

MANTON QUARRY RESTORATION

Environmental Permit Variation Application

Environmental Risk Assessment

Prepared for: **Brianplant (Humberside) Limited**

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Drawing 001	Environmental Permit Boundary V2
Drawing 002	Cross Sections
Drawing 003	Environmental Site Setting
Drawing 0726-1-13	Restoration Concept

1.0 Introduction

SLR Consulting Limited (SLR) has been retained by Brianplant (Humberside) Limited (Brianplant) to prepare an Environmental Permit (EP) variation application. The variation application seeks to add a bespoke deposit for recovery activity to the existing EP to facilitate the use of suitable waste in the restoration of Manton Quarry (the Site), located near Manton, North Lincolnshire DN21 4JT under the Environmental Permitting (EP) (England and Wales) Regulations 2016.

1.1 Current Environmental Permit

Brianplant hold a Tier 2 EP for the 'treatment of waste to produce soil, soil substitutes and aggregate' (based on SR2010 No 12) at Manton Quarry (Ref: EPR/GB3535RQ). The EP boundary covers the entire quarry to ensure ongoing operational flexibility as the quarry is restored. The proposed area to be restored through waste recovery sits within the wider existing recycling EP boundary as illustrated on Drawing 001. Treatment and storage of waste destined for restoration will be processed within the recycling area of the site.

The EP authorises the following activities as described in Annex I and Annex II of the Waste Framework Directive:

- **R13:** Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced);
- **R3:** Recycling/reclamation of organic substances which are not used as solvents;
- **R5:** Recycling/reclamation of other inorganic compounds.

There is no change to the existing recycling activities in any way as a result of the proposed EP variation application. Brianplant will continue to accept up to 75,000 tonnes per annum of waste as listed in Table S2.1 of the existing EP for the purpose of physical treatment to produce topsoil and a range of recycled hardcore. The permitted tonnage for the recycling activity is separate, and in addition to the proposed permitted tonnage for the waste recovery activity.

1.2 Methodology

This Environmental Risk Assessment (ERA) is an assessment of the risks to the environment and to human health from accidents, odour, noise and fugitive emissions that may be associated with the proposed waste recovery activity at the site.

The ERA assesses the risks and impacts associated only with the proposed waste recovery activities on site as a result of this EP variation application. Risks and management measures associated with the existing Tier 2 recycling permit on site have been fully assessed during previous submissions, and are considered to be sufficient, as there is no change proposed to the existing recycling activities. Therefore distances to receptors have been taken from the boundary of the proposed recovery activity.

The assessment has been completed in accordance with the Environment Agency (EA) Technical Guidance '*Risk Assessments for your Environmental Permit*' published February 2016¹. The aim of the assessment is to identify any significant risks and demonstrate that the risk of pollution or harm will be acceptable by taking the appropriate measures to manage these risks.

This ERA uses the following approach for identifying and assessing the risks from the proposed operation:

Step 1 Identify risks and sources of risk from your activity.

¹ Environment Agency - 'Risk Assessments for your Environmental Permit' published February 2016, <https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>, accessed January 2022.

Step 2 Where risks are identified from Step 1 then identify the receptors that could be affected.

Step 3 Identify potential pathways between the sources of risk and receptors.

Step 4 Assess the risks and check that they are acceptable. Justify appropriate measures to control your risks, if necessary.

Step 5 Submit your assessment.

Section 2.0 of this document is a screening step to identify the risks requiring consideration as part of this assessment.

Section 3.0 identifies people or parts of the environment that could be harmed (at potentially significant risk) by the activity. The ERA for an EP variation application requires all receptors that are near the site and could reasonably be affected by the activities to be identified and considered as part of the assessment. The proposed area to be restored through waste recovery sits within the wider existing recycling EP boundary as illustrated on Drawing 001. As the risks posed to sensitive receptors by the existing activities have been previously fully assessed, the ERA identifies potentially sensitive receptors based upon their distance to the proposed waste recovery activity boundary.

For the purposes of this ERA the following distances have been used to identify potentially sensitive receptors:

- A 1km radius from the proposed waste recovery boundary has been used to identify potentially sensitive receptors of European ecological importance and sites of cultural and natural heritage; and
- A radius of 500m from the proposed waste recovery boundary has been adopted for all other potentially sensitive receptors (for example, residential, commercial, industrial, agricultural and surface water receptors).

Section 4.0 of this document presents the assessment and demonstrates that any risks of pollution or harm will be mitigated to manage the risk.

This ERA should be read in conjunction with the following documents submitted with this EP variation application:

- Non-Technical Summary V2;
- Waste Recovery Plan;
- Environmental Setting and Site Design;
- Emissions (Dust) Management Plan (DMP) V2; and
- Operating Techniques (OT) and Environmental Management System (EMS).

2.0 Identifying the Risks

Step 2 is a screening step to identify the potential risks to the environment from the proposed bespoke waste recovery activity. The following are generally considered to require assessment for bespoke operations:

- Amenity and Accidents;
- Site Waste;
- Global Warming Potential;
- Odour;
- Noise; and
- Point source emissions to air, water and land.

There will be no point source emissions to groundwater, surface water, air or land resulting from the proposed waste recovery activity and neither will there be any site waste arising or global warming potential.

There is no change to the point source emissions from the existing recycling activities as a result of the proposed EP variation application.

Therefore only 'Amenity and Accidents', remains applicable for assessment in this instance, and includes the consideration of odour, noise and vibration, fugitive emissions (including dust, mud, litter and pests) and accidents.

3.0 Site Setting and Receptors

3.1 Site Setting

Manton Quarry is located in North Lincolnshire, approximately 450m southeast of the village of Manton, within a predominately rural area. The site is accessed via Manton Lane which runs adjacent to the site’s northern boundary. The National Grid Reference (NGR) for the site is SE 93976 02420.

The entire site is designated as a geological SSSI called Manton Stone Quarry SSSI. It is considered to be a key exposure of the more northerly development of the Lincolnshire Limestone. Four other SSSIs are located within close proximity. These include Cleatham Quarry which lies approximately 640m south, Cliff Farm Pit which is situated approximately 1170m south, Manton & Twigmoor which is located approximately 1170m north, and Messingham Sand Quarry which lies approximately 2340m northwest.

Most of the land surrounding the site is occupied by open/agricultural ground with a few quarries located within the surrounding area including Kirton Quarry and Landfill to the southeast, approximately 50m from the eastern EP boundary.

The site’s location is illustrated on drawing 0726-1-8. The proposed area to be restored through waste recovery sits within the wider existing recycling EP boundary as illustrated on Drawing 001.

The surrounding land uses and local receptors within 500m of the proposed waste recovery activity boundary and the ecological, cultural and natural heritage receptors within 1km of the proposed waste recovery activity boundary are identified on Drawing 003.

A summary of the site’s immediate surrounding land uses is identified in Table 3-1 below.

Table 3-1
Surrounding Land Uses

Boundary	Description
North	Manton Stone Quarry SSSI is located immediately to the north, followed by Manton Lane. Beyond this lies open/agricultural land.
East	Immediately to the east lies Manton Quarry SSSI, the B1398, and Kirton Quarry and Landfill. Newlands Farm and open/agricultural land are also located in this direction.
South	Open/agricultural land and Cleatham Quarry SSSI are located to the south of the site.
West	Manton Stone Quarry SSSI lies immediately to the west, followed by open/agricultural land. Beyond this lies Manton Village which is home to a number of residential properties.

The land uses immediately surrounding the proposed waste recovery activity boundary (as illustrated on Drawing 001) are described in further detail below. Distances are provided between the sensitive receptors and the waste recovery activity boundary as the risks posed to sensitive receptors by the existing activities have been previously fully assessed.

3.1.1 Commercial/Agricultural Premises

The site forms part of the wider Manton Quarry of which further areas lie immediately to the north, east and west of the EP boundary. The former Kirton Quarry which is now operated as a landfill site is located approximately 50m east of the site.

3.1.2 Residential Properties

Few residential properties are located within 500m of the site. The closest residential properties are Manton Place and Newlands Farm which lie approximately 350m west and 470m east respectively.

3.1.3 Local Transport Network

Access to the site is provided by Manton Lane which is situated approximately 130m north of the waste recovery activity area. This in turn provides access to the B1398 which is located approximately 30m from the site's eastern EP boundary. There are various unnamed small, trail roads within 500m of the site, mostly to the east, but with some to the west also.

The local transport network is illustrated on Drawing 003.

3.1.4 Surface Water Features

Four surface water features were identified within a 500m radius of the waste recovery activity boundary:

- A drain is located approximately 60m to the north east;
- A drain lies approximately 70m to the north east;
- A drain is located approximately 420m to the north; and
- Multiple bodies of water are located within Kirton Quarry to the east of the site. The closest of these is a pond which lies approximately 220m south east. These are likely to be man-made surface water management ponds linked to the operation of the quarry and the landfill.

3.1.5 Open Ground

The majority of the surrounding land within a 500m radius of the site boundary is comprised of open ground. The closest area is located immediately to the south of waste recovery activity area.

3.1.6 Woodland

An area of deciduous woodland designated as a priority habitat can be found approximately 360m to the west and an area classified as a traditional orchard designated as a priority habitat is situated approximately 40m to the south west of the site.

3.2 Geology

A review of the British Geological Survey (BGS) map², reveals that the majority of the site is underlain by a bedrock of Kirton Cementstone Beds - Mudstone and Limestone interbedded, which is indicative of a local environment previously dominated by shallow carbonate seas. In a small portion of the south of the site the bedrock is comprised of Hilbaldstow Limestone - Limestone Oolitic which again is indicative of a local environment previously dominated by shallow carbonate seas.

There are no records regarding superficial deposits at the site.

² British Geological Survey Map (BGS) – Available at: <https://mapapps.bgs.ac.uk/geologyofbritain/home.html>, accessed January 2022

3.3 Hydrogeology

3.3.1 Aquifer Designations

The bedrock deposits underlying the site are classed as a Principal Aquifer on the Multi-Agency Information for the Countryside (MAGIC)³ website.

The superficial deposits are classed as unproductive.

3.3.2 Source Protection Zones

The site does not fall within a Source Protection Zone (SPZ). However, the southernmost point of the site, is approximately 720m from a Zone II – Outer Protection Zone, at its closest point.

3.4 Hydrology

The Groundwater Vulnerability layer on MAGIC map reveals the site lies within an area known for groundwater vulnerability classified as High with Soluble Rock Risk.

3.4.1 Flooding

The EA Flood Map for Planning⁴ reveals that the site lies within Flood Zone 1 and therefore has a low probability of flooding.

3.5 Ecology

The MAGIC map website has been accessed to determine the presence of any European or Internationally designated sites within a 1km radius from the Site's boundary.

3.5.1 Sites of Special Scientific Interest (SSSI)

The entire site is located within a geological SSSI called Manton Stone Quarry SSSI. It is considered to be a key exposure of the more northerly development of the Lincolnshire Limestone. A further SSSI called Cleatham Quarry lies approximately 640m to the south of the waste recovery activity area.

The searches on MAGIC confirmed that there are none of the following within 1km of the waste recovery area boundary:

- Special Areas of Conservation (SAC);
- Special Protection Areas (SPA);
- National Nature Reserves (NNR);
- Local Nature Reserves (LNR);
- Areas of Ancient Woodland;
- National Parks;
- Areas of Outstanding Natural Beauty (AONB); and
- RAMSAR sites.

³ Multi-Agency Information for the Countryside – Available at: <http://www.magic.gov.uk>, accessed January 2022

⁴ EA Flood Map for Planning – Available at: <https://flood-map-for-planning.service.gov.uk/>, accessed January 2022.

3.6 Cultural and Heritage

3.6.1 Listed Buildings

There are several listed buildings within a 1km radius of the waste recovery area. All of the listed buildings located within the 1km radius are Grade II listed. The closest to the site boundary is the Church of St. Hybald which is located approximately 480m to the west.

The searches on MAGIC confirmed that there are none of the following within 1km of the site's boundary:

- Scheduled Monuments;
- Registered Battlefields;
- Registered Parks and Gardens;
- World Heritage Sites; or
- National Parks;

3.7 Identified Receptors

Table 3-2 below and Drawing 003 show the locations of receptors that are considered to be potentially sensitive and could reasonably be affected by the proposed waste recovery activities carried out on site.

Table 3-2
Identified Receptors

Receptor Name	Receptor Type	Direction from Site	Approximate Distance from Waste Recovery Boundary (in metres)
Local receptors located within 500m of the waste recovery activity boundary as shown on Drawing 003			
Principal Aquifer	Principal Aquifer	N/A	N/A
Open Ground	Open Ground	South	Adjacent
Manton Quarry	Commercial/Agricultural Premises	North	Adjacent
Manton Quarry	Commercial/Agricultural Premises	East	Adjacent
Manton Quarry	Commercial/Agricultural Premises	West	Adjacent
B1398	Local Transport Network	East	30
Traditional Orchard Priority Habitat	Woodland	South west	40
Kirton Quarry and Landfill	Industrial/Waste Facility	East	50
Drain	Surface water feature	North east	60
Drain	Surface water feature	North east	70
Manton Lane	Local Transport Network	North	130

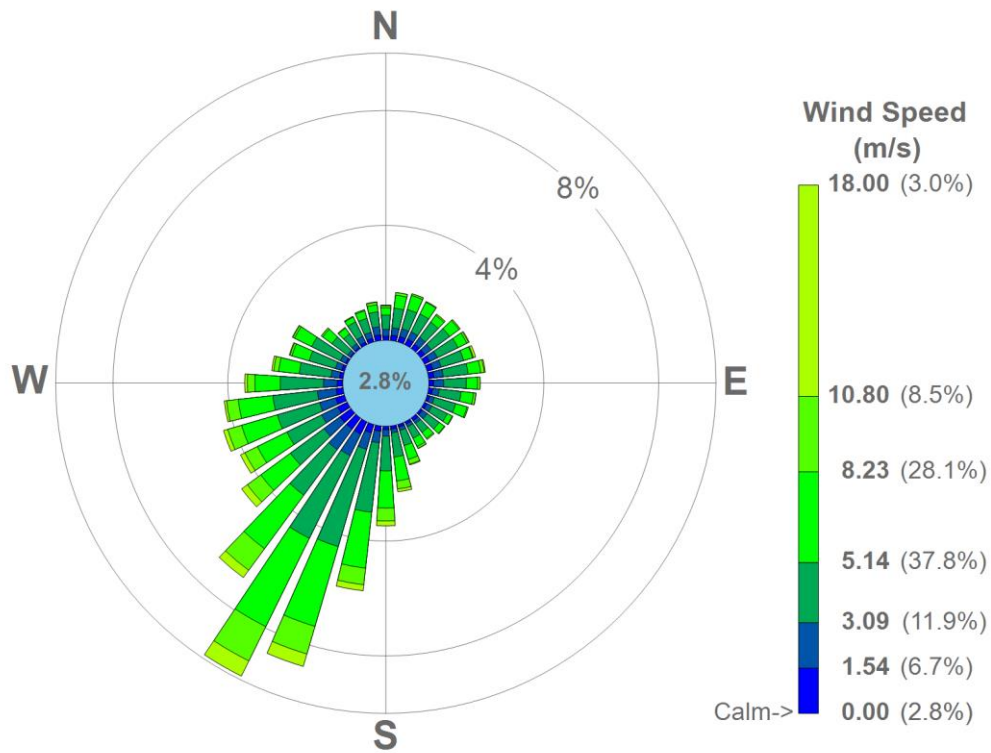
Receptor Name	Receptor Type	Direction from Site	Approximate Distance from Waste Recovery Boundary (in metres)
Pond at Kirton Quarry	Surface Water Feature (man-made)	South east	220
Manton Place	Residential	West	350
Deciduous Woodland Priority Habitat	Woodland	West	360
Drain	Surface Water Feature	North	420
Newlands Farm	Residential	East	470
Ecological and Cultural and Natural Heritage identified within 1km of the waste recovery activity boundary as shown on Drawing 003			
Manton Stone Quarry SSSI	SSSI	N/A	Located within the boundary
Church of St. Hybald	Grade II Listed Building	West	480
Cleatham Quarry SSSI	SSSI	South	640
Cleatham Hall Barn Approximately 70 Metres North of Cleatham Hall	Grade II Listed Building	South west	640
Cleatham Hall Tack Room and Dog Kennel Approximately 40 Metres North of Cleatham Hall	Grade II Listed Building	South west	670
Cleatham Hall Coach House and Stables Approximately 50 Metres North of Cleatham Hall	Grade II Listed Building	South-West	670
Cleatham Hall	Grade II Listed Building	South west	690

3.8 Windrose

Figure 3-1 shows the wind patterns between 2015-2019 as identified by the Humberside meteorological station, which is the closest weather station lying 17.4km east of the site. The most prominent wind direction is from the south-west. Winds from the south-west are frequent with winds from other directions being more infrequent.

Figure, 3-1

Humberside Meteorological Station, 2015-2019



4.0 Environmental Risk Assessment

4.1 Amenity and Accidents Risk Assessment

The following tables (4.1 - 4.4) in this section assess the site in terms of potential hazards posed to amenity and by accidents, the associated receptors and pathways, along with measures to manage the identified risks.

The probability of exposure is the likelihood of the receptors being exposed to the hazard, and is defined as low, medium or high. These terms are qualified as follows;

- Low: exposure is unlikely, barriers in place to mitigate against exposure.
- Medium: exposure is fairly probable, barriers to exposure less controllable.
- High: exposure is probable, direct exposure likely with few barriers.

The methodology outline in Section 1.1 of this report is the basis on which it is determined whether the proposed operations will lead to significant impacts on the surrounding environment. Where a conclusion of 'not significant' has been reached, it is proposed that the mitigation and management measures that will be in place at the Site will be sufficient to ensure that there will be no impact at the surrounding environment.

There will be no point source emissions to surface water, groundwater or air resulting from the proposed operations and neither will there be any site waste arising or global warming potential. Therefore, it is only considered to be applicable for standard assessment in this instance, and includes the consideration of odour, noise and vibration, fugitive emissions (including dust, mud, litter and pests) and accidents in relation to the proposed development.

The ERA will cover risks associated with the proposed waste recovery activities on site as a result of this EP variation application. Risks associated with the existing Tier 2 recycling permit on site have been fully assessed during previous submissions, and are considered to be sufficient, as there is no change proposed to the existing recycling activities.

Table 4-1 Odour Risk Assessment and Management Plan

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
From the acceptance, processing and deposition of waste.	Sensitive receptors as listed in Table 3-2, including, transport, agricultural, ecological and cultural receptors.	Air	<p>Waste accepted on-site for general fill of the quarry and as topsoil will only consist of suitable waste materials. These materials are not considered to be odorous in nature and will most likely be inert.</p> <p>The waste acceptance procedures on site will be enforced to ensure that no unauthorised waste will be accepted on site. This will minimise the chance of odorous waste being on site.</p> <p>There is no change proposed to the existing recycling permit activities on site as a result of this EP variation application. Therefore, existing odour management measures are considered to be effective and will continue to be implemented. No specific additional measures are considered necessary for the recycling activities.</p>	Low	Odour nuisance	Not significant

Table 4-2 Noise Risk Assessment and Management Plan

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
<p>Engine noise from vehicles entering/exiting site.</p> <p>Receiving and depositing of waste.</p> <p>Existing waste processing activities including crushing and screening</p>	<p>Sensitive receptors as listed in Table 3-2, including, transport, agricultural, ecological and cultural receptors.</p>	<p>Air</p>	<p>The closest residential receptor is located 350m to the west of the waste recovery activity (with prevailing winds from the opposite direction, the south west). One further residential property lies 470m to the east. No further sensitive receptors are located within 500m of the waste recovery activity. The wider site lies within an area dominated by agricultural and industrial activities (quarry/landfill).</p> <p>Any site operations including vehicles and site machinery will continue to be restricted to only operate during daylight hours. Plant operations will be intermittent.</p> <p>All site plant is operated and maintained in accordance with manufacturers specification, to reduce any unnecessary noise pollution.</p> <p>On-site plant is turned off when not in use.</p> <p>Plant will be fitted with noise silencers if necessary.</p>	<p>Low</p>	<p>Noise nuisance during operational hours.</p>	<p>Low</p>

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			<p>Speed limits (5 – 10 mph) will continue to be implemented for vehicles on site and traffic calming measures introduced to help enforce these speed limits.</p> <p>Site access and operational areas will continue to be maintained and repaired to an appropriate standard, to reduce any unnecessary noise emissions due to uneven/poor surfacing.</p> <p>Drop heights for waste deposition are minimised to minimise noise emissions.</p> <p>All visitors and haulage companies are made aware of the noise procedures.</p> <p>Auditory inspections are carried out daily by site operatives and in response to complaints. If noise levels are deemed a nuisance, then a full investigation of mitigation measures will be carried out.</p> <p>There is no change proposed to the existing recycling permit activities as a result of this EP variation application. Therefore, existing noise management measures are considered to be</p>			

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			<p>effective and will continue to be implemented. No specific additional measures are considered necessary for the recycling activities.</p> <p>The Site Manager will continue to be responsible for implementing risk management measures in conjunction with the OT and EMS.</p>			

Table 4-3 Fugitive Risk Assessment and Management Plan

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
To Air:						
<p>Dust</p> <p>Dust emissions from waste deposition/tipping operations and vehicle movements.</p> <p>Dust emissions from existing waste processing activities including crushing and screening</p>	Sensitive receptors as listed in Table 3-2, including, transport, agricultural, ecological and cultural receptors.	Air	The wider site and proposed waste recovery activities will be managed in accordance with the DMP (ref: 416.01994.00002/DMP) which is included as Section 8 of this EP variation application.	Medium	Nuisance and harm to human health.	Low

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
To Water						
Runoff from the Site Runoff from site surfaces, access roads and haul roads. Percolation of contaminated water.	Sensitive receptors as listed in Table 3-2, including, transport, agricultural, ecological and cultural receptors. Groundwater – high groundwater vulnerability in the area.	Land and surface water. Percolation through the ground.	The site is only permitted to accept suitable uncontaminated waste. This poses minimal risk as contaminated runoff and leachate will not be generated. However, measures will continue to be put in place to ensure risk of runoff from site is managed: <ul style="list-style-type: none"> • Strict waste acceptance procedures in place ensure no unauthorised materials are accepted on to site; • The proposed waste recovery activity will only accept and deposit waste, no storage or treatment will be undertaken; 	Low	Contamination of surrounding land and water (surface water and groundwater)	Not significant

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			<ul style="list-style-type: none"> • Only uncontaminated material will be deposited as part of the proposed waste recovery activity; • Vehicles undergo preventative maintenance to prevent any leaks of fuel/oil; • Spill kits are stored on site containing appropriate absorbent materials to use in the event of a spillage; and • No fuels, chemicals or hazardous substances will be stored in the proposed waste recovery area of the site. <p>Site operations are inspected daily for signs of spillages.</p> <p>There is no change proposed to the existing recycling permit activities on site as a result of this EP variation application. Therefore, existing management measures are considered to be effective and will continue to be implemented. No</p>			

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			<p>specific additional measures are considered necessary for the recycling activities.</p> <p>The Site Manager will continue to be responsible for implementing risk management measures in conjunction with the OT and EMS.</p>			
Pests						
Birds, vermin and pests	Sensitive receptors as listed in Table 3-2, including, transport, agricultural, ecological and cultural receptors.	Land and air.	<p>No biodegradable or putrescible waste will be accepted on site as a result of the proposed waste recovery activity and strict waste acceptance procedures ensure that no unauthorised wastes are accepted. Therefore, the proposed waste recovery activity will not attract birds, vermin and pests.</p> <p>There is no change proposed to the existing recycling permit activities on site as a result of this EP variation application. Therefore, existing pest management measures are considered to be effective and will continue to be implemented. No specific additional measures are considered necessary for the recycling activities.</p>	Low	Nuisance, potential risk to human health.	Low

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Mud/Litter						
Mud from vehicle movements	Site access road. Local road network.	Land – transfer of mud to roads from vehicle wheels.	<p>Access to the waste recovery activity area is located within the wider recycling EP boundary.</p> <p>An adequate area of hard surfaced road between waste recovery activities and the site entrance/exit will be maintained. These measures will reduce the amount of mud and dirt the vehicles leaving site can pick up.</p> <p>The site will continue to benefit from good housekeeping and all areas of the site are maintained and cleaned daily, to minimise the transfer of mud from site.</p> <p>All waste will be transferred from the existing recycling facility located adjacent to the waste recovery activity to the north.</p> <p>Before leaving site, vehicles and plant machinery will continue to be checked to ensure their load is secure to ensure no mud is dropped.</p>	Medium	Nuisance from mud and dirt on roads. Dangerous conditions on roads.	Low.

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			<p>There is a wheel wash at the entrance to the wider site, but not at the entrance to the restoration area. The wheel wash will be utilised if checks reveal it is necessary.</p> <p>Daily inspections of the site will continue to be conducted by site personal to identify if there are any problems associated with mud or waste debris. If any issues are raised, these will be cleaned up as soon as possible.</p> <p>The result of any inspections or investigations due to a complaint, will be recorded.</p> <p>There is no change proposed to the existing recycling permit activities on site as a result of this EP variation application. Therefore, existing mud management measures are considered to be effective and will continue to be implemented. No specific additional measures are considered necessary for the recycling activities.</p>			

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			The Site Manager will continue to be responsible for implementing risk management measures in accordance with appropriate procedures in the OT and EMS.			
Litter from waste	Sensitive receptors as listed in Table 3-2, including, transport, agricultural, ecological, and cultural receptors.	Air	The existing waste types accepted for the recycling activity do not generate litter. There is no change proposed to the existing recycling operations as a result of this EP variation, and therefore existing management measures are considered adequate. The proposed waste types to be accepted for the waste recovery activity, will not generate litter. Site waste acceptance procedures will continue to be followed to ensure that no unauthorised waste is accepted on site.	Low – due to the nature of the waste accepted on Site.	Nuisance from litter. Loss of amenity. Dangerous conditions on roads.	Not significant.

Table 4-4 Accidents Risk Assessment and Management Plan

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
<p><u>Spillage and Leakage</u></p> <p>Spills and leaks of fuels and oils.</p>	<p>Local land quality.</p> <p>Groundwater – high groundwater vulnerability in the area.</p> <p>Surface water.</p>	<p>Runoff and percolation through ground.</p>	<p>No fuel or oil tanks will be stored within the waste recovery area.</p> <p>All vehicles and mobile plant will continue to be subject to a programme of planned preventative maintenance in accordance with the manufacturer’s recommendations to prevent oil/fuel leaks from vehicles.</p> <p>Spill kits are kept on site and in the event of any minor spillages associated with vehicles or plant machinery will be cleaned up immediately using appropriate materials such as sand or absorbent material and afterwards placed in suitable sealed containers.</p> <p>Daily visual inspections are carried out to identify any evidence of spillages or leakages.</p> <p>The results of any inspections or investigations will be recorded.</p> <p>There is no change proposed to the existing recycling permit operations on site as a result of</p>	Low	Contamination of local land, groundwater and surface waters.	Not significant.

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			<p>this EP variation application. Therefore, existing management measures are considered to be effective and will continue to be implemented. No specific additional measures are considered necessary for the recycling activities.</p> <p>The Site Manager will continue to be responsible for implanting risk management measures in accordance with the appropriate procedures as outlined in the OT and EMS.</p>			
Fire	Sensitive receptors as listed in Table 3-2, including, transport, agricultural, ecological and cultural receptors.	Air (smoke). Ground (spillages and firewater).	<p>The waste types authorised to be accepted on site for both the existing recycling activity and the proposed waste recovery activity are considered to be ‘inert’ in nature and therefore will not readily burn or self-combust.</p> <p>No waste will be treated or stored within the proposed waste recovery area.</p> <p>The Site Manager will continue to be responsible for implementing risk management measures detailed within the Accident Prevention and Management Plan outlined in the OT and EMS.</p>	Low	Harm to human health and the environment and nuisance.	Low.

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Vandalism/Security	Sensitive receptors as listed in Table 3-2, including, transport, agricultural, ecological and cultural receptors.		<p>The site benefits from the existing security measures in place at the wider facility and is adequately secured using gates and fencing to prevent and deter any unauthorised entrance. The site will continue to benefit from operational procedures, including regular inspections, to ensure continual monitoring of security provision.</p> <p>Security infrastructure is inspected daily to identify any deteriorations and need for repairs. If deterioration or damage is found, then actions will be taken to prevent unauthorised access and temporary repairs made within 24 hours. Permanent repairs will then be made as soon as practically possible after this.</p> <p>All visitors to site are required to sign in and out of the visitors book. This minimises the risk of unauthorised visitors gaining access to the site.</p> <p>The Site Manager will continue to be responsible for implementing risk management measures in</p>	Low	Theft. Harm to human health.	Not significant.

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			accordance with appropriate procedures outlined in the OT and EMS.			
Flooding	Sensitive receptors as listed in Table 3-2, including, transport, agricultural, ecological and cultural receptors.	Flood waters over land.	The site lies within a flood zone 1 and therefore has a low probability of flooding.	Very low.	Contaminated flood waters impacting land in residential, ecological and commercial local areas.	Negligible.
Unauthorised Waste	Sensitive receptors as listed in Table 3-2, including, transport, agricultural, ecological and cultural receptors.	Air, land and water	The site-specific WAP and criteria will be implemented for the waste recovery activity with strict enforcement, to ensure no unauthorised waste is accepted. Only waste authorised by the EP will be accepted. These procedures include; pre-acceptance checks, an approved suppliers list, basic characterisation and visual checks against the declaration on the waste transfer note.	Low	Odour nuisance. Water contamination.	Not significant.

What do you do that can harm and what could be harmed		Managing the Risk		Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – Who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			<p>In the event that unauthorised waste is delivered to the site, then waste will be segregated and stored in a designated quarantine area before being exported from site.</p> <p>There is no change proposed to the existing recycling permit activities on site as a result of this EP variation application. Therefore, existing management measures are considered to be effective and will continue to be adhered to.</p> <p>The Site Manager will continue to be responsible for implementing risk management measures in accordance with appropriate procedures as outlined in the OT and EMS.</p>			

5.0 Conclusion

This ERA has been undertaken in accordance with EA guidance. The assessment is provided as part of the EP variation application for the Manton Quarry restoration for Brianplant (Humberside) Limited.

This qualitative risk assessment has considered odour, noise, fugitive emissions, dust, releases to water, litter and potential for accidents and incidents.

The assessment concluded that with the implementation of the risk management measures described above, potential hazards, apart from dust, from the waste recovery activities are not likely to be significant and no further assessment or management plan is required.

However, the EA's guidance⁵ requires that all facilities for the 'recovery of household, commercial or industrial waste by deposit for recovery' and are located 'within 500m of a sensitive receptor such as a home', need a DMP to be prepared.

Therefore, to support this ERA, a DMP has been prepared and is included in Section 8 of this EP variation application.

⁵ [Control and monitor emissions for your environmental permit - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit)

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