



Persimmon

Persimmon Homes North Midlands



Landscape & SUDS Maintenance Plan

Land at Thurlaston Lane, Earl Shilton, LEICESTER LE9 7EF

Enc. APPENDIX A: Approved drainage drawings.

Introduction

Sustainable Drainage Systems (SuDS) are an environmentally friendly approach to managing rainfall that uses landscape features to deal with surface water. SuDS aim to:

- Control the flow, volume and frequency of water leaving a development area.
- Prevent pollution by intercepting silt and cleaning runoff from hard surfaces.
- Provide attractive surroundings for the community.
- Create opportunities for wildlife.

The purpose of this document is to provide concise and easy to follow guidance for the long-term management and maintenance of the SuDS to be constructed at Land off Thurlaston Lane, Earl Shilton, following recommendations from The SuDS Manual (CIRIA C753). This document sets out the basis of the development SuDS Maintenance Plan to ensure that the management company is entrusted with a robust inspection and lifetime maintenance programme which results to the optimum operation of the surface water drainage network.

The activities listed in this document are generic to the relative SuDS types and represent the minimum maintenance and inspection requirements, however additional tasks or varied maintenance frequency may be instructed by the management company (or others) as required. Specific maintenance needs of the SuDS elements should be monitored, and maintenance schedules adjusted to suit requirements.

All those responsible for maintenance should follow relevant Health and Safety legislation (Health and Safety at Work Regulations, 1999) for all activities listed within this report including lone working, if relevant) and risk assessments should always be undertaken.

Any contractor employed by the Management Company (or others) shall conduct periodic maintenance of all such SuDS in accordance with the contents of this document. Inspection checks shall be conducted by a qualified and competent person, at the minimum intervals listed within this document and the appropriate work carried out.

SuDS Features at Land off Thurlaston Lane, Earl Shilton

The development at Earl Shilton comprises a combination of conventional piped drainage and SuDS feature as part of the overall surface water drainage strategy. The SuDS feature includes a single online infiltration basin with a hydrobrake control device limited to 14l/s

Managing the SuDS

The SuDS at Thurlaston Lane have been designed for easy maintenance and will require three categories of maintenance activities.

- **Regular maintenance** (including inspections and monitoring) - this consists of basic tasks done on a frequent and predictable schedule, including vegetation management, litter and debris removal, and inspections.
- **Occasional maintenance** - this comprises tasks that are likely to be required periodically, but on a much less frequent and predictable basis than the routine tasks (sediment removal is an example).
- **Remedial maintenance** – this comprises intermittent tasks that may be required to rectify faults associated with the system, although the likelihood of faults can be

minimised by good design. Where remedial work is found to be necessary, it is likely to be due to site-specific characteristics or unforeseen events, and as such timings are difficult to predict.

Maintenance Responsibilities

AWIN NAV will be responsible for the operation and maintenance of adoptable storm and foul drainage systems coloured brown for foul water and blue for surface water as indicated on drawing No. 21246 103J & 21246 104F. This includes the hydrobrake control device serving the attenuation basin.

Highway drainage runs and road gullies will be the responsibility of the Highway Authority (Leicestershire County Council).

The infiltration basin and landscaped areas will be maintained by a management company.

Between the construction period and formal adoption / handover of the adoptable drainage, highway drainage, attenuation pond /structures and POS areas, the maintenance responsibilities of these features will lie with Persimmon Homes Ltd.

Maintenance Regime

The landscape maintenance principles for the open space areas will be conducted by the management company (or others) based on a frequency of 20 visits per year. It is proposed that maintenance visits will be conducted as follows:

- April – October – two visits a month
- November – March – one visit a month
- Plus one reserve visit as required.

A record of maintenance visits and remedial operations shall be kept as per the 'SuDS Monthly Inspection Record' document. The following guidelines are proposed as an initial regime, but maybe either increased or decreased by the management company (or others) depending on the local environment and any external contributing factors.

Infiltration Basin

The key maintenance requirement for the attenuation basin and its associated inlet / outlet headwalls / pipework will be the maintenance of vegetation and mowing of grass within and on the banks/verges and the removal of accumulated sediments and collection of litter and debris.

During the inspections, the general operation and structural condition of the inlet / outlet headwalls and other structures should be identified and rehabilitated as required. De-silting of the infiltration ponds will usually be dependent on the on-going silt level checking. Any desilting work will be conducted under the supervision of consulting engineers and to a preagreed method statement.

In addition to the above, the below tables provide guidance for operational and maintenance requirements for attenuation pond. The maintenance regime for the existing unnamed watercourse will generally follow the same maintenance regime as that of swales / ditches – referenced below:

Operation and maintenance requirements for ponds (The SuDS Manual):

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Remove litter and debris	Monthly
	Cut grass – for spillways and access routes	Monthly (during growing season), or as required
	Cut grass – meadow grass in and around basin	Half yearly (spring – before nesting season, and autumn)
	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 banksides, structures, pipework etc for evidence of physical damage	Monthly
	Inspect inlets and facility surface for silt accumulation. Establish appropriate silt removal frequencies.	Monthly (for first year), then annually or as required
	Check any penstocks and other mechanical devices	Annually
	Tidy all dead growth before start of growing season	Annually
	Remove sediment from inlets, outlet and forebay	Annually (or as required)
	Manage wetland plants in outlet pool – where provided	Annually (as set out in Chapter 23)
Occasional maintenance	Reseed areas of poor vegetation growth	As required
	Prune and trim any trees and remove cuttings	Every 2 years, or as required
	Remove sediment from inlets, outlets, forebay and main basin when required	Every 5 years, or as required (likely to be minimal requirements where effective upstream source control is provided)
Remedial actions	Repair erosion or other damage by reseeding or re-turfing	As required
	Realignment of rip-rap	As required
	Repair/rehabilitation of inlets, outlets and overflows	As required
	Relevel uneven surfaces and reinstate design levels	As required

Operation and maintenance requirements for swales (The SuDS Manual):

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Remove litter and debris	Monthly, or as required
	Cut grass – to retain grass height within specified design range	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, 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 years, then half yearly
	Inspect inlets and facility surface for silt accumulation, establish appropriate silt removal frequencies	Half yearly
Occasional maintenance	Reseed areas of poor vegetation growth, alter plant types to better suit conditions, if required	As required or if bare soil is exposed over 10% or more of the swale treatment area
Remedial actions	Repair erosion or other damage by re-turfing or reseedling	As required
	Relevel 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

APPENDIX A: Approved drainage drawings:



