

1. Underground Drainage Strategy

1.1. Foul Drainage

- 1.1.1. The underground drainage is a gravity system discharging to a public sewer under Blyth Road.
- 1.1.2. Collector drains run along the front and rear elevations. The rear collector drain flows to a drain under the building that picks up the front drain and discharges to the demarcation manhole.
- 1.1.3. The connection to the foul sewer is through an existing demarcation manhole reusing the existing lateral drain.

1.2. Surface Water

- 1.2.1. Surface water falling within the site onto roofs and hard surfaces is collected in drains running along the front and rear elevations and discharges to manifold manholes that connect to off-site attenuation storage.
- 1.2.2. The drainage system collects water from an adjacent area of hard standing off-site and an area of car park lay-bye.
- 1.2.3. The off-site attenuation tank is designed to attenuate flows from the site to a limit of the 1 in 1 year flow from the pre-existing hard areas of the site for storm events with a return period up to 100 years with an allowance for climate change.
- 1.2.4. The off-site attenuation tank discharges to a manhole with a flow limiter also off-site and from there to public sewers in Blyth Road

1.3. SuDS

- 1.3.1. There are no SuDS elements on site.

2. Maintenance of On Site Drainage

2.1. General

- 2.1.1. Drainage systems require maintenance to avoid failure.
- 2.1.2. If not maintained the drainage may become blocked and the water may flood causing damage to property. If the foul water system surcharges a health hazard is likely.

2.2. Routine inspection and maintenance

- 2.2.1. The routine maintenance is shown in the following table.
- 2.2.2. If a drain becomes blocked, then it must be cleared by use of water jetting.

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2.3. Health and Safety

- 2.4. Manhole lifting rigs should be used to lift heavy duty manholes
- 2.5. Plastic manhole covers must be screwed down again after being opened
- 2.6. All operatives must be warned of the Bio-Hazard from foul water.
- 2.7. Foul and Surface water may be infected with Leptospirosis (Weil's Disease) and all operatives should be advised of the potential symptoms, and that if not treated permanent damage to health may occur.
- 2.8. No entry to any confined space should be undertaken without the appropriate precautions.

Drainage Maintenance			
Ref.	Item	Required Action	Recommended Frequency
a)	Silt Pit Manholes	Inspect, and empty if required	6 Monthly
b)	Road Gullies	Inspect, and empty if required	6 Monthly
c)	Yard Gullies and Linear Drain Sumps	Inspect and empty if required	Annually
d)	Gratings and Manhole Covers	Check for loose or missing gratings and secure or replace.	Monthly checks, replace ASAP.
e)	Manholes	Visual inspection.	Bi-Annually
f)	Blocked Drains	Clear by jetting	As and when required
g)	Pollution incidents.	In the event of harmful liquids leaking into the Surface Water System; the two manifold manholes should be temporarily blocked until all the spilled pollutant is removed from site. If necessary liaise with the maintainers of the offsite attenuation tank, if flushing contaminated water is required	As and when required.

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