ENVIRONMENTAL RISK ASSESSMENT

Ashcourt Aggregates Ltd
Halifax Way
Pocklington Industrial Estate
Pocklington
YO42 1NR

Revision 3

04/06/2025

Contents

1. Introduction

1.1 Report Context

This Environmental Risk Assessment supports a bespoke permit application by Ashcourt Aggregates Ltd (the Operator) at Halifax Way, Pocklington, YO42 1NR (the Site).

The Site currently operates under a Standard Permit EPR/KB3404GT. This application for a bespoke permit will supersede the existing permit to include a Wash Plant to treat non-hazardous wastes for recovery, increase the EWC Codes permitted and tonnage.

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 will be 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 foot of the Yorkshire Wolds at Pocklington Airfield Industrial Estate which is characterised by a mixture of arable land and industrial areas. To the west lies the village of Barmby Moor.

The Site is centred on an approximate National Grid Reference of SE78486 48594.

The Site currently operates under a Standard Permit EPR/KB3404GT. This application for a bespoke permit will supersede the existing permit to include a Wash Plant to treat non-hazardous wastes for recovery, increase the EWC Codes permitted and tonnage.

The Site is accessed via Halifax Way, through a secure gate. 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 will be weighed weighbridge and then directed to the correct location for processing.

2. Current Activities

A wide range of waste types are permitted for acceptance, including commercial, construction and demolition wastes.

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

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 850,000 tonnes per annum.

3. Proposed Changes

3.1 Soil Washing

Proposed waste types that will be subject to soil washing are listed in Table 1 below. This list mirrors the waste types allowed under the end of waste protocol. The predominant waste types will be concrete, bricks, soil and stones from construction, demolition, and excavation.

Waste Code	Description
01 01 01	Wastes from mineral metalliferous excavation
01 01 02	Wastes from mineral non-metalliferous excavation
01 03 06	Tailings other than those mentioned in 01 03 04 and 01 03 05
01 03 09	Red mud from alumina production other than the wastes mentioned in 01 03 07
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	Waste sand and clays
01 04 11	Wastes from potash and rock salt processing other than those mentioned in 01 04 07
01 04 13	Wastes from stone cutting and sawing other than those mentioned in 01 04 07
01 05 04	Freshwater drilling muds and wastes
01 05 07	Barite-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 08	Chloride containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
02 01 01	Sludges from washing and cleaning
02 02 01	Sludges from washing and cleaning
02 03 01	Sludges from washing, cleaning, peeling, centrifuging and separation
02 04 02	Off-specification calcium carbonate
02 07 01	Wastes from whing, cleaning and mechanical reduction of raw materials
10 01 01	Bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 24	Sands from fluidised beds
10 11 03	Waste glass-based fibrous materials
12 01 17	Wast blasting materials other than those mentioned in 12 01 16
15 01 07	Glass packaging
17 01 01	Concrete
17 01 02	Bricks
17 01 03	Tiles and ceramics
17 01 07	Mixture of concrete, bricks, tile and ceramics other than those mentioned in 17 01 06
17 05 04	Soil and stones other than those mentioned in 17 05 03
17 05 06	Dredging spoil other than those mentioned in 17 05 05
17 05 08	Track ballast other than those mentioned in 17 05 07

17 09 04	Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
19 01 19	Sands from fluidised beds
19 08 02	Waste from desanding
19 12 05	Glass
19 12 09	Mineral (for example sand, stones)
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of waste containing dangerous substances
20 01 02	Glass
20 02 02	Soil and stones
20 03 03	Street-cleaning residues

Table 1. Waste Types for Wash Plant

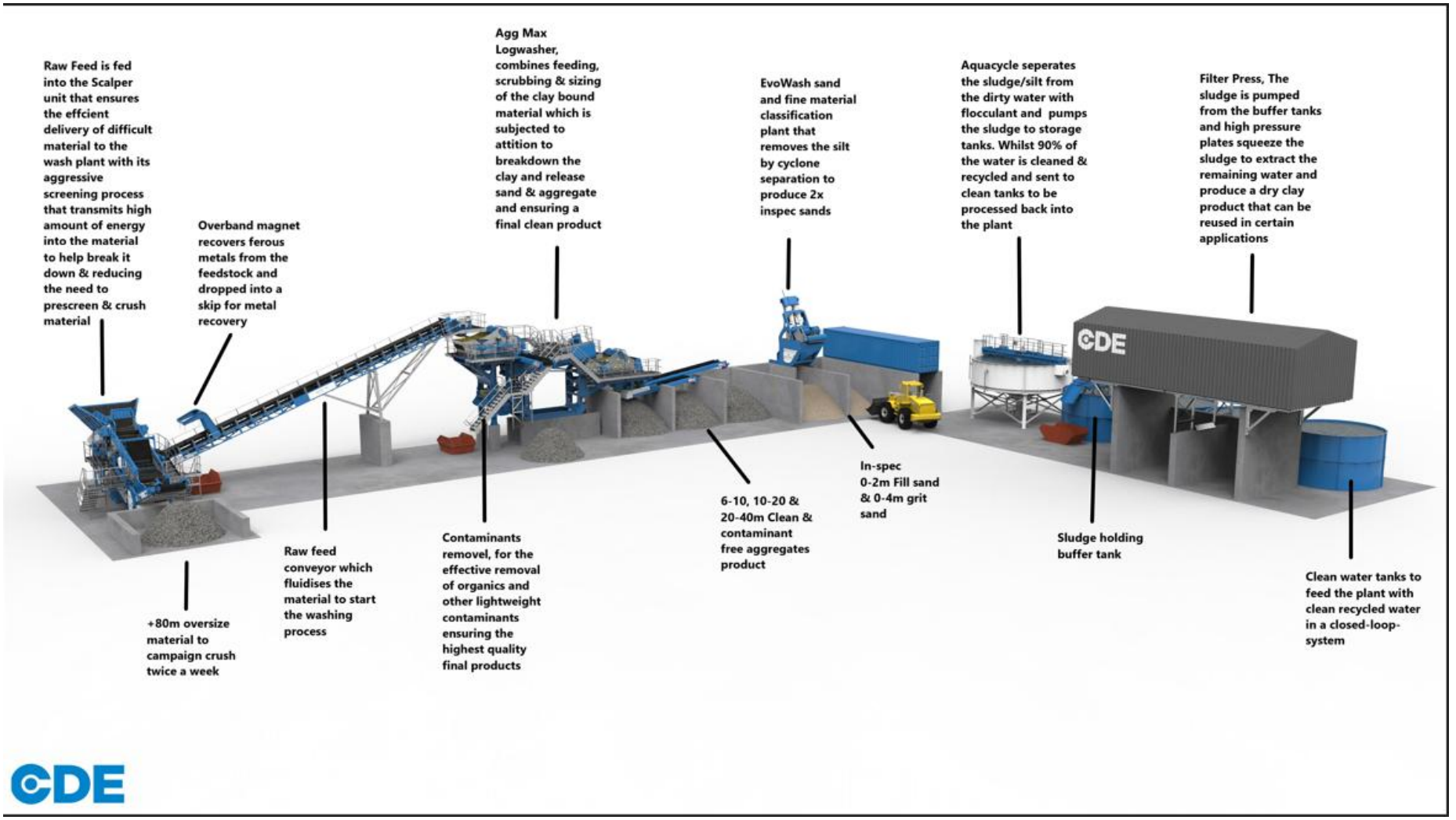

Figure 1: Wash Plant Material Flow Diagram

The plant will be located within the Site shown on the Site Layout, Appendix 1. A process flow chart for the operation is shown in Figure 1.

Washing of soil/stone mixtures will be carried out to produce a clean stone product. Waste will be 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 will be a closed loop system, there will be no discharge of water. Water is lost as moisture in the filter cake and the system will be topped up with clean water. The water source will be harvested water from the lagoon and mains water.

Incoming wastes will be stored in the yard. Products will be stored in bays in the yard as shown on the site layout plan.

The daily capacity of the plant is around 2500 tonnes.

3.4 Throughput

It is requested that the annual throughput is set at 850,000 tonnes per annum. The permanent wash plant will have the capacity to process up to 2,500 tonnes per day, which over a 5 day week and 48 weeks of the year equates to 600,000 tonnes. In addition, some material will be dry screened and not processed through the wash plant.

4. Identification of Risks

4.1 Receptors

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

Receptor Name	Receptor Type	Direction from Site	Approximate Distance from Site Boundary (in metres)
Local Receptors located within 500m of the Site boundary			
Stirling Road Industrial Estate	Industrial Site	SSE	157
Industrial Estate	Industrial Site	SSW	540
Industrial Estate incorporating DHL and Phoenix Software	Industrial Area	WSW	757
Properties at Grangeland Walk and Back Lane	Residential	WNW	570
Properties at Back Lane, Allethorpe	Residential	SE	850

Surface Water

The EA's Data Catchment Explorer website shows the site is not within any water body. The Site is within the Catchment of Pocklington Beck bk to River Derwent, which is reported as having moderate ecological status.

Groundwater

Superficial deposits of the Pocklington Gravel Formatio exists as a blanket deposit at the eastern limit of the Vale of York. Bedrock geology comprises of the Mercia Mudstone Group – Mudstone. Sedimentary bedrock formed between 252.2 and 201.3 million years agon during the Triassic period.

The site is not within a source protection zone for the abstraction of groundwater.

4.2 Baseline Conditions

Wind Direction

Wind speed and directional data has been obtained from the Leconfield weather station with statistical data obtained. Both are presented in Figure 1 and Figure 2 below. The prevailing wind direction is from the West-South-West (19.66%).

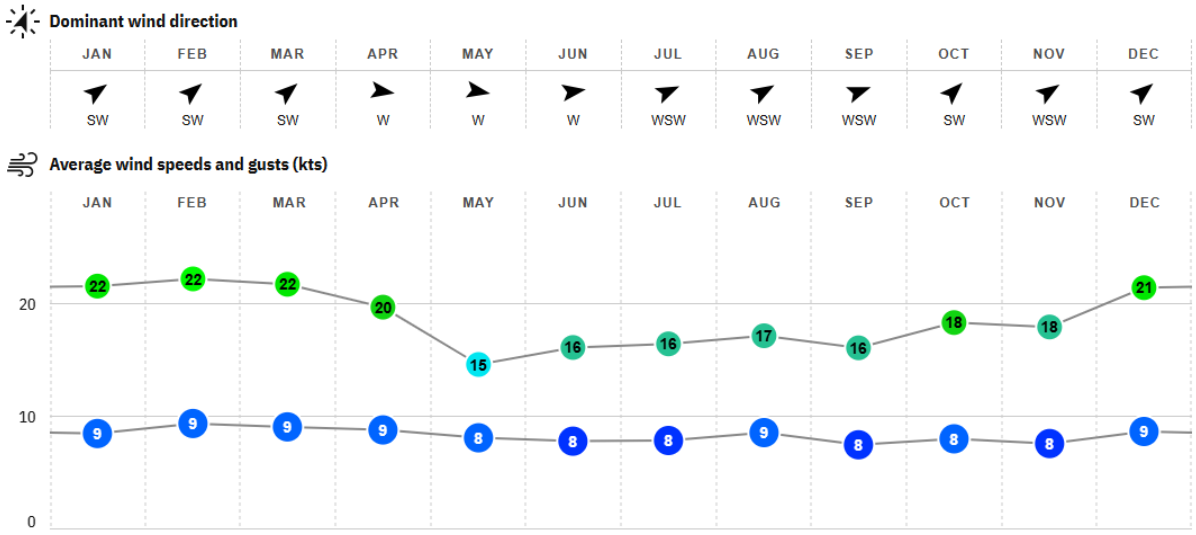

Figure 2. Wind Statistics from Leconfield

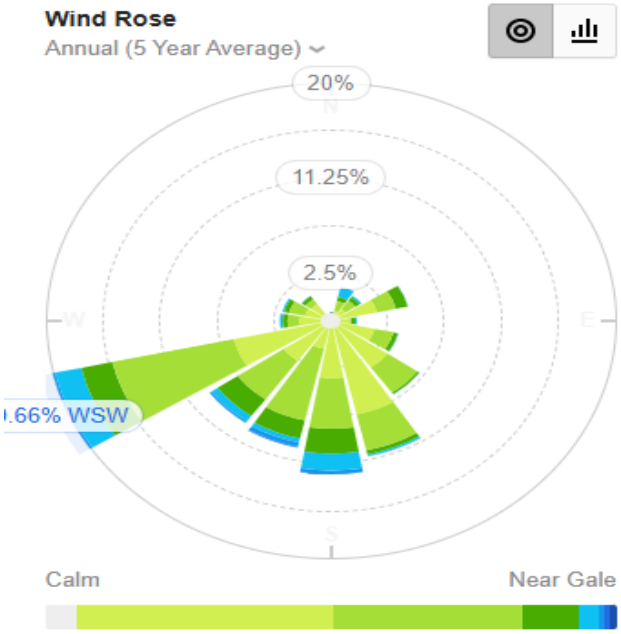

Figure 3. Wind Rose for Pocklington

Rainfall

Total average annual rainfall calculated over a 30-year period was 769mm.

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.

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 0.565km 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. • Halifax Way 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	Habitats	Flow off site and into waterways	Increased sediment load reducing water quality and affecting the marine life.	Unlikely as there are waterways close to the Site; 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 wildlife	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 0.565km.	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. Waste Pre Acceptance is carried out prior to entering site. Inspection of waste upon entry via the Weighbridge.	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				
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	Waterways	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. There are no waterways close to the Site.	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	Unlikely – the site is in Flood Zone 1 (low probability)	Medium	• Topography of the site drains to the centre so water would pond on site and run into the interceptor drainage.	Very low

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 litter is collected immediately if seen. All vehicles arrive sheeted to minimise this.	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. Proposed 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 concreted yard area is directed to the centre to be collected or dried out. Drainage with an interceptor is located around the site to collect run off.

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

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

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

6.4 Waste Acceptance

Unsuitable waste will be 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 shall 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.

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 will be conducted to establish concentration of contaminants in the washwater and identify whether these are becoming concentrated by recycling the washwater.

It is proposed to take monthly samples of washwater and filtercake and results will be reviewed after 6 months.

It is proposed to test for the following parameters:

- Arsenic
- Chromium
- Cadmium
- Copper
- Lead
- Nickel
- Tin
- Zinc
- Total Petroleum Hydrocarbons (TPH)
- PAH 16
- pH

Sampling will be conducted by a trained competent technician and samples will be submitted to an accredited laboratory for analysis. A Testing Schedule will be established to monitor the following:

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

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 will be 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 will be conducted daily, and contingency actions are in place to prevent dust emissions from occurring.

7. Conclusions

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

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

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

Risks from accidents will be 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 will be mitigated through regular road sweeping.

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

In conclusion it has been demonstrated that the risks posed by the proposed operation can be mitigated so they will not have a significant impact on the surrounding environment.

Appendix 1. Site Plan