

Windmill Street, Gravesend

Churchill Living

Drainage Maintenance Plan



Windmill Street, Gravesend

Drainage Maintenance Plan

Job Title	Windmill Street, Gravesend
Project Number	1305
Date	27.07.2026
Revision	-
Client	Churchill Living
Prepared by	JB
Checked by	CPY
Authorised by	CPY
File Reference	P:\0057 - AWP Windmill Street, Gravesend\B Incoming\AWP\2026.07.15 - Drainage Maintenance Plan\1305 - Windmill St, Gravesend - Drainage Maintenance Plan.docx

Contents

1	Introduction.....	3
2	Adopted Drainage.....	3
3	Overview of Maintenance.....	3
4	Private Drainage.....	5
5	Geocellular / modular systems.....	6
6	Pervious Pavements.....	7
7	Bioretention.....	9
8	Attenuation storage tanks.....	10
9	Schedule of changes.....	11

Appendices

Appendix A

1 Introduction

- 1.1 The function and performance of the proposed drainage system rely on the correct implementation of this Drainage Maintenance Plan. If this plan is not followed, the quality, performance and standard of protection offered by the drainage system(s) may deteriorate over time.
- 1.2 The approach and measures outlined by this Drainage Maintenance Plan must be understood by those responsible for maintenance. If any relevant party has concerns that the Drainage Maintenance Plan is not being followed appropriately, or that the plan requires adjustments to the proposed actions and/or their frequencies, it is recommended that they contact the respective party responsible for maintenance.

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', 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 will be designed and installed in accordance with Part H of the Building Regulations. Once the drainage is approved by Building Control it is maintained by the appointed 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, manholes, headwalls and flow controls.	Every 6 months
	Remove debris from catchpits upstream of private attenuation/soakaways.	Every 6 months
	Inspect gullies, manholes, headwalls, flow controls, attenuation and soakaways.	Annually
	Jetting of pipes.	Every 5 years
	Internal inspection of pipes (CCTV).	Every 10 years
Occasional Maintenance	Repair/rehabilitate gullies, pipes, manholes, headwalls and flow controls.	As required
	Repair/rehabilitate private attenuation/soakaways.	As required

5 Geocellular/modular systems

- 5.1 Modular high void ratio, plastic geocellular systems used to create an underground storage structure or to allow infiltration (soakaway).
- 5.2 Geocellular/modular systems are designed in accordance with CIRIA guidelines and should be maintained by the appointed Management Company 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
	Debris removal from catchment surface (where may cause risks to performance).	Monthly
	Where rainfall infiltrates into blocks from above, check surface or filter for blockage by silt, algae or other matter. Remove and replace surface infiltration medium as necessary.	Monthly (and after large storms)
	Remove sediment from pre-treatment structures.	Annually, or as required
Remedial Actions	Repair/ rehabilitation of 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 and after large storms

6 Pervious Pavements

- 6.1 Pervious Pavements must be specified to accord with the respective site conditions and must be installed in accordance with the manufacturer recommendations.
- 6.2 The operation and maintenance of pervious pavements should also be to the manufacturers recommendations. However this is expected to be maintained by the appointed Management Company, generally in line with the following regime as per CIRIA C753 – 'The SuDS Manual';

Maintenance Schedule	Required Action	Recommended Frequency
Regular Maintenance	Brushing and vacuuming.	Once a year, after autumn leaf fall or reduced frequency as required, based on site-specific observations of clogging or manufacturers recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this is most likely to collect sediment.
Occasional Maintenance	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying.	As required – once per year on less frequently used pavements
	Stabilise and mow contributing and adjacent areas.	As required
Remedial Actions	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users.	As required
	Remediate any landscaping which, through vegetation maintenance or soil	As required

Maintenance Schedule	Required Action	Recommended Frequency
	slip, has been raised to within 50 mm of the level of the paving.	
	Rehabilitation of surface and upper sub-structure by remedial sweeping.	Very 10 – 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial Inspection.	Monthly for three months after installation
	Inspect for evidence of poor operation and/or weed growth/. If required take remedial action.	3-monthly, 48 h after large storms
	Inspect Silt accumulation rates and establish appropriate brushing frequencies.	Annually
	Monitor inspection chambers.	Annually

7 Bioretention

- 7.1 Areas of shallowed landscape depressions which are typically underdrained and rely on engineered soils and enhanced vegetation and filtration.
- 7.2 Bioretention areas are designed in accordance with CIRIA guidelines and should be maintained by the appointed Management Company using the following regime;

Maintenance Schedule	Required Action	Recommended Frequency
Regular Inspections	Inspect infiltration surfaces for silting and ponding, record de-watering time and assess standing water levels in underdrain 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	Litter and debris removal.	Quarterly (or more frequently for aesthetics)
	New planting to maintain 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

Maintenance Schedule	Required Action	Recommended Frequency
Remedial Actions	Remove and replace filter medium and vegetation above	As required but likely to be > 20 years

8 Attenuation storage tanks

- 8.1 Attenuation storage tanks are used to create a below ground void space for the temporary storage of surface water before infiltration, controlled release or use.
- 8.2 The following methods are usually used: Geocellular storage systems, plastic corrugated arch structures, oversized concrete or plastic pipes. Corrugated steel pipes, concrete box culvert sections and tanks, GPR tanks or hybrid structures using reinforced earth walls and concrete roof panels.
- 8.3 Attenuation tanks are designed in accordance with CIRIA guidelines and should be maintained by the appointed Management Company 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 annually
	Debris removal from catchment surface (where may cause risks to performance).	Monthly
	Where rainfall infiltrates into blocks from above, check surface or filter for blockage by silt, algae or other matter. Remove and replace surface infiltration medium as necessary.	Annually
	Remove sediment from pre-treatment structures or internal forebays.	Annually, or as required
Remedial Actions	Repair/ rehabilitation of 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

9 Schedule of Changes

- 9.1 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

Appendix A