

Phase 3B, Welborne, Fareham

CG Fry and Son

Drainage Maintenance Plan



1 Introduction

- 1.1 The maintenance of drainage networks is fundamental to secure their long-term operation and functionality. If the maintenance regimes are not adhered to, the systems design capacity and performance will deteriorate over time, reducing the level of protection offered to the development and its downstream catchment.
- 1.2 Whilst the maintenance regimes covered by this document are based on best practice guidance for the surface water management system, those responsible for maintenance must acknowledge the need to appraise the effectiveness of the recommended actions and frequencies, so that any variations in site or drainage conditions can be controlled throughout the developments lifetime.
- 1.3 This maintenance plan must be read in conjunction with the final drainage plans or as-built records, so that all drainage features can be identified and located on site.
- 1.4 A schedule has been provided at the rear of this maintenance plan to document any variations which might be implemented through the developments lifetime.

2 Adopted Drainage

- 2.1 The adopted site drainage has been designed and installed in accordance with Water Authority and/or Highway Authority guidelines and specifications.
- 2.2 This Water Authority adopts the drainage infrastructure under Section 104 of the Water Industry Act. The Highway Authority adopts the drainage infrastructure under S38 of the Highways Act.
- 2.3 Once adopted the Water Authority and Highway Authority maintain the drainage infrastructure in line with their own maintenance regimes.

3 Overview of Maintenance required for Sustainable Drainage Systems (SuDS)

- 3.1 It is important to ensure that thought is given to the long term maintenance of SuDS features during the feasibility and planning stages. By ensuring SuDS features are correctly monitored and maintained throughout their lifetime, the amount of deterioration in performance that could occur over time is prevented or limited. This ensures that the feature will continue to work at full capacity as required in the design.
- 3.2 The type of required maintenance is determined by many factors, including;
 - Type of SuDS scheme
 - The size of the contributing catchment relating to each SuDS component

- Land-use associated with contributing catchment
 - Level of construction ongoing within the contributing catchment
 - Planting types
 - Habitat types that have been created
 - Amenity and visual requirements of the area
- 3.3 Maintenance regimes should be regularly assessed to make sure that the approach is still meeting the drainage, landscape and any other objectives.
- 3.4 In accordance with CIRIA C753 – 'The SuDS Manual' v2, maintenance can be split into three main categories; Regular maintenance (including inspections and monitoring), Occasional maintenance and Remedial maintenance.
- 3.5 Regular maintenance covers basic tasks which are carried out on a predictable and frequent schedule. Such activities include inspections, vegetation management and litter/debris removal.
- 3.6 Occasional maintenance includes tasks which are likely to be required infrequently and cannot be predicted as easily as regular maintenance tasks. This covers tasks such as sediment removal.
- 3.7 Remedial maintenance covers tasks which are required to resolve faults within the system found during regular inspections. Although in good design the requirement of this type of maintenance is limited, faults still occur. These faults and the corresponding maintenance actions required are generally site specific and difficult to predict.
- 3.8 Detailed information for the maintenance required for the SuDS features applicable to this project can be found in the following sections of this document.

4 Private Drainage

- 4.1 The private drainage is designed and installed in accordance with Part H of the Building Regulations. Once the drainage is adopted then it is maintained by the individual property owner. The drainage which serves communal areas would be maintained by a management company.
- 4.2 This private drainage would be maintained using the following regime;

Maintenance Schedule	Required Action	Recommended Frequency
Regular Maintenance	Inspect and identify any areas that are not operating correctly. If required take remedial action.	Monthly for 3 months, then six monthly
	Remove debris from gullies and manholes.	Every 6 months
	Inspect gullies and manholes	Annually
	Jetting of pipes.	Every 5 years
	Internal inspection of pipes (CCTV).	Every 10 years
Occasional Maintenance	Repair/rehabilitate gullies, pipes, manholes	As required

5 Swales

- 5.1 Swales are used to convey surface water drainage or intercept overland run-off from both urban and rural catchments.
- 5.2 Swales are designed in accordance with CIRIA guidelines and should be maintained using the following regime;

Maintenance Schedule	Required Action	Recommended Frequency
Regular Maintenance	Litter and debris removal.	Monthly, or as required
	Grass cutting – to retain specified design height.	Monthly (during growing season), or as required
	Manage other 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 and 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 year, then half yearly
Occasional Maintenance	Inspect inlets and facility surface for silt accumulation. Establish appropriate silt removal frequencies.	Half yearly
	Re-seed areas of poor vegetation growth. Alter plant types to better suit conditions, if required.	Annually, or if bare soil is exposed over 10% or more of the swale treatment area
	Repair erosion or other damage by re-turfing or reseedling.	As required

Maintenance Schedule	Required Action	Recommended Frequency
Remedial Actions	Re-level 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

6 Land Drains/Trenches

- 6.1 Land Drains create temporary subsurface storage in shallow excavations filled with rubble or stone.
- 6.2 Can be used to store either infiltration or filtration of stormwater runoff. Ideally, they receive lateral inflow from an adjacent impermeable surface but can be used with point source inflows
- 6.3 Trenches are designed in accordance with CIRIA guidelines and should be maintained using the following regime;

Maintenance Schedule	Required Action	Recommended Frequency
Regular Maintenance	Litter and debris removal from trench surface, access chambers and pre-treatment devices.	Monthly (or as required)
	Inspect filter drain surface, inlet/outlet pipework for blockages, clogging, standing water and structural damage	Monthly

Maintenance Schedule	Required Action	Recommended Frequency
	Inspect inlets and perforated pipework for silt accumulation, and establish appropriate silt removal frequencies	Six monthly
	Removal of sediment from land drain/trench	Six monthly
Occasional Maintenance	Remove tree roots or trees that grow close to the trench.	As required
	Clear perforated pipework of blockages.	As required
Remedial Actions	Rehabilitate infiltration or filtration surfaces.	As required
	Replace geotextiles and clean and replace filter media, if clogging occurs.	As required
	Excavate trench walls to expose clean soils if infiltration performance reduces to unacceptable levels.	As required

7 Schedule of Changes

- 7.1 This schedule has been provided to enable those responsible for maintenance of the drainage systems to document changes made to the actions and frequencies of maintenance, in direct response to changing site/drainage conditions;

Drainage Feature	Change of Action	Change of Frequency	Comments