



SUDS MANAGEMENT & MAINTENANCE PLAN

Kinsealy Teagasc

January 2025



Introduction

1. This document sets out the principles for the long term management and maintenance of the surface water Sustainable Drainage Systems (SuDS) to be constructed at Kinsealy Teagasc, Malahide Road, Dublin 17.
2. The purpose of this document is to set out the basis of the development SuDS Maintenance Plan and to ensure that the adopting management company is entrusted with a robust inspection and maintenance programme, ensuring the optimum operation of the surface water drainage network is continually maintained for the lifetime of the development and to prevent the increased risk of flooding both on and off site in accordance with the opinion from Fingal County Council
3. 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 maintenance company as required. Specific maintenance needs of the SuDS elements should be monitored and maintenance schedules adjusted to suit requirements.
4. All those responsible for maintenance should follow relevant Health and Safety legislation, for all activities listed within this report including lone working, if relevant) and risk assessments should always be undertaken.
5. Any contractor employed by the Management Company shall carry out periodic maintenance of all such SuDS in accordance with the schedules listed in this report. Inspection checks shall be carried out by a qualified and competent person, at the minimum intervals listed within the schedules and the appropriate work carried out.

SuDS Layout & Design

6. The storm water drainage strategy for the proposed development is utilises SuDS features to intercept and convey all pluvial surface water runoff. The design of the system aims to attenuate runoff and encourage infiltration.
7. The proposed storm water system consists of the following SuDS components:
 - a. Swale;



- b. Infiltration;
- c. Storage Basins.
- d. Natural Pond
- e. There are three categories of maintenance activities referred to in this report:
 - Regular maintenance (including inspections and monitoring). Consists of basic tasks done on a frequent and predictable schedule, including vegetation management, litter and debris removal, and inspections.
 - Occasional maintenance 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). Mabestown, Malahide, Co. Dublin SUDS Management & Maintenance Plan
 - Remedial maintenance 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.

Every 3 years, the bottom of the detention basin shall be hollow tined. This shall be done during the months of August and September. The area shall be reseeded during a dry period.

Management & Maintenance Attenuation Basin, Swales and Headwalls

- 8. Note: The operations contained within this section specific to the maintenance of landscaping, shall be read in conjunction with any development landscape maintenance plan(s).
- 9. The land drainage system including the attenuation basin, swales and associated inlet / outlet headwalls and pipework will be subject to a routine monitoring and maintenance schedule as part of the general site management. This will be carried out at monthly



- intervals between 1 April and 31 October and once between 1 November and 31 March unless otherwise detailed. A record of maintenance visits and remedial operations shall be maintained. The following guidelines are offered as an initial regime, but maybe either increased or decreased by the management company depending on the local environment and any external contributing factors.
10. The key maintenance requirement for the attenuation basin, swales and associated inlet / outlet headwalls and 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.
 11. During the inspections the general operation, and structural condition of the inlet / outlet headwalls and any erosion of banks or scour control features should be identified and rehabilitated as required.
 12. Vegetation within on the banks of the pond should be trimmed twice a year, preferably in April and October to a height of 100mm to establish a dense sward and provide long grass margins which will discourage public access down to the water's edge. Vegetation in and on the banks of the swale should be trimmed at least twice a year or as required to maintain a height of 75–150mm. Cuttings from any clearance work should be removed from the pond and swale to avoid it causing blockages downstream.
 13. Accumulated sediments should be removed from the bed of the swale as required (once deposits exceed 25 mm in depth). The frequency of this operation can vary depending on local conditions, however it is recommend that the level of silts should be monitored at least once a year and a maintenance regime implemented to suit.
 14. De-silting will usually be on a 10-15 year cycle depending on the ongoing silt level checking. The desilting work will be carried out under the supervision of consulting engineers and to a pre-agreed method statement. Such a method statement should be submitted in writing to Fingal County Council and agreed in advance of the commencement of the works.
 15. Prior to desilting works commencing, a suitably qualified ecologist shall be appointed to undertake an assessment of the ecological interest within the pond and its margins. In the event that the attenuation ponds develop particular ecological interest, then careful consideration will be given to the timing of this operation.

16. Sediments excavated from the pond and swale that receive runoff from greenfield areas are not toxic or hazardous material and can be safely disposed of by either land application or landfilling. However, consultation should take place with the environmental regulator to confirm appropriate protocols. As long as the silt is non-hazardous it can be put it on the bank of the pond / swale and depositing silt on top of the banks allows for any organisms to re-establish.

Table 1: Maintenance Plan for the Attenuation Basin

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

Table 2: Maintenance Plan for the Conveyance Swale

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 reseed	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