



STORM WATER / SUDs MAINTENANCE PLAN

1. Introduction

This drainage maintenance proposal is to be read in conjunction with the following documents:

- Ian Farmer Preliminary Risk Assessment Report Contract 41922-1 Dated August 2016.
- Drainage drawing Ref No T/16/1885 - CL(19)01 Rev P1

The considered drainage solution comprises an attenuated network with discharge rates to the onsite private drainage system limited to 5 litres/second by means of a vortex flow control device and the incorporation of a full retention Class 1 petrol/oil separator with built in silt capacity to control water quality.

Storage volume is provided by means of an open surface water attenuation lagoon which caters for all storm events up to the 1 in 100 year storm plus an additional 20% to cater for climatic change. There are 2 drainage connection points into the storage lagoon both of which comprise a 500mm deep sump within the upstream 1200mm diameter manhole chambers to act as individual silt traps.

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 Tier Consultants drawing reference T/16/1885 CL(19)01.

The main drainage components are:-

1. Roof water from the building is collected into a gravity fed drainage system and routed to the open storage lagoon. The lagoon requires periodic inspection and de-silting as required.

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2. Surface water runoff from the external service yard areas flows into linear drainage channels which discharge into a Class 1 full retention petrol/oil interceptor prior to final discharge into the lagoon. The interceptor removes oil and other hydrocarbons which have entered the drainage system. The interceptor will be fitted with a visual and audible alarm to warn when the system requires maintenance/cleaning.
The interceptor requires routine inspection/maintenance to remove any oil and other contaminants from the unit. The external service yards require periodic sweeping as this will remove silt and contaminants directly from the paved surfaces before they become mobilised during rainfall events and transported into the drainage system.
3. Flows from the open storage lagoon will be discharged into a flow control chamber which houses the vortex flow control device. The restricted flow rate of 5 litres/second is then discharged into the existing onsite gravity drainage system.
4. The storage lagoon will comprises an open channel with 1 in 3 batter slopes
The open lagoon will require periodic inspection and possible de-silting if required.
5. The vortex flow control unit limits the discharge of surface water to the receiving drain at a predetermined rate.
The chamber housing the control unit requires periodic inspection to check for any siltation and the vortex flow control unit should be checked for any blockages and to ensure it is working correctly.

3. Maintenance Schedule

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 the completion of the development. 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 including bin and recycling enclosures	Monthly
Clear guttering of leaves and debris.	Twice yearly. Spring and Autumn after leaf fall.
Inspect all attenuation lagoon access chambers for sediment.	Monthly and after heavy rainfall. Remove debris /silt as required

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Petrol/oil Separator	Inspect bi-annually and also when alerted by the audible/visual alarms. Remove silt, oil and contaminants
Inspect all manholes chambers for siltation and debris	3 monthly and after every major storm event. Remove debris/silt as encountered
Vortex Flow Control Unit	Monthly inspect and remove debris
Catchpits immediately upstream from storage tank	Minimum 3 monthly and after every major storm event. Remove debris/silt as encountered
Linear drainage channels	3 monthly inspect channels and sump units. Remove debris/silt as encountered
Open Storage Lagoon	Litter/debris removal - Monthly Cut grass - Monthly during growing season Weed removal - Monthly Remove sediment – Every 5 years Inspect inlets/outlets for evidence of blockage - Monthly

4. Management Company

'Proserve' operatives will manage the maintenance regime their personnel will be site based and where specialised contractors are required the work will be undertaken through a series of written RAMS.