

7512 – Kenmore Drive, Cleckheaton

1 Drainage - Operations and Management Plan

1.1 General

- 1.1.1 The underground surface water drainage within the site boundary will be maintained by the landowners. All proprietary systems will be maintained in accordance with manufacturer's recommendations. The current recommendations, where appropriate, are included below. However, the guidance provided below should be reviewed as and when manufacturer's guidance is updated. All installation and maintenance guides for proprietary systems will be retained on the premises in the Health & Safety file.
- 1.1.2 In addition to the following guidance on the underground drainage system, the above ground roof rainwater drainage system should be maintained strictly in accordance with the designer's guidance to ensure that roof run-off is conveyed in to the underground system as intended.

1.2 Gullies

- 1.2.1 Road gullies draining the site hard standings should be inspected regularly to ensure that they continue to operate effectively, and are free from damage and blockage by debris or solid objects.
- 1.2.2 Gullies should be cleaned at least once a year, and incorporated into a planned maintenance schedule.
- 1.2.3 Any debris or blockages near to the surface of the gully should be removed by hand or by jet-vac. The trap element of the gully can be cleaned through the use of a high-pressure hose.
- 1.2.4 The seating areas for grates should be cleaned before they are replaced. If grates are allowed to move within their frame, this may cause damage to the frame or seating.

1.3 Drainage channels / Kerb Drains

- 1.3.1 Drainage channels and kerb drains should be inspected regularly to ensure that the system continues to operate effectively, and is free from damage and blockage by debris or solid objects.
- 1.3.2 The system should be cleaned at least once a year, and incorporated into a planned maintenance schedule.
- 1.3.3 Channel units and kerb drains can be cleaned through the use of a high-pressure hose. This can be fed into the channel system through access units which are strategically placed along the channel run.
- 1.3.4 The throat section of channel units should be kept clear at all times to ensure uninterrupted flow of surface liquids into the drainage channel. Any debris within the throat should be removed.
- 1.3.5 The seating areas for covers and grates should be cleaned before they are replaced. The covers and grates should be locked into position to prevent these being removed, stolen or dislodged by traffic. 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 grates/ covers are allowed to move within their frame, this may cause damage to the frame or seating.

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1.4 Pipes and manholes

- 1.4.1 Manholes are to be inspected annually for signs of blockage, with pipes jet washed and CCTV inspections carried out to the pipelines as appropriate should a blockage occur.

1.5 Petrol Interceptors

- 1.5.1 Interceptors will be installed with individual alarms, which are activated when 90% of the oil storage volume of the interceptor has been reached. This notifies the occupant that the unit is required to be emptied. Should the interceptor fail to be emptied at this time, excessive oil could pass through the interceptor, thus polluting the downstream environment.
- 1.5.2 The interceptor should be serviced in accordance with the manufacturer's recommended service interval in order to ensure proper operation of the equipment. This should be done routinely without waiting for the alarm to sound. The on-going functional assessment of the unit and oil alarm systems is fundamental if pollution incidents are to be avoided.
- 1.5.3 The removal of sediment and retained oil/grease should be carried out by a contractor holding the relevant permits to transport and dispose of such waste.
- 1.5.4 Contaminated surface water can contain substances harmful to human health. Any person carrying out maintenance on the equipment should wear suitable protective clothing, including gloves. Good hygiene practice should also be observed.

1.6 Filter Drains

- 1.6.1 Filter drains are to be inspected regularly for weeds and growth of any other vegetation. Removal should be carried out by hand pulling or spot treating individual weed growth using non-toxic and biodegradable weed killer and ensuring it does not enter filter drain.
- 1.6.2 Regularly inspect the filter drain to check for siltation at surface. Where siltation at the surface has occurred; remove surface stone layer and separating geotextile that protects the stone drain below. Replace geotextile and top stone layer.
- 1.6.3 Where there is no protective geotextile; remove all stone and perforated pipe, replace as original spec. and include separating geotextile as above.

1.7 Surface Water Attenuation / Infiltration Tank

- 1.7.1 The first inspection of the tanks should be carried out 12 months after the product has been installed.
- 1.7.2 Over a period of time all attenuation / infiltration tanks will have a very gradual build-up of silt, the level of build-up needs to be monitored and from this information the frequency of inspection can be decided.
- 1.7.3 A gully sucker can be used to remove any silt build up or this can be done manually. The tank inspection needs to be carried out by someone who has successfully completed a confined space training course.

1.8 General Guidance

- 1.8.1 Contaminated surface water can contain substances harmful to human health. Any person carrying out maintenance on equipment which could potentially contain contaminated water should wear suitable protective clothing, including gloves. Good hygiene practice should also be observed.
- 1.8.2 When covers are removed precautions should be taken against personnel falling into the unit.

- 1.8.3 The working area should be adequately lit and the inspector should be familiar with the area and access points
- 1.8.4 Correct posture should be maintained, particularly when lifting. Appropriate lifting equipment should be used when necessary. Proper footing and balance should be maintained at all times, taking care to avoid any sharp edges.