

ENVIRONMENTAL RISK ASSESSMENT

Ashcourt Contracts Ltd
Foster Street
Hull
HU8 8BT

Revision 2
20/04/2025

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1. Introduction

1.1 Report Context

The Site operates under a Recycling Permit, Permit EPR/DB3508XU.

The report assesses the risks of the proposed changes and has been prepared following guidance available on the gov.uk website, particularly:

- Risk Assessment for your Environmental Permit
- Non-hazardous and inert waste: Appropriate measures for permitted facilities
- Control & Monitor Emissions for your Environmental Permit

Risks identified in Sections 4 and 5 will be controlled through mitigation, as detailed in Section 6. Mitigation are incorporated into the Environmental Management System.

All drawings referenced are contained in Appendix A.

1.2 Site Location and Surrounding Area

The Site lies within the centre of an industrial area, characterised by heavy industry, warehousing and manufacturing.

The area is surrounded by various residential areas although none are in the immediate vicinity. Beverley & Barnston Drain and the River Hull are both within the surrounding area of the Site.

The Site is centred on an approximate National Grid Reference of TA10054 30451.

The Site is accessed via an existing gated access road off Foster Street with additional emergency access from Dalton street. Fences are installed around the site. A notice board is displayed on the site gate with the permit details and the Agency's contact details.

Incoming waste is weighed weighbridge and then directed to the correct location for processing.

The site benefits drainage that has an interceptor to catch all the silt to prevent water contamination.

2. Activities

A wide range of waste types are permitted for acceptance, including commercial, construction and demolition wastes. Bonded Asbestos is permitted on site but is not treated and is stored in a segregated, sealed skip before transfer.

Waste is imported to site and deposited in the transfer shed before it is treated, either manually or through the Wash Plant.

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Treatment consists of manual sorting and separation, crushing, screening, and blending. Hardcore is crushed and then either sold as 6F5 or screened for further processing to produced graded stone products.

The annual permitted throughput for the site is currently unlimited.

2.1 Soil Washing

Waste types that are subject to soil washing are listed within Appendix 8. The predominant waste types will be concrete, bricks, soil and stones from construction, demolition, and excavation.

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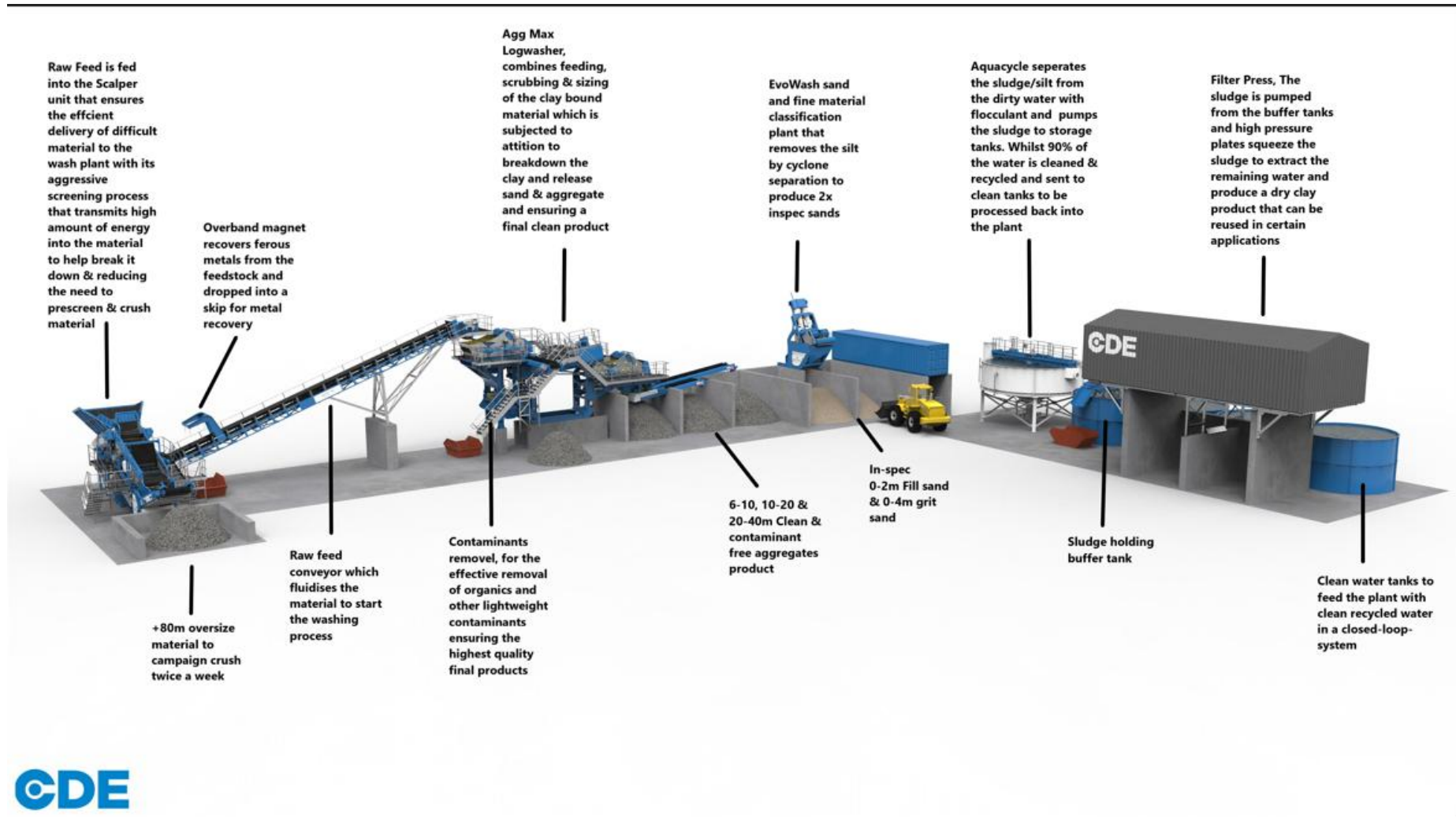


Figure 1: Wash Plant Material Flow Diagram

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The plant is located on the Foster Street Site shown on the Site Layout, Appendix 1. A process flow chart for the operation is shown in Figure 2.

Washing of soil/stone mixtures are carried out to produce a clean stone product. Waste is loaded into a hopper which feeds a rinsing screen and then a log wash. Following this stone and sand is screened into separate sizes of stone (e.g. <40mm, <20mm and <10mm) and sand. The stone produced undergoes a second rinse as it is screened.

Wash water will be returned into a thickening tank where it is separated into water/sludge by flocculation. Water brims over the top of the flocculation tank and is returned to the water feed tank for reuse.

Sludge settles to the bottom of the tank and is drawn off into a sludge storage tank and sent to a filter press. Filter cake will be stored beneath the press housing in a concrete block storage bay. The filtrate is returned to the water feed tank.

The plant is a closed loop system, there will be no discharge of water. Water is lost as moisture in the filter cake and the system is topped up with clean water. The water source is rain harvested water and if crucial can be topped up using mains water.

Incoming wastes are stored in the yard within storage bays as shown on the site layout plan.

The daily capacity of the plant is around 2500 tonnes.

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4. Identification of Risks

4.1 Receptors

The location of the Site in relation to the potential receptors are listed in Table 2 below.

Number	Receptor	Description	Distance from Site	Direction from Site	Freq. of Prevailing Wind
1	Stoneferry	Residential	0.839	NE	9.4
2	Summergangs	Residential	0.720	E	11.2
3	Sculcoates	Residential	0.788	SW	19.6
4	Beverley & Barnston Drain	Watercourse	0.737	SW	19.6
5	River Hull	Watercourse	0.265	E	11.2
6	Garden Village	Residential	0.516	NE	9.4
7	Roads	Roads	0.100	All	

Table 2. Potential Receptors Within 1km

Surface Water

The River Hull lies to the west of the site boundary. The EA's Data Catchment Explorer website shows the site is not within any water body, although the site is close to the Hull from Arram Beck to Humber water body, which is reported as having moderate ecological status.

Groundwater

The Site is built on top of a chalk aquifer. Between the chalk and the city are layers of clay in excess of 100m.

The site is not within a groundwater source protection zone.

Habitats and Protected Species

There are a number of protected species and habitats within 1km of the site boundary. A separate Habitats Risk Assessment has been provided with this application as Appendix 6a which assesses the risk of the proposed operations to these receptors.

4.2 Baseline Conditions

Wind Direction

Wind speed and directional data has been obtained from the Hull weather station with statistical data obtained. Both are presented in Figure 1 and Figure 2 below. The prevailing wind direction is from the West (25.9%).

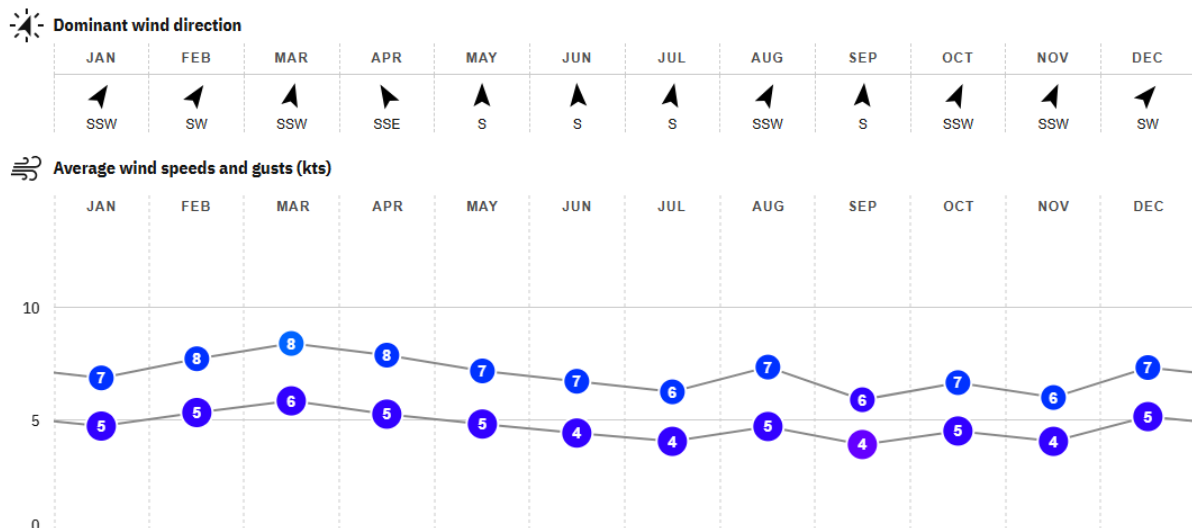
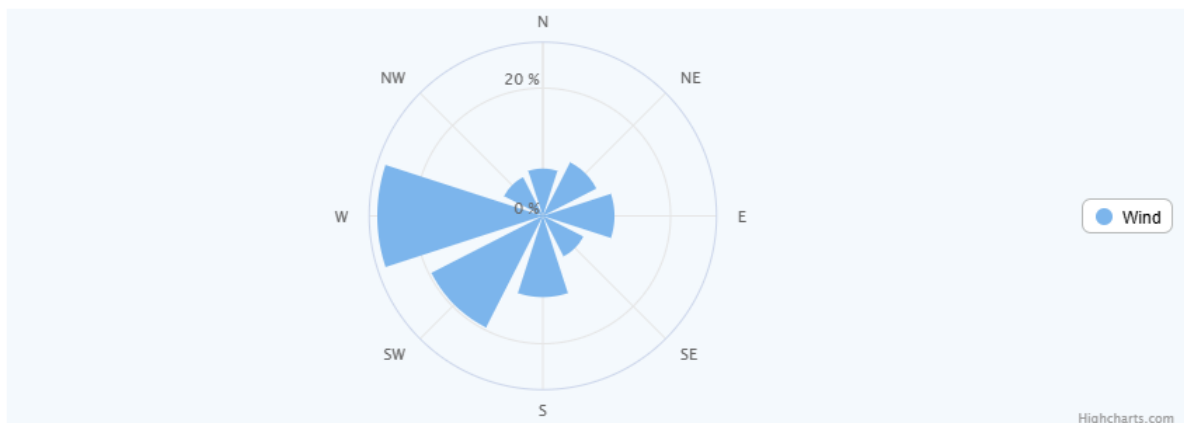


Figure 1. Wind Statistics from Kingston upon Hull

Wind rose in Kingston upon Hull



N ▼ Northern	NE ▲ Northeastern	E ◀ Eeastern	SE ▼ Southeastern	S ▲ Southern	SW ◀ Southwestern	W ▶ Western	NW ▲ Northwestern
7.4%	9.4%	11.2%	7.1%	12.7%	19.6%	25.9%	6.8%

Figure 2. Wind Rose for Hull

Rainfall

Total average annual rainfall during the period 1991 to 2020 was 693.45mm. The number of days rainfall greater than or equal to 1mm was 124 days.

Air Quality

According to the DEFRA interactive map tool the site is not located within an Air Quality Management Area (AQMA).

Potential for Flooding

According to the 'Flood Map for planning' tool on the gov.uk website, the site is situated in Flood Zone 1, has the lowest probability of flooding from rivers and the sea.

Identification of Hazards

Potential hazards from the proposed changes to activities have been identified as:

- Noise and vibration – from operation of the Wash Plant, plant, and HGVs
- Dust – generated in dry conditions from processing operations, stockpiles, and site roads
- Mud on the road – deposited on the public highway by outgoing vehicles
- Uncontained run-off – surface water run-off which may contain suspended solids from stockpiled waste and site roads
- Accidents (fire, acceptance of contaminated material, spillage of fuel/oil or escape of water from the washing operations)

The nature of wastes accepted at the site will result in negligible generation of odour due to the proportion of biodegradable and/or odorous materials.

The operation is not considered to pose a risk to air (excepting fugitive dust) due the nature of waste materials that are accepted.

A Dust and Emissions Management Plan has been prepared to assess the risks from dust emissions and present mitigation and control measures.

5. Risk Assessment

5.1 Methodology

Overall risk is a combination of the severity of an event and the likelihood that will occur.

Probability of occurrence is designated as:

- Probable – expected to occur based on previous occurrences.
- Likely – expected to occur due to proposed changes
- Possible – this may occur, it may or may not have happened occasionally in the past
- Unlikely – not expected to occur
- Very unlikely – has never and is not expected to occur

The magnitude of risk is determined by the probability of exposure and the severity of the consequences, whereby:

- High – severe and long lasting environmental effects to the wider locality
- Medium – effects to the local environment and community
- Low – minor, short lived effects just beyond the site boundary
- Negligible – no discernible effect beyond the site boundary

An event could have a high probability of occurring but have minor environmental consequences; therefore, it will be designated as a low risk. Likewise, a risk with severe consequences could be unlikely to occur and will be designated as a low risk. A high risk designation would be assigned to an event that has severe consequences and is expected to occur.

5.2 Assessment

The risks associated with the identified hazards have been assessed and are presented in Tables 4 to 9, including mitigation and control measures.

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Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Mitigated Risk
Noise from incoming and outgoing HGVs for additional throughput	Residential properties, with the closest located 0.516km from site	Noise through the air and vibration through the ground	Nuisance, noise from delivery vehicles	Unlikely, the properties are located far enough away that the noise does not have an impact.	Low	- Noise Management Plan in place to control noise emissions. - Site access is concrete surfaced and maintained to prevent potholes, and minimise noise generated by vehicles. - Vehicle drivers to adhere to 10mp speed limit on site. - All machinery and plant is maintained as per manufacturers specifications for efficient running. - Noise only during daytime working hours, no nighttime operations.	Low
Noise from aggregate processing (engine noise, reversing warning noise, material handling, crushing, washing & screening)			Nuisance noise detected beyond the site boundary from processing operations during daytime working hours	Unlikely, the properties are located far enough away that the noise does not have an impact. There is no history of noise complaints or issues following operation of external crushing and screening	Low		Low

Table 4. Assessment of Risks from Noise and Vibration

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Mitigated Risk
Mud on the road	Roads and motorways	Material carried on vehicle wheels and axles on leaving the site.	Mud carried onto roads which could be a skid hazard for motorists	Possible	Medium	- All vehicles are inspected and cleaned if required before leaving the site. - Concreted site surfaces swept with a road sweeper. - Foster Street also swept with road sweeper	Low

Table 5. Assessment of Risks from Mud on the Road

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Mitigated Risk
Surface water run-off carrying sediment from stockpiled waste, products, and site surface	River Hull Underlying ground	Flow off site and into waterways	Increased sediment load reducing water quality and affecting the marine life.	Unlikely as there are no pathways between the site and the River; all surface water is on the concreted hardstanding or runs into the drain via interceptors.	Low	- A programme of sampling and testing of recycled water and filtercake will be undertaken to establish if contaminants are becoming concentrated. - Filtercake will be stored on a concreted surface and in a covered bay beneath the filter press housing to shelter from rainfall. - Spillages will be contained in a sump within the concreted area and returned to the plant.	Low
Spillage or leakage of wash plant water. Leaching of contaminants from filtercake		Concentrated contaminants in recycled wash water or filtercake soak into underlying ground	Build-up of contaminants in groundwater, deteriorating water quality affecting the marine life	Unlikely as there is no pathway to underlying ground	Low		Low

Table 6. Assessment of Risk from Uncontained Run-Off

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Mitigated Risk
Dust from operation of the wash plant	Closest residents	Dust generated and carried beyond the site boundary	Annoyance to neighbours, loss of amenity, reduction in air quality and possible health impacts	Unlikely as the washing activity provides inherent dampening	Low	- A Dust and Emissions Management Plan has been prepared to assess the risk from dust and propose mitigation and controls. - Products are stored in bays to minimise wind whipping. - Stockpiles are damped down with a bowser during dry conditions. - Site access road is checked daily, swept with a road sweeper which provides dampening. - Site surface is dampened with a bowser. - All loads are covered on entering and exiting the site.	Low
Dust from vehicle movements carrying additional throughput		Dust carried off site on wheels or from waste loads, or dust generated from dusty roads		Possible – there may be a possibility of airborne dust reaching residential properties, although the distance to the closest property is 340m.	Medium		
Dust from dry processing of additional throughput		Dust generated from crushing of additional waste					

Table 7. Assessment of Risks from Dust

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Mitigated Risk
Non-compliant waste types, e.g. hazardous dust from importation & processing of contaminated material	Site staff, neighbouring employees, and residents	Air	Inhalation of contaminated dust	Unlikely as hazardous material is segregated and stored in a sealed container.	Medium	- Hazardous waste acceptance procedure in place. - Waste acceptance controls and pre-acceptance procedures will prevent acceptance of non-compliant waste types. - In the event that non-conforming waste is unloaded the waste will be consigned to a quarantine area to await re-loading and removal off-site.	Low
	Surface water	Uncontrolled run-off	Contamination of controlled waters	Waste Pre Acceptance is carried out prior to entering site. Inspection of waste upon entry via the Weighbridge.			
Spillage or leakage of fuel, oils & coolants Minor (<5 litres) Major (>5 litres)	Surface water	Oil or fuel seeps off site into surface water	Contamination of River Contamination to marine life	Very unlikely due to topography and distance	Low	- Fuel stored in bunded tanks in concreted yard area. - Vehicles inspected as part of daily checks for leaks. - Tank inspected daily. - Oil stored in bunded area in workshop. - Spillage procedure detailed in Emergency Response Plan.	Low
	Underlying ground and groundwater	Percolates through hardstanding	Contamination of groundwater	Unlikely as fuel storage in concreted yard area, not on hardstanding	Low		
Spillage of sludge / wastewater from washplant	River Hull	Spillage or misconnection causes wastewater or sludge to flow off site	Increased sediment load in the river. Reduction in water quality	Unlikely due to distance from site. Topography would keep spillages in the centre of the site. Additional separation of site from the River, no pathway to the River	Low	- The wash plant will be sited on a concrete base which drains to a central sump to contain any spillages. - Water is pumped from the sump back up into the plant.	Low
	Underlying ground and groundwater	Percolates through hardstanding	Contamination of groundwater	Unlikely as the area is concrete so no direct pathway.	Low		
Fire, smoke and firewater	Closest residents	Overland flow of firewater. Increased airborne particulates from smoke	Contained firewater flows off site. Smoke causes nuisance and respiratory effects to local residents	Possible – the risk of fire is low as the material processed is mainly non-combustible with appropriate control procedures in place.	Medium	- Permitted activities do not allow flammable materials to be accepted on site and burning of waste is not allowed on site. - Smoking is only permitted in the designated areas away from flammable waste.	Low

Flooding		Site floods and waste is washed off-site, adding sediment to the water environment	Waste material may be washed out of the site	Possible – the site is in Flood Zone 3 (high probability)	Medium	Topography of the site drains to the centre so water would pond on site and run into the interceptor drainage.	Very low
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Table 8. Assessment of Risk from Accidents

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Mitigated Risk
Litter	Closest resident, neighbours, motorway, and wider environment	Litter in waste blown beyond site boundary	Litter in the neighbourhood or motorway reducing amenity.	Unlikely as there is no pathway between the site and the River; all surface water is on the concreted yard area and soaks into the hardstanding areas.	Low	- Waste acceptance procedures are in place to ensure only suitable waste types are accepted. - Permitted waste types are restricted to non-putrescible and non-biodegradable waste - Pest Control used throughout the site to ensure there are no cases. - Odour Management Plan in place.	Low
Odour		Dispersion of odours from odorous waste	Build-up of contaminants in groundwater, deteriorating water quality	Unlikely – waste types will not be biodegradable so would not generate odours or attract pests	Low		
Pests		Pest attracted to waste or imported inside loads of waste	Pest dispersed in local area, annoying neighbours, and disturbing habitats				

Table 9. Assessment of Risks from Litter, Odour and Pests

6. Mitigation and Control

Risks assessed as medium or high will require mitigation and control. Measures are outlined below and have been incorporated into the EMS.

6.1 Noise and Vibration

Noise and vibration risks associated with operations have been determined as low for the closest residential receptors owing to their distance from the source and existing background noise. This is mitigated further by conducting operation only during the working day.

Noise will be minimised by working to a Noise Management Plan.

6.2 Mud on Road

Risks associated with mud on the road have been determined as medium.

This is mitigated to low risk, by ensuring vehicles are clean before leaving site. The EMS will include procedures for the removal of accidental deposit by a road sweeper, as well as regular checks and sweeping of the site entrance.

6.3 Control of Run-off

Surface water run-off from the yard is directed to drainage which feeds into the wash plant. This is then recirculated within the process.

Water from the wash plant will be stored in an underground storage tank and reused for the wash plant.

The area footprint beneath the permanent wash plant is concreted and laid to a fall with any run-off, drips and spillages drained to a sump in the centre. Contents of the sump are returned to the wash plant.

The storage areas will be compacted hardstanding and used to store incoming waste and processed material.

There is no pathway for water to run off site into the River Hull.

6.4 Waste Acceptance

Unsuitable waste is prevented from being accepted into the site by checks conducted as part of the waste acceptance procedures, summarised below, and contained in the EMS.

Pre-Acceptance waste enquiries include information on the origin of the waste and whether it is from a contaminated site. When an enquiry is received, a member of the management team may conduct a site visit to inspect the waste. Photographs of the site and any stockpiles are taken. If the waste consists only of hardcore it will be accepted on the basis of the visual inspection.

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For waste classed as EWC 17 05 04, chemical testing and analysis will be conducted to ensure it is not contaminated before being accepted onto site. This is assessment by a member of the management team.

If the waste is accepted as suitable it will be booked into site and undergoes further checks when it arrives.

Waste which is found to be unsuitable after delivery will be rejected.

6.5 Sampling and Testing of Washwater

A programme of testing is conducted to establish concentration of contaminants in the washwater and identify whether these are becoming concentrated by recycling the washwater.

A Testing Schedule has been established to monitor the following:

- characterise the washwater
- build up a picture of variation
- establish if contaminants are becoming concentrated

Sampling is conducted by a trained competent technician and samples will be submitted to an accredited laboratory for analysis.

If contaminants are observed to be building up, then an action plan will be proposed to reduce contaminants to an acceptable level.

6.6 Control of Dust

Risks from fugitive dust emissions were assessed as medium and a Dust and Emissions Management Plan has been produced to demonstrate how dust will be managed to reduce the risk to an acceptable level.

The washing activity is inherently dampening so will not raise dust. Crushing is conducted under dust suppression to prevent dust from being generated. The stockpile of incoming waste and products could become dusty when dry and will be managed by positioning of stockpiles and bays to prevent wind whipping and damping down.

Dust monitoring is conducted daily and contingency actions are in place to prevent dust emissions from occurring.

7. Conclusions

The risks to the environment from the activities have been determined and where required mitigation has been proposed to reduce the risks to an acceptably low level.

Noise is minimised by the maintenance of plant and maintenance of roads and working within the permitted operational hours.

Risks from surface water run-off are minimised through containment and primary treatment to remove sediment and catch any fuel or oil spillages.

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Risks from accidents are reduced through effective management of the site through an Environmental Management System, including waste acceptance procedures to prevent importation of contaminated waste.

Risks from mud on the road are mitigated through regular road sweeping.

Risk from dust are controlled by damping down, housekeeping and monitoring.

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Appendix 1 – Drawing of Site Layout



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