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RGE Recycling Ltd **Royal Eagle Close** **Environmental Risk** **Assessment**



RGE Recycling Ltd

Environmental Risk Assessment

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1. Introduction

The Permitting Company Limited (TPC) was commissioned by RGE Recycling Ltd (RGE, the 'Operator' or the 'Client') to prepare an Environmental Risk Assessment (ERA) for its proposed waste facility located at Royal Eagle Close, Rochester, ME2 4NF (the 'Facility', or the 'Site'). The ERA has been prepared in support of the Client's application for an Environmental Permit.

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, the 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 source 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

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:

- 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 to controlled waters.
- A 'receptor' is something that could be adversely affected by a contaminant, for example a person, an organism, an ecosystem, property, or controlled water.
- A 'pathway' is a route by which a receptor is or might be affected by a contamination.

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.

Environmental Risk

The operator is required to identify the environmental risks (source of potential contamination) which could occur during the operation of the Facility, including any risks which may arise from accidents. The EA online guidance 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 discharge)
- Visible emissions

In considering the risks, 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 the risks is presented in the table below which also provides justification where risks are considered to be insignificant. The risks which have been identified as significant have been included in the risk assessment in Section marked ‘Risk Assessment Methodology’ of this report.

Table 1: Screening of Environmental Risk

Environmental Risk	Applicability	Justification
Controlled discharges to surface water	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 and 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>Material handling: Wastes to be processed will be stored in a dedicated storage bay or container. Wastes will be transported across the Facility via HGV's and Plant.</p> <p>Raw Materials are stored within drums and IBC's in dedicated storage areas 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 in a mixed commercial and industrial 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 Facility have the potential to be odours if the Waste Acceptance Procedures are not appropriately followed.

Noise and Vibration	Applicable	Operations at the Facility have the potential to produce noise if not appropriately managed. In particularly the movements of Heavy Goods Vehicles making deliveries to and collections from site.
Visual Impact	Not Applicable	Do to the heavily built industrial area of which the Facility is located, visible emission will be limited to dust generation, and the operations itself will not have visual impact the residents living in the wider area. Based on this, visual impact has not been significant and has not been included for further assessment.
Emission to air and water	Applicable	Fugitive emissions of dust and odour may be generated during the movement of materials around the site. Surface Water: potential for blocked/damaged drains or misconnections in the drainage system to result in an uncontrolled release of wastewater to the ground or surface water. Storm water discharges: storm water run-off from the sites roofs and yard area is directed into the sites sealed drainage system.
Controlled releases to air	Not Applicable	The facility does not have any controlled air emissions systems in place in line with their operations. The waste operation doesn't warrant it.
Global Warming Potential	Applicable	Indirect emissions arise from the use of electricity, and water. There are no direct emissions produced by the facility.
Facility Waste	Applicable	Hazardous and Non-hazardous wastes will be produced at the Facility as a result of the production processes, maintenance and administrative functions.

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), TPC has identified the receptors within the vicinity of the site. A summary of the identified receptors is provided in the table below.

Table 2: Summary of Identified Receptors

Receptor	Location
<p>Groundwater: The Groundsure dataset acquired for the Site Condition Report identifies both a superficial aquifer (associated with the tidal alluvium) and a Principal Aquifer in the bedrock (the Chalk). In practice this means any infiltration that reaches the drift will move slowly where the alluvium is clay-rich, but could transfer more readily into fissures and solutional voids in the Chalk if pathways exist. Groundwater vulnerability is flagged on site, with a “soluble rock risk” also recorded, again consistent with Chalk karst potential.</p> <p>Within the wider setting, a Source Protection Zone is present about 2 km to the west, with no recorded potable abstractions within 2 km and one groundwater abstraction in the 0.5–2 km band. The nearest surface water is Whitewall Creek, a tidal arm of the Medway estuary approximately 84 m to the north-east. The adjacent transitional Water Framework Directive water body is the “Medway,” assessed in 2019 as moderate overall (moderate ecology; chemical “fail”). These factors reinforce that any uncontrolled releases on site could find a short pathway to surface waters during rainfall via yard drainage or minor infiltration to shallow groundwater with tidal influence.</p> <p>The site is not located in Source Protection Zone (SPZ). The Groundsure report shows the nearest SPZ is a Zone 3 (Total Catchment) located about 260m West of the site. The Groundsure lists zero SPZ features on-site or within 0-250m and no features in the 250-500 band.</p> <p>The site is not located within a surface water Nitrate Vulnerable Zone (NVZ) as designated by the Environment Agency.</p>	<p>On site and in the immediate vicinity.</p>
<p>Surface Water: The closest surface water is Whitewall Creek, a tidal inlet of the River Medway, located about 84 m to the north-east of the site. The Water Framework Directive (WFD) dataset classifies the adjacent transitional water body as “MEDWAY” (ID GB530604002300). Its most recent reported status (2019) is Overall: Moderate, Chemical: Fail and Ecological: Moderate. The site lies within the Lower Medway management catchment; for WFD purposes the on-site surface-water catchment is mapped as a coastal/transitional unit rather than a river water-body catchment.</p> <p>Groundwater beneath the site forms part of the North Kent–Medway Chalk WFD groundwater body (ID GB40601G500300). In 2019 this unit was assessed as Overall: Poor, with both Chemical and Quantitative elements ranked Poor. There is a concentration of licensed discharges to controlled waters within 500 m, largely associated with the Whitewall Creek Wastewater Treatment Works (Upnor Road), 270–304 m to the northwest. Over time the WWTW has held permits for storm overflows and final treated effluent to Whitew</p>	<p>Within 1km of site</p>

<p>all Creek, with the most recent variations issued under the EPR in March 2025 (Permit W00510, Version 11). Historic records also include a trade discharge for site drainage at Pelican Reach about 340 m southeast, and List 2 Dangerous Substances entries (iron, pH) linked to nearby dischargers in the Medway estuary corridor.</p> <p>Abstraction data show no licensed surface-water abstractions within 2 km of the site and, therefore, none within 1 km. One historical groundwater abstraction is recorded 848 m southwest (QDS Environmental Ltd, a pollution-remediation borehole series), and there are no potable abstractions within 2 km. The site itself is not inside a Source Protection Zone, although the outer SPZ-3 (total catchment) clipping of a public supply lies roughly 260 m west.</p> <p>The site lies on the Medway City Estate adjacent to Whitewall Creek and the tidal River Medway. Environment Agency Flood Map for Planning data reproduced in the Groundsure report confirms that Flood Zones 2 and 3 intersect the site when flood defences are ignored; in other words, parts of the footprint are modelled to be at risk in both the 0.1% AEP and $\geq 1\%/0.5\%$ AEP events respectively.</p> <p>When defences are considered, the Risk of Flooding from Rivers and the Sea (RoFRaS) classification for the site itself is “Very Low”, with the same rating recorded within 50 m. No historic flood events are logged in the immediate vicinity. The mapping also shows the site is within an “Area Benefiting from Flood Defences” and lists multiple formal defences within 250 m—consistent with the raised, engineered frontage along Whitewall Creek. This means the day-to-day probability is suppressed by the local defence standard, but a residual risk remains should those defences be overtopped or fail.</p> <p>Surface water (pluvial) modelling indicates shallow ponding is possible during intense rainfall. On-site depths are typically 0.1–0.3 m in a 1-in-30 year event, increasing to 0.3–1.0 m in the 1-in-100 to 1-in-1,000 year scenarios in the immediate surrounds. This reflects the flat topography and hardstanding prevalent across the estate.</p> <p>Groundwater flood susceptibility is mapped as “High” on the site at a 1-in-100 year return period, again reflecting the low-lying estuarine setting and shallow groundwater conditions typical of the Medway tidal corridor. Such flooding is usually slow-to-recede and can persist for weeks, so it is pertinent to storage and pollution-prevention design.</p>	
<p>Ground: Made Ground - Although the BGS “artificial and made ground” layer shows no polygons at 1:50,000 scale within 500 m, the site is a long-established, fully hard-surfaced industrial plot; the lack of mapping should not be taken to mean made ground is absent at shallow depth.</p> <p>Solid and Drift Geology - Published BGS mapping at 1:50,000 scale shows the site is mantled by Quaternary superficial deposits of Alluvium—clay, silt, sand and peat—with areas of undifferentiated beach and tidal-flat deposits also recorded directly beneath the footprint. Similar alluvial ground is mapped in every direction within tens of metres, with local patches of Head (clay and silt) and River Terrace Deposits (sand and gravel) appearing a little farther out. On this mapping, the estimated vertical permeability of the superficial cover is “intergranular: moderate to very low,” which is consistent with fine-grained, estuarine alluvium limiting infiltration except via any made-ground breaks or service runs.</p> <p>Beneath the drift, the bedrock is Chalk of the Lewes Nodular, Seaford and Newhaven Chalk formations (undifferentiated). The Chalk here is characterised</p>	<p>On site and in the immediate vicinity.</p>

<p>by very high fracture permeability on the BGS dataset, reflecting the importance of fissures and any solutional features for groundwater movement. No mapped bedrock faults occur within 500 m.</p>	
<p>Atmosphere: Reference to the interactive DEFRA Air Quality Management Area (AQMA) mapping tool identifies that the site is not located within an AQMA for PM10.</p> <p>Reference to the UK Ambient Air Quality Interactive Map identifies background annual mean PM10 concentration for the area 9 µg m³, which is well below the annual mean Air Quality Objective of 40 µg m³.</p> <p>The prominent wind direction is from the Southwest to the Northeast. Winds from the north, east and west are relatively infrequent.</p> <p>Total average annual rainfall during the period 1991-2020 was 675.27mm. The number of days greater than or equal to 1mm was 110 days on average each year, therefore providing natural dampening approximately 31% of the year.</p>	<p>On site and in the immediate vicinity.</p>
<p>Designated Ecological Sites: The site sits within a 500m radius of areas of protected species. The species are listed below:</p> <ul style="list-style-type: none"> - Allis Shad migratory route - European Eel migratory route - River Lamprey migratory route - Sea Lamprey migratory route - Smelt migratory route <p>SSSI: Tower Hill to Cockham Wood, this is of both biological and geological interest. It contains woodland representative of that on tertiary deposits in Kent and supports a rich insect fauna. In addition, Upnor Quarry exposes a complete Tertiary stratigraphic sequence.</p> <p>It contains woodland representative of that on Tertiary deposits in Kent and supports a rich insect fauna. In addition, Upnor Quarry exposes a complete Tertiary stratigraphic sequence. Much of Cockham Wood consists of neglected coppice, principally ash <i>Fraxinus excelsior</i>, with oak <i>Quercus robur</i> standards. The shrub layer, which is especially varied towards the central part of the wood, is dominated for the most part by elm <i>Ulmus</i> spp., field maple <i>Acer campestre</i> and hawthorn <i>Crataegus monogyna</i>. However, many other shrubs are also represented including some characteristic of base-rich soils, such as dogwood <i>Cornus sanguinea</i>, and others of more acid soils, such as honeysuckle <i>Lonicera periclymenum</i>. Amongst the ground flora brambles <i>Rubus fruticosus</i>, dog's mercury <i>Mercurialis perennis</i>, and nettles <i>Urtica dioica</i> are generally dominant. To the west of the wood is an area of dense scrub, but with grassy clearings maintained by rabbits. Elm suckers and hawthorn dominate the vegetation.</p> <p>The ground flora here are sparse, though the clearings support a number of herbs typical of calcareous pastures including yellow-wort <i>Blackstonia perfoliata</i> and ploughman's spikenard <i>Inula conyza</i>. A narrow grassy zone, dominated by sea couch-grass <i>Elymus pycnanthus</i>, occurs at intervals along the junction between woodland and intertidal mudflats. Minor slippages and wave action have led to erosion of this habitat. A number of scarce species were formerly found in this zone but only one, bithynian vetch <i>Vicia bithynica</i>, remains. Tower Hill and Lower Upnor Quarry are sandy areas which support a very rich insect fauna. Of</p>	<p>Within 500m of site</p>

<p>particular note are the aculeate hymenoptera (bees and wasps), about a third of all British species being found here including 7 nationally rare species. The geological interest of Upnor Quarry may be defined as follows: The Upnor Quarry exposes a complete Tertiary age stratigraphic sequence from the Thanet Sands, through the Woolwich and Oldhaven Beds, into the lower part of the London Clay. The Woolwich and Oldhaven Beds are of particular interest, both in the sedimentary evidence they afford of depositional conditions, and in the abundant molluscan fauna that they yield. The complex lateral facies changes in these formations makes Upnor a vital site to be viewed in comparison with other Palaeogene localities in the eastern London Basin.</p>	
<p>Human Occupation: The site is in a predominately industrial/commercial area. The following current activates have been identified surrounding the site.</p> <p>North – a mixture of industrial land, vanguard way and Whitewall Creek.</p> <p>East – Industrial land furthering onto residential and Limehouse Reach.</p> <p>South – Industrial land and the River Medway.</p> <p>West – Industrial land along with Whitewall Creek and the River Medway.</p> <p>The nearest residential property is located approximately 800 metres to the south east.</p>	<p>Within 1km of the site</p>

4. Potential Pollution Pathways

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

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

Table 3: Potential Pollution Pathways

Source	Potential Pathway	Receptor
<i>Odour:</i> arising from the waste materials.	Through the air.	Humans including: 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.	Humans including: 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 surface, through site drainage systems and through the air.	Surface water; Groundwater; Ground; Atmosphere, and Humans including: 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.	Surface water; Groundwater; Ground; Atmosphere, and Humans including: Facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes /

		roadways surrounding the Facility.
<i>Controlled release to air: from point source</i>	Through the air, windblown.	Atmosphere, and humans including: Facility workers/visitors; workers on adjacent premises; local residents; intermittent presence on pedestrian routes / roadways surrounding the site.
<i>Global Warming Potential: from fossil fuels.</i>	Through the air.	Atmosphere.
<i>Facility Waste: hazardous and non-hazardous wastes arising as a result of production process, maintenance and administrative functions undertaken at the facility.</i>	Windblown over ground, surface water run-off.	Groundwater; surface water; ground; and atmosphere.

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.

Assessing likelihood and consequences

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 4: Likelihood Ranking

Very Low	Low	Medium	High
Exposure to pollution is considered to be highly unlikely	Exposure is considered to be unlikely	Exposure is considered to be likely	Exposure is considered to be highly likely to occur

Table 5: Consequence Ranking

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.

Assessment of Risk

Following the determination of the likelihood and consequence ranking for the hypothesised relationship development 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 6: 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

Odour

The potential sources of odour at the Facility have been identified and used to develop the risk assessment.

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>Odour:</i> receiving waste materials	Humans including facility workers/visitors, workers on adjacent premises, local resident, intermittent presence on pedestrian routes/roadways surrounding the Facility.	Fugitive emissions to air	The EMS includes strict waste pre-acceptance and acceptance procedures.	Low	Low	Low

Noise

The potential sources of noise at the facility have been identified and used to develop the risk for 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
<p>Noise: arising from the movement of heavy goods vehicles (HGV) and engine noise/alarms from other vehicles working on and visiting the site.</p>	<p>Humans including facility workers/visitors, workers on adjacent premises, local resident, intermittent presence on pedestrian routes/roadways surrounding the Facility.</p>	<p>Through the air and the ground vibration</p>	<p>A site speed limit of 10 miles per hour will be in operation across the Facility to minimise engine noise.</p> <p>Deliveries are timed so that vehicles will not 'back up' waiting to get onto the site.</p> <p>A no idling policy will be enforced on-site and vehicle users will be required to switch off their engines when not in use.</p> <p>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.</p> <p>Routine inspection and maintenance of roads.</p>	<p>Low</p>	<p>Low</p>	<p>Low</p>

<p><i>Noise and Vibration:</i> arising from the internal handling of raw materials and equipment.</p>			<p>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.</p> <p>Deliveries are only received during normal working (daylight) hours as detailed within the planning permission. The working hours are between 07:00 and 17:00 Monday to Friday and 08:00 and 13:30 Saturday.</p> <p>Routine inspection and maintenance of equipment.</p>	<p>Low</p>	<p>Low</p>	<p>Low</p>
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Accidents

The risk assessment for accidents at the site

Source-Pathway-Receptor Hypothetical Model			Risk Management Techniques	Assessing the Risk		
Source of Pollution	Receptor	Pathway		Likelihood of Exposure	Consequence of Exposure	Overall Risk
Accidents: Leaks and spillages	Ground	Over surface and through drainage systems	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.	Very Low	Medium	Low
	Groundwater		Spill kits will be provided, and staff will be fully trained on their use. An interceptor is installed in the drainage system to capture hydrocarbons.	Very Low	Medium	Low
	Surface Water		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. The diesel tank will be self-bunded and protected by a collision barrier. The drains will be isolated in the event of an emergency. Procedures require refuelling operations to be supervised.	Very Low	Medium	Low

			Emergency response procedures will be in place at the site including leaks and spillage.			
<i>Accident:</i> Plant failure and breakdown	Ground	Through facility drainage system	<p>All plant will be checked on a daily basis, and any issues reported immediately.</p> <p>All internal areas of the Facility feature impermeable surfaces and a sealed drainage system.</p> <p>A interceptor is installed and will be inspected and cleaned regularly.</p> <p>Spill kits will be available in key risk areas.</p> <p>A spill response procedure will be defined in the site's Accident Management Plan house within the EMS.</p> <p>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.</p> <p>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.</p> <p>All vehicles and plant will be turned off when not in use.</p>	Very Low	Low	Low
	Groundwater			Very Low	Low	Low
	Surface Water			Very Low	Low	Low

<p><i>Accidents (Vandalism):</i> Damage/theft of externally located equipment/tanks</p>	Ground	<p>Over Facility surfaces, and through drainage systems,</p>	<p>CCTV will cover the site, which will be secured by fencing and with authorised access only.</p> <p>Site gates will be kept locked at all times when the site is not operational.</p>	Very Low	Low	Low
	Groundwater		<p>The Facility will be manned between the hours of 07:00 to 17:00 from Monday to Friday and between the hours of 08:00 and 13:00 on a Saturday. CCTV will be monitored by an external security company when the site is not manned.</p> <p>Surface water runoff will collect in the site drainage system which can be isolated in the event of a spill.</p>	Very Low	Low	Low
	Surface Water		<p>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.</p>	Very Low	Low	Low
<p><i>Accidents (Fire):</i> <i>Fire and arson attacks</i></p>	Grounds	<p>Over Facility surface, through the air and through the drainage system.</p>	<p>Strict waste pre-acceptance and acceptance procedures will be put in place to minimise the risk of non-compliant wastes being accepted.</p> <p>The operator will undertake regular maintenance of plant and equipment in accordance with the manufacturer's guidance.</p>	Medium	Medium	Medium
	Groundwater		<p>Firefighting equipment will be available on site for handling small fires.</p> <p>Infrastructure will be designed inline with the FPP requirements.</p>	Medium	Medium	Medium

	Surface Water		<p>All chemicals will be stored in accordance with manufacturers guidance within a dedicated chemicals storage area inside the building.</p> <p>The drainage system in the contaminative areas of the site will be isolated in an emergency in line with FPP.</p> <p>FPP will be reviewed regularly to make sure the procedures are reflective of the risk and activity at the site.</p>	Medium	Medium	Medium
	Atmosphere			Medium	Medium	Medium

Fugitive Emissions

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

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>Fugitive Emissions:</i> dust, mud and odour	Humans including facility workers/visitors, workers on adjacent premises, local resident, intermittent presence on pedestrian routes/roadways surrounding the Facility. SSSI: Towerhill to Cockham Wood. Marine environment through dust soiling of waterways.	Through the air	<p>All incoming and outgoing vehicles will be sheeted or covered to prevent any load loss.</p> <p>Management plans are in place and monitoring will be undertaken on a monthly basis for dust, and a daily basis for emissions.</p> <p>Waste pre-acceptance and acceptance procedures ensure that potential dusty loads are rejected.</p> <p>Drop heights will be minimised were possible.</p> <p>Dust suppression in line with the Emission Management Plan</p>	Low	Medium	Low
	Atmosphere			Low	Medium	Low
<i>Fugitive Emissions:</i> contaminated	Surface Water	Through drainage system	Drainage system runs into an interceptor.	Low	Medium	Low

surface water run-off from external areas.	Ground Water			Low	Medium	Low
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Controlled Releases to Air

The risk assessment for controlled releases to air is presented in the table below.

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>Controlled Release to Air: (number) extraction points from the (locations)</i>	Humans including facility workers/visitors, workers on adjacent premises, local resident, intermittent presence on pedestrian routes/roadways surrounding the Facility.	Through the air	Currently no controlled release to air.	Very Low	Very Low	Very Low
	Atmosphere			Very Low	Very Low	Very Low

Global Warming Potential

The risk assessment for Global Warming Potential is presented in the table below.

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 indirect emissions of greenhouse gasses.</i>	Atmosphere	Through the air	Energy consumption will be monitored Site will act in accordance with the Climate Change Adaptation Assessment	High	Very Low	Low

Facility Waste

The risk assessment for Facility Waste is presented in the table below.

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>Facility Waste:</i> Wastes which arise from production and administration activities at the site comprising: mixed recyclables, general waste, wood, cardboard and hazardous waste.	Humans including facility workers/visitors, workers on adjacent premises, local resident, intermittent presence on pedestrian routes/roadways surrounding the Facility. SSSI: Tower Hill to Cockham Wood.	Through the air	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.	Low	Low	Low
	Surface Water	Over Facility surface and through drainage systems				

	Groundwater					
	Ground					

7. Environmental Risk Assessment Conclusion

TPC has identified the potential environmental risk 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.