conisbee
Consulting Structural and Civil Engineers

London
1– 5 Offord Street
London N1 1DH
Telephone 020 7700 6666

Norwich
1 Bank Plain
Norwich NR2 4SF
Telephone 01603 628 074

Cambridge
16 Signet Court Swann Road
Cambridge CB5 8LA
Telephone 01223 656 058

Colchester
35 Mayfly Way
Colchester CO7 7WX
Telephone 01206 581 950

design@conisbee.co.uk
www.conisbee.co.uk

St Andrew's Park, Uxbridge - LEOMB

Sustainable Drainage Maintenance Plan

Ref: 240234-CON-XX-XX-RP-C-0002
Author: J Courtney
Approved By: A Crump
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1.0 INTRODUCTION

The purpose of this document is to outline the proposed maintenance schedule for the drainage system and all SuDS features for the proposed development at Land East of Mons Barrack (LEOMB) Block, St Andrew's Park, Hillingdon Road, Uxbridge, UB10 0RX.

The maintenance schedule set out here complies with the CIRIA SuDS Manual (C753), which is identified as providing current best practice in the industry. The report does not replace manufacturers' requirements and these should be followed for each product in addition to the information in this document.

For the proposed extents of SuDS features on a plan drawing, please refer to the separate drainage layout plans and drainage strategy report.

2.0 ORGANISATION RESPONSIBLE

The client, Vinci St Modwen, or any subsequent purchaser of the building will be responsible for undertaking maintenance of the proposed drainage for the whole life of the site.

3.0 CONVENTIONAL DRAINAGE SYSTEMS

3.1 Gullies, Silt Traps, Manholes, Catchpits & Pipework

On completion of construction, the internal surfaces of the sewers and manholes shall be thoroughly cleansed to remove all deleterious matter, without such matter being passed forward into the existing sewers.

All trapped gullies, silt traps, manholes and catchpits are to be regularly inspected every three months and cleared out on a regular frequency for the first nine months. After this period, the frequency can be reduced to every six months.

All drainage runs will be inspected once a year. The system is to be jetted clear if/when necessary.

3.2 Flow controls (including Hydrobrakes)

The manhole containing the flow control is to be regularly inspected once a year and any debris and silt are to be removed from the sump and manhole.

Hydrobrakes / vortex flow controls should be maintained in accordance with the manufacturer's requirements.

4.0 SUDS FEATURES

4.1 Introduction

The following SuDS measures are proposed for the project:-

- Permeable Paving
- Below Ground Attenuation Tank
- Podium Deck and Green Roofs
- Water Butts

During the first year of the operation of all types of SuDS should be inspected at least monthly and after significant storm events to ensure that the system is functioning as designed and that no damage or faults are evident.

It is recommended that a report on the condition of the SuDS is undertaken further to an inspection at least once annually.

4.2 Permeable pavements

The pavement should be inspected regularly for clogging, litter, weeds and water ponding, preferably during and after heavy rainfall to check effective operation. Permeable pavements need to be regularly cleaned of silt and other sediments to preserve their infiltration capacity. The SuDS Manual indicates that sweeping once per year is sufficient for most sites, however the sweeping frequency should be adjusted to suit site specific conditions and should also be informed by annual inspection reports.

Care should be taken in adjusting vacuuming equipment to avoid removal of joining material. Any lost material should be replaced.

Table 1 outlines the proposed operation and maintenance regime for permeable pavements. This is adapted from The SuDS Manual (C753).

Table 1: Operation and maintenance requirements for permeable pavements

Maintenance Schedule	Required Action	Frequency
Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	Once a year, after autumn leaf fall or reduced frequency as required, based on site-specification observations of clogging - pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediments
Occasional maintenance	Stabilise and mow contributing and advancement areas	As required
	Removal of weeds or management using glyphosphate applied directly into the weeds by an applicator rather than spraying	As required –once per year on less frequently used pavements
Remedial actions	Remediate any landscaping which through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving	As required
	Remedial work to any depressions rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required
	Rehabilitation of surface and upper structure by remedial sweeping.	Every 10 to 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	Three-monthly, 48h after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

4.3 Below ground attenuation tank

Regular maintenance and inspection of below ground attenuation tanks are required to ensure the effective long term operation of attenuation tanks. The main activity is associated with dealing with debris and silt.

Before connecting a newly constructed upstream drainage system to an attenuation tank, the new drainage system should be jetted and cleaned thoroughly.

Table 2 provides the proposed operation and maintenance regime for the attenuation tanks. This is adapted from The SuDS Manual (C753).

Table 2: Operation and maintenance requirements for below ground attenuation tank

Maintenance Schedule	Required Action	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 pre-treatment structures and/or internal forebays.	Annually, or as requested
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 the tank for sediment build –up and remove if necessary	Every 5 years or as required

4.4 Podium Deck and Green Roofs

Table 4 outlines the proposed operation and maintenance regime for the green roofs and podium deck. This is adapted from The SuDS Manual (C753). The manufacturer's specification and maintenance should take precedence over points listed below. The specific maintenance needs of the green roof should be monitored and maintenance schedules adjusted to suit site specific conditions.

Where the roof is accessed by residents or tenants, training and guidance information on operating and maintaining the roof should be provided to them.

Table 3: Operation and maintenance requirements for podium deck and green roof

Maintenance Schedule	Required Action	Frequency
Regular Inspections	Inspect all components including soil substrate, vegetation, drains, irrigation systems (if applicable), membranes (if accessible) and roof structure for proper operation, integrity of waterproofing and structural stability	Annually and after severe storms
	Inspect soil substrate for evidence of erosion channels and identify any sediment sources	
	Inspect drain inlets to ensure unrestricted runoff from the drainage layer to the conveyance or roof drain system	
	Inspect underside of roof for evidence of leakage	
	Inspect flow control chamber for blue roof	
Regular Maintenance	Remove debris and litter to prevent clogging of inlet drains and interference with plant growth	Six monthly and annually or as required
	During establishment (ie year one), replace dead plants as required	Monthly (but usually responsibility of manufacturer)
	Post establishment, replace dead plants as required (where 5% of coverage)	Annually (in autumn)
	Remove fallen leaves and debris from deciduous plant foliage	Six monthly or as required
	Remove nuisance and invasive vegetation, including weeds	
	Mow grasses, prune shrubs and manage other planting (if appropriate) as required — clippings should be removed and not allowed to accumulate	
	Clean and remove any material blocking the flow control inlet for blue roofs.	
Remedial Actions	If erosion channels are evident these should be stabilised with extra soil substrate similar to the original material, and sources of erosion damage should be identified and controlled	As required
	If drain inlet has settled, cracked or moved, investigate and repair as appropriate	

4.5 Rainwater Butts

Regular maintenance and inspection of rainwater butts is required to ensure the effective long term operation. The main activity is associated with dealing with debris and litter.

Table 4 provides the proposed operation and maintenance regime for the rainwater butts. This is adapted from The SuDS Manual (C753).

Table 4: Operation and maintenance requirements for rainwater butts

Maintenance Schedule	Required Action	Frequency
Regular Inspections	Remove debris from inlets	Monthly
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 the tank for sediment build –up and remove if necessary	Every 5 years or as required

5.0 SUDS PROGRAMME

The proposed SuDS for the site will come on line approximately Summer 2027.

The contractor should ensure that during the construction phase that SuDS are not damaged by construction works. Guidance on the construction and commissioning of SUDS features is given in CIRIA C768.

6.0 OPERATION AND MAINTENANCE MANUAL RECORDS

6.1 Documents to be handed over

Conisbee will provide this document to Vinci St Modwen, who will provide the document to the construction contractor, and will also include it in the Operation and Maintenance Manual.

Vinci St Modwen will have copies of the drainage design drawings which show locations of the proposed SuDS and any ‘as-builts’ provided by the contractor.

6.2 Maintenance Records

Vinci St Modwen will be provided with the standard proforma in Appendix B of The SuDS Manual to enable them to record the outcomes of inspections.