



**ENVIRONMENTAL PERMIT VARIATION APPLICATION  
ENVIRONMENTAL AND ACCIDENT RISK ASSESSMENT**

**MYTUM AND SELBY WASTE RECYCLING  
MORLEY STREET  
HULL  
HU8 8DN**

**Document Reference: MS1037/07.R0  
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**Project Quality Assurance  
Information Sheet**

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**MYTUM AND SELBY WASTE RECYCLING LIMITED  
MORLEY STREET, HULL  
NORTH HUMBERSIDE  
HU8 8DN**

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## 1.0 INTRODUCTION

### 1.1 Scope

1.1.1 This document presents an assessment of the risks to the environment and amenity posed by the operational changes proposed at the Waste Recycling Facility, located at Morley street, Hull. These operational changes include principally seek to increase in the hazardous waste treatment and storage capacities at the site (including clinical waste treatment)

1.1.2 This risk assessment has been undertaken in accordance with the Environment Agency (EA) Guidance on 'Risk Assessments for your Environmental Permit'; published 1<sup>st</sup> February 2016 (last updated 21<sup>st</sup> November 2023).

### 1.2 Site Setting

#### Site Description

1.2.1 Mytum and Selby's Waste Recycling Facility is located on industrial land off Morley Street, Hull, North Humberside, HU8 8DL. The National Grid Reference (NGR) for the site is TA100309.

1.2.2 The facility lies within an industrial estate and is surrounded by commercial and industrial properties. Hull railway line is located ~10m to the south of the site boundary and runs east to west. Beyond the railway line Triumph Fabrics is located ~160m, Donalston Filtration Limited is located ~185m south of the site and Premier Galvanizing Limited is located ~190m south of the site.

1.2.3 The A1165, Stoneferry Road, which runs north to south is located directly to the east of the site boundary. Beyond Stoneferry Road, Bush Tyres is located ~60m to the east of the site and MKM Building Supplies is located ~225m to the north east of the site boundary.

1.2.4 The city of Hull is situated approximately 1.9km to the south west. There is a Grade 2 listed building (the River Hull Railway Bridge and operating cabin, built in c.1885) located 20m to the west of the site boundary and another located 70m north east (the Isis Oil Mill Silo, built in 1912, which is currently undergoing demolition).

1.2.5 The closest residential properties to the facility (the Environmental Permit Boundary) lie ~70m to the east of the site. These are the closest residential receptors. Another residential area lies ~300m north-east of the site boundary.

1.2.6 The site does not lie within 1km of a European Site, Ramsar Site or Site of Special Scientific Interest (SSSI).

1.2.7 The site is located within a Nitrate Vulnerable Zone (NVZ). It also lies within the Hull Air Quality Management Area (AQMA); with the only declared pollutant being Nitrogen Dioxide (NO<sub>2</sub>).

#### Geology

1.3 Information on the published geology of the site area has been collated from the British Geological Survey (BGS) 1:50,000 scale map.

1.3.1 Regional geology records show the site is underlain by Quaternary Tidal Flat Deposits which comprise unconsolidated sediment of predominantly mud and sand.

- 1.3.2 The Tidal Flat Deposits are situated upon the Burnham Chalk Formation which is characterised as white, thinly-bedded chalk with common tabular and discontinuous flint bands and sporadic marl seams. The lower boundary is at a marked change from massive, rubbly-weathering chalks below, to harder, thinly bedded or nodular chalk above. The upper boundary is the top of the highest flint band in the thick, flint-rich unit of chalk (Burnham Formation), succeeded by flint-free chalks (Flamborough Formation).
- 1.3.3 BGS borehole logs located within the vicinity of the site indicate that locally the site underlain by mottled silty clay and soft dark grey silt which transitions into dark brown boulder clay at around 7.3m depth. Logs show that compact chalk is recorded at a depths of approximately 15 to 18m.

#### Hydrogeology

- 1.3.4 The Burnham Chalk Formation bedrock is designated as a Principal Bedrock Aquifer.
- 1.3.5 The site does not lie within a groundwater vulnerable zone. The site does lie within a Nitrate Vulnerable Zone (NVZ). The site is also located within a Zone 3 (total catchment) Source Protection Zone (SPZ).

#### Hydrology

- 1.3.6 The River Hull is located ~20m directly to the west of the site. The river flows southwards parallel to the site towards Kingston upon Hull where it reaches its confluence with the Humber Estuary.
- 1.3.7 The river and its banks are designated as a Local Wildlife Site and migratory routes for a variety of protected species including: Smelt, European Eel, Atlantic Salmon, Twaite Shad, River Lamprey and Sea Lamprey.
- 1.3.8 The section of the River Hull located within the vicinity of the site comprises the Humber Middle water body which is classified by the Environment Agency Catchment Classification data (Cycle 3; 2019) as having "Moderate Ecological Status". It is stated to have a "Fail" for overall chemical status. The proposed site operations are unlikely to exacerbate the current ecological status of the River Hull.
- 1.3.9 According to the Environment Agency the site is at low risk of flooding from rivers or sea with a chance of flooding of between 0.1% and 1% each year. This has been calculated by considering the existing flood defences along the banks of the river. For there is also a low risk of flooding from surface waters with a 0.1% to 1% chance of flooding each year.

### **1.4 Potential Sensitive Receptors**

- 1.4.1 **Table EARA1** summarises the potential sensitive receptors that have been identified through a desk top study of the locality and the corresponding minimum distance from the proposed permit boundary of the waste recycling facility. The locations of the receptors are shown in **Drawing No.: MS1037/08/05**.

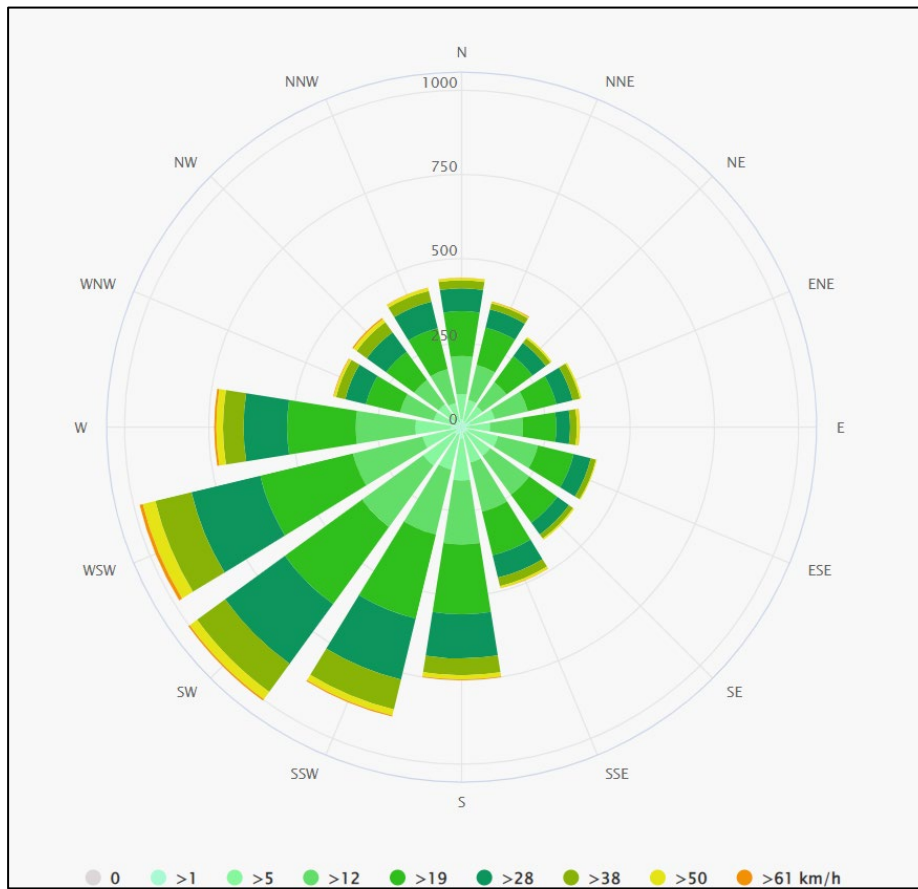
**Table EARA1: Identified Potential Sensitive Receptors within 1km of Hull Waste Recycling Facility.**

Ref	Receptor Name	Receptor Type	Approximate distance from the operational area	Direction from proposed facility
R1	Principle Bedrock Aquifer - Burnham Chalk Formation	Groundwater	0m	All directions
R2	River Hull	Local Wildlife Site (LWS) and migratory route for a number of protected species.	20-80m	E & N
R3	Hull Railway Line	Railway	10m	S
R4	Wilmington Industrial Premises	Commercial / Industrial	35 - 825m	S & SE
R5	A1165 (Stoneferry Road)	Highway	40 - 550m	E, S & N
R6	Bank Side Industrial Premises (West)	Commercial / Industrial	40 - 850m	N, NE & W
R7	Industrial Premises East of Stoneferry Road	Commercial / Industrial	60m	E
R8	Residential Properties associated with Woodhall Street	Residential	70m	E
R9	Clough Road	Highway	330m	N
R10	Industrial Premises North of Clough Road	Commercial / Industrial	415 – 785m	NW
R11	Residential Properties associated with Mayville Avenue & Lorraine Street	Residential	310m	NE
R12	Stoneferry Residential Area	Residential	500m	W
R13	Residential Properties associated with Foredyke Avenue & Glebe Road	Residential	640m	NE
R14	Sculcoates Industrial Premises	Commercial / Industrial	630m	W, WSW & S
R15	Sculcoates Residential Area	Residential	780m	W
R16	Industrial Premises off Howells Road and Leads Road	Commercial / Industrial	830m	NE

### Meteorological Conditions

- 1.4.2 The local wind speed and direction data has been obtained from the Meteoblue Meteorological Website for Hull. The wind rose, as shown by **Figure EARA1** shows the percentage of wind vector that could be generated in each of the 16 points of a compass.
- 1.4.3 The wind rose indicates that the predominant wind directions are from the south western quadrants. It can be observed from **Figure EARA1** that the prevailing wind is from the south west.

**Figure EARA1: Wind Rose for Hull (Source: Meteoblue)**



## 1.5 Risk Assessment

### Risk Assessment Criteria

1.5.1 The risk assessment will be prepared using the widely accepted source-pathway-receptor methodology, and is the preferred method specified in the EA guidance. Where any complete source-pathway-receptor linkage exists, the magnitude of any such risk is qualified by the probability and consequence of any such risk occurring. The criteria to be adopted for the risk assessment are present in **Table EARA2**.

**Table EARA2: Risk Assessment Criteria**

Probability ⇄ Consequence ↓	Very Low	Low	Moderate	High
Very Low	Negligible	Very Low	Low	Low-Moderate
Low	Very Low	Low	Low-Moderate	Moderate
Moderate	Low	Low-Moderate	Moderate	High
High	Low-Moderate	Moderate	High	Very high

1.5.2 An environmental and accident risk assessment for the waste operations is presented in **Appendix EARA1**. The assessment covers the following potential risks;

- Fugitive emissions to air (dust and particulates);
- Odour;
- Litter;
- Mud and Debris on the road;
- Scavenging Birds, Vermin and Insects;
- Noise & Vibration;
- Fugitive emissions to water;
- Accidents; and
- Abnormal conditions.





# DRAWINGS



## APPENDICES



## APPENDIX 1

# Environmental and Accident Risk Assessment Matrix

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<i>What is the agent or process with potential to cause harm?</i>	<i>What are the harmful consequences if things go wrong?</i>	<i>How might the receptor come into contact with the source?</i>	<i>What is at risk? What do I wish to protect?</i>	<i>How likely is this contact?</i>	<i>How severe will the consequences be if this occurs?</i>	<i>What is the overall magnitude of the risk?</i>	<i>On what did I base my judgement?</i>	<i>How can I best manage the risk to reduce the magnitude?</i>	<i>What is the magnitude of the risk after management?</i>
<b>Dust/Particulates</b>									
Particulate matter and dusts from delivery vehicles, handling and unloading wastes/materials, including trafficked mud and debris, dust from waste storage and treatment.	Harm to human health - respiratory irritation and illness.	Air transport, deposition then inhalation.	Local human population	Very Low	High	<b>Low – Moderate</b>	The nearest human receptors (industrial premises) are located ~35m to the south of the site and nearest residential properties are located ~70m east away from the site. Prevailing wind direction is from the southwest thus unlikely to adversely be affected by dust emissions.	All treatment, transfer and storage of hazardous wastes will be undertaken internally. Any components such as metals / plastic containers removed as part of waste processing will be stored externally in a skip as appropriate prior to further treatment or removal offsite.  All loads will arrive at site in covered or enclosed vehicles/containers.	Very Low
	Nuisance - dust on property, clothing etc.	Air transport then deposition	Local human population	Very Low	Moderate	<b>Low</b>	The waste types to be treated are not dusty in nature and treatment process lines will be entirely contained thus reducing the likelihood of fugitive dust generation.	Frequent visual monitoring to be undertaken by trained operatives and daily by the TCM (or nominated deputy) to identify any potential dust generated as a consequence of the waste operations.  Mechanical sweepers and/or water sprays (bowser), will be utilised where required to manage mud and debris across external areas and to dampen dry surfaces to reduce dust emissions.	Very Low
	Smothering of habitats and crops	Air transport then deposition	Local wildlife habitats/species	Very Low	Moderate	<b>Low - Moderate</b>	The waste types to be treated are not dusty in nature and treatment process lines will be entirely contained thus reducing the likelihood of fugitive dust generation.	All hazardous waste treatment processes will be sealed processes with conveyors being enclosed thus preventing the potential escape of fugitive dust emissions.	Very Low
<b>Odours</b>									
Fugitive odours from delivery and dispatch of wastes/materials  Fugitive odours from waste unloading, handling and treatment of waste.  Fugitive odour emissions from waste storage  Fugitive odour release during an abnormal event such as a spill or leak	Nuisance, loss of amenity	Air transport then inhalation.	Local human population	Low	Moderate	<b>Moderate</b>	The nearest human receptors (industrial premises) are located ~35m to the south of the site and nearest residential properties are located ~70m east away from the site. Prevailing wind direction is from the southwest thus unlikely to adversely be affected by odour emissions.  All hazardous waste treatment activities are carried out internally.  All clinical waste are handling internally.	All incoming wastes will be delivered to site in a range of sealed packaging or containers  All treatment, transfer and storage of potentially odorous wastes (e.g. clinical wastes) will be undertaken internally.  All doors and shutters of the waste treatment buildings will be closed when not in use.  Stock will be rotated on a first in, first out basis where possible.  Incoming loads of waste will be visually checked at either the site entrance or during off-loading in the waste recycling area. Any identified malodorous wastes will be rejected or stored in enclosed receptacles in the quarantine area.  The site will operate with cognisance to an approved Odour Management Plan (OMP) to reduce the risk of emissions. All waste treatment and transfer operations will be conducted with reference to an approved OMP.  Daily inspection of the site for odours will be performed as part of the management procedures.  Daily inspection drainage channels and sump will be carried out by trained site personnel.  Regular emptying of drainage channels and sumps as necessary and cleaning where required.  Good housekeeping measures will be employed on site to ensure cleanliness and reduce the potential for odours to build up. All operational areas of the site will undergo a weekly clean-down by site operatives and equipment can be cleaned by hot high-pressure wash.  Any complaints received will be managed in accordance with the approved site OMP.	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Litter</b>									
Litter from waste delivery vehicles  Litter from waste stored on site  Litter from the welfare and office facilities	Nuisance, loss of amenity, road traffic accidents and harm to animal health	Vehicles entering and leaving site.  Air transport and then deposition	Local human population, livestock and wildlife. Local road users.  (All Receptors)	Moderate	Moderate	<b>Moderate</b>	The nearest human receptors (industrial premises) are located ~35m to the south of the site and nearest residential properties are located ~70m east away from the site.	All treatment, transfer and storage of hazardous wastes will be undertaken internally.  All loads will be sheeted or kept in enclosed containers where appropriate, whilst in transit.  Treated wastes will be stored internally, except for segregated components e.g. metals / plastics which will be stored within a skip externally.  Site surrounded by continuous fencing to stop windblown fractions escaping the site boundary.  Non-conforming wastes will be hand or mechanically extracted and stored within an enclosed receptacle.  Strict compliance with waste acceptance procedures will be required at all times.  Good housekeeping will be promoted in order to keep storage areas, treatment areas and haul roads as clean as possible.  Daily inspection of the site for windblown fraction will be performed.  Remedial action such as litter picking will be carried out if considered necessary.	Low
<b>Mud and Debris</b>									
Waste debris and mud on local roads  Tracking of mud and debris onto public roads causing accident, hazards and nuisance to road users.	Nuisance, loss of amenity, road traffic accidents and harm to animal health	Vehicles entering and leaving site.	Local human population, livestock and wildlife. Road users  (All Receptors)	Moderate	Moderate	<b>Moderate</b>	Public highways sensitive to trafficking of mud and debris.  Nearest public highway located ~40m from the site boundary.	Entrance way and main site access roads are surfaced (tarmac or concrete), with the recycling areas and storage areas also surfaced in concrete, which will prevent the general and subsequent tracking of mud and debris.  No wastes are permitted to be deposited outside of the designated waste storage and treatment areas (i.e. on soft ground where mud could be trafficked).  All vehicles hauling waste and recycled products will be sheeted (or instructed to do so) or fully enclosed where appropriate to avoid the loss of waste/materials during transport.  Vehicles will be checked for mud and debris prior to being dispatched.  Wheel wash facilities are available on site prior to vehicles leaving the site.  All vehicles will be supervised during loading to ensure that vehicles are not overfilled.  A mechanical road sweeper will be deployed to the wider facility once a week or as necessary.  Daily inspection of the site for mud and debris will be performed as part of the management procedures.	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Scavengers, Insects and Other Pests</b>									
Scavenging animals and scavenging birds, Pests (e.g. flies) attracted to or infesting wastes	Harm to human health - from waste carried off site and faeces. Nuisance and loss of amenity.  Negative effects on habitats and crops	Air transport and over land.	Local human population, crops and local habitats.  (All receptors)	Moderate	Moderate	<b>Moderate</b>	No priority habitats or species with close proximity of the site at risk from scavengers.	The inspection of all wastes as they arrive on site will be used to identify wastes that are likely to attract scavengers, insect and other pests prior to off-loading and deposit.  Infested waste will be stored in quarantine pending transfer off site.  Any wastes i.e. some clinical wastes that may attract scavengers will be stored and processed internally.  Daily visual inspection will be carried out for evidence of scavengers accessing the site.  Litter picking will be undertaken daily.  First in, first out principles will be employed to prevent excessive waste storage timings.	
<b>Noise &amp; Vibration</b>									
Noise and vibration caused by engine noise and vibrations from site plant and equipment, lorry movements etc.	Nuisance, loss of amenity, loss of sleep or harm.	Noise through the air and vibration through the ground.	Local human population	Low	Moderate	<b>Low – Moderate</b>	The nearest human receptors (industrial premises) are located ~35m to the south of the site and nearest residential properties are located ~70m east away from the site beyond a main road which generates noise itself.  Established vegetation line along southern boundary will help mitigate noise to closest human receptor.  Noise has the potential to be generated through processing operations and movement of mobile plant and HGVs.  Treatment operations are to be carried out internally.  Facility located within an extensive industrial area with an elevated baseline environment.	Unloading, processing, and loading of wastes will be undertaken within strict operational parameters, to ensure that noise and vibration from waste operations is mitigated as necessary.  Site activities will be restricted to sociable hours when background noise levels are appreciably higher.  All haul routes will be maintained to an appropriate standard e.g. filling in potholes to prevent body slap.  All machinery used on site will be operated and maintained in accordance with manufacturers' recommendations. And all relevant plant and equipment will be equipped with silencers which will be maintained to the manufacturer's specifications.  Daily plant pre-start checks will be carried out and recorded.  Noise monitoring will be undertaken if necessary. Should unacceptable emissions of noise or vibration occur, the incident will be noted, and a record made.	Very Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Water</b>									
Generation of contaminated run-off and leachate from wastes and other hazardous substances handled on site (e.g. fuels, oils etc).	Harm to protected site through nutrient enrichment, leachate, contaminated surface water runoff	Surface water run-off, and sub-surface transport of leachates then base and spring flows to rivers.	Groundwater, surface water bodies and their associated habitats.	Low	Moderate	<b>Low – Moderate</b>	Appropriately designed drainage systems are also installed at the site.  Wastes to be accepted are hazardous in nature.	Handling of hazardous wastes will be carried out on impermeable surfacing in specific areas which will have engineered drainage controls in place to ensure containment of uncontrolled surface water run off to a sealed sump or the combined sewer.  Any liquids including those in disassembled spare parts, batteries, capacitors containing PCBs/PCTs and any other hazardous waste shall be stored in suitable sealed and labelled containers.  The site drainage system will be regularly inspected and maintained for evidence of blockages.  High risk operations (e.g. refuelling plant) will be undertaken with the necessary primary, secondary and tertiary containment measures.  Spillage collection facilities, spill kits, absorbent granules and where appropriate decanters and cleanser-degreasers are available throughout the site ready for immediate deployment.  WEEE (disassembled spare parts, components and residues) will be stored in areas provided with a weatherproof covering where appropriate or in containers providing a weatherproof covering where appropriate.  Good housekeeping will be promoted in order to keep storage areas as clean as possible.  Daily inspection of the site for spillages / leaks etc will be performed as part of the management procedures.	Low
Flooding of the site	Contamination of buildings, gardens, agricultural land, natural habitats etc downstream resulting from waste washed off-site.	Flood waters	Local human population, crops and local habitats.  (All receptors)	Low	Moderate	<b>Low-Moderate</b>	The northern Environmental Permit Boundary borders the River Hull. While the Environment Agency classifications places the site within a Zone 3 Flood Area, there are extensive flood defences in place to prevent such an event meaning it has a 0.1% – 1% chance of flooding from rivers, sea or surface waters each year.	Site flooding risk is significantly reduced due to the flood defences.  The site drainage system will be regularly inspected and maintained for evidence of blockages.	Low
<b>Accidents</b>									
On site hazards: wastes, machinery, vehicles, surface water attenuation pond.	Bodily injury	Direct physical contact	Local human population	Low	High	<b>Moderate</b>	The site is fully secured to prevent trespassers.	Facility will have perimeter fencing, lockable gates and CCTV installed. The site will be protected with remote surveillance out of normal hours of operation.  All site staff and visitors will receive an induction to the site to ensure safety protocols are adhered to.  Appropriate personal protective equipment (PPE) will be provided for all site staff, particularly those handling waste.  Designated pedestrian routes are clearly marked around the site.  In the event of any significant environmental emergency/incident, a representative of Mytum and Selby limited notify the Environment Agency (EA) by telephone immediately, but first having due regard for the incident at hand and any remediation actions required to ensure the safety of site personnel and the immediate environment.	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Fire resulting from arson/vandalism or an accident causing the release of polluting materials (smoke or fumes) to air, water or land.	Bodily injury	Direct physical contact	Local human population	Low	High	<b>Moderate</b>	Site will accept combustible and flammable wastes.  The site is secured.	Facility will have perimeter fencing, lockable gates and CCTV installed. The site will be protected with remote surveillance out of normal hours of operation.  All plant and equipment will be inspected daily and serviced in line with manufacturers recommendations/specifications  All visitors to the site (including personnel) must report to the site office to sign in.  Firefighting equipment will be available and maintained, and site operators will be trained in their correct use.  Surface gradients of the engineered surfaces within the application site will direct any potentially contaminated fire water to the sealed sump.  Ignition sources will be kept at least 6m from flammable and combustible material.	Low
Leaks and Spillages from on-site plant/vehicles, waste or contaminated rainwater runoff (including firewater).	Deterioration of water quality, contamination of ground/surface waters,	Direct run off from site across ground surface, indirect runoff via the soil layer or transport through soil/groundwater	Groundwater, surface water bodies and their associated habitats.	Moderate	Moderate	<b>Moderate</b>	Any contaminated surface waters will be directed to the combined sewer or sealed sumps.	All operations will be closely monitored to allow immediate deployment of mitigation measures in the event of a spillage.  All hazardous wastes will be stored on impermeable concrete surfacing with integral sealed drainage system.  The integrity of the engineered containment systems will be inspected regularly and maintained accordingly.  Surfaces will be inspected and maintained at regular intervals and any defects or damage will be repaired.  Vehicles for dispatch will not be overfilled and will be supervised during loading.  All plant and equipment will be inspected daily and serviced in line with manufacturers recommendations/specifications  All vehicles hauling waste will be sheeted or enclosed.  All operational fuels and waste liquid tanks will be self-bunded and/or surrounded by bunds to a minimum of 110% of the tank's capacity.  Absorbent spill kits will be available for use should any spillage occur.	Low
<b>Abnormal Conditions</b>									
Containment Damage from fuel/oils and hazardous waste storage areas	Contamination of surrounding land, groundwater and surface water.	Direct run off from site across ground surface, indirect runoff via the soil layer or transport through soil/groundwater	Groundwater, surface water bodies and their associated habitats.	Low	Moderate	<b>Low-Moderate</b>	Application site located over permeable strata and that is designated as a Principal Aquifer.	All operational fuel tanks will be double skinned or surrounded by bunds to a minimum of 110% of the tank's capacity.  The effective capacities of all bunds will be maintained.  Any repairs will be affected as soon as possible or within 5 working days (subject to replacement material availability). Mitigation measures will be undertaken immediately if there is a possibility of pollution.  Contaminated surface water will be directed over the impervious catchment area to an engineered sealed sump.	Low



Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Power loss to emission control systems	Harm to human health and local habitats and surface water via fugitive emissions  Nuisance to local human receptors via fugitive emissions	Airborne transport	Local human population, crops and local habitats.  (All receptors)	Very Low	Moderate	<b>Low</b>	Hazardous wastes accepted and proposed to be accepted at site are not dusty in nature.  All treatment, transfer and storage of hazardous wastes will be undertaken internally.  The nearest human receptors (industrial premises) are located ~35m to the south of the site and nearest residential properties are located ~70m east away from the site.  Prevailing wind direction from the southwest.	If power/water is lost for a sufficiently long period of time where it has the potential to affect ancillary functions outside of the permitted area (e.g. weighbridge, mess facilities wash-down area etc, then alternative means of power generation will be sought).	Low
Vandalism and security breach	Bodily injury	Direct physical contact	Local human population	Low	High	<b>Moderate</b>	-	Facility will have perimeter fencing, lockable gates and CCTV installed.  The site will be protected with remote surveillance out of normal hours of operation.  All visitors to the site (including personnel) must report to the site office to sign in.	Low
Operator error	Bodily injury  Harm to human health - respiratory irritation and illness.  Nuisance – dust, olfactory, and noise emissions  Contamination of surrounding land, groundwater and surface water.	Direct physical, air transport then deposit or inhalation, direct run off	Local human population, crops and local habitats.  (All receptors)	Low	High	<b>Moderate</b>	-	Technically competent people will oversee the management of activities of the site, in accordance with the fit and proper person assessment.  Training (including refresher training) will be given to all site staff on the environmental permit, health and safety and incident response.	Low
Cross-connected drains	Deterioration of water quality, contamination of ground/surface waters,	Direct run off from site across ground surface, indirect runoff via the soil layer or transport through soil/groundwater	Groundwater, surface water bodies and their associated habitats.	Very Low	Very Low	<b>Negligible</b>	Combined sewerage system underlying site.	Surface gradients used to direct surface water falls to the engineered sealed sump or combined sewer.  Full retention Class 1 Separator installed within drainage system and Bypass Separator installed for suspended solid control prior to discharge into sewer.  Drainage system fitted with isolation valves to control discharge of contaminated water to sewer.	Negligible

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Emissions from plant or equipment due to abnormal conditions	Harm to human health - respiratory irritation and illness.	Air transport, deposition then inhalation.	Local human population	Very Low	High	<b>Moderate</b>	The nearest human receptors (industrial premises) are located ~35m to the south of the site and nearest residential properties are located ~70m east away from the site.  Prevailing wind direction from southwest.  Closest human receptors situated downwind of the site are located ~100m NE of the site boundary (industrial premises).	Commissioning tests will be performed on all plant/ equipment, to ensure integrity, prior to full scale use.  All machinery used on site will be operated and maintained in accordance with manufacturers' recommendations.  Alarms and interlocks will be used on major items of plant and equipment to monitor performance.  Strict operating guidelines will ensure adherence with start-up and shut down procedures.  All equipment will be underlain with a suitable operational engineered surface.  All machinery will be subject to regular checks and maintenance.	Low
Inadequate waste acceptance procedures	Harm to human health - respiratory irritation and illness.  Bodily harm  Nuisance (e.g. dust for non-compliant particularly dusty waste loads)	Transported by vehicle	Site operatives and site users	Very Low	Moderate	<b>Low</b>	-	All wastes will undergo a strict pre-acceptance and acceptance procedure.  Incoming waste will be visually checked at the weighbridge to confirm the waste type.  Accompanying paperwork will be scrutinised to ensure the details are correct and all fields are completed.  All waste loads will be visually inspected during deposit in the waste reception areas.  Any non-conforming wastes will be segregated as soon as possible and stored in the quarantine area awaiting removal off site.	Very Low