

Lidl Irlam Drive, Kirkby

Drainage Operations and Maintenance Manual

Lidl GB Ltd

March 2026

Doc Ref: 250134a-TN01

Prepared by:	Mike Tuna
	Principal Engineer
Checked by:	Mohamed Gheit
	Senior Engineer
Approved by:	Tim Wright
	Regional Director

Document Revision Control

Revision	Date	Status	Prepared By	Approved By
-	4/12/25	First Issue	MT	MG/TW

Colwyn Chambers
19 York Street
Manchester
M2 3BA

T: 0161 832 4400



E: info@scptransport.co.uk
W: www.scptransport.co.uk

This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of SCP being obtained. SCP accepts no responsibility or liability for the consequence of this document being used for a purpose other than the purposes for which it was commissioned. Any person using or relying on the document for such other purposes agrees and will by such use or reliance be taken to confirm his agreement to indemnify SCP for all loss or damage resulting there from. SCP accepts no responsibility or liability for this document to any party other than the person by whom it was commissioned.

CONTENTS

1.0 INTRODUCTION 1

2.0 DRAINAGE DESIGN PHILOSOPHY.....2

3.0 SURFACE WATER DRAINAGE.....3

APPENDICES

- APPENDIX A – SURFACE WATER DRAINAGE PLANS
- APPENDIX B – FLOW CONTROL MANHOLE DETAILS
- APPENDIX C – ATTENUATION BASIN DETAILS

1.0 INTRODUCTION

Background

- 1.1 SCP have been instructed to prepare a Drainage Operation and Maintenance Manual for the new Lidl store at Irlam, Kirkby.
- 1.2 This document should be read in conjunction with the Flood Risk Assessment for Lidl Irlam Drive, Kirkby.
- 1.3 The site is located in the town of Kirkby, near Liverpool. The site and drainage assets detailed within this report are within the privately owned Lidl site boundary and not in the public highway except for the sewer connection.
- 1.4 Particular reference is paid to the inspection, aftercare and maintenance of drainage features.
- 1.5 This report is based on current best practice guidance as outlined within the SuDS manual.

Scope of O & M Manual

- 1.6 This manual is intended to give an overview of the operation and maintenance for the range of drainage and external works features included with the design and in relation to typical details only.
- 1.7 Where proprietary products are specified the manufacturer's instructions and recommendations should be followed in priority to this document unless specifically noted otherwise due to project constraints.
- 1.8 The recommended operations and frequencies are typical only and should be more frequent initially to ensure that there are no unforeseen issues with the operation and then adjusted to suit the site requirements.

2.0 DRAINAGE DESIGN PHILOSOPHY

- 2.1 The surface water network is to be designed to accommodate up to 1 in 100-year storm rainfall event plus an allowance for climate change (45%).
- 2.2 As the flows are generally being attenuated on site within SuDS features there will be a period after storm events where the network is still partially or fully surcharged and is draining down. Where this surcharging is still present after 48hrs appropriate action should be taken as in Section 3.
- 2.3 The drainage systems provided within the site boundary:
- Foul water drainage system that connects to existing United Utilities foul water sewer.
 - New surface water drainage system that is proposed to discharge to United Utilities surface water sewer.
 - Private surface water drainage system comprising gullies, catchpits, pipework, flow control, attenuation and petrol interceptor.
- 2.4 The surface water drainage systems will discharge from the site by gravity into UU sewer.
- 2.5 Attenuation in the form of an underground tank is proposed.

3.0 SURFACE WATER DRAINAGE

- 3.1 This section is intended to give an overview of the operation and maintenance for the drainage features included with the drainage strategy and in relation to typical details. Where proprietary products are specified, the manufacturer's instructions and recommendations should be followed in priority to this document unless specifically noted otherwise due to project constraints.
- 3.2 The recommended operations and frequencies are typical only and should be more frequent initially to ensure that there are no unforeseen issues with the operation and then adjusted to suit the site requirements.
- 3.3 The surface water network is to be designed to accommodate from 1 in 1-year storm rainfall event, up to the 1 in 100-year storm event plus an allowance for climate change. As the flows are to be attenuated on site there will be a period of time after storm events where the network is still partially or fully surcharged and is draining down. Where this surcharging is still present after 48hrs appropriate action should be taken as noted in this section.

Components

3.4 The following components have been included within the drainage design for the development:

Component	Visual Inspection	Physical Inspection
Gullies	✓	
Pipes		✓
Inspection, Manhole and Catchpit Chambers	✓	
Flow Control Units	✓	
Attenuation Tank		✓
Petrol Interceptor		✓

- 3.5 A suitable maintenance strategy should be adopted to ensure the drainage network is cleaned regularly and the routine maintenance and cleansing regime should be documented.
- 3.6 The maintenance of the private drainage network will be the responsibility of a private maintenance company.
- 3.7 It is recommended that the drainage system is inspected as a minimum twice a year, with the system also being inspected after any major storm event.
- 3.8 Significant sediment deposition is likely in areas used for storage, so a post clean-up operation may be required including the removal of litter, vegetation, sewerage debris and larger objects.
- 3.9 Long-term management practices include monthly sweeping of external paved areas. The sweeping program will remove sand and contaminants directly from paved surfaces before they become mobilised during storm events and transported to the drainage system.
- 3.10 During the winter months, drainage features such as gullies and channels should be cleared of ice, snow, debris, leaves, litter etc.

- 3.11 Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols.

Gullies

Location and description

- 3.12 The locations of the gullies will be confirmed during detailed design but will drain low spots within the car park and be provided at locations to suit approximately 200m³ catchments.
- 3.13 The features have been designed in accordance with all relevant standards, plus Statutory Bodies' and manufacturers requirements.
- 3.14 Gullies should be inspected and cleaned in accordance with the manufacturer's details.
- 3.15 Locking bolts should be replaced and sufficiently tightened, taking care that the bolt heads do not stand above the top surface of the cover or grate. If covers are allowed to move within their frame, this may cause damage to the frame or seating.
- 3.16 Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols.

Gullies Schedule

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required).	Initial Inspection	Half yearly and after large storms.
Regular maintenance\ inspection	Litter and debris removal	Monthly or as required.
	Inspect for evidence of poor operation and/or weed growth. If required, take remedial action. Inspect silt accumulation rates and establish appropriate brushing frequencies. Silt can also be caused by adjacent landscaping areas which should be reprofiled to provide a flat area or berm adjacent to the paving.	3-monthly, 48 hours after large storms.
Remedial Action	Inspect gullies and rod through poorly performing gullies as initial remediation.	Monthly or as required

Pipes

Location and Description

- 3.17 The locations of the pipes are indicated in the Flood Risk Assessment Report and are to be confirmed following approval of the FRA and subject to detailed design.
- 3.18 The features have been designed in accordance with all relevant standards, plus Statutory Bodies' and manufacturers requirements.
- 3.19 Pipes are proprietary products, and the materials can vary across the site and as such where used the manufacture's recommendations should be followed.

Operation

- 3.20 Pipes are intended to be the main conveyance across the development and where oversized they form the attenuation volume required by the limitation of the discharge rate. They are intended to be dry except for during rainfall events.
- 3.21 These have been designed to be self-cleansing where possible for smaller diameter pipes, and for larger diameters the risk is reduced due to the overall pipe size.
- 3.22 Access for maintenance will be provided through access chambers, manholes, rodding plates and rodding eyes.

Inspection and Maintenance Regime

- 3.23 Regular inspection and maintenance are important to identify areas which may have been obstructed/clogged and may not be drain correctly thus exposing the development to a greater level of flood risk. Maintenance responsibility for the pipes should be placed with the maintenance management contractor.
- 3.24 Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols.

Pipes Schedule

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first	Initial inspection should be provided as post construction CCTV survey.	N/A

year of operation and adjusted as required)	Inspect for evidence of poor operation via water level in chambers. If required, take remedial action.	3-monthly, 48 hours after large storms.
Occasional maintenance	Check and remove large vegetation growth near pipe runs.	6-monthly.
Remedial actions	Rod through poorly performing runs as initial remediation.	As required.
	If continued poor performance jet and CCTV survey poorly performing runs.	As required.
	Seek advice as to remediation techniques suitable for the type of performance issue and location.	As required If above does not improve performance.

Inspection, Manhole and Catchpit Chambers

Location and Description

- 3.25 The locations of the inspection, manhole and catchpit chambers are indicatively shown on the Flood Risk Assessment report.
- 3.26 The features have been designed in accordance with all relevant standards, plus Statutory Bodies' and manufacturers requirements.
- 3.27 Inspection, manhole and catchpit chambers are proprietary products, and the materials can vary across the site and as such where used the manufacture's recommendations should be followed.
- 3.28 The appropriate health and safety equipment must be used when accessing manholes. Confined space certificates must be held by any personnel entering a manhole.

Inspection and Maintenance Regime

- 3.29 Regular inspection and maintenance are important for the effective operation of the features. A regular inspection regime is very important to ensure the correct functionality of the surface water drainage network. Maintenance responsibility will be with a private drainage management company.
- 3.30 Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols.

Chambers Schedule

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required)	Inspect inlets, outlets and overflows for blockages, and clear if required. If faults persist jetting and CCTV survey may be required.	Monthly and after large storms.
	Check penstocks and other mechanical devices (if present).	Half yearly.
	Inspect ventilation cowl (if present)	Monthly and after large storms.
Regular maintenance\inspection	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then six monthly.
	Debris removal from catchment surface (where may cause risks to performance)	Monthly
	Where rainfall infiltrates into blocks from above, check surface of filter for blockage by silt, algae or other matter. Remove and replace surface infiltration medium as necessary.	Monthly (and after large storms)
	Remove sediment from pre-treatment structures	Annually (or as required after heavy rainfall events)
Remedial actions	Repair/rehabilitation of inlets, outlet, overflows and vents.	As required.

Flow Control Units

Location and Description

- 3.31 The location of the flow control units is indicated on the drawing submitted with the Flood Risk Assessment report and immediately downstream of the attenuation tank.
- 3.32 The features have been designed in accordance with all relevant standards, plus Statutory Bodies' and manufacturers requirements.

Operation

- 3.33 A single flow control unit is required for the development. These units are intended to control the flow at strategic locations and to restrict the discharge rate off the site.
- 3.34 The design flow for each flow control is:
- Hydrobrake - Unit: 1.6 l/s
- 3.35 The flow control units will be a Hydro-Brake or similar approved and is a proprietary product; therefore, manufacturer's recommendations should also be taken into consideration.

Inspection and Maintenance Regime

- 3.36 Access for maintenance will be provided by locating within a manhole chamber.
- 3.37 The appropriate health and safety equipment must be used when accessing manholes. Confined space certificates must be held by any personnel entering a manhole and the appropriate permits should be obtained to any access.

Flow Control Schedule

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required).	Inspect inlets for blockages, and clear if required. If faults persist jetting and CCTV survey may be required.	Monthly and after large storms.
Regular maintenance \ inspection	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then six monthly.
	Debris removal from catchment surface (where may cause risks to performance).	Monthly
	Remove sediment from pre-treatment structures and flow control chambers.	Annually (or as required after heavy rainfall events)
Remedial Actions	Repair/rehabilitation of inlets.	As required.

Attenuation Tank

Location and Description

- 3.38 The location of the attenuation tank is specified in the Flood Risk Assessment report.
- 3.39 The features will be designed in accordance with all relevant standards, plus statutory Bodies' and manufacturers requirements.
- 3.40 Attenuation tanks are to be constructed as recommended in the CIRIA SuDS Manual.

Operation

- 3.41 The attenuation tanks will provide attenuation for up to and including the 100 year + 45% climate change events.
- 3.42 Access for maintenance will be provided from the proposed private car park.

Inspection And Maintenance Regime

- 3.43 Regular inspection and maintenance are important for the effective operation of the features. A regular inspection regime is very important to ensure the correct functionality of the surface water drainage network.
- 3.44 Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols.

Attenuation Tanks Schedule

Maintenance Schedule	Required Action	Frequency
Monitoring	Inspect/check all inlets, outlets, vents, and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment build-up and remove if necessary	Every 5 years or as required
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter, remove and replace surface infiltration medium as necessary	Annually
	Remove sediment from pre-treatment structures and/ or internal forebays	Annually, or as required
Remedial Actions	Repair/rehabilitate inlets, outlet, overflows and vents	As required

Petrol Interceptor

Location and Description

- 3.45 The location of the petrol interceptor is specified in the Flood Risk Assessment report.
- 3.46 The features will be designed in accordance with all relevant standards, plus statutory Bodies' and manufacturers requirements.

Operation

- 3.47 The petrol interceptor will filter out hydrocarbon pollutants from rainwater runoff before it gets discharge to the river.
- 3.48 Access for maintenance will be provided from the privately owned car park.

Inspection And Maintenance Regime

- 3.49 Regular inspection and maintenance are important for the effective operation of the features. A regular inspection regime is very important to ensure the correct functionality of the surface water drainage network.
- 3.50 Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols.

Petrol Interceptor Schedule

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required).	Initial Inspection	Half yearly and after large storms.
Regular maintenance\ inspection	Litter and debris removal	Monthly or as required.
Remedial Action	Inspect outlets and rod through poorly performing outlets as initial remediation.	Monthly or as required
Petrol Interceptor to have alarm fitted	Inspect/maintain if alarm is raised	As required