Sovereign Planning & Building Services

Discharge of Condition 9 related to 31697/APP/2021/4340

At 50 Hudson Road, Harlington.

1.0 Introduction

This document relates to condition 9 on the above minor application planning approval. It relates to the implementation of a sustainable drainage system to the two proposed dwellings. It should be primarily read in conjunction with drawing 2143-cn-01 which details the Sustainable Drainage Plan, but also with landscaping which details the planting proposed on the site (as submitted and approved with the full planning application.

2.0 Implementation

In accordance with The London Plan Policy 5.15, and under the guidance of CIRIA's The SuDS Manual, 2015 the following sustainable drainage systems have been implemented on the site;

i. Cellular soakaways provided to each property in order to discharge the surface water generated from the impermeable areas of the proposed dwellings (roofs).

ii. All hard landscaping is to be of a permeable block paver with the suitable sub bases to allow the surface water to infiltrate to the ground as opposed to becoming surface run off, and alleviating the flood risk or discharging into the sewers.

In addition to the construction detail intended to completely infiltrate all surface water, in accordance with 20.1.9 of The SuDS Manual, an emergency overflow system has been provided in the form of a Hydrokerb drainage system to a geo cellular soakaway. This will allow for events in excess of the design event, allows for the materials becoming less efficient over time and will prevent pooling on the surface.

iii. A linear drain connected to the soakaway is provided at the junction between the proposed development and the highway in order to prevent any surface water being discharged on to the highway.

iv. A Bioretention system in the form of rain gardens and all planting to the shown detail has been implemented across the site in order to self irrigate surface water.

v. Rainwater harvesting is to be provided on site, in the form of water butts which are connected to the rainwater pipes in the rear gardens, to be used for domestic gardening. Overflow of the water butt will discharge to the dwellings soakaway.

It is assessed that the implementation of a pumped and treated rainwater harvesting system with a tank would not be cost effective for two dwellings.

3.0 Timetable for Implementation

i. The Soakaways and all associated drainage will be undertaken with the groundworks at an early stage on site.

ii. The permeable hard landscaping will be completed before any occupation of the development.

iii. The linear drain will be functional before any occupation of the development.

iv. The planting across the site and construction of the rain gardens will be carried out in the first planting season (November – March) that is practically possible. Ideally this will be pre occupation but, if the construction phase finishes outside of this period then the responsibility lays with the developer to complete it.

v. The water butts will be part of the roof drainage system, and as such, will be completed at that time.

4.0 Management and Maintenance Plan

It is intended that the development is to be adopted by the local authority, and an application to do so will be submitted. Up until the adoption, any inspections and maintenance will be undertaken by the developer.

Inspection chambers and catch pits are to be provided to soakaways.

Information will be provided to the homeowners on occupation on the purposes of the sustainable drainage features on site, and how they can help maintain the features on site.

Maintenance requirements are shown below;

TABLE 18.3 Operation and maintenance requirements for bioretention systems

Maintenance schedule	Required action	Typical frequency
Regular inspections	Inspect infiltration surfaces for silting and ponding, record de-watering time of the facility and assess standing water levels in underdrain (if appropriate) 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 blockage	Quarterly
Regular maintenance	Remove litter and surface debris and weeds	Quarterly (or more frequently for tidiness or aesthetic reasons)
	Replace any plants, to maintain planting 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
Remedial actions	Remove and replace filter medium and vegetation above	As required but likely to be > 20 years

TABLE 20.15 Operation and maintenance requirements for pervious pavements

Maintenance schedule	Required action	Typical 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-specific observations of clogging or manufacturer's recommendations – 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 sediment
Occasional maintenance	Stabilise and mow contributing and adjacent areas	As required
	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
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 substructure 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, 48 h after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

TABLE 21.3 Operation and maintenance requirements for attenuation storage tanks

Maintenance schedule	Required action	Typical 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 required
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 tank for sediment build-up and remove if necessary	Every 5 years or as required