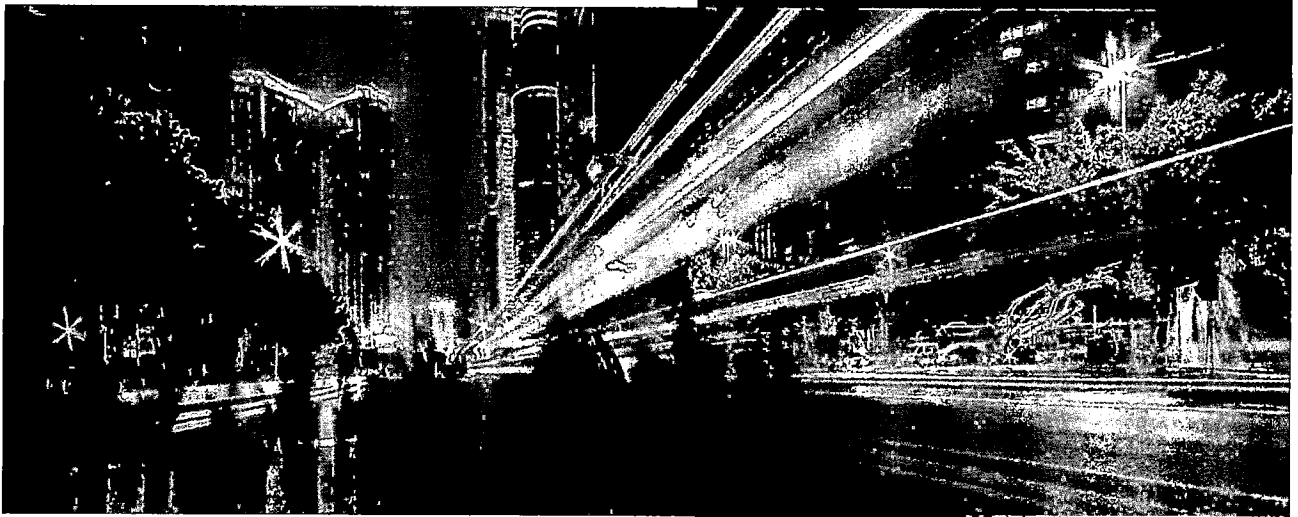


2022

# SuDS Management & Maintenance Plan



Prepared by: M Heslin



Engineering a Sustainable Future

Dublin | Cork | Galway | Mullingar | Donegal

o: +353 1 5242060 | e: [info@ors.ie](mailto:info@ors.ie) | w: [www.ors.ie](http://www.ors.ie)

## SuDS Management & Maintenance Plan

Kilnamanagh Shopping Centre, Treepark / Mayberry Road, Kilnamanagh Dublin 24

### Document Control Sheet

<b>Client:</b>	Dunnes Stores
<b>Document No:</b>	220063-ORS-XX-XX-RP-C-13a-002

Revision	Status	Author:	Reviewed by:	Approved By:	Issue Date
P01	S2	MH	AH	DMC	25/10/2022



## Contents

<b>1</b>	<b>Introduction</b> .....	<b>3</b>
<b>2</b>	<b>SuDS Layout and Design</b> .....	<b>3</b>
<b>3</b>	<b>SuDS Management and Maintenance</b> .....	<b>4</b>
3.1	Green Roof .....	4
3.2	Attenuation Tank and Flow Control .....	4
<b>4</b>	<b>Maintenance Schedule</b> .....	<b>5</b>

## 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 as part of the extension to the Dunnes Stores Unit at Kilnamanagh Shopping Centre, Treepark / Mayberry Road, Kilnamanagh Dublin 24.

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.

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. 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.

Any contractor employed by the Management Company shall carry out periodic maintenance of all such SuDS elements 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.

## 2 SuDS Layout and Design

The storm water drainage strategy for the proposed development utilises SuDS features to intercept and convey all pluvial 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:

- (1) Extensive Green Roof
- (2) Attenuation Tank
- (3) Flow Control Device

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 SuDS Management and Maintenance

#### 3.1 Green Roof

An extensive green roof system consisting of lightweight sedum/moss layers, capable of intercepting a minimum of 5mm of rainwater across its area has been specified on the proposed extension. This will provide ecological, aesthetic and amenity benefits and will help retain rainfall at the source and reduce the volume of runoff and attenuate peak flows. The green roof will absorb the majority of rainfall received during ordinary rainfall events and will contribute to the attenuation of flows for larger events.

Owing to the water retention performance of the proposed green roof system this acts to reduce the annual average runoff from this area by 40%. The remaining runoff is then collected and directed to a below ground attenuation tank on the site.

The maintenance of an extensive green roof is relatively minimal however it is recommended the following is undertaken:

- (1) Inspect roof twice a year for weeds and seeds (carried by wind) and remove same. No pesticides are recommended. Check drainage system and remove any leaves or debris.
- (2) Fertilize the roof twice a year to ensure an even supply of nutrients.

#### 3.2 Attenuation Tank and Flow Control

A geocellular attenuation tank will be installed to the south of the proposed extension. The tank has been sized to cater for the runoff from the green roof. No other runoff will be directed into the tank. The manhole immediately upstream of the tank will be a catchpit (trapped) manhole which will help collect silt or debris from entering the tank. Trapped manholes should be checked regularly and desilted as necessary – usually a minimum of twice per year.

The manhole immediately downstream of the attenuation tank will have a flow control device fitted to limit discharge offsite to greenfield runoff rates.

#### 4 Maintenance Schedule

Maintenance Activity	Required Action	Typical Frequency
Catchpit Manholes	Inspect for sediment and debris in catch pit (trapped manholes)	Monthly for first year and twice yearly thereafter
Flow Control Manhole	Check flow control manhole to ensure emptying is occurring (little to no water should be present after consecutive days of dry weather) Check function of emergency drain down Check for build up of debris and silt	Twice yearly once after heavy rainfall and once after consecutive dry weather
Gutters	Remove litter and debris from all sump units (gullies, channel drains and catch pits), access chambers and pre-treatment devices.	Six monthly (spring, start of winter), or as required
Pipe work	Inspect all pipework for silt accumulation and high pressure jet any pipe work which has silt accumulation. Care must be taken that any silts within the pipework are not flushed into the attenuation tank (use of bungs and jet-vac of chamber prior to removal of bungs)	Twice yearly, or as required
Attenuation tank	Ensure that ventilation pipework is free from obstructions and blockages. If jetting through the attenuation tank is required, this must be done following jet vac clearance of sump manholes	Twice yearly, or as required
Green Roof	Inspect roof for weeds and seeds (carried by wind) and remove same. Check drainage system and remove any leaves or debris. Fertilize the roof twice a year to ensure an even supply of nutrients.	Twice yearly, or as required