

Intended for
Dunton Technologies Limited

Date
June 2023

Project Number
1620013520-002

BRIDGE STREET NORTH ENVIRONMENTAL RISK ASSESSMENT

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Project No. **1620013520-002**
Issue No. **01**
Date **December 2022**
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Version Control Log

Revision	Date	Made by	Checked by	Approved by	Description
01	15/12/2022	LB	LC	LJ/TP	Issue
02	12/06/2023	AB	LJ	LJ	Updated to include NMP

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APPENDICES

Appendix 1

NOISE IMPACT ASSESSMENT

1. INTRODUCTION

Ramboll UK Limited (Ramboll) was commissioned by Dunton Technologies Limited ('Dunton', the 'Operator' or the 'Client') to prepare an Environmental Risk Assessment (ERA) for its proposed waste treatment facility located at Bridge Street North, Smethwick, B66 2BZ (the 'Facility' or the 'site'). The ERA has been prepared in support of the Client's application for an Environmental Permit (EP).

The objective of the ERA is to identify the scenarios where pollution to air, water or land could occur, particularly where there is the likelihood of an accident. The Environmental Risk Assessment (ERA) has been carried out based on the Environment Agency's (EA) EPR H1 Guidance.

In accordance with the aforementioned guidance, this ERA is structured as follows:

1. Identification and consideration of risks for the Facility and sources of the risks.
2. Identification of receptors (people, animals, property and anything else that could be affected by the hazard) at risk from the Facility.
3. Identification of possible pathways from the sources of the risks to receptors.
4. Assessment of the risks relevant to the specific activities carried out at the site and consideration of which risks can be screened out as negligible.
5. Description of measures to control identified risks.

2. IDENTIFICATION OF ENVIRONMENTAL RISKS

2.1 Source-Pathway-Receptor Concept

In order for pollution to have an impact on the environment, a pollution linkage must be present which relies on the Source-Pathway-Receptor concept, where all three factors must be present and linked for a potential risk to exist.

A "pollution linkage" requires the following:

- i) A "source" is a substance which is in, on or under the land and which has the potential to cause significant harm to a relevant receptor, or to cause significant pollution of controlled waters;
- ii) A "receptor" is something that could be adversely affected by a contaminant, for example a person, an organism, an ecosystem, property, or controlled waters; and
- iii) A "pathway" is a route by which a receptor is or might be affected by a contaminant.

Identification of the source, pathway and receptor enables management interventions to be made to manage the environmental risks and avoid pollution reaching the receptor.

In this section the potential sources (environmental risks) of pollution at the Facility are identified and screened for their significance, and the potential pathways and receptors are identified.

2.2 Environmental Risks

The Operator is required to identify the environmental risks (sources of potential contamination) which could occur during the operation of the Facility, including any risks which may arise from accidents. The EA online guidance¹ stipulates that the Operator must consider the following potential risks:

- any discharge (e.g. sewage or trade effluent to surface water or groundwater);
- accidents;
- odour;
- noise and vibration;
- uncontrolled and unintended ('fugitive') emissions (for which risks include dust, litter, pests; and pollutants that shouldn't be in the discharge); and
- visible emissions (e.g. smoke or visible plumes).

In considering the risk, the Operator can determine that a potential risk is not considered to be significant in terms of its potential impact on the environment; however, a justification must be provided for any risk which is 'screened out'.

Based on the guidance summarised above, the potential environmental risks at the Facility have been identified and have been determined either significant or not significant based on the potential environmental impact arising from the risk. A summary of these risks is presented in the table below which also provides justifications where risks are considered to be insignificant. The risks which have been identified as significant have been included in the risk assessment in Section 5 of this report.

¹ <https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit#risks-from-your-site>

Table 2.1: Screening of Environmental Risks

Environmental Risk	Applicability	Justification
Controlled discharges to surface waters	Not Applicable	There are no controlled discharges to surface water from the Facility. This risk has not been considered for further assessment.
Controlled discharges to Groundwater	Not Applicable	There are no controlled discharges to groundwater from the Facility. This risk has not been considered for further assessment.
Accidents	Applicable	<p>Plant or Equipment Failure: The failure of plant or equipment may result in an incident occurring which could potentially impact on the environment.</p> <p>Fire and potential for firewater runoff.</p> <p>Materials Handling: Wastes to be processed will be stored in dedicated storage bays within the building.</p> <p>Wastes will be transported across the Facility via HGV trucks and hoppers with enclosed conveyor belts.</p> <p>Raw materials are stored within drums and kegs in a dedicated storage area within the building.</p> <p>There is the potential for accidents (e.g. spills, leaks etc.) to occur during the filling of the above ground fuel tank and the movement of materials, which may result in contaminated run-off.</p> <p>Vandalism: The Facility is located in a mixed commercial, light industrial and residential setting. The risk of vandalism cannot be discounted.</p> <p>Operator Error: All processing plant is manually operated, and the potential for operator error cannot be ruled out.</p>
Odour	Applicable	Emissions from the Installation have the potential to be odorous, if not appropriately managed.
Noise & Vibration	Applicable	Operations at the Facility have the potential to produce noise if not appropriately managed, in particularly the movement of Heavy Goods Vehicles making deliveries to and collections from the site.
Visual Impact	Not Applicable	<p>The Facility is bordered to the north by an arm of the Birmingham canal, beyond which is an embankment and a second arm of the Birmingham Canal, prior to the presence of residential dwellings. The Facility is bordered to the south by the Engine Arm Aqueduct, beyond which are commercial and light industrial buildings.</p> <p>Visible emissions from the Facility will be limited to dust generated by road vehicles.</p> <p>These emissions are not considered to be significant in terms of visual impact. Based on this, visual impact has not been considered to be significant and has not been included for further assessment.</p>
Emissions to air and water	Applicable	<p>Fugitive emissions of dust and odour may be generated during the movements of materials around the site</p> <p>Surface Water: potential for blocked/ damaged drains or misconnections in the drainage system to result in an</p>

Environmental Risk	Applicability	Justification
		<p>uncontrolled release of process wastewater to ground or surface water.</p> <p>Storm water discharges: storm water run-off from the site roofs and yard areas is directed via an integrated wastewater and storm water drainage system flowing towards the north-east of the site. A sump with an isolation valve will be present in the centre of the site which will be closed during fuelling, and four damp down sumps will be present within the warehouse building. The drainage system will flow into a silt trap / full retention interceptor in the north-east of the site, before flowing into two 10,000 litre holding tanks within a concrete bund, after which the water will be tested and subsequently discharged to the foul water sewer.</p>
Controlled releases to air	Applicable	<p>There will be four emission points at the facility, to be defined as:</p> <ul style="list-style-type: none"> • A1 – extraction from the asbestos storage bays • A2 – extraction from the biopads • A3 – extraction from the asbestos hopper • A4 – extraction from the asbestos picking cabin <p>The extracted air will pass through an abatement unit containing a HEPA filter and carbon filter.</p>
Global Warming Potential	Applicable	<p>Indirect emissions arise from the use of electricity, and water. There are no direct emissions produced by the facility.</p>
Facility Waste	Applicable	<p>Hazardous and non-hazardous wastes will be produced at the Facility as a result of the production processes, maintenance and administrative functions.</p>

3. IDENTIFICATION OF RECEPTORS

A receptor is defined as something that could be adversely affected by a pollutant. Based on desk-based research, information provided by the Client and the information relating to the environmental setting (provided in the SCR), Ramboll has identified the receptors within the vicinity of the site. A summary of the identified receptors is provided in Table 3.1 below.

Table 3.1: Summary of Identified Receptors

Receptor	Location
<p><i>Groundwater:</i> The site is underlain by superficial deposits classified as a Secondary A Aquifer, which are further underlain by bedrock geology classified as a Principal Aquifer. The site is located within Source Protection Zone 3 (Total Catchment).</p> <p>The EA currently classifies groundwater beneath the site (Tame Anker Mease – Permo-Triassic Sandstone) as being of 'poor' quantitative status and 'poor' chemical status under the Water Framework Directive (WFD) classification scheme.</p> <p>There are no active licensed groundwater abstractions within a 1 km radius of the site. There are no licensed groundwater abstractions for potable water supply within a 2 km radius.</p> <p>Groundwater was not encountered during the 2022 ground investigation, and subsequent seepages were interpreted as perched groundwater.</p>	<p>On-site and in the immediate vicinity.</p>
<p><i>Surface Water:</i></p> <p>The nearest identified surface watercourse is the Birmingham Canal, of which two arms are located directly adjacent to the north and south of the Facility. The EA does not currently classify the canal arms under the WFD classification scheme.</p> <p>There is no connectivity to river from the canal. The nearest surface water is Hockley Brook located 980m from the site boundary.</p> <p>There are no active licensed surface water abstractions within a 1 km radius of the site.</p>	<p>Adjacent and in the immediate vicinity.</p>
<p><i>Ground:</i></p> <p>British Geological Survey mapping indicates that the site is site is directly underlain by superficial Glaciofluvial Deposits (sand and gravel). This is further underlain by bedrock geology of the Kidderminster Formation (sandstone and conglomerate, interbedded).</p> <p>A ground investigation undertaken at the site in October 2022 identified the following ground conditions:</p> <ul style="list-style-type: none"> • Made Ground was identified across the site from ground level to depths of between 0.8 m below ground level (bgl) to 4.25 m bgl. Concrete slabs were present in every borehole location, and the underlying strata comprised dark brown to black very gravelly sand with frequent cobbles of brick. Gravel was observed to be fine to coarse angular to rounded ash, clinker, brick, concrete and quartzite. Cobbles were observed to be angular brick. Made Ground was also identified as very soft to soft brown slightly gravelly very sandy clay. Gravel was fine to coarse sub-rounded to rounded quartzite. • Glaciofluvial Deposits were identified beneath the Made Ground from depths of 1.7 m bgl to >5.45 m bgl (final depth of borehole). The strata was encountered as firm to stiff orange brown slightly sandy very gravelly 	<p>On-site and in the immediate vicinity</p>

Bridge Street North

Receptor	Location
<p>clay. Gravel was coarse subangular to rounded quartzite. The strata was also identified as brown to orange brown very gravelly slightly to very clayey sand. Gravel was fine to coarse rounded quartzite.</p>	
<p><i>Atmosphere:</i> There will be four emission points across the facility. The point source release points to air are defined as:</p> <ul style="list-style-type: none"> • A1 – extraction from the asbestos storage bays. • A2 – extraction from the biopads. • A3 – extraction from the asbestos hopper. • A4 – extraction from the asbestos picking cabin. <p>The extracted air will pass through an abatement unit containing a HEPA filter and carbon filter.</p>	<p>Across the entirety of the Facility</p>
<p><i>Designated Ecological Sites:</i> There are no statutory designated ecologically sensitive sites located within 2km of the site.</p>	<p>>2 km</p>
<p><i>Human Occupation:</i> Facility workers and visitors are anticipated to be present across the internal and external areas of the site. The nearest residential dwellings are located approximately 90 m north-east of the site. Commercial and light industrial units are present from 10 m east and 15 m south.</p>	<p>On-site and directly adjacent</p>

4. POTENTIAL POLLUTION PATHWAYS

4.1 Identification of Possible Pathways from the Sources of the Risks to Receptors

The potential pollution pathways between the sources identified in Section 1 (excluding those which have been screened out) and the receptors identified in Section 2 are summarised in the table below.

Table 4.1: Potential Pollution Pathways

Source	Potential Pathway	Receptor
<i>Odour:</i> arising from the waste materials.	Through the air.	<i>Humans including:</i> Facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes / roadways surrounding the Facility.
<i>Noise and Vibration:</i> arising from vehicle movements; site operations and process machinery.	Transmitted through the air and through ground vibration.	<i>Humans including:</i> Facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes / roadways surrounding the Facility.
<i>Accidents:</i> including plant or equipment failure; materials handling; vandalism; operator error; fire; and flooding.	Over site surfaces; through site drainage systems; and through the air.	<i>Surface water; Groundwater; Ground; Atmosphere, and Humans including:</i> Facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes / roadways surrounding the Facility.
<i>Fugitive Emissions:</i> including dust; odour; litter; and surface water run-off.	Through the air; windblown; over Facility surfaces; through Facility drainage systems.	<i>Surface water; groundwater; ground; atmosphere, and humans including:</i> facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes / roadways surrounding the site.
<i>Controlled release to air:</i> from point sources.	Through the air; windblown.	<i>Atmosphere, and humans including:</i> Facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes / roadways surrounding the site.
<i>Global Warming Potential:</i> from direct and indirect use of fossil fuels.	Through the air.	<i>Atmosphere.</i>

Bridge Street North

Source	Potential Pathway	Receptor
<i>Installation Waste:</i> hazardous and non-hazardous wastes arising as a result of production processes; maintenance; and administrative functions undertaken at the Facility.	Windblown over ground; surface water run-off.	<i>Groundwater; surface water; ground; and atmosphere.</i>

5. RISK ASSESSMENT METHODOLOGY

The risk assessment provides a simple representation of the hypothesised relationships between contaminants, pathways and receptors. This allows the identification of potential contamination linkages and, therefore, an interpretation of the potential for pollution to occur at the Facility or within the vicinity of the site as a result of the activities at the Facility.

The potential for pollution to occur at the site is determined by assessing the likelihood of an identified receptor being exposed to pollution emanating from a source at the Facility and the resultant consequences of any such exposure. In determining the likelihood and the consequence of a pollution exposure the risk management techniques which are used at the Facility, and the effect on any such exposure are considered. Where the risk management techniques are considered to have a mitigating impact, the resultant overall likelihood of the pollution exposure occurring and its consequences on a receptor are lowered.

5.1 Assessing Likelihood and Consequence

Within the risk assessment, each hypothesised relationship between contaminants, pathways and receptors is assessed to determine the likelihood of the receptor being exposed to pollution and the consequences of exposure using the rankings listed in the tables below.

Table 5.1: Likelihood Rankings

Very Low	Low	Medium	High
Exposure to pollution is considered to be <i>highly unlikely</i> .	Exposure is considered to be <i>unlikely</i> .	Exposure is considered to be <i>likely</i> .	Exposure is considered to be <i>highly likely</i> to occur.

Table 5.2: Consequence Rankings

Very Low	Low	Medium	High
No impact or imperceptible impact on the receptor.	Low level impact easily and quickly mitigated or may not require any intervention to rectify any impact.	Moderate impact which will not be rectified without some mitigation / intervention.	High impact requiring significant intervention / mitigation and may have caused irreparable damage to the receptor.

5.2 Assessment of Risk

Following the determination of the likelihood and consequence rankings for the hypothesised relationships developed using the source-pathway-receptor concept, the matrix in the table below is used to determine the overall risk of the pollution exposure occurring.

Table 5.3 Risk Matrix

		Likelihood			
		Very Low	Low	Medium	High
Consequence	High	Low	Medium	High	High
	Medium	Low	Medium	Medium	High
	Low	Low	Low	Medium	Medium
	Very Low	Very Low	Low	Low	Low

6. RISK ASSESSMENT

6.1 Odour

The potential sources of odour at the Facility have been identified and used to develop the risk assessment for odour (see Table 6.1).

Table 6.1: Odour

Source-Pathway-Receptor Hypothetical Model			Risk Management Techniques	Assessing the Risk		
Source of Pollution	Receptor	Pathway		Likelihood of Exposure	Consequence of Exposure	Overall Risk
Odour: receiving waste materials	Humans including: Facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes / roadways surrounding the Facility.	Fugitive emissions to air	<p>The site will utilise the following measures to protect receptors against odours from site operations:</p> <ul style="list-style-type: none"> • Deliveries of waste materials, ACM storage and bioremediation bays located inside a building; • Strict waste pre-acceptance and acceptance procedures; • Fast turnaround of incoming wastes for asbestos treatment; • A quarantine bay will be provided inside the building; • Limited storage time for processed wastes; • Good housekeeping; • Routine cleaning; • Regular plant maintenance; • Covered external post-treatment storage bays; • Enclosed conveyor belt systems; • Carbon filters; • HEPA filters; • Wastes kept damp; • Odour monitoring undertaken daily in accordance with Odour Management Plan. 	Low to Medium	Medium	Medium

6.2 Noise

The potential sources of noise at the Facility have been identified and used to develop the risk assessment for noise (see Table 6.2). A detailed assessment of noise is provided separately in the Noise Impact Assessment report (1620013520-002, October 2022), and Noise Management Plan (1620013520-002, Dunton Bridge Street North, Noise Management Plant, June 2023).

Table 6.2: Noise

Source-Pathway-Receptor Hypothetical Model			Risk Management Techniques	Assessing the Risk		
Source of Pollution	Receptor	Pathway		Likelihood of Exposure	Consequence of Exposure	Overall Risk
<i>Noise:</i> arising from the movement of heavy goods vehicles (HGVs), and engine noise / alarms from other vehicles working on, and visiting the site.	<i>Humans including:</i> Facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes / roadways surrounding the factory	Through the air and ground vibration	<ul style="list-style-type: none"> A site speed limit of 10 miles per hour will be in operation across the Facility to minimise engine noise. Deliveries are timed so that vehicles will not 'back up' waiting to get onto the site. A no idling policy will be enforced on-site and vehicle users will be required to switch off their engines when not in use. The site has been designed so that vehicles delivering and removing waste will either not have to reverse, or the reversing will be kept to an absolute minimum. Routine inspection and maintenance of roads. 	Low	Low	Low
<i>Noise and Vibration:</i> arising from the internal handling of raw materials and equipment.			<ul style="list-style-type: none"> Bioremediation processes are undertaken within buildings. Enclosed hopper and conveyor belt to transport materials. All waste will be handled with care when being loaded or unloaded. Drop heights will be minimised to reduce the impact of waste hitting site or vehicle surfaces and care will be taken to ensure any manual handling i.e. use of spades does not lead to noise from these implements. Abatement systems such as HEPA filters and fans will operate on a 24/7 basis to control fugitive emissions at the site; however, they will be located inside a building to minimise noise. Deliveries are only received during normal working (daylight) hours as detailed within the planning permission. The working hours are between 07:30 and 17:00 Monday to Friday and 08:00 and 13:30 Saturday. Routine inspection and maintenance of equipment. 	Low	Low	Low

6.3 Accidents

The risk assessment for accidents at the site is included in Table 6.3.

Table 6.3: Accidents

Source-Pathway-Receptor Hypothetical Model			Risk Management Techniques	Assessing the Risk		
Source of Pollution	Receptor	Pathway		Likelihood of Exposure	Consequence of Exposure	Overall Risk
<i>Accident:</i> Leaks and spillages	<i>Ground</i>	Over surfaces & through drainage systems	<ul style="list-style-type: none"> Regular maintenance will be undertaken on all plant and equipment in accordance with the manufacturer's guidance. Daily plant checks will be undertaken to identify and respond to any defects/leaks. Spill kits will be provided, and staff will be fully trained on their use. A full retention interceptor will be installed in the drainage system to capture hydrocarbons. In the event of a spill or leak that could cause risk to the environment, the Site Manager will be informed. If necessary, works shall cease while measures are put in place to remediate the leak or spill and the Environment Agency will be informed. Raw material will be stored indoors. The diesel tank will be self-bunded and contained within a concrete bund and protected by a collision barrier. The refuelling area will be located within a bund with a concrete hump to allow access to vehicles.. An isolation valve will be installed in the drainage system serving contaminative areas. This will be closed routinely during refuelling operations. Procedures require refuelling operations to be supervised. Emergency response procedures will be in place at the site including leaks and spillage. 	Very Low	Medium	Low
	<i>Groundwater</i>			Very Low	Medium	Low
	<i>Surface Water</i>			Very low	Medium	Low
<i>Accident:</i> Plant failure and breakdown	<i>Ground</i>	Through Facility drainage systems	<ul style="list-style-type: none"> All plant will be checked on a daily basis, and any issues reported immediately. All internal areas of the Facility feature impermeable surfaces and a sealed drainage system. A full retention interceptor will be installed and will be inspected and cleaned regularly. Spill kits will be available in key risk areas. A spill response procedure will be defined in the site's Accident Management Plan. The site will keep critical spares for important plant or parts so that minimal disruption will be experienced in the event of plant failure or breakdown. In the event of prolonged plant failure that could lead to environmental impact, site operations may temporarily cease and any incoming vehicles will be diverted to an alternative (off-site) permitted facility for treatment. All vehicles and plant will be turned off when not in use. 	Very Low	Low	Low
	Groundwater			Very Low	Low	Low
	Surface Water			Very Low	Low	Low
<i>Accidents (Vandalism):</i> Damage / theft of externally located equipment / tanks	<i>Ground</i>	Over Facility surfaces; and, through drainage systems.	<ul style="list-style-type: none"> CCTV will cover the site, which will be secured by fencing and with authorised access only. Site gates will be kept locked at all times when the site is not operational. The Facility will be manned between the hours of 07:00 to 17:30 from Monday to Friday and between the hours of 08:00 and 13:30 on a Saturday. CCTV will be monitored by an external security company when the site is not manned. Surface water run off will collect in the site drainage system which can be isolated in the event of a spill. The drain ultimately leads to the foul sewer network via a full retention interceptor. There is limited potential for contamination to reach surface water from accidents and vandalism. 	Very Low	Low	Low
	Groundwater			Very Low	Low	Low
	Surface Water			Very Low	Medium	Low
<i>Accidents (Fire):</i> Fire and arson attacks	<i>Ground</i>	Over Facility surfaces; through the air;	<ul style="list-style-type: none"> Due to the nature of the waste types to be accepted into the facility and the treatment activities being undertaken, it is considered that the activities are of an inherently low fire risk. 	Very Low	High	Low

Source-Pathway-Receptor Hypothetical Model			Risk Management Techniques	Assessing the Risk		
Source of Pollution	Receptor	Pathway		Likelihood of Exposure	Consequence of Exposure	Overall Risk
	Groundwater	and, through Installation drainage systems.	<ul style="list-style-type: none"> • Strict waste pre-acceptance and acceptance procedures will be put in place to minimise the risk of non-compliant wastes being accepted. • The operator will undertake regular maintenance of plant and equipment in accordance with the manufacturer’s guidance. • Firefighting equipment will be available on site for handling small fires. • Hazardous waste treatment and storage areas will be fully concreted and will have kerbed edgings with sealed drainage. • All chemicals will be stored in accordance with manufacturers guidance within a dedicated chemicals storage area inside the building. • The drainage system in the contaminative areas of the site will have an isolation valve installed which will contain contaminated water in the drainage system and hardstanding. Two effluent storage tanks will provide additional storage capacity of up to 20,000 litres. 	Very Low	High	Low
	Surface Water			Very Low	High	Low
	Atmosphere			Very Low	High	Low

6.4 Fugitive Emissions

The risk assessment for fugitive emissions is presented in the table below.

Table 6.4: Fugitive Emissions

Source-Pathway-Receptor Hypothetical Model			Risk Management Techniques	Assessing the Risk		
Source of Pollution	Receptor	Pathway		Likelihood of Exposure	Consequence of Exposure	Overall Risk
Fugitive Emissions: dust, asbestos, mud and odour	Humans including: Facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes / roadways surrounding the factory.	Through the air	<ul style="list-style-type: none"> Dust and HEPA extraction systems will be in place within the main building and asbestos picking area, vented at roof level, with four emission points. Waste materials will be stored internally in dedicated storage bays, Material transfers will be facilitated by a covered conveyor belt system. Post treatment bays will be roofed. All incoming and outgoing vehicles will be sheeted or covered to prevent any load loss. A wheel wash area will be present at the site, so that vehicles are washed down following deposition of material. Management plans are in place and monitoring will be undertaken on a monthly basis for dust, and a daily basis for odour. Waste will be tested using a portable analyser prior to acceptance. Waste pre-acceptance and acceptance procedures ensure that the fibre content of the waste is below the threshold for hazardous determination. Waste in the asbestos picking station will pass under spray bars to maintain moisture content and minimise dust formation. Daily VOC monitoring will be undertaken using a portable photoionisation detection unit. 	Low	Medium	Medium
	Atmosphere			Low	Low	Low
Fugitive Emissions: contaminated surface water run-off from external areas.	Surface Water	Through drainage systems	<ul style="list-style-type: none"> Storm water run-off from contaminative areas will be directed via an integrated wastewater and storm water drainage system flowing towards the north-east of the site. A sump is present in the centre of the site with an isolation valve, and four damp-down sumps are present in the internal warehouse building. The drainage system is transferred via two 10,000 litre holding tanks to foul sewer via a silt trap and full retention interceptor. The water will be tested prior to discharge to the foul sewer. The holding tanks will be located within a concrete bund to provide secondary containment. The wheel wash will include a tank where water will be recycled until it is spent. When the water is spent, it will be tested prior to discharge to foul sewer via the silt trap and interceptor. Waste treatment activities will predominantly be carried out indoors, with outdoor storage of treated waste being covered. 	Low	Medium	Medium
	Ground water					

6.5 Controlled Releases to Air

The risk assessment for controlled releases to air is presented in Table 6.5.

Table 6.5: Controlled Releases to Air

Source-Pathway-Receptor Hypothetical Model			Risk Management Techniques	Assessing the Risk		
Source of Pollution	Receptor	Pathway		Likelihood of Exposure	Consequence of Exposure	Overall Risk
Controlled Releases to Air: Four extraction points from the asbestos storage bays, biopads, asbestos hopper and asbestos picking cabin	Atmosphere	Through the air	<ul style="list-style-type: none"> • Extracted air will pass through abatement units containing HEPA and carbon filters. • If waste requires both asbestos treatment and bioremediation, it will pass through the asbestos picking station prior to being moved to a biopad for bioremediation. • Air will ultimately be extracted from vents at roof height. • Waste soils will be kept damp to prevent dust formation and an additive will be sprayed onto the soil to treat and bind any asbestos fibres present. Whilst the waste acceptance criteria require the fibre content to be below the threshold for hazardous determination, the additive will provide additional protection for process operatives. • Routine monitoring of dust will be undertaken using Frisbee gauges and laboratory analysis. The samples will also be analysed for asbestos fibres. • MCertS monitoring of dust and TVOC will be undertaken once every six months. • Monitoring will be undertaken within the asbestos picking station in accordance with CIRIA C733 and HSG 248. Monitoring will be undertaken on a monthly basis by a third-party contractor. 	Low	High	Medium
	Humans including: Facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes / roadways surrounding the factory					

6.6 Global Warming Potential

Table 6.6: Global Warming Potential

Source-Pathway-Receptor Hypothetical Model			Risk Management Techniques	Assessing the Risk		
Source of Pollution	Receptor	Pathway		Likelihood of Exposure	Consequence of Exposure	Overall Risk
<i>Global Warming Potential: Use of grid-sourced electricity to support production processes resulting in in-direct emissions of greenhouse gasses.</i>	<i>Atmosphere</i>	Through the air	<ul style="list-style-type: none"> Energy consumption will be monitored, recorded, and reported on a monthly basis. Energy use will be monitored in accordance with the EMS. The company has energy reduction targets that include Scope 1,2 and 3 emissions. 	High	Very Low	Low

6.7 Installation Waste

Table 6.7: Installation Waste

Source-Pathway-Receptor Hypothetical Model			Risk Management Techniques	Assessing the Risk		
Source of Pollution	Receptor	Pathway		Likelihood of Exposure	Consequence of Exposure	Overall Risk
<p><i>Facility Waste:</i> Wastes which arise from production and administrative activities at the site comprising: mixed recyclables; general waste; wood, cardboard and hazardous waste.</p>	<p><i>Humans including:</i> Facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes / roadways surrounding the factory</p>	Through the air	<ul style="list-style-type: none"> Wastes from the facility are limited to asbestos, general waste from the offices, wastes from maintenance activities and containers from raw materials. Materials will be recycled where possible, including the plastic drums and kegs in which the raw materials are supplied. All wastes produced at the Facility will be segregated and provided with suitable containment. All wastes will be stored within a dedicated recycling and waste area. Asbestos waste will be double bagged and locked securely in an onsite skip ready for collection. The management of waste will be contracted to a suitable waste contractor, who will manage and arrange collections on behalf of the Facility. 	Low	Low	Low
	Surface Water	Over Facility surfaces; and through drainage systems		Low	Low	Low
	Groundwater			Low	Low	Low
	Ground			Low	Low	Low

7. ERA CONCLUSION

Ramboll has identified potential environmental risks at the Facility and determined the potential environmental impact arising from each risk. The assessment has demonstrated that with the appropriate management controls in place, risks identified are acceptable.

APPENDIX 1 NOISE IMPACT ASSESSMENT