

9. ENVIRONMENTAL RISK ASSESSMENT

An environmental risk assessment has been undertaken for the proposed works under this application which is detailed in **Table 9.2**.

The risk matrix shown in **Table 9.1** has been used in the risk assessment.

TABLE 9.1 RISK MATRIX

Risk Matrix		Severity (Consequence)		
		High	Medium	Low
Likelihood (Probability of exposure)	High	High	High	Medium
	Medium	High	Medium	Low
	Low	Medium	Low	Low

The definitions of severity and likelihood are as follows.

Likelihood:

- Low – An incident that is highly unlikely to occur without mitigation.
- Medium – A reasonably likely incident without mitigation.
- High – An incident that is highly likely to occur without mitigation.

Severity:

- Low – An incident that would have a negligible impact on receptors.
- Medium – An incident that would have a moderate impact on receptors.
- High – An incident that would have a significant impact on human health or the environment.

TABLE 9.2 ENVIRONMENTAL RISK ASSESSMENT

Hazard	Operation scenario	Receptor	Pathway	Risk management techniques	Probability of exposure	Consequence	Overall Risk
Emissions to air (NO _x , CO, particulates)	Daily operation of the two gas boilers.	Facility workers and nearby non-residential workers.	Dispersion through the air.	Emissions from boiler stacks are monitored when the boilers undergo maintenance.	Medium	Low	Low
Emissions to water	Accidental from waste oil spills or leaks during waste transfer to/from ship.	Mersey Docks approximately 100 m northwest of the Site.	Potential release to water through failure of tank (on ship), hose leak or overfill.	Waste oil is classed as non-hazardous waste. The following activities and techniques are carried out to reduce the risk of loss of containment and minimise impact: Pipeline and hose inspections are carried out regularly. Quantity checks are carried out for each transfer, There is continuous supervision of each waste transfer. Site storage tanks are positioned within a bund. There is a high level brick wall along the site boundary, between the terminal site and Mersey Docks/River Mersey. Site operator maintains direct contact with the ship during transfers in case operations need to be halted. For any emergency spills in the river, cease transfer and contact the harbour port authority immediately.	Low	Medium	Low

Hazard	Operation scenario	Receptor	Pathway	Risk management techniques	Probability of exposure	Consequence	Overall Risk
Emissions to water	Accidental from waste oil spills or leaks during waste transfer to/from ship.	Liverpool Bay Special Protection Area approximately 0.8 km east of the Site.	Potential release to water (via Mersey Docks) through failure of tank (on ship), hose leak or overfill.	As above, plus Harbour Port Authority oil spill response	Low	Medium	Low
Emissions to sewer	Effluent discharge to sewer	Waste water treatment plant (WWTP)	Potentially contaminated release to sewer drains through manually operated valve.	Waste oil is classed as non-hazardous waste. Bunds are checked daily, and rainwater is drained manually after checking for contamination. The operator checks condition of wastewater before emptying to sewer (i.e. that it is not contaminated and is just rainwater). Effluent released to sewer is monitored and tested monthly by UU to ensure TEC conditions are met and there are no exceedances in tested analytes.	Low	Low	Low

Hazard	Operation scenario	Receptor	Pathway	Risk management techniques	Probability of exposure	Consequence	Overall Risk
Emissions to sewer	Accidental from waste oil spills outside of transfer/offloading bays	Waste water treatment plant (WWTP)	Potentially contaminated run-off from hard standing to the sewer via surface water drains, and/or following a direct spill onto land through catastrophic failure of tank, pipework, valve, overfill or bund failure.	Waste oil is classed as non-hazardous. Oil is stored within fixed tanks which sit within a bunded area. Offloading bay slopes towards drainage channel to effluent pit/interceptor. Effluent passes through interceptors prior to release to sewer. Tank/pipe failure in these areas will be captured by mentioned control measures. . In the instance of a spill, the Site is equipped with an emergency plan which will be followed.	Low	Medium	Low

Hazard	Operation scenario	Receptor	Pathway	Risk management techniques	Probability of exposure	Consequence	Overall Risk
Emissions to land and groundwater	Accidental from waste oil spills outside of transfer/offloading bays	Land in/around the Site	Potentially contaminated run-off from hard standing to land and/or groundwater beyond the terminal boundary following a direct spill onto land through catastrophic failure of tank, pipework, valve, overflow or bund failure.	Waste oil is classed as non-hazardous waste. Site is finished with concrete hardstanding and asphalt roadways which are kept in good condition. Tertiary containment would be provided by the hardstanding/roadways around site which are kerbed and provide additional containment. Additionally, the Site has a steel post and reinforced concrete panel boundary on three side of the facility, and one high level brick wall. In the instance of a spill, the Site is equipped with an emergency plan which will be followed. This includes external contacts in the case spills travel beyond the confines of the terminal.	Low	Medium	Low
Odour (Waste storage)	Odour from waste oil, storage tank vents - daily	Facility workers and nearby non-residential workers, local businesses	Tank vent releases, dispersion through air.	Oil is stored within fixed storage tanks, which are regularly inspected and maintained. Tanks are fitted with vents, however waste oil has low vapour pressure, resulting in minimal tank vent emissions being released.	Low	Low	Low

Hazard	Operation scenario	Receptor	Pathway	Risk management techniques	Probability of exposure	Consequence	Overall Risk
Odour (Waste storage)	Accidental	Facility workers and nearby non-residential workers, local businesses	Direct spill through failure of tank/ pipework resulting in airborne waste odour emissions.	Oil is stored within fixed storage tanks, which are regularly inspected and maintained. Spilled waste within bund or offloading area will be captured within drainage system.	Low	Low	Low
Noise and Vibration	None identified.						
Litter / Pests	None identified.						
Visible emissions	None identified.						
Surface water flooding from weather event	Not operational. Uncontrolled external scenario	The whole Chane facility	High rainfall, flooding from Mersey River	Site is located in Flood Zone 1 – low risk of flooding. Site boundary is fenced. Steel post and reinforced concrete panel boundary, which will reduce water ingress from off-site.	Low	Low	Low