ENVIRONMENTAL RISK ASSESSMENT

(inc. Climate Change Adaption)

N&P Hartlepool MRF Ltd
Materials Recycling Facility

Prepared by:
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1. INTRODUCTION

As part of an application for an environmental permit, Operators must assess the risk to the environment and human health from the activities they seek to permit. This Environmental Risk Assessment has been undertaken to support a permit variation application in accordance with the Environment Agency Guidance for undertaking environmental risk assessments.

Environmental risks relevant to the site activities are:

- Emissions to Air;
- Emissions to Water;
- Emissions to Land;
- Odour;
- Noise;
- Litter;
- Pests;
- Vandalism;
- Fire;
- Incompatible Feedstock; and
- Climate Change Factors.

For each of the above environmental criteria the approach to the assessment has followed the following four stage process:

- Identify the risks;
- Assess the risks (assuming those control measures proposed are in place);
- Choose appropriate further measures to control these (if required); and
- Present the assessment.

Environmental Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Point Source / Emissions to Air	Atmosphere	Airborne	• There are no point source emissions to air from the site.	Negligible	Air Pollution	VERY LOW due to the nature of waste processing/storage activities on site
Emissions to Water	Groundwater / Geology / Surface Water	Waterborne	• The majority of the drainage system will remain as currently permitted. • There will be no direct process emissions to controlled waters arising from the site. • All activities will be carried out on impermeable hardstanding with sealed drainage to prevent potentially contaminated runoff to soil, surface water or groundwater. • Water falling onto the roof of the pellet storage buildings is collected by rainwater gutters into the sealed surface water drainage system which will be equipped with stage 1 interceptor systems and isolation valves. • The drainage system has been designed to ensure that any contaminated site water or fire water run-off is retained with only clean uncontaminated surface water being discharged from site. • Any potential contaminated run-off is captured within the drainage system and tankered off site for disposal. • There is a connection to a mains sewer foul, consented via a Trade Effluent Discharge Consent.	LOW: all runoff is controlled on site, therefore the probability of exposure is low.	Contamination	VERY LOW due to the proposed management techniques and drainage arrangements

Emissions to Land	Groundwater / Geology	Spills / Leaks	• There will be no emissions to land arising from the proposed facility. • All operational and storage areas are covered by impermeable hardstanding. • Spill kits will be strategically located around site. • Minor spills will be cleaned up immediately, using spill kits. Resultant materials to be placed in container for off-site disposal to appropriate facility, if necessary. • Immediate action to be taken in event of any major spills. Spillage to be cleared immediately and placed in containers for offsite disposal. EA to be informed	LOW: spills / leaks could potentially contaminate the ground / groundwater underneath the site.	Contamination	VERY LOW due to the proposed risk management techniques
Noise	Local Residents	Airborne	• The introduction of the new Hammer Mill will introduce a new process to the sites operation. However, as the permitted MRF is no longer operational and the Hammer Mill will be operated within an enclosed building within a heavily industrialised area, there will be no increase in noise emissions as a result of the permit variation. • The site is within a predominantly industrial/agricultural area and is not considered unduly sensitive in regards to noise. • Appropriate preventative maintenance will be provided for the various elements of the installation. This will ensure no deterioration of plant or equipment that would give rise to increases in noise. • The Trommel Mill has been designed in accordance with best practice and to ensure that internal noise does not present an issue to the employees at the site under the Control of Noise at Work Regulations and to ensure that noise	LOW: due to the nature of the activities, noise emissions from the plant are inevitable and could cause offsite receptor impacts.	Nuisance	LOW due to the proposed risk management techniques

			breakout does not lead to noise nuisance at the identified sensitive receptors. • The facility will not give rise to reasonable cause for annoyance. In the unlikely event that complaints are received, they will be investigated fully in line with the sites EMS system. measures described in the integrated management system will be put in place.			
Odour	Local Residents	Airborne	• The SRF material stored and processed on site is devoid of food waste and organic fines and therefore has very low odour potential. • There is no potential for odour from the external storage of baled waste as the bales will be sufficiently wrapped. • Due to the design of the building structures and the enclosed processing activities, there is no potential for offsite odour emissions and impacts to arise from the site. • No malodorous waste will be accepted onto site and therefore the potential for offsite odour impacts is considered negligible. • The site has an existing Odour Management Plan.	LOW: the occurrence of odour emissions from the site is possible.	Nuisance	**NEGLIGIBLE** due to the proposed risk management techniques
Dust	Local Residents	Airborne	• The introduction of the Hammer Mill does potentially increase the potential for dust emissions on site. However, the pellets are unloaded, stored and processed internally within an enclosed system, reducing the risk of dust emissions from the process.. • Vehicle speeds will not exceed 10mph on site which is a recognised method of controlling dust. • All plant will be regularly maintained, inspected and kept clean to avoid a build-up of material, which may lead to dust emissions.	LOW: the occurrence of dust emissions migrating offsite is low.	Nuisance	**VERY LOW** due to the proposed risk management techniques

			• All incoming / departing loads will be appropriately sheeted or tipped in designated areas. • Site drainage, containment systems and associated infrastructure will be regularly cleared and maintained as required to ensure they are working correctly. • The facility will not give rise to reasonable cause for annoyance. In the unlikely event of any complaints, these will be dealt with in accordance with the sites complaints procedures. • No inherently dusty material is accepted onto site, therefore the potential for dust emissions is very low. • All pellets will be stored internally in designated warehouses. • The only waste stored externally is triple wrapped baled SRF to prevent dust emissions. • The site has a dedicated Dust Management Plan.			
Litter	Local Residents	Airborne	• There are no external activities on site apart from the storage of baled SRF which will be sufficiently wrapped to prevent litter issues . • All incoming and exporting waste vehicles will be covered. • The site access and site services shall be swept as necessary. • The site shall be inspected daily by the site manager and any litter or accumulated debris shall be dealt with immediately. • The site will have robust housekeeping measures in place. • The site has a dedicated Dust Management Plan which also addresses litter.	LOW: the occurrence of litter on site is unlikely therefore the probability of exposure is very low.	Nuisance	LOW due to the proposed risk management techniques

Pests	Local Residents	Airborne and migration	• The site will employ commercially available products and services to control pests if required. • The site is inspected weekly for the presence of pests which is recorded in the daily log should any activity be revealed. • A specialist contractor will visit the site periodically which will be recorded in the pest control log.	LOW: the occurrence of pests on site is highly unlikely.	Nuisance	VERY LOW due to the proposed risk management techniques
Vandalism	Operator	The site could be subject to intentional vandalism and damage by intruders / trespassers who could cause damage or harm to the site or cause fires.	• The site has CCTV monitoring and is manned 24/7. • The site is well lit and secured by a perimeter fence. • Fencing is maintained and repaired to ensure its continued integrity. If damage is sustained, repair will be made within the same working day. If this is not possible, suitable measures will be taken to prevent unauthorised access to the site and permanent repairs will be affected as soon as is practicable. • All visitors to the site are required to register in the visitor's book and sign out again on exit, thereby minimising the risk of unauthorised visitors on the site.	LOW: the occurrence of vandalism taking place on site is highly unlikely.	Nuisance, Damage or Fire	VERY LOW due to the proposed risk management techniques
Fire on site	Operator / Residential Properties	Windborne	• Arson by intruders is controlled via CCTV monitoring and site being manned 24/7. • The site is well lit and secured by a perimeter fence. • Fire detection and suppression systems are implemented in all buildings that store or process the waste, inline with the EA's Fire Prevention Plan Guidance 2021: • Storage areas are monitored 24/7 by thermal imaging cameras.	LOW: the occurrence of a fire taking place on site is highly unlikely.	Fire	VERY LOW due to the proposed risk management techniques

			• Manual fire suppression is readily available throughout the site including water hoses, fire extinguishers and a fire tender. • The site will have a regular inspection and maintenance programme which will identify any electrical or mechanical machinery faults which could result in a machinery fire. • Machinery will be regularly cleaned to remove any dust, etc. • All relevant equipment on site will be equipped with dedicated fire suppression. • A number of fire extinguishers will be placed at strategic locations around the plant. • The risk of damaged or exposed electrical cables will be controlled via the regular inspection and maintenance programme. • Staff will be appropriately trained on the necessary actions to take on discovery of a fire • Staff and visitors will only be permitted to smoke within the designated smoking area. • Smoking shelters are provided around the site. All shelters are located a minimum of 6m from any combustible waste. No smoking outside of the designated shelter is permitted on site. • The site has a dedicated Fire Prevention Plan.			
Incompatible Feedstock	Operator / Residential Properties	If incorrect waste is accepted on site it could result in adverse emissions	The following methods will be implemented to ensure that incompatible feedstocks do not compromise the safe operation of the site: • All waste will be subjected to 'pre-acceptance' in accordance to established waste acceptance procedures; • Any non-conforming waste will be removed prior to acceptance in accordance with established waste acceptance procedures.	LOW: off-site receptor impacts.	Nuisance / Adverse Emissions	VERY LOW due to the proposed risk management techniques

			• Waste that has been off-loaded and cannot be reloaded will be stored in the designated quarantine area. • Records of incidents involving incompatible waste will be kept on site together with a summary of the remedial action taken.			
Climate Change Factors including: Rising River Levels and Site Flooding Increased temperature / fire risk Extreme Cold Weather Increase odour / vermin	Controlled Waters	Site is located in a Flood Zone 1 and is therefore at a low risk of flooding. Increased rainfall and flash flood runoff due to climate change have the potential to impact the site causing flooding and potential contamination of surrounding green landscapes.	• The site is considered to be at low risk of climate change factors due to the site being within a Flood Zone 1 and the sites current EMS. • The sites EMS will remain responsive and adaptive to the evolving risks posed by climate change and will prioritise mitigation measures should there be increased risks to the site or surrounding area. • Given that all the nature of the wastes on site and the mitigation measures in place, the risk of odour, fire and dust as result of Climate Change is considered negligible.	LOW: The control of runoff during a flood event is difficult. Any water that enters buildings and waste storage areas has the potential to mobilise waste and/or contaminate the water. Safe access of the site personnel is considered paramount.	Controlled Water Personnel	LOW due to the proposed risk management techniques