3. The pipes, components and components used for the system comply with the relevant product standards.
4. I have received the installation instructions of the manufacturer and installed the system according to these instructions.

The installation has been checked as complying with the valid standards and the general accepted ruled of technology. The design corresponds to the planning documents including the proper

Date/Signature Builder,Expert

Commissioning and Audit Protocol STORMSHARK

Please use this as an example template. Modify to suit local conditions.

Building Project Owner represented by

Specialist Company represented by

No	Feature	Remarks
1.	The STORMSHARK insert was fixed in the chamber by means of fixing anchors.	
2.	The STORMSHARK insert was aligned.	
3.	The uniform distance of the balancing weir to the chamber wall was checked.	
4.	The bottom of the chamber was filled with 100 mm of concrete.	
5.	The Maintenance Lifting Cable is accessible and appropriately secured.	

The instruction for the operation of the plant has been given. The required operating documents and existing operating and maintenance instructions according to the installation were handed over completely.

.....
Signature Contactor

.....
Signature Owner's

Maintenance Record Sheets

Please use this as an example template. Modify to suit local

Maintenance interval	State Remark	Maintenance work	Name and Signature
Date: 1 st Sept 20		Inspection of the system for visible damage Emptying and cleaning of the sludge trap Grate is closed and locked Maintenance Lifting Cable is accessible and secured	A N Other

Date:			
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Date:			
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Date:			
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Maintenance Record Sheets

Maintenance interval	State Remark	Maintenance work	Name and Signature
Date:			

Date:			
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Date:			
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Date:			
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Maintenance Record Sheets

Maintenance interval	State Remark	Maintenance work	Name and Signature
Date:			

Date:			
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