+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

**Document name:** 19238-EDGE-XX-XX-CO-C-0001_DRAINAGE MAINTENANCE PLAN[P01]

10 October 2023

**Chris Fothergill**
John Southworth
chris.fothergill@johnsouthworth.co.uk

10 Charles Street
Dukinfield
SK16 4SD

Dear Chris,

**Re:** Victoria Avenue, Blackley – Drainage maintenance plan

With reference to condition 13 of the planning approval this document represents a proposal for maintenance of the private drainage system at Victoria Avenue Blackley.

This maintenance plan has been produced in support of the developments planning permission and is delivered alongside the sites proposed drainage strategy, attached to this document, shown in EDGE Drawings 19238_C2002_DRAINAGE LAYOUT[P16] and 19238_C2004_PLOT DRAINAGE [C01].

One of the reports aims is to confirm that the designer has taken maintenance into account with the design and demonstrate the competence of the designer.

This document has been produced to ensure all parties involved in the ongoing operation and maintenance of the drainage infrastructure and SUDs systems understand their functionality as well as the maintenance requirements.

All required inspections and tasks listed in the Maintenance Specification should comply with all relevant health and safety legislation (Health and Safety at work regulations) including the development of risk assessments for working close to or in water.

The drainage proposals include provision of separate surface water and foul water sewers serving the development. Foul will connect to existing public infrastructure in Victoria Avenue to the North of the site with no restriction on flow rates.

Surface water will connect to existing public infrastructure to the North of the site in Victoria Avenue. A restriction to runoff via a flow control unit is proposed to discharge a maximum of 14.73 litres per second as agreed with the incumbent water authority United Utilities.

Storage is required and is provided within the upstream network using oversized storage pipes and chambers.

The proposed surface water network has been designed using Microdrainage flow simulation software to ensure:

- No surcharging of drainage network for design storm of 1 in 2 years.
- No flooding of drainage network for design storm of 1 in 30 years.
- The storage within the system is proposed to accommodate volumes up to the 1 in 100 year + climate change event. For the extreme events, the Micro drainage model has been reviewed and a flood routing/ exceedance plan is provided showing no buildings are at risk of flooding.

The main drainage infrastructure within public highway will be adopted by United Utilities and will be under their inspection and maintenance regime. Highway gullies will be adopted by Manchester City Council and will be inspected and maintained by the highways department.

This report covers the inspection requirements and maintenance of private sewers, chambers and gullies.

This plan is provided to support the long-term performance of the system to meet the design criteria to which they have been designed. Furthermore, this plan will provide a basis for costing the long-term maintenance budget and provide a working document for use on site.

The proposed drainage infrastructure outside the public road and public sewer system will be private and under a management companies' inspection and maintenance regime.

The Maintenance Specification will provide a guide to the management company as to what the maintenance requirements for each drainage component are and how to meet them efficiently. It will also detail the frequency of the required tasks whether that be planned maintenance or reactive repairs etc.

Preventative maintenance protects the investment of the drainage infrastructure. Furthermore, frequent and thorough maintenance will prevent long term problems, costly repairs and ensure efficient and optimum working order of the drainage system.

Each component of the foul and storm water sewer network should be inspected and cleaned dependent upon its maintenance needs. The cleaning and inspection program should include sewer cleaning, CCTV inspection of pipes, visual inspection of the manhole structure and flow channels and an evaluation of the manhole and pipe condition.

This maintenance program will help identify any required repairs and the assessments may help judge the future frequency of cleaning and inspections. Effective maintenance can have a significant impact on extending the effective life of the system.

Cleaning includes water jetting to remove silt build-up and other debris within the pipes. CCTV surveys of the sewers and manhole inspections will be required to ensure the infrastructure is performing efficiently.

CCTV surveillance of the sewers will be focused on indicating leaking pipe joints, obstructions or any excessive deposits as well as other pipe defects.

The newly constructed drainage infrastructure will be fully inspected/ surveyed prior to hand over to the management company to ensure there are no construction defects and they have been installed in accordance with the approved plans and specifications.

The inspections should ideally be carried out at the same time as other routine maintenance activities.

Drainage components should be inspected and maintained in accordance with the manufacturer's specifications.

**MAINTENANCE SPECIFICATION**

| Component | Maintenance Requirement | Frequency |
|---|---|---|
| Storm and foul manholes. | • Visual inspection to verify condition of manhole structure and flow channels.<br>• Jetting/ cleaning of flow channels. | • Yearly<br>• Yearly |
| Storm and foul water pipes. | • CCTV survey of pipes.<br>• Jetting/ cleaning of pipes. | • Prior to handover and every 5 years thereafter<br>• Yearly |
| Gullies, linear drains and sumps | • Visual inspection to verify condition.<br>• Jetting/ cleaning and emptying sumps. | • Monthly for the first 3 months then every 6 months thereafter<br>• Monthly for the first 3 months then every 6 months thereafter |

Yours sincerely,



**Ryan Atherton**
Team Leader - Civil