DOSA

DENIS O'SULLIVAN & ASSOCIATES

CONSULTING ENGINEERS

RESIDENTIAL DEVELOPMENT, COUNTESS ROAD, KILLARNEY, CO. KERRY

PRELIMINARY SUDS MAINTENANCE & MANAGEMENT PLAN

DATE 15/04/2026

REVISION 1

JOB NO. 7334

Joyce House, Barrack Square, Ballincollig, Co. Cork

T 021 4871781 F 021 4874157 info@dosa.ie www.dosa.ie

DOCUMENT CONTROL

PROJECT NAME: Residential Development, Countess Road, Killarney, Co. Kerry

PROJECT NUMBER: 7334

REVISION	DATE	FILE NAME: Residential Development, Countess Road, Killarney, Co. Kerry			
1	15.04.2026	DESCRIPTION: Preliminary SuDS Maintenance & Management Plan			
			PREPARED	CHECKED	APPROVED
		INITIAL	SO'G	SO'G	SO'G
		DATE	15.04.2026	15.04.2026	15.04.2026
#	Insert Date	FILE NAME: Residential Development, Countess Road, Killarney, Co. Kerry			
		DESCRIPTION: Preliminary SuDS Maintenance & Management Plan			
			PREPARED	CHECKED	APPROVED
		INITIAL	#	#	#
		DATE			
#	Insert Date	FILE NAME: Residential Development, Countess Road, Killarney, Co. Kerry			
		DESCRIPTION: Preliminary SuDS Maintenance & Management Plan			
			PREPARED	CHECKED	APPROVED
		INITIAL	#	#	#
		DATE	Insert Date	Insert Date	Insert Date
#	Insert Date	FILE NAME: Residential Development, Countess Road, Killarney, Co. Kerry			
		DESCRIPTION: Preliminary SuDS Maintenance & Management Plan			
			PREPARED	CHECKED	APPROVED
		INITIAL	#	#	#
		DATE	Insert Date	Insert Date	Insert Date
#	Insert Date	FILE NAME: Residential Development, Countess Road, Killarney, Co. Kerry			
		DESCRIPTION: Preliminary SuDS Maintenance & Management Plan			
			PREPARED	CHECKED	APPROVED
		INITIAL	#	#	#
		DATE	Insert Date	Insert Date	Insert Date

Contents

1 Introduction....3

2 SuDS Layout & Design....4

3 Sustainable Drainage (SuDS) features checklist....5

4 SuDS Management & Maintenance....6

4.1 Filter Strips & Swales....6

4.2 Filter Drains & Infiltration Trenches....7

4.3 Infiltration Devices - Soakaways, Infiltration Trenches and Infiltration Basins....8

4.4 Basins, Ponds & Wetlands....8

4.5 Inlets, Outlets, Controls & Inspection Chambers....10

4.6 Overflows And Flood Routes....11

4.7 Ornamental Planting & Existing Vegetation....11

1 Introduction

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 Countess Road, Killarney, Co. Kerry.

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/council 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.

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 undertaken 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) for all activities listed within this report including lone working, if relevant) and risk assessments should always be undertaken.

Any contractor employed to carry out works 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.

It is proposed that the maintenance regime detailed in this document is carried out by the developer until such time as the estate and works have been taken in charge. At this point in time, it would be envisaged that responsibility would fall to the local authority upon completion of the taking in charge process.

2 *SuDS Layout & Design*

The storm water drainage strategy for the proposed development utilises SuDS features to intercept and convey surface water runoff. The design of the system aims to attenuate runoff and encourage infiltration.

The proposed storm water system consists of the following SuDS components:

- Tree Pits.
- Infiltration.
- Filter Drains.
- Rain Gardens.
- Storage Bioretention Basins.

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).
- **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.

3 *Sustainable Drainage (SuDS) features checklist*

SuDS techniques include landscape features and control structures to manage runoff as it flows to site outfalls. The following lists the features which may be found on a site.

- Filter strips are grass verges that allow runoff to flow through vegetation to a swale, wetland, infiltration area or other SuDS technique.
- Swales are linear, flat bottomed grassed or vegetated channels that convey water from one place to another. They can also store water and allow it to soak into the ground.
- Underdrained Swales are stone filled trenches with a perforated pipe in the bottom covered by engineered sandy soil and turf. These intercept dirty water and allow it to soak into the ground or lead it to a water storage feature.
- Filter drains clean, store and convey water to another feature or allow it to soak into the ground. They are stone filled trenches, sometimes with a perforated pipe in the bottom. These may be enlarged to treat dirty water, as treatment trenches, or increase soakage into the ground, as infiltration trenches.
- Infiltration basins, trenches, soakaways and most of the preceding SuDS features allow water to soak into the ground.
- Basins, ponds and wetlands are depressions in the ground where water is stored and treated. Water levels rise after rain and then drops to the normal level as the excess soaks into the ground or is released slowly to a watercourse or drain.
- Bioretention areas are planted areas with engineered topsoil over drainage layers that allow water to soak into the ground.
- Green Roofs are planted with sedum or other plant material. They clean and absorb water allowing it to evaporate. Excess water is drained from the roof to other SuDS features.
- Inlets and outlets structures are often conveyance pipes protected with mesh guards. They must be free from obstruction at all times to allow free flow through the SuDS.
- SuDS flow control structures are usually small orifices in control chamber, slots or V notches in weirs. They are usually near the surface so are accessible and easy to maintain. They may be in baskets, in small chambers or in the open.
- Inspection Chambers and rodding eyes are used on bends or where pipes come together. They allow cleaning of the system if necessary.
- Overflows can be below ground through gratings and chambers or over grass weirs in the open They must be kept clear at all times to protect areas from flooding.
- Flood routes (exceedance routes) allow water volumes exceeding the capacity of the SUDS system to escape from the site without causing damage to property. This route must be clear of obstructions at all times.

4 SuDS Management & Maintenance

Note: Not all SuDS features described below form part of the proposed development. The report encompasses them for completeness. Relevant Management & Maintenance procedures are applied to specific elements used within the project.

4.1 Filter Strips & Swales

- **Filter strips** are grass verges next to hard surfaces that allow runoff to flow through vegetation removing silt and pollution.
- **Swales** are linear, flat bottomed grassed or vegetated channels that convey water from one place to another which can also store water and allow it to soak into the ground.
- **Underdrained Swales** are free draining swales with stone filled trenches in the bottom covered by engineered sandy soil and turf that clean dirty water and allow it to soak into the ground or lead it to a water storage feature.

Filter Strips & Swales	
Regular Maintenance	Frequency
Grass Mow amenity grass access paths and verges surrounding swales and filter strips at 35-50mm minimum and 75mm maximum or as specified. Mow filter strips and swales at 100mm with 150mm maximum to filter and control runoff in normal grass swales removing first and last cut in season if grass is longer than 150mm removing cuttings to wildlife piles on site. Where marsh or wetland develops in the swale due to wet conditions then cut annually, or as required, at 100mm removing cuttings to wildlife piles on site	Monthly or as required Monthly or as required Annual or as required
Occasional Tasks	Frequency
Where there is a build-up of silt on the filter strip, swale, under-drained swale or at inlets, i.e. 50mm or more above the design level, then remove and spread on site. Undertake when ground is damp in autumn or early spring and transplant turf and overseed to original design levels.	As required
Remedial Work	Frequency
All damage to be made good to design profile unless there is a design flaw.	As required

4.2 Filter Drains & Infiltration Trenches

- **Filter** drains are stone filled trenches, sometimes with a perforated pipe in the bottom, that collect, clean and store runoff before conveying the water to another SuDS feature or allowing it to soak into the ground.
- **Treatment Trenches** are enlarged filter drains designed to treat a known volume of dirty water or increase soakage into the ground. They may also be used to intercept overland flows when they are referred to as cut off drains.

Filter Drains & Infiltration Trenches	
Regular Maintenance	Frequency
Grass edges Mow 1m min. wide grass surround to drain at 100mm and 150mm maximum to filter runoff and protect drain from silt.	Monthly or as required
Occasional Tasks	Frequency
Weeds Hand pull or spot treat individual weed growth only if necessary ensuring weedkiller does not enter the filter drain. Weed growth usually dies in dry weather.	As required
Remedial Work	Frequency
Siltation at surface Where there is no protective geotextile remove all stone and perforated pipe replacing as original Spec. and include separating geotextile as below. Where there is a separating geotextile (see Spec.) then remove surface stone layer and separating geotextile that protects the stone drain below. Replace geotextile and top stone layer.	As required
Siltation of perforated pipes Manholes and any inlet/outlet points should be inspected to confirm that there is no silt buildup. Removal or jetting of network may be required if silt build up has occurred	6 monthly inspection

4.3 *Infiltration Devices - Soakaways, Infiltration Trenches and Infiltration Basins*

- **Infiltration basins**, trenches, soakaways and most of the preceding SuDS features allow water to soak into the ground.

Soakaways, Infiltration Trenches & Infiltration Basins	
Regular Maintenance	Frequency
Grass edges Mow 1m min. wide grass surround to drain at 100mm and 150mm maximum to filter runoff and protect infiltration structure from silt.	Monthly or as required
Infiltration Basins Protect grass surface from compaction and siltation and manage main area of basin for design function or appearance.	As required
Occasional Tasks	Frequency
Infiltration Basins Where there is a build-up of silt in the basin at inlets, i.e. 50mm or more above the design level then remove when the ground is damp in autumn or early spring and turf to the original design levels. Spread excavated material on site above SuDS design profile, e.g. top of banks Infiltration Trench Hand pull or spot treat individual weed growth only if necessary, ensuring weedkiller does not enter the drain and inhibit natural breakdown of pollutants.	As required As required
Remedial work	Frequency
Infiltration Basin Where the infiltration basin is compacted then reinstate by removal of silt and de- compaction of the surface by scarifying, spiking or the use of hollow tines to the basin area.	As required

4.4 *Basins, Ponds & Wetlands*

- **Basins, ponds and wetlands** are depressions in the ground that store water. Water levels rise after rain and then drop to the normal level as the excess soaks into the ground or is released slowly to a watercourse or drain. Some water is often held back in a pond or wetland for final 'polishing' treatment or amenity interest.
- **Basins** are usually dry
- **Ponds** can be permanent or temporary and are mainly open water.

- **Wetlands** are mainly aquatic vegetation but can have small areas of open water like ponds.

Basins, Ponds & Wetlands	
Regular Maintenance	Frequency
Grass Mow grass access paths and verges surrounding basins, ponds and wetlands areas at 35mm-50mm minimum and 75mm maximum or as specified to provide a cared for appearance and allow pedestrian access. Mow rough grass areas for occasional access or habitat reasons at 100mm and maximum 150mm with cuttings removed to wildlife piles Grass areas not required for access may be managed for wildlife interest and to reduce costs. 2 cuts in July and September or 1 cut annually in September or October as specified and cuttings removed to wildlife piles.	Monthly or as required As required 4-6 times annually Annually or as required
Wet woodland management Manage annually as detailed spec. with cuttings left in situ or removed to wildlife piles.	Annually or as required
Wetland vegetation Cut (strim) at 100mm with cuttings removed to wildlife piles September - October or Maintain as a mosaic to be cut 25-30% in any one year at 100mm in September or October with cuttings removed to wildlife pile.	Annually or as required
Occasional Tasks	Frequency
Where silt accumulates on apron or area in front of inlet or outlet then remove and land apply within design profile of SuDS Where silt accumulates more than 150mm in base of wetland undertake a phased removal of silt subject to Client approval. Confirm whether a liner is present to hold water or prevent pollution of groundwater and protect. Remove silt as instructed but not more than 30% of pond or wetland area at any one time and to an agreed depth but not subsoil layer. Retain as much representative existing vegetation as possible to ensure rapid re-colonisation of open areas. Stack excavated material adjacent to wetland to allow de-watering of	Annually or every 3 years as required

silt. Undertake silt removal during September-October to minimise damage to protected wildlife and ensure re-growth of aquatic vegetation before winter. Spread excavated material on site above SUDS design profile, e.g. top of banks, in accordance with E.A. Waste Exemption Guidance.	
Remedial work	**Frequency**
Although not usually required this may be needed due to damage to liners or control structures.	Undertake as design details or as required

4.5 Inlets, Outlets, Controls & Inspection Chambers

- Inlets and outlets structures may be surface structures or conveyance pipes with guards or headwalls. They must be free from obstruction at all times.
- SuDS flow control structures can be protected orifices, slots weirs or other controls at or near the surface to be accessible and easy to maintain. They may be in baskets, in small chambers or in the open.
- Inspection Chambers and rodding eyes are used on bends or where pipes come together and allow cleaning of the system if necessary. They should be designed out of the system where possible.

Inlets, Outlets, Controls & Inspection Chambers	
Regular Maintenance	Frequency
Inlets, outlets and surface control structures Inspect surface structures removing obstructions and silt as necessary. Check there is no physical damage. Strim vegetation 1m min. surround to structures and keep hard aprons free from silt and debris	 Monthly Monthly
Inspection chambers and below ground control chambers	
Remove cover and inspect ensuring water is flowing freely and that the exit route for water is unobstructed. Remove debris and silt. Undertake inspection after leaf fall in autumn	Annually
Occasional Maintenance	
Check topsoil levels are 20mm above edges of baskets and chambers to avoid mower damage	As necessary
Remedial work	Frequency

Unpack stone in basket features and unblock or repair and repack stone as design detail as necessary. Repair physical damage if necessary.	As required As required

4.6 *Overflows And Flood Routes*

- **Overflows** are overland across weirs, through gratings or within chambers and must be kept clear at all times to protect areas from flooding. They allow onward flow when part of the SuDS system is blocked.
- **Flood routes (exceedance routes)** allow water volumes that exceed the capacity of the SuDS system to pass through or round the site without causing damage to property. These routes must be clear of obstructions at all times.

Overflows and Flood Routes	
Regular Maintenance	Frequency
Overflows. Jet pipes leading from overflow structures annually and check by running water through the overflow. Check free flow at next SuDS feature – inlet to basin or chamber.	Annually
Overflows. Remove any accumulated grass cuttings or other debris on top of grass weirs or stone filled baskets overflows.	Monthly
Flood Routes. Make visual inspection. Check route is not blocked by new fences, walls, soil or other rubbish. Remove as necessary.	Monthly
Remedial	Frequency
Overflows. If overflow is not clear then dismantle structure and reassemble to design detail.	As required

4.7 *Ornamental Planting & Existing Vegetation*

- **Ornamental Trees** - All ornamental planting to be kept weed free and pruned using secateurs to keep the shrubs to an agreed and reasonable size.
- **Native Trees and Shrubs** – All native planting to be allowed to grow freely removing overhanging branches as required.

Planting & Existing Vegetation - Review	
Regular Maintenance	Frequency
Grass maintenance	
Amenity Grass - Mow all grass verges, paths and amenity grass at 35- 50mm with 75mm max. All cuttings to remain in situ	16 visits

Rough grass – Mow at 75-100mm but not to exceed 150mm All cuttings to wildlife piles	4 - 8 visits
Wildflower areas strimmed to 50mm in Sept-Oct or Wildflower areas strimmed to 50mm July and Sept or Wildflower areas strimmed to 50mm on 3 year rotation 30% each year All cuttings to wildlife piles	1 visit 2 visit 1 visit
Ornamental tree & shrub planting. Weed all shrub beds as detailed spec as necessary. Cut back planting from lights, paths and visibility sight lines in late autumn and as necessary. Cut hedges slightly tapered back from base with flat top at specified height. Do not mulch planting adjacent to permeable/ porous paving surfaces. Remove stakes and ties from trees when no longer needed for support and within 3 years of planting. Protect from strimmer damage and remove competitive growth until well established.	4 visits
Native trees & shrub planting. Prune to shape in year 1. Protect trees from strimmer damage and remove competitive growth until well established. Remove stakes and ties from trees when no longer needed for support and within 3 years from planting.	1 visit
Existing trees Check existing trees for safety.	1 visit
Remedial	**Frequency**
Replace trees and shrubs which fail in the first five years after planting. Carry out tree surgery as necessary.	