



Clockhouse Quarry Restoration Environmental Permit Application

Environmental Risk Assessment

SUEZ Recycling and Recovery UK Limited

Prepared by:

SLR Consulting Limited

Treenwood House, Rowden Lane, Bradford on Avon,
BA15 2AU

SLR Project No.: 402.065294.00001

20 April 2026

Revision: 02

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
01	11 December 2025	KH / GW / TH	GW	GS
02	20 April 2026	GW	GS	GS
	Click to enter a date.			
	Click to enter a date.			
	Click to enter a date.			

Basis of Report

This document has been prepared by SLR Consulting Limited (SLR) with reasonable skill, care and diligence, and taking account of the timescales and resources devoted to it by agreement with SUEZ Recycling and Recovery UK Limited (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.



Table of Contents

1.0	Introduction	1
1.1	Methodology.....	1
2.0	Identifying the Risks	3
3.0	Site Setting	4
3.1	Setting Overview	4
3.2	Industrial Premises.....	6
3.3	Landfills	6
3.4	Residential Properties	6
3.5	Local Transport Network	6
3.6	Open/Agricultural Ground	6
3.7	Geology.....	6
3.8	Hydrogeology	6
3.8.1	Aquifer Designations	7
3.8.2	Source Protection Zones.....	7
3.8.3	Groundwater Vulnerability	7
3.9	Hydrology	7
3.9.1	Flooding	7
3.9.2	Surface water features	7
3.10	Ecology	7
3.10.1	Sites of Special Scientific Interest (SSSI)	7
3.10.2	Ancient Woodland.....	8
3.11	Cultural and Heritage	8
3.11.1	Scheduled Monuments	8
3.11.2	Listed Buildings.....	8
3.12	Summary of Identified Receptors.....	8
3.13	Windrose	10
4.0	Environmental Risk Assessment	12
4.1	Amenity and Accidents Risk Assessment	12
5.0	Conclusion.....	28

Tables in Text

Table 1-1: Surrounding Land Uses	5
Table 3-1 Identified Receptors.....	9
Table 4-1 Odour Risk Assessment and Management Plan	13
Table 4-2 Noise Risk Assessment and Management Plan	14



Table 4-3 Fugitive Risk Assessment and Management Plan.....	17
Table 4-4 Accident Risk Assessment and Management Plan	23

Figures in Text

Figure 3-1 Site Location and Areas	5
Figure 3-2 Gatwick Meteorological Station, 2022	11



1.0 Introduction

SUEZ Recycling and Recovery UK Limited (SUEZ) has instructed SLR Consulting Limited (SLR) to prepare an Environmental Permit (EP) application for a Deposit for Recovery activity, with associated screening and crushing activities. The application seeks approval for the use of suitable waste in the restoration of Clockhouse Quarry (the Site), located at Horsham Road, Capel, Surrey, RH5 5JL, as a Deposit for Recovery operation under the Environmental Permitting (England and Wales) Regulations 2016.

This document provides an Environmental Risk Assessment (ERA) for the proposed activities.

1.1 Methodology

This 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 operations at the site.

The assessment has been completed in accordance with the Environment Agency (EA) Technical Guidance '*Risk Assessments for your Environmental Permit*' (last updated November 2023)¹. 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, as set out in the EA's guidance, for identifying and assessing the risks from the proposed operation:

- Step 1** Identify and consider risks for your site and the sources of the risks;
- Step 2** Identify the receptors at risk from the site;
- Step 3** Identify potential pathways from the sources of the risks to the receptors;
- Step 4** Assess the risks relevant to your specific activity and check they are acceptable. Justify appropriate measures to control your risks if necessary;
- Step 5** Submit your risk assessment as part of your application.

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 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.

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

- A 2km radius from the site's EP boundary has been used to identify potentially sensitive receptors of European ecological importance including RAMSAR sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA);
- A 2km radius from the site's EP boundary has been adopted in reviewing potentially sensitive receptors of ecological importance along with features such as sites of cultural and natural heritage. This includes National Nature Reserves (NNR), Local

¹ Environment Agency - 'Risk Assessments for your Environmental Permit' August 2022, <https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>, accessed March 2025.



Nature Reserves (LNR) and Sites of Special Scientific Interest (SSSI), in line with EA guidance; and

- A radius of 1km from the site's EP 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 application:

- Non-Technical Summary (NTS);
- Waste Recovery Plan (WRP);
- Environmental Setting and Site Design (ESSD) Report;
- Stability Risk Assessment (SRA);
- Emissions (Dust) Management Plan (DEMP);
- Hydrogeological Risk Assessment (HRA);
- Operating Techniques (OT) document, including Waste Acceptance Procedures; and
- Noise Impact Assessment and Management Plan (NIAMP).



2.0 Identifying the Risks

Step 2 is a screening step to identify the potential risks to the environment listed in the EA's guidance to identify those which will apply to the proposed activities and which require assessment, and to screen out those which are not relevant.

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.

The EP application will seek to allow Suez to restore the quarry via a deposit for recovery operations, with associated crushing and screening activities for selected incoming waste to facilitate this restoration. Crushing and screening will be minimal and only as required. Crushing and screening activities proposed to be carried out will be wholly for the purposes of the deposit for recovery activity. No waste material will be crushed and screened that is not destined for on-site use. The crushing and screening activity will sit fully within the footprint of the deposit area. Once the deposit for recovery activity has been completed, the screening and crushing plant will no longer be required and will be removed offsite.

Suez manages the water from Clockhouse Quarry works via pumping surface water from the quarry utilising an existing discharge consent P.12567/S/05 owned by Forterra.

Suez are planning to restore the clay pits and create a SUDs drainage scheme which will discharge to Fylls Brook at the same outlet location as the permit owned by Forterra.

As part of this submission, Suez are applying for a point source emission discharge to cover the duration of the works until the SUDs scheme is operational. This involves discharging 2,160m³/day at a rate of 25l/s at discharge point TQ 17790 3854.

Please see the Point Source Emission Supporting Document included within this application for full details.

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

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

3.1 Setting Overview

Clockhouse Quarry is a former clay pit associated with the dormant Clockhouse Brickworks covering approximately 26.4 hectares (ha) and can be subdivided into three distinct areas referred to as Area 1, Area 2 and Area 3. The location of each of these areas is shown on Figure 3-1 and a description of each is provided as follows:

- **Area 1:** The south-western area includes a closed landfill the subject of Environmental Permit (EP) reference EPR/CP3994HB (EAWML 19674) operated by SITA (now SUEZ Recycling and Recovery Surrey Ltd) under planning permission MO98/1448. The landfill ceased accepting waste in 2004 with the expiry of the planning permission time limit. Restoration was completed in 2008 in accordance with the requirements of planning permission MO98/1448;
- **Area 2:** The south-eastern area and to the east of Area 1 has been quarried and, although included within the expired planning permission MO98/1448 and its restoration landform design, landfilling operations never progressed into Area 2 so it remains unrestored and unable to achieve the intended restoration landform due to expiry of the landfill planning permission. Area 2 has historically been partially infilled with quarry overburden. A lower level restoration design has recently been agreed with the planning authority under permission MO/2023/0789; and
- **Area 3:** The northern area, directly north of Area 2 and east of the brickworks has been quarried and is an unrestored flooded quarry void. Mineral permission MO02/1072 includes an outstanding requirement to restore and the restoration design has recently been agreed with the planning authority under permission MO/2023/0789.

This EP application relates to the permanent deposit of waste in Areas 2 and 3 only. The site access road will also be included within the EP boundary.

The Site is situated approximately 950m south of the village of Capel and approximately 10km west of Crawley. The total area of the site to be restored measures approximately 12 hectares. The Site is accessed off Horsham Road (A24) which runs to the west of the site. The National Grid Reference (NGR) for the centred site is TQ 17541 38620.

The majority of the land surrounding the Site is characterised by open/agricultural land. The site is situated within the Clock House Brickworks Site of Special Scientific Interest (SSSI) which extends to the north, and south. The Site is designated as it shows beds in the lower part of the Weald Clay Group, stratigraphically above the strata seen at the GCR SIL at Warnham. Auclaye SSSI is located approximately 400m to the west of the site. The closest residential properties lie approximately 80m to the east.

The Site's location, EP boundary, layout and nearby receptors are shown on the following drawings included in the EP application:

- Drawing 001 – Site Location Plan
- Drawing 002 – Environmental Permit Boundary and Site Layout Plan
- Drawing 003 – Local Receptors
- Drawing 004 – Natural and Cultural Heritage.



Figure 3-1 Site Location



The general surrounding land uses are detailed in Table 3-1.

Table 3-1: Surrounding Land Uses

Boundary	Description
North	Fields and open/agricultural land followed by Rusper Road, and Capel.
East	Rusper Road lies immediately to the east followed by open/agricultural land and individual residential properties. Individual commercial/industrial properties including RMV Heating & Plumbing Dorking, and Surrey Hills Bikes – Servicing and Coaching also lie in this direction.
South	Fields and open/agricultural land, the railway line and Ridge Farm.
West	The previously infilled Area 1 of Clockhouse Quarry, and Clockhouse Brickworks followed by the Horsham Road (A24) and the railway line. Beyond this lies open/agricultural land and residential properties.



The immediate surrounding land uses are described in further detail below.

3.2 Industrial Premises

A brickworks lies adjacent to the site's northwestern boundary. Further commercial businesses are situated to the west including Carrington's International (Motor Vehicle Dealer), and Mole Valley Specialist Cars Ltd, approximately 150m and 310m west respectively. Sure Permanent Makeup Training lies approximately 340m southwest. Approximately 80m east lies Surrey Hills Bikes Servicing and Coaching, and approximately 225m in the same direction lies RMV Heating and Plumbing Dorking.

3.3 Landfills

Immediately to the west of Area 2 lies the previously infilled Area 1 of Clockhouse Quarry. Area 1 has been infilled using a separate landfill environmental permit and is formally closed.

3.4 Residential Properties

Individual residential properties are situated within the immediate area surrounding the site. The closest properties lie approximately 80m east, 90m northeast, 200m northwest, and 250m west.

The larger residential area of Capel is located approximately 1200m northwest.

3.5 Local Transport Network

The site is accessed off Horsham Road (A24) which runs in a north-south direction to the west of the site,. Rusper Road runs in a north-south direction approximately 45m to the east. Smaller local access roads are illustrated on Drawing 003.

A railway line runs in a north-south direction approximately 140m southwest.

3.6 Open/Agricultural Ground

Open/agricultural and farm land is situated in all directions surrounding the site. The closest areas lie adjacent to the north, east, and south of the EP boundary.

3.7 Geology

A review of the British Geological Survey (BGS) map², reveals that the bedrock across the site comprises:

- Weald Clay Formation – Sandstone in the central areas of the site; and
- Weald Clay Formation – Mudstone is found in limited areas of the northern and southern areas of the site.

Published online mapping by the British Geological Survey (BGS)³ and Defra mapping of historic landfills⁴, indicates that the superficial deposits present across the Site comprises the following:

² British Geological Survey Geology of Britain Viewer – Available at [GeoIndex - British Geological Survey \(bgs.ac.uk\)](https://www.bgs.ac.uk/geology-of-britain-viewer/), accessed September 2024.

³ BGS Geoindex Superficial Deposits 1:50,000 Scale Mapping, available at: <https://mapapps2.bgs.ac.uk/geoindex/home.html> (Accessed August 2025)

⁴ Defra mapping of Historic Landfills at [Defra Spatial Data Download](https://www.defra.gov.uk/spatial-data/download/)



- The Cranfield Institute Soilscales identifies the site as lying in an area of '*slowly permeable seasonally wet loamy and clayey soils*', however much of this is expected to have been stripped before quarrying.
- Previous reporting and ground investigation has confirmed that superficial deposits are absent beneath the site.

3.8 Hydrogeology

3.8.1 Aquifer Designations and Groundwater Vulnerability

The Weald Clay is generally classified by the EA as Unproductive Strata, however the sandstone and limestone horizons within the Weald Clay are classified as Secondary A aquifers, described as:

..."Permeable layers of rock or drift deposits that are capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.."

The groundwater vulnerability of the Weald Clay in the vicinity of the Site is classified by the EA "High Vulnerability" where the bedrock geology is Weald Clay – Sandstone. However, the majority of the site underlain by bedrock comprising the Weald Clay – Mudstone for which the aquifer status is considered "Unproductive" and so no vulnerability rating is attributed.

3.8.2 Source Protection Zones

The site does not lie within a Source Protection Zone (SPZ).

3.9 Hydrology

3.9.1 Flooding

The site lies within Flood Zone 1 and therefore has a low probability of flooding from the rivers and the sea.

3.9.2 Surface water features

Surface water features associated with the quarrying and infill activities are situated within the EP boundary. Small streams run approximately 15m east, and 20m south. Small ponds are located approximately 200m west, 10m east, 260m east, and 410m north.

Surface water features are illustrated on Drawing 003.

3.10 Ecology

The MAGIC map website has been accessed to determine the presence of any European or Internationally designated sites within a 2km radius from the site's boundary.

3.10.1 Sites of Special Scientific Interest (SSSI)

The site is located within the Clock House Brickworks Site of Special Interest (SSSI) which extends to the north and south. The site is designated as it shows beds in the lower part of the Weald Clay Group, stratigraphically above the strata seen at the GCR SIL at Warnham. Auclaye SSSI is located approximately 400m to the west of the site.

Vann Lake and Ockley Woods SSSI is situated approximately 1,420m to the west.



3.10.2 Ancient Woodland

Several areas of ancient woodland are located within a 2km radius of the Site. The closest is an area of Ancient & Semi-Natural Woodland with the site boundary on the east. There are other sections of ancient woodland immediately to the south of the site and to the west along the access route to the site.

Further areas are illustrated on Drawing 004.

The searches on MAGIC confirmed that there are none of the following within 2km of the site's boundary:

- National Parks;
- Local Nature Reserves (LNR);
- National Nature Reserves (NNR);
- Ramsar Sites;
- Special Areas of Conservation (SAC);
- Special Protection Areas (SPA);
- Biosphere Reserves; and
- Areas of Outstanding Natural Beauty (AONB).

3.11 Cultural and Heritage

3.11.1 Scheduled Monuments

The Medieval Moated Site, North of Oakdale Farm Scheduled Monument lies approximately 1.7km west of the site.

3.11.2 Listed Buildings

Multiple listed buildings are situated within a 2km radius of the Site as illustrated on Drawing 004. The closest listed buildings within a 500m radius of the Site are as follows:

- The Clock House lies approximately 155m west;
- The Taylors lies approximately 300m east;
- Barn at Taylors Farm lies approximately 280m east;
- Fyllsbrook Cottage lies approximately 345m east; and
- Barn at Pleystowe Farm lies approximately 440m north.

The searches on MAGIC confirmed that there are none of the following within a 2km radius of the Site's boundary:

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

3.12 Summary of Identified Receptors

Table 3-2 below shows the locations of receptors that are considered to be potentially sensitive and could reasonably be affected by the operations carried out onsite.



Table 3-2 Identified Receptors

Receptor Name	Receptor Type	Direction from Site	Approximate Distance from Site Boundary (in metres)
Local receptors located within 1km of the site boundary as shown on Drawing 003			
Surface Water Features associated with Clockhouse Quarrying and Landfill Activities	Surface Water Features	N/A	Within EP Boundary
Horsham Road (A24)	Local Transport Network	West	Adjacent
Open/Agricultural Ground	Open/Agricultural Ground	North, east, south	Adjacent
Brickworks	Commercial/Industrial	Northwest	Adjacent
Clockhouse Quarry Area 1	Landfill	Southwest	Adjacent
Pond	Surface Water Feature	East	10m
Stream	Surface Water Feature	East	15m
Stream	Surface Water Feature	South	20m
Rusper Road	Local Transport Network	East	45m
Residential Property	Residential	East	80m
Surrey Hills Bikes Servicing and Coaching	Commercial/Industrial	East	80m
Residential Property	Residential	Northeast	90m
Railway Line	Local Transport Network	Southwest	140m
Carrington's International	Commercial/Industrial	West	150m
Residential Property	Residential	Northwest	200m
Pond	Surface Water Feature	West	200m
RMV Heating and Plumbing Dorking	Commercial/Industrial	East	225m
Residential Property	Residential	West	250m
Pond	Surface Water Feature	East	260m
Mole Valley Specialist Cars Ltd	Commercial/Industrial	West	310m
Sure Permanent Makeup Training	Commercial/Industrial	Southwest	340m
Pond	Surface Water Feature	North	410m
Clarks Green	Residential	South	950m
Ecology and Cultural and Natural Heritage identified within 2km of the Site boundary as shown on Drawing 004			
Clock House Brickworks SSSI	SSSI	N/A	Within EP Boundary and extending to north and southwest



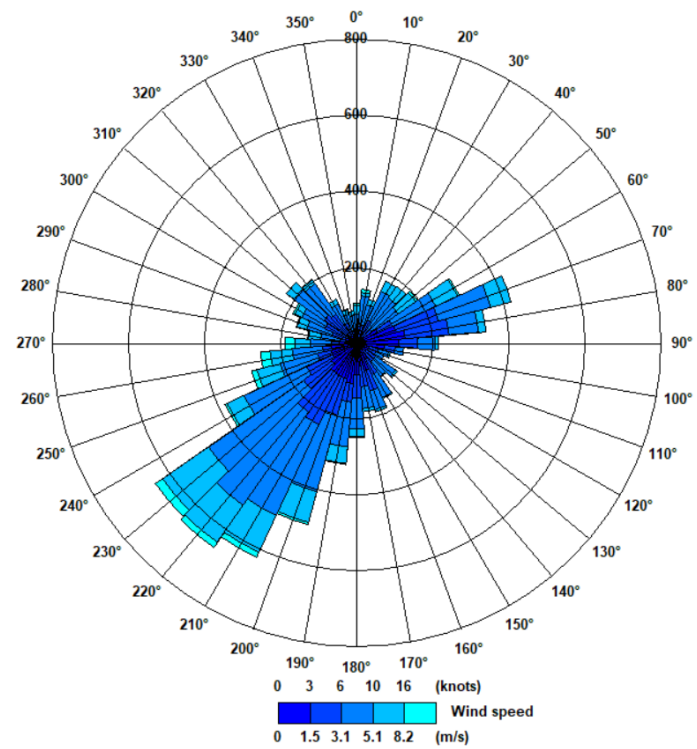
Receptor Name	Receptor Type	Direction from Site	Approximate Distance from Site Boundary (in metres)
Deciduous woodland	Priority Habitat Inventory	Northwest and east	Adjacent and a small area within EP boundary
Ancient & Semi-Natural Woodland	Ancient Woodland	South and east	Adjacent and a small area within EP boundary
The Clock House	Listed Building	Northwest	155m
Fyllsbrook Cottage	Listed Building	East	280m
The Taylors	Listed Building	East	300m
Barn at Taylors Farm	Listed Building	East	280m
Auclaye SSSI	SSSI	West	400m
Barn at Pleystowe Farm	Listed Building	North	440m
Vann Lake and Ockley Woods SSSI	SSSI	West	1,420m
The Medieval Moated Site, North of Oakdale Farm	Scheduled Monument	West	2,000m

3.13 Windrose

Figure 3-2 shows the wind patterns for 2022 as identified by the Gatwick meteorological station, which is the closest weather station lying 9km east of the Site. The most prominent wind direction is from the southwest to the northeast with winds from other directions being more infrequent



Figure 3-2 Gatwick Meteorological Station, 2022



4.0 Environmental Risk Assessment

4.1 Amenity and Accidents Risk Assessment

The following tables 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 probably, barriers to exposure less controllable.
- High: exposure is probable, direct exposure likely with few barriers.

The methodology outlined 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 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.



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 and deposition of waste.	Sensitive receptors as listed in Table 3-2.	Air	All waste types to be accepted on site for general fill will consist of suitable 'inert' waste materials only. The materials to be accepted on site for general fill, will not be putrescible and will not contain degradable residues. The wastes are therefore not odorous in nature. Strict Waste Acceptance Procedures (WAP) 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. The Site Manager will be responsible for implementing risk management measures in conjunction with the Operating Techniques (OT).	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
Engine noise from vehicles entering/exiting site Receiving, screening, crushing and depositing of waste	Sensitive receptors as listed in Table 3-2.	Air	The majority of the land surrounding the site is characterised by open/agricultural areas, with few residential properties in the surrounding area. A Noise Impact Assessment and Management Plan (NIAMP (Ref: 402.065294.00001/NIAMP) has been prepared as part of the EP application. The NIAMP includes the following: • Site operations will be restricted to reasonably sociable hours as specified in the planning consent; • Speed limits will be implemented for all vehicles using the site and traffic calming measures will be implemented to enforce speed limits; • Site access and operational areas will be maintained and repaired to minimise emissions of noise due to uneven and poor surfacing;	Low	Noise nuisance during operational hours	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
			- All fixed plant and mobile plant will be maintained and repaired to the manufacturers specifications to minimise unnecessary emissions; - Plant will be switched off when not in use; - If horns or alarms are deemed to cause unacceptably high levels of noise, alternative technologies will be explored and implemented; - Plant will be fitted with noise silencers if necessary; - Drop heights for waste deposition will be minimised to minimise noise emissions; - All visitors and haulage companies will be made aware of the noise procedures; - Auditory inspections will be carried out by site personnel daily and in response to complaints. If noise levels are deemed a nuisance, investigations will be undertaken to determine the cause and appropriate mitigation measures will be implemented.			



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 be responsible for implementing risk management measures in conjunction with the NIAMP and OT. Screening and crushing will not be required during the whole lifetime of the EP. These activities will be minimal and will only be undertaken when required. For example, the screening activity will only be limited to accepted wastes that require screening for the restoration layer. Crushing and screening plant will only be turned on and utilised when needed.			



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:						
Dust Dust emissions from waste screening / crushing / deposition / tipping operations and vehicle movements	Sensitive receptors as listed in Table 3-2.	Air	The Site will be managed in accordance with the Emissions (Dust) Management Plan (DEMP) (ref: 402.065294.00001/DEMP) which is included as Section 8 of this EP application. The DEMP includes the following: • Overview of operations and potential for dust emissions; • Potential dust effects; • Review of meteorological conditions; • Local sources of dust; • Control of dust emissions; • Site management; • Complaints procedure; and • Contingency action plan. The Site Manager will be responsible for implementing risk management measures in conjunction with the DEMP and OT.	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
			Screening and crushing will not be required during the whole lifetime of the EP. These activities will be minimal and will only be undertaken when required. For example, the screening activity will only be limited to accepted wastes that require screening for the restoration layer. Crushing and screening plant will only be turned on and utilised when needed. It is noted that there is no additional tonnage proposed solely for the 'treatment' activities on site. These are directly associated to the recovery activity and would not exist without the recovery activity and will not continue once the recovery activity has been completed.			
To Water:						
Runoff from the site Runoff from site surfaces, including the access roads	Sensitive receptors as listed in Table 3-2.	Land and surface water. Percolation through the ground.	The site will only accept uncontaminated suitable 'inert' waste as part of the waste recovery operation. This poses minimal risk as contaminated runoff and leachate will not be generated. However, measures will be put in place to ensure risk of runoff from site is managed:	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
and haul roads. Percolation of contaminated water.			• Strict WAP will be in place to ensure no unauthorised materials are accepted on to site; • Impermeable areas of site surfacing (i.e. the access road) will be inspected and maintained regularly to ensure it is good condition. Any weaknesses identified will be repaired immediately using temporary solutions and with permanent measures implemented as soon as practicable; • Vehicles will undergo preventative maintenance to prevent any leaks of fuel/oil; • Spill kits will be stored on site containing appropriate absorbent materials to use in the event of a spillage; • Machinery fuel and oils will be stored onsite in bunded containers of a fixed pad separate from the infilling operations., The container area will be fenced and locked; and • Groundwater quality monitoring will be conducted on site using the existing network of monitoring boreholes (Please see			



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
			Hydrogeological Risk Assessment, Ref: 402.065294.00001/HRA). Site operations will be inspected daily for signs of spillages. The Site Manager will be responsible for implementing risk management measures in conjunction with the OT.			
Pests						
Birds, vermin, and pests	Sensitive receptors as listed in Table 3-2.	Land and air.	The proposed waste types to be accepted at the site will not contain putrescible materials. Therefore, the wastes accepted on site will not attract birds, vermin and pests. Strict WAP will ensure that no unauthorised wastes are accepted on site. The Site Manager will be responsible for implementing risk management measures in conjunction with the OT.	Low.	Nuisance, potential risk to human health.	Low
Mud/Litter						



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 from vehicle movements	Site access road.	Land – transfer of mud to roads from vehicle wheels.	The site is accessed off the Horsham Road (A24). An adequate area of hard surfaced road between site 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. A wheel wash will be in place on the access road, where all HGVs will be required to use the wheelwash before exiting the site. The site will benefit from good housekeeping and all areas of the site will be maintained and cleaned daily, to minimise the transfer of mud from site. All vehicles and mobile plant leaving operational areas will be checked to ensure that they are clear of loose waste. Before leaving the site, vehicles will be checked to ensure their load is secure. Daily inspections of the site will be conducted by site personal to identify if there are any problems associated with mud or waste debris.	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
			If any issues are raised, these will be cleaned up as soon as possible. The result of any inspections or investigations due to a complaint, will be recorded. The Site Manager will be responsible for implementing risk management measures in conjunction with the OT.			
Litter from waste	Sensitive receptors as listed in Table 3-2.	Air	The proposed waste types to be accepted on site will not generate litter. Strict WAP will be followed to ensure that no unauthorised waste is accepted on site. The site and its immediate surrounding will be inspected daily, and action will be taken to maintain the area free of significant accumulations of litter and debris. The Site Manager will be responsible for implementing risk management measures in conjunction with the OT.	Low – due to the nature of the waste accepted on site.	Nuisance from litter. Loss of amenity. Dangerous conditions on road.	Not significant.



Table 4-4 Accident 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
Spillage and leakage Spills and leaks of fuels and oils	Local land quality. Groundwater Surface water.	Runoff and percolation through the ground.	Machinery fuel and oils will be stored onsite in bunded containers of a fixed pad separate from the infilling operations., The container area will be fenced and locked. All vehicles and mobile plant will be subject to a programme of planned preventative maintenance in accordance with the manufacturer's recommendations to prevent oil/fuel leaks from vehicles. Spill kits will be 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. Daily visual inspections will be carried out to identify any evidence of spillages or leakages from vehicles or plant machinery.	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
			The results of any inspections or investigations will be recorded. The Site Manager will be responsible for implementing risk management measures in conjunction with the OT.			
Fire	Sensitive receptors as listed in Table 3-2.	Air (smoke). Ground (spillages and firewater).	All waste types to be accepted on site for general fill will consist of suitable 'inert-type' waste materials only and therefore will not readily burn or self-combust. Strict WAP will be followed to ensure that no unauthorised waste is accepted on site. The plant inspection schedule will include checks of electrical equipment within the site to ensure that any faults are identified, reported and repaired. Smoking will not be permitted in the operational areas of the site. No waste will be burned on site and any fire at the site will be treated as an emergency. The Site Manager will be responsible for implementing risk management measures in conjunction with the OT.	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.		The site will be adequately secured using gates, fencing and thick vegetated boundaries to prevent and deter any unauthorised entrance. Fencing will consist of a mixture of palisade, chain link and wire mesh fencing. An existing barrier gate at the site entrance will be retained and an additional gate will be constructed by the weighbridge. The site will benefit from operational procedures, including regular inspections, to ensure continual monitoring of security provision. Security infrastructure will be inspected at the commencement of each working day 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. If this is not possible, suitable measures will be taken to prevent unauthorised access. Permanent repairs will then be made as soon as practically possible after this.	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
			All visitors to site will be required to sign in and out of the visitors book. This minimises the risk of unauthorised visitors gaining access to the site. In the event of a breach of security at the site, the cause will be investigated, and appropriate mitigation measures implemented. This will be recorded in the Site Diary. Records maintained will include inspections and maintenance of security fencing and the gate, breaches of security, investigations and actions taken. The Site Manager will be responsible for implementing risk management measures in conjunction with the OT.			
Flooding	Sensitive receptors as listed in Table 3-2.	Flood waters over land.	The site lies within a Flood Zone 1 and therefore has a low probability of flooding from rivers and the sea. An evacuation plan will be implemented in the unlikely event of flooding. The Site Manager will be responsible for implementing risk management measures in conjunction with the OT.	Very low.	Contaminated flood waters impacting land in residential, ecological and commercial local areas.	Negligible



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
Unauthorised Waste	Sensitive receptors as listed in Table 3-2.	Air, land, and water	The site-specific WAP and waste acceptance criteria will be implemented on site with strict enforcement, to ensure no unauthorised waste is accepted. Only waste authorised by the EP will be accepted. These procedures will include; pre-acceptance checks, an approved suppliers list, basic characterisation and visual checks against the declaration on the waste transfer note. 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. The Site Manager will be responsible for implementing risk management measures in conjunction with the OT.	Low	Odour nuisance. Water contamination.	Not significant.



5.0 Conclusion

This ERA has been undertaken in accordance with EA guidance. The assessment is provided as part of the application for a bespoke EP for the Site.

This qualitative risk assessment has considered odour, noise, fugitive emissions, dust, releases to water, litter and potential for accidents and incidents. A DEMP has been prepared and is included within the application due to the potential for fugitive dust emissions, and a NIAMP has been prepared and is included within the application due to the potential for noise emissions.

The assessments concluded that with the implementation of the risk management measures described above and within the DEMP and NIAMP, potential hazards from the application are not likely to be significant and no further assessment is required.





Making Sustainability Happen