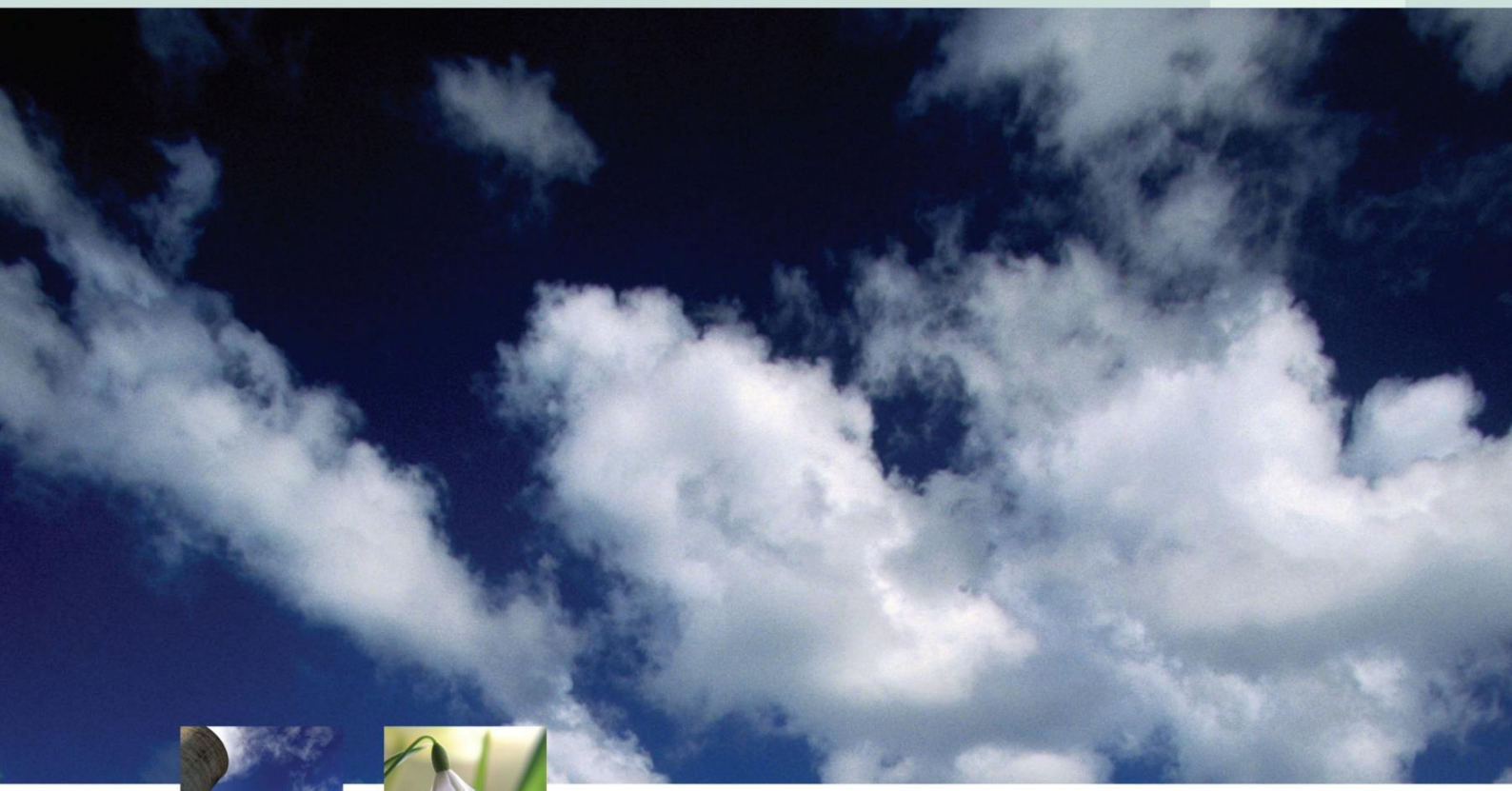

ENVIRONMENTAL RISK ASSESSMENT

GED Environmental Services
Heysham Hazardous Waste Transfer Station

Prepared for:
GED Environmental Services

Date:
October 2021

Project Issue Number:
SOL1812GED01

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1. INTRODUCTION

As part of an application for an environmental permit Operators must assess the risk to the environment and human health from the activities they seek to permit. This Environmental Risk Assessment has been undertaken in accordance with the online Environment Agency Guidance for undertaking environmental risk assessments. Environmental risks relevant to the activities proposed at the Hazardous Waste Transfer Facility are:

- Emissions to Air;
- Emissions to Water;
- Emissions to Land;
- Odour;
- Noise;
- Fugitive emissions; and
- Accidents.

For each of the above environmental criteria the approach to the assessment has followed the following six stage process:

- Identify the risks;
- Identify the receptors:
- Identify the possible pathways from the sources of the risks to the receptors:
- Assess the risks (assuming those control measures proposed are in place);
- Choose appropriate further measures to control these (if required); and
- Present the assessment.

In completing the assessment prevention and control measures proposed by GED Environmental Services are assumed to be in place. Where relevant details of these measures are identified within the assessment.

2. SENSITIVE RECEPTORS

The below table identifies the nearest human and ecological receptors that are potentially at risk from site.

Table 1: Location of Sensitive Receptors

ID	Receptor	Type
R1	Field Road Industrial Park	Industrial
R2	Morecambe Bay SSSI/Ramsar/SAC	Habitat
R3	Ferry Terminal	Commercial

R4	Heysham Nature Reserve	Habitat and leisure
R5	Ferry Port	Commercial
R6	Heysham Nuclear Power Plant	Industrial
R7	Heysham Golf Club	Leisure
R8	Penrod Way Industrial Park	Industrial
R9	Heysham Town	Residential/urban
R10	Trumacar School	School

Details relating to the groundwater and geology beneath the site are detailed within the Site Condition Report.

Please refer to the plan below which shows the location of the aforementioned receptors.

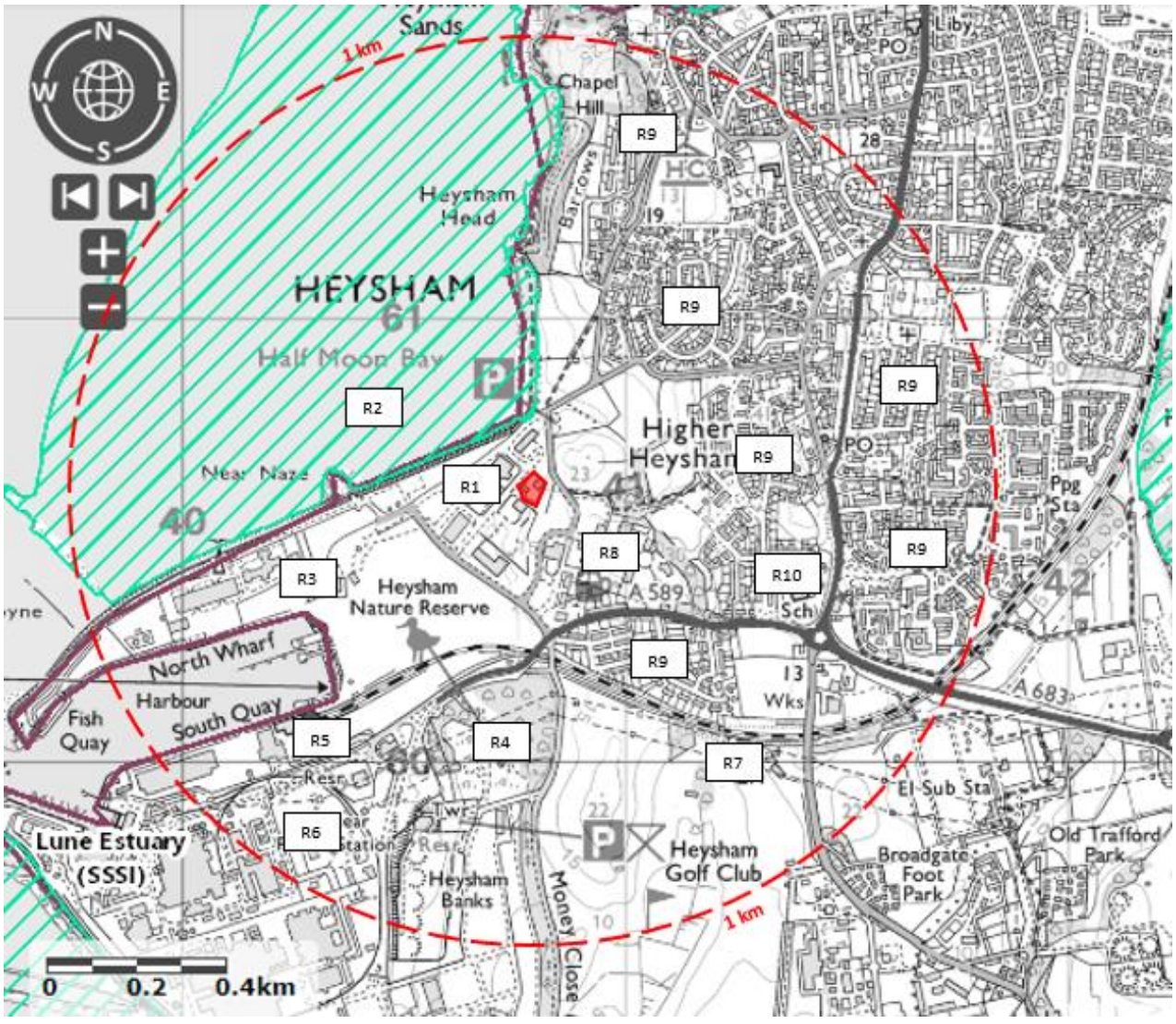

Figure 1: Site Receptor Plan (OS license Ref: 100062750)

Table 1: Environmental Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Point Source \ Releases to Air	Atmosphere	Airborne	• There are no point source emissions to air proposed at the site. • There is no treatment of wastes onsite other than bulking activities prior to onward transfer. • It is acknowledged that fugitive emissions of VOCs may be released onsite due to the nature of the waste materials (namely waste oils) – all VOCs will be captured through the use of local carbon Pack Filters fitted to tank vents. • These are discussed in Table 4 below.	Low: offsite receptor impacts	Air Pollution	LOW due to the proposed processes on site
Emissions to Water	Groundwater / Geology / Surface Water	Waterborne	• There will be no direct process emissions to controlled water arising from the Installation. • The entire site is constructed on sealed concrete hardstanding with a sealed drainage system. • The sites tanks are located within a concrete bund with a blind sump. All filling / discharge points are also located within the bund. • Each yard area of site has a dedicated drainage system discharging via interceptor to foul sewer under Trade Effluent Consent. • The sites tanks are fitted with level gauges and alarms • All offloading / loading activities are supervised by the Site Manager; • All infrastructure including hardstanding, tanks and bunds and containers are inspected on a daily basis for signs of damage / deterioration. • In the event of a fire, all drainage systems can be isolated, and all potentially contaminated fire water	Low: all runoff is controlled on site, therefore the probability of exposure is low.	Contamination	VERY LOW due to the proposed management techniques and drainage arrangements

			will be contained onsite. All fire water will then be tankered away to a suitable water treatment facility.			
Emissions to Land	Groundwater / Geology	Spills / Leaks	• There will be no emissions to land arising from the proposed facility. • The entire site is covered by good quality re-enforced impermeable concrete hardstanding; • Spill kits will be strategically located around site. • Minor spills to be cleaned up immediately, using spill kits. Resultant materials to be placed in container for off-site disposal to appropriate facility, if necessary. • Immediate action to be taken in event of any major spills. Spillage to be cleared immediately and placed in containers for offsite disposal. The EA to be informed.	Low: spills / leaks could potentially contaminate the ground / groundwater underneath the site.	Contamination	VERY LOW due to the proposed risk management techniques

Table 2: Odour Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Odour from receipt and transfer of odorous material	Local residents (nearest residential receptors approx.240 m south on Rothesay Road)	Airborne	• Stringent pre-acceptance, acceptance and rejection procedures will be in place to prevent any excessively malodourous materials ever arriving onsite. • All storage of waste onsite is within enclosed containers, namely sealed IBC's, lidded drums or tanks. • The sites tanks are fitted with vacuum vents and [carbon pack] adsorption abatement. • Transfer systems including valves and pipework are sealed to prevent emissions during delivery and collection of wastes. • Monitoring of odour will be included within the daily perimeter walk around. Any issues will be recorded and enacted upon according to site procedures. • Any complaints will be recorded and enacted upon according to the site management complaints procedure.	Moderate: odorous material is accepted at the site	Nuisance	**Low –** due to the proposed management techniques

Table 3: Noise Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Noise from HGV movements during delivery / collection	Local Residents	Airborne	• There are no processing operations onsite. • Delivery / collections are to be restricted to daytime hours only. No deliveries shall take place on Sundays or bank holidays. • An earthen bund along the sites eastern boundary provides some noise attenuation between the site and the town of Heysham. • The facility will not give rise to reasonable cause for annoyance. • Any complaints will be recorded and enacted upon according to the site management complaints procedure.	Low: due to proximity of closest receptors	Nuisance	**Very Low –** due to the proposed management techniques

Table 4: Fugitive Emissions Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
VOC emissions from storage and transfer of waste oils	Atmosphere	Airborne	• The tanks onsite are fitted with pressure / vacuum vents to minimise breathing losses of VOC's during storage. • In addition, activated carbon adsorption abatement is fitted to the tank vents. • Tanks are painted white in order to minimise warming of bulk liquid wastes and therefore minimise VOC volatilisation. • All drums and IBCs onsite are lidded and sealed. • All transfer systems for offloading / loading of liquid wastes are sealed. • Vapour balance lines are used during offloading / loading of liquid wastes; • All unloading / loading operations are overseen by the Site Manager. • Should the EA wish for annual fugitive emissions monitoring to be undertaken, this will be implemented via calculation on an annual basis where required.	Medium	Pollution	**Low –** due to the proposed management techniques
Leaks / spillages from waste storage / chemicals	Land, Groundwater & Surface Water	Waterborne	• The site is surfaced in impermeable concrete hardstanding with a sealed drainage system. • All waste storage and transfer arrangements are in line with BAT. • Surface water run-off from the external yard, reception area, car park and washing area is directed via the fall of the hardstanding into the sealed drainage system where it is discharged via four dedicated interceptors to foul sewer under Trade Effluent Consent. • The drainage system has the capability to be isolated in the event of any spillage.	Low	Contamination	**Very Low: –** due to the proposed management techniques

			• Tank storage onsite is within a bunded area, with water levels (from rainfall) checked on a daily basis during the site walkover inspection. • The tanks are fitted with automatic level gauges and are alarmed. • All tank filling points are within the bund. • The entire site is kerbed and contained through drainage gullies, providing tertiary containment to keep any spillages onsite. • Uncontaminated surface water run-off from the building roof is directed to the existing drainage system. • Spill kits will be strategically located around site. • Minor spills to be cleaned up immediately, using spill kits. Resultant materials to be placed in container for off-site disposal to appropriate facility, if necessary. • Immediate action to be taken in event of any major spills. Spillage to be cleared immediately and placed in containers for offsite disposal. EA to be informed.			
Dust	Local Residents	Airborne & inhalation	• Permitted waste types do not include dusts, powders or loose fibres, and it is highly unlikely that any transfer activities will produce dust. • Good housekeeping practices ensure cleanliness of site including potential dust issues.	Low: Low potential for dust generation	Harm to human respiratory health – irritation & illness	**Very Low: -** due to proposed management techniques
Litter	Local residents	Windblown	• The site access and external concrete hardstanding shall be swept as necessary. • Solid wastes are stored within containers (IBCs / drums). • Any waste generated onsite will be disposed of at the appropriate onsite location. • Good housekeeping practices will be in place onsite with daily visual inspections. • Daily site perimeter walk arounds will be undertaken and shall include monitoring for litter. Any litter or accumulated debris shall be dealt with immediately.	Low: Little potential for waste to be generated	Nuisance	**Very Low: –** due to the proposed management techniques

Pests	Local Residents	Airborne & via land migration	• Pests are not likely to become a problem on site. • No putrescible and biodegradable wastes are to be accepted onsite. • Monitoring for evidence of pests to be included during the daily site perimeter inspections. • However, if a problem does develop, reasonable measures will be taken to use commercially available products and services to control pests.	Low: the occurrence of pests on site is highly unlikely.	Nuisance	**VERY LOW** due to the proposed risk management techniques

Table 5: Accidents Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Fire	Emissions to atmosphere & firewater contamination of land, groundwater & surface water	Airborne, via land / water	• The site manages storage of the wastes, quarantine and procedures in the event of a fire. • Arson by intruders is unlikely and controlled via security. • The site is well lit and secured by a fence and padlocked gates. • The site is alarmed and has 24/7 CCTV which links to site management; • The site is subject to regular housekeeping practices; • A number of fire extinguishers are placed at strategic locations around the plant. • All waste is segregated to prevent mixing of incompatible substances; • The risk of damaged or exposed electrical cables is controlled via the regular inspection and maintenance programme. • Staff and visitors are only permitted to smoke within the designated smoking area outside the site boundary. • Firewater will be contained onsite through isolation of the drainage system.	Low: fire is considered unlikely	Nuisance, damage, contamination	VERY LOW due to the proposed risk management techniques
Operator Error	Air / land / water	Various dependant on the nature of the error	• Bulking activities and delivery of wastes carried out within the site are relatively simple. • All staff will be fully trained against the site operating procedures. • Unloading / loading activities are supervised at all times by the sites manager. • Training will include awareness raising of key parameters and the potential implications of failure	Low	Various dependant on the nature of the error	VERY LOW due to proposed management techniques

			to control operations as designed and the associated potential impact on the environment. • All incidents will be recorded and investigated appropriately according to the site incident procedure.			
Loss of containment of fuels / spillages etc.	Land / water	Site drainage system	• An emergency spillage management plan will be produced and will be incorporated within the EMS. • All bunds will be visually checked daily to ensure that they are empty. • All storage tanks constructed of suitable materials which are resistant to the vessel content. The vertical tanks are fitted with level gauges and alarmed. A maintenance programme will be established for the inspection of all storage tanks and bunds. • Potential release to groundwater would require simultaneous failure of the tank, its containment and the hardstanding at the site. • Waste deliveries will be overseen by a trained member of staff who will be responsible for checking that there is sufficient capacity in the storage vessel to receive the delivery. • Spill kits will be available to contain and clean up the spill. Site procedures will be in place to ensure that spill kit inventories are routinely checked and replacements ordered as required. • Spillages within the bunds will be pumped into IBC's and sent offsite for disposal. • All incidents will be recorded and investigated appropriately according to the site incident procedure.	Low	Contamination	VERY LOW due to proposed management techniques
Flood	Flood waters	Local residents & surface water	• The site is located within an area at low risk of flooding (< 0.1 % each year).	Low: flood risk is medium	Nuisance, contamination	VERY LOW due to the proposed risk

			• Nevertheless, flood warning sites relating to the coastline of Half Moon Bay will be monitored to allow preparations in the event of extreme weather. • This will include the procurement and placement of sand bags, barriers and preparation of waste storage areas.			management techniques
Vandalism	Operator	The site could be subject to intentional vandalism and damage by intruders / trespassers who could cause damage or harm to the site or cause fires.	• Site is secure and has perimeter fencing. • The site is alarmed and has CCTV in operation linked directly to the site managers phones. • Site access is via secure gates at the main entrance which will be locked out of normal operating hours. • Unauthorised access is prohibited onsite. • Fencing is inspected daily by operations staff to identify deterioration and damage and the need for repair. • Fencing is maintained and repaired to ensure its continued integrity. If damage is sustained, repair will be made within the same working day. If this is not possible, suitable measures will be taken to prevent unauthorised access to the site and permanent repairs will be affected as soon as is practicable.	Low: the occurrence of vandalism taking place on site is highly unlikely.	Nuisance, Damage or Fire	VERY LOW due to the proposed risk management techniques