



Project Name: Sea Street Whitstable

Maintenance Manual for Drainage
Systems

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1.0 Introduction

- 1.1 This report has been produced to provide general maintenance procedures for the various components of the foul and surface water drainage systems serving the proposed development at Sea Street Whitstable. The design is not yet complete and so the full and final details are not yet developed. This report covers possible scenarios some of which may not be required in the final design (for example porous paving).
- 1.2 This document has been produced in accordance with current best practise and the recommendations and guidance set out in CIRIA C697 'The SuDs Manual'.
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2.0 Surface Water Drainage

This section of the report will provide general maintenance procedures for the various components comprising the surface water drainage system serving the proposed development.

2.1 Permeable Pavements

2.1.1 Permeable surfaces need to be regularly cleared of silt and other debris to ensure their permeability is preserved. Current advice suggests that a minimum of three surface sweepings per year. However, manufacturer's specific recommendations should always be followed.

2.1.2 A brush and suction cleaner, which can be a lorry mounted device or smaller precinct sweeper, should be used and the sweeping regime should be as follows:

1. End of winter (April) – to collect winter debris
2. Mid-summer (July/August) – to collect dust and flower other plant type deposits
3. End of autumn (November) – to collect leaf fall.

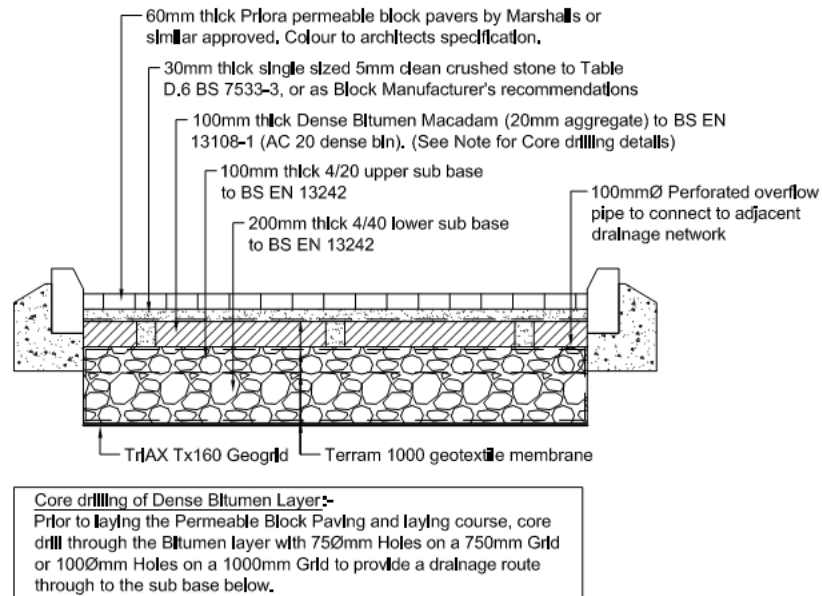
2.1.3 In addition to surface sweeping and vacuuming the following maintenance regime would also be recommended.

Maintenance Schedule	Required Works/Action	Frequency
Regular Maintenance	<ul style="list-style-type: none"> • Brushing and Vacuuming. 	Three times a year as above or as required following further monitoring
Occasional Maintenance	<ul style="list-style-type: none"> • Removal of weed growth. 	3 Monthly
Ongoing Monitoring	<ul style="list-style-type: none"> • Inspection for evidence of poor operation or ponding marks. • Inspect debris accumulation on surface and adjust sweeping regime if necessary. • Inspect silt accumulation in inspection chambers and remove as necessary. • Inspect silt accumulation in overflow pipework and remove as necessary. 	3 Monthly, 24-48h after a storm Annually Annually Annually

Table 2.1 – Recommended Maintenance Requirements

2.1.4 Rehabilitation of the surface laying course should be carried out if evidence of poor performance is observed during the quarterly inspections. If it is deemed necessary the following procedures should be followed:

1. Lift block pavers and set aside or reuse removing jointing material.
2. Remove laying course and geotextile membrane.
3. Inspect cores and replace granular fill as required.
4. Renew geotextile membrane.
5. Renew laying course, block pavers and jointing material in accordance with the construction detail shown in figure 3.1 below.



Typical Permeable Parking Area Construction Design 3% < CBR < 4%

Fig 2.1 – Typical Permeable Parking Area Construction.

2.2 Attenuation Tanks

- 2.2.1 Regular inspection of buried storage systems is required to ensure effective long term performance of the system. Maintenance needs of the system should be monitored and schedules adjusted to suit the specific requirements of the development.
- 2.2.2 The following maintenance regime would be recommended as a minimum but actions and frequencies should be adjusted to suit the specific requirements of this development. However, manufacturer’s specific recommendations should always be followed.

Maintenance Schedule	Required Works/Action	Frequency
Regular Maintenance	<ul style="list-style-type: none"> Inspect and identify incorrect operation. Debris removal from catchment area using sweeping and vacuuming. Removal of sediment from pre-treatment components i.e catchpits. 	Monthly 3 Monthly Annually

Table 2.2 – Recommended Maintenance Requirements

- 2.2.3 Current best practise suggests that underground storage systems are constructed with access ‘turrets’ to ease future maintenance. These ‘turrets’ allow the annual removal of any silts or sediments directly from the tank ensuring effective long term performance. Personnel should not enter the storage tank for cleaning purposes without having detailed training for confined space working and all the necessary PPE, risk assessments and support equipment. No single working operative working alone to carry out this work.

2.3 Flow Controls

- 2.3.1 Regular inspection of flow control devices is required to ensure effective long term performance of the system. Maintenance needs of the system should be monitored and schedules adjusted to suit the specific requirements of the development.
- 2.3.2 The following maintenance regime would be recommended as a minimum but actions and frequencies should be adjusted to suit the specific requirements of this development. However, manufacturer’s specific recommendations should always be followed.

Maintenance Schedule	Required Works/Action	Frequency
Regular Maintenance	<ul style="list-style-type: none"> Inspect and identify incorrect operation. Removal of sediment from pre-treatment components i.e catchpits. 	Monthly
		Annually

Table 2.3 – Recommended Maintenance Requirements

2.4 Oil/Petrol Interceptors

2.4.1 Regular inspection and maintenance of interceptor is required to ensure effective long term performance of the system. Maintenance needs of the system should be monitored and schedules adjusted to suit the specific requirements of the development.

2.4.2 The following maintenance regime would be recommended as a minimum but actions and frequencies should be adjusted to suit the specific requirements of this development. However, manufacturer’s specific recommendations should always be followed.

Maintenance Schedule	Required Works/Action	Frequency
Regular Maintenance	<ul style="list-style-type: none"> Removal of stored oil/petrol. Inspect and identify incorrect operation. Removal of sediment from pre-treatment components i.e catchpits. 	Product dependant
		Monthly
		Annually

Table 2.4 – Recommended Maintenance Requirements

2.4.3 It is recommended that all interceptors are fitted with high level alarms to ensure the system does not exceed its oil and sediment storage capacity. The alarm should be linked to the building management system to ensure the system is constantly monitored.

2.4.4 It is also recommended that all interceptors are installed and commissioned by the manufacturer, or their approved sub-contractor to ensure correct operation from first installation.

2.5 General Maintenance

2.5.1 Regular inspection and maintenance of drainage systems is essential to ensure effective long term performance. Maintenance needs of the system should be monitored and schedules adjusted to suit the specific requirements of the development.

2.5.2 The following maintenance regime would be recommended as a minimum but actions and frequencies should be adjusted to suit the specific requirements of this development. However, the previous discussed, component specific regimes and any manufacturer’s specific recommendations should always be followed.

Maintenance Schedule	Required Works/Action	Frequency
Routine Maintenance	<ul style="list-style-type: none"> • Inspect and identify incorrect operation. • Debris removal from catchment area using sweeping and vacuuming. • Removal of sediment from pre-treatment components i.e catchpits. 	<p>Monthly</p> <p>3 Monthly</p> <p>Annually</p>

Table 3.5 - Recommended Maintenance Requirements

3.0 Foul Water Drainage

This section of the report will provide general maintenance procedures for the foul water drainage system serving the proposed development.

3.1 General Maintenance

3.1.1 Regular inspection and maintenance of drainage systems is essential to ensure effective long term performance. Maintenance needs of the system should be monitored and schedules adjusted to suit the specific requirements of the development.

Maintenance Schedule	Required Works/Action	Frequency
Routine Maintenance	<ul style="list-style-type: none">Inspect and identify incorrect operation.	Monthly

Appendix A - Drainage Strategy, Drawing A4453-1500 Rev P2

