Carley Daines and Partners Limited

Consulting Civil and Structural Engineers

DOWNLEY DRIVE - MANCHESTER.

DRAINAGE MAINTENANCE PLAN

The site drainage plan is shown on Carley Daines and Partners drawing reference 12490-200 rev H, Drainage Layout.

The drainage system comprises separate foul and surface water networks which drain by gravity, with the foul water discharging freely into the existing public combined sewer via an existing public manhole within the site boundary; whilst the surface water is attenuated on site, and a controlled discharge into the combined sewer at 5l/s. Both systems are designed to adoptable standards and have been submitted to United Utilities for adoption under a Section 104 agreement, for which they have been approved. The plot drainage and the attenuation tanks, however, remain private.

For each property the foul water is collected by a 450mm diameter polypropylene inspection chamber, with a direct connection into the adoptable site foul system sewer. The foul system will collect the discharge from all properties before connecting into an existing public combined chamber on site via a short section of new combined sewer, where the restricted SW also joins. There are elements of sewerage within private gardens which are to be adopted, and will be under the maintenance responsibilities of United Utilities, for which a legal easement is applied.

The surface water from each property is collected by peripheral drains and a main private surface water network which collects run off from RWPs, gullies and channel drains. The SW is then controlled on site via a HydroBrake flow control, discharging at a maximum pass forward flow of 5l/s. There are oversized tank sewers and attenuation crates within the site to provide sufficient attenuation. With the exception of the oversized adoptable sewers, all other plot drains and the attenuation tanks are and will remain private and are not to be adopted, responsibility and ownership falls under the landowner, and will be maintained by them, or an appointed maintenance team.

There is a small network of highway drainage within Downley Drive, which is to be adopted by MCC highways department under a Section 38 agreement, which discharges at 5l/s from a flow control into the combined sewer, via a new saddle connection. This will all be under the maintenance responsibility of MCC highways.

The site owner/ management team is responsible for the maintenance of all drainage on site, with the governance of United Utilities only taking maintenance responsibilities for the adoptable drainage. The surface water attenuation tank will also come under the maintenance of the site owner.

The private drainage systems (including attenuation tank and the existing ponds) will be maintained by a private management company appointed by the landowner who will be responsible of the regular maintenance and upkeep of all areas which could affect the drainage systems.

The systems have been designed to remain self-cleansing, however, silt and debris may accumulate within the system over time. The system will be inspected and cleansed prior to Practical Completion and handover, following which the following schedule will be adopted. A further inspection will be carried out at the end of the 12-month contractual Maintenance Period.

Action	Frequency
GENERAL	
Clear external areas of litter	Monthly
Clear gutters, gullies and drainage channels of leaves and debris	Twice yearly, Spring & Autumn
Inspect inspection chambers and manholes for build-up of debris & potential blockages, jet and clear where required	Six monthly.
Inspect flow control chamber (prior to probation period with UU) **and private attenuation tank** for potential build up of silt/ debris, and jet clear where required. Ensure all parts, inlet/outlet pipes are operating correctly, and repair if needed.	Monthly for first three months, then six monthly.
Check existing ponds for litter and debris, remove and clear where required.	Twice yearly, Spring & Autumn

Avoid use of weedkillers and pesticides to prevent chemical pollution.

Avoid de-icing agents wherever possible to allow bio-remediation of pollutants.

24 months after Practical Completion, the Maintenance Schedule will be reviewed and adjusted as necessary in the light of experience over the previous two years.

Carley Daines And Partners Limited – March 2024.