PROPOSED DEVELOPMENT AT LANGDALE MEWS, M19 3NT



MANAGEMENT & MAINTENACE PLAN

Prepared in accordance with the Flood and Water Management Act 2010, the Non-Statutory Technical Standards for Sustainable Drainage (Defra, 2015), and the CIRIA SuDS Manual (C753)

Flood Flow Limited
36 Holdenbrook Close
Leigh
WN72HL

25255/JJ

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Client: *-*

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01	07/10/25	A. Jones BSc MSc (Hons)	Jason Jones BEng Civils (Hons) MCIHT	First Issue

INTRODUCTION

1.1. The Lead Local Flood Authority (LLFA) has requested a Maintenance Manual to support the proposed extension at Langdale Mews, M19 3NT Langdale Mews. This document outlines the ongoing management and maintenance requirements for the private surface water drainage system, based on current design drawings and strategy documents. The manual will be updated following the completion of construction and issue of final 'As Built' information.

MAINTENANCE REGIME

1.2. The integrated SuDS features, designed as part of the site, to facilitate the first phase of the development, are an environmentally friendly approach to managing rainfall from the development to the existing water features. The aim of the SuDS features is to: -

- Control the flow, volume and frequency of the water leaving the development site.
- Prevent pollution by intercepting silt and cleaning run-off from hard surfaces.
- Provide public open spaces for amenity uses for the nearby employment development
- Create natural wildlife corridors.

SUDS AT THE PROPOSED DEVELOPMENT

1.3. The SuDS features have been designed as part of proposed development to prevent flooding. They are as follows: -

- Permeable paving for car park spaces for additional attenuation.
- Creation of additional volume in the onsite drainage feature.
- Creation of SuDS based amenity area.
- Control the final discharge from the site to the existing run-off rates.

1.4. The SuDS features at Langdale Mews comprise the following:

- Permeable paving to access paths and driveways to reduce runoff and provide natural filtration.
- A geocellular attenuation tank (39 m^3 capacity) to manage the 1 in 100-year storm event + 45% climate change.

- A vortex flow control device (Hydrobrake or equivalent) restricting discharge to 5.71 l/s.
- Discharge to the adjacent 225mm VC public surface water sewer in Langdale Avenue, subject to a S106 agreement with United Utilities.

1.5. All components will be retained in private ownership and maintained by a private management company.

MANAGING THE SUDS

1.6. The SuDS system has been designed for ease of access and low-maintenance requirements. Typical maintenance activities will include:

- **Monthly tasks:**
  - Litter collection from accessible inlets and outlets
  - Visual inspection of permeable paving condition
  - Removal of leaf fall and debris from gulley grates and flow controls
- **Occasional tasks (bi-annually or post-storm):**
  - Jetting or vacuuming of the flow control chamber
  - Inspection of manholes for sediment or obstruction
  - Checking tank performance (via inspection ports if provided)
- **Remedial work (as needed):**
  - Repair or replacement of damaged covers
  - Clearing any blockage in the Hydrobrake or discharge pipe
  - Maintenance of permeable paving (e.g. power washing or infill renewal)

GENERAL DRAINAGE MAINTENANCE

1.7. The appointed maintenance contractor will be provided with final 'As Built' drawings to inform the inspection and maintenance programme. Regular checks will include:

- Jetting and vacuuming of key pipework
- CCTV surveys of the system at 5-year intervals or as required
- Maintenance of the Hydrobrake unit and inspection of its performance
- Repairs to any SuDS components as required

1.8. The required maintenance for the SuDS elements has been split into regular (weeding/inspections/sweeping/litter removal/grass cutting), occasional (sediment removal/vacuum brushing) and remedial maintenance (repair and replacement).

1.9. Any SuDS structures outside of the specific plot curtilages will be undertaken by a management company in accordance with the Operation and Maintenance (O&M) manuals which will be produced after construction of the drainage scheme.

1.10. These manuals will be in accordance with CIRA C753 and will outline the location of any drainage infrastructure, detail what maintenance is required, the associated cost, and how often each activity should be carried out. Records should be kept for any maintenance undertaken onsite and will be available for inspection when required.

1.11. The end user will employ a private maintenance company to undertake the required SuDS inspections and maintenance once the scheme has been completed and occupied. The site is considered Less Vulnerable under the National Planning Practice Guidance (NPPG) classification, and is located within Flood Zone 1, where the proposed development and surface water strategy are deemed appropriate.

SITE SPECIFIC SUDS ELEMENTS

1.12. The proposed surface water drainage network contains the following SuDs elements.

- Hydrobrake flow control, (Ref to be provided)
- Permeable Paving (Ref to be provided)
- Cellular Storage (Ref to be provided)
- Proprietary System; Petrol Interceptors (Ref to be provided), Downstream Defenders (Ref to be provided)

1.13. The required maintenance for each of the above element has been tabled below in Table 2. The maintenance for each element will be firmed up as the detailed design progresses.

Operation and Maintenance Activity	SuDS Component												
	Pond	Wetlands	Detention Basin	Infiltration Basin	Soakaway	Infiltration Trench	Filter Drain	Cellular Storage	Permeable Paving	Swales	Filter Strip	Green Roof	Proprietary Systems
Regular Maintenance – Monthly Basis													
Inspection						•	•	•	•		•		•

Litter and debris removal						●	●	○	●		●		○
Grass cutting						●	●	○	○		●		
Weed and invasive plant control						○	○		○		○		
Shrub management									○		○		
Shoreline vegetation management													
Aquatic vegetation management													
Occasional Maintenance – Annually or as required													
Sediment management						●	●	●	●		●		●
Vegetation replacement											○		
Vacuum sweeping and brushing									●				
Remedial Maintenance – As required													
Structure rehabilitation/repair						○	○	○	○		○		
Infiltration surface reconditioning						○	○		○		○		

QUERIES REGARDING A DESIGN FEATURE

1.14. In the event of a concern or failure of a SuDS design feature contact Flood Flow Ltd.

36 Holdenbrook Close, Leigh, WN72HL

Tel: 07940523819

Email – mail@floodflow.co.uk

SPILLAGE – EMERGENCY ACTION

1.15. Most spillages on site (e.g., oils, fuels, detergents) are unlikely to pose a serious risk to the environment if intercepted and contained within the drainage system. Where possible, minor spillages should be removed using appropriate absorbent materials (e.g., spill kits or mats) and disposed of in accordance with Environment Agency guidance.

1.16. In the event of a significant or unidentified spillage (e.g., high volume or toxic substance), the outlet from the affected area should be isolated using a bung or barrier, and the source material should be contained using absorbent booms or bunds. Emergency procedures should be followed, and a qualified waste contractor engaged if needed.

1.17. In all serious cases, the Environment Agency should be contacted via the incident hotline on 0800 80 70 60.

MANAGEMENT COMPANY

1.18. All SuDS features at Langdale Mews will remain in private ownership and will be maintained by a management company appointed by the developer or end user. No elements of the system are intended for adoption by United Utilities or the Local Authority.

1.19. The appointed management company will be responsible for routine inspections, scheduled maintenance, and emergency response related to the Hydrobrake flow control, geocellular tank, permeable paving, and associated pipework.

CONCLUSION

1.20. The proposed surface water drainage strategy has been designed in accordance with the principles of the CIRIA SuDS Manual (C753). The scheme is consistent with national guidance, incorporates appropriate attenuation and flow restriction



measures, and has been designed to manage runoff in a safe, sustainable, and maintainable manner throughout the lifetime of the development.