KAVANAGH BURKE
CONSULTING ENGINEERS

SUDS Maintenance Plan

for

Proposed LRD Development

at

Railpark West,
Maynooth,
County Kildare.

Job No:	**D1824**
Date:	**November 2025**
Client:	**Maynooth Montane Limited**
Local Authority:	**Kildare County Council**




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1.0 Introduction

This report has been prepared by Kavanagh Burke Consulting Engineers to provide information on the proposed SuDS design and details the associated operation and maintenance procedures for a planned residential development at Railpark West, Maynooth, County Kildare.

2.0 Project Description

The development will comprise a Large-Scale Residential Development (LRD) on a site at "Railpark West", in the townland of Railpark, Maynooth, Co. Kildare.

The proposed development is for 139 no. units comprising 36 no. houses (ranging in heights up to 3 storeys), 95 no. apartments (5 no. blocks ranging in heights up to 5 storeys partially over podium parking) and 08 no. duplexes (1 no. 3/4 storey Block).

The proposal includes for a new vehicular/pedestrian/cyclist access from the permitted Maynooth Eastern Ring Road (MERR) to the east and the adjoining development to the South, and pedestrian/cyclist access (and vehicular access for one of the proposed houses) to Parklands Grove/Old Railpark to the north of the site.

The development also includes all car and bicycle parking at surface and podium underdeck level, new streets and footpaths, bin stores, residential private open spaces, public & communal open spaces, boundary treatments, waste management areas, landscaping and all associated site development works.

3.0 Proposed SUDS Measures

As part of the development, a number of different SuDS measures are proposed to minimise the impact on water quality and water quantity of the runoff and maximise the amenity and biodiversity opportunities within the site. These measures have been chosen and designed in accordance with the Kildare County Council Sustainable Drainage Systems Guidance Document 2024.

The planned Sustainable Drainage Systems (SuDS) will incorporate Source Control techniques within a Management Train approach. This means surface water will be dealt with locally within smaller sub-catchments, rather than being directed into larger drainage networks further downstream. By using a combination of the SuDS methods outlined below, the strategy aims to optimize surface water retention and lessen pressure on the existing downstream drainage infrastructure. These methods are also designed to provide effective water quality treatment, including the removal of nutrients and pollutants—especially during the 'first flush.' Additionally, the range of techniques proposed will contribute positively to local amenity value and

biodiversity, offering more environmental benefits than traditional drainage solutions.

The following SUDS measures are proposed to meet the objectives of Amenity, Quantity, Quality and Biodiversity:

- Green/Blue Roofs to apartments blocks.
- Vegetated detention basins.
- Underground Soakaway.
- Permeable paving to car parking spaces.
- The hardstanding areas such as roads and footpaths will be directed towards to adjacent soft landscaping via dropped kerbs etc.
- Tree pits/Bio-retention areas.
- Rain gardens.
- Flow control devices to limit discharge.

4.0 Operation and Maintenance Plan

The SuDS operation and maintenance plan outlined below should be read in conjunction with drawing no. D1824-KB-XX-XX-DR-C-0001 and drawing no. D1824-KB-XX-XX-DR-C-0003. All recommended operations are to be carried out as required/ needed

Blue / Green Roof		
Maintenance Schedule	**Operation Maintenance Activities**	**Frequency**
Regular Inspections	Inspection of all components including soil substrate, vegetation, drains, membranes 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	Annually and after severe storms
	Inspect drain inlets to ensure unrestricted runoff from the drainage layer to the conveyance or roof drain system	Annually and after severe storms
	Inspect underside of roof for evidence of leakage	Annually and after severe storms
	Inspect all outlets / overflows, checking the flow restrictor has not been tampered with, damaged or removed.	Annually and after severe storms
	Ensure there are no openings that might allow leaves and debris into the blue roof system	Annually and after severe storms
Regular Maintenance	Remove debris and litter to prevent clogging of inlet / outlet / overflow drains and interference with plant growth	Six monthly and annually or as required
	During establishment (i.e., year one), replace dead plants as required	Monthly

	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	Six monthly or as required
	Mow grasses, prune shrubs, and manage other planting (if appropriate) as required – clippings should be removed and not allowed to accumulate	Six monthly or as required
Remedial Actions	If erosion channels are evident, these should be stabilized with extra soil substrate similar to the original material, and sources of erosion damage should be identified and controlled	As Required
	If drain inlet / outlet / overflow has settled, cracked, or moved, investigate and repair as appropriate	As Required

Detention Basins		
Maintenance Schedule	**Operation Maintenance Activities**	**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, outlets and forebay	Annually (or as required)
	Manage wetland plants in outlet pool – where provided	Annually
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 re-turfing or reseeding	As required
	Realignment of rip-rap	As required
	Relevel uneven surfaces and reinstate design levels	As required
	Repair/rehabilitation of inlets, outlets, and overflows	As required

Underground Soakaway		
Maintenance Schedule	**Operation Maintenance Activities**	**Frequency**
Regular Maintenance	Inspect soakaway inspection chambers and access points for blockages or standing water.	Quarterly
	Check inlet and outlet pipes for obstructions or sediment build-up	Quarterly
	Inspect for signs of ponding or surface flooding near soakaway location	Monthly (after significant rainfall)
	Check for evidence of oil, grease, or contamination in inflow structures and remove if present.	Quarterly
	Verify that flow control devices (if any) are functioning correctly	Annually
	Record water levels in inspection chambers during and after rainfall events to assess soakaway performance	Annually (preferably during wet season)
	Check for signs of tree root intrusion or subsidence above soakaway location.	Annually
Occasional Maintenance	Flush inlet pipes and soakaway distribution pipes to prevent clogging	Every 2 years, or as required
	Refill or replace filter media (if applicable, e.g., in stone-filled trenches or modular soakaways)	Every 5 years, or as required
	Reseed or re-turf disturbed surface areas above soakaway	As required
Remedial Actions	Excavate and clean or replace soakaway media if infiltration capacity is significantly reduced	As required
	Reconstruct soakaway where structural failure or severe clogging occurs	As required
	Regrade surface levels if settlement occurs above soakaway location	As required

Permeable Paving		
Maintenance Schedule	**Operation Maintenance Activities**	**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	Stabilize 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 50mm 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, 48h after large storms in first six months

	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Tree Pits		
Maintenance Schedule	**Operation Maintenance Activities**	**Frequency**
Regular Maintenance	Remove litter and debris	Monthly (or as required)
	Manage other vegetation and remove nuisance plants	Monthly at start, then as required
	Inspect inlets and outlets	Inspect monthly
Occasional Maintenance	Check tree health and manage tree appropriately	Annually
	Remove silt build-up from inlets and surface and replace mulch as necessary	Annually, or as required
	Water	As required (in periods of drought)
Monitoring	Inspect silt accumulation rates and establish appropriate removal frequencies	Half yearly

Surface Water Drainage General		
Maintenance Schedule	**Operation Maintenance Activities**	**Frequency**
Blockages	Inspect inlets, outlets, and overflows for evidence of blockages and clear if required.	Monthly or as required
Inlet & Outlets	Inspect inlet / outlet structures and pipes for evidence of physical damage.	Monthly
Blockages / Structural Damage	Inspect SuDS surfaces, inlet/outlet pipework and control systems for blockages, clogging, standing water and structural damage.	Monthly
Tree Roots	Remove or control tree roots where they are encroaching the sides of the drainage pipe network, using recommended methods (e.g., NJUG, 2007 or BS 3998:2010).	As required
Silt Trap & Petrol Interceptors	To be maintained in accordance with supplier's requirements and specifications	As required by supplier
Flow control devices	Remove any debris from flow control manhole and maintain in accordance with supplier's requirements and specifications	1 visit per year