# Chetwode Embankment Waste Recovery Permit Application

## Reference EPR/LB3404KN/A001

### Environmental Risk Assessment

### On behalf of EKFB JV

JER9490
Environmental Risk Assessment
2
2
10 March 2025

rpsgroup.com

## Quality Management

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# 1 INTRODUCTION

1.1.1 This Environmental Risk Assessment (ERA) has been carried out in support of an application for a bespoke Waste Recovery Permit at Preston Bissett Road, Chetwode, Buckinghamshire, MK18 4LF.

1.1.2 The scope of the ERA considers risks associated with the operation of the facility and demonstrate that the risk of pollution or harm will be acceptable by taking the appropriate measures to manage these risks.

1.1.3 The Environment Agency's '*Risk Assessments for your environmental permit'*[1] covers a range of environmental risks. Those aspects relevant to the operation of the proposed facility are covered within the following sections:

- Amenity and accidents
- Emissions to air
- Emissions to water

1.1.4 This document provides the relevant risk assessments covering the above aspects.

[1] Environment Agency, Risk assessments for your environmental permit, https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit

# 2 SITE DETAILS

## 2.1 Site Setting

2.1.1 The site is located off Preston Bisset Road, Chetwode approximately 1.5 km southwest of Preston Bisset. The centre of the site is at approximate grid reference SP 64678 28638. The site address is Preston Bissett Road, Chetwode, Buckinghamshire, MK18 4LF.

2.1.2 A site plan can be found in Appendix A.

2.1.3 The landscape bund at Chetwode Embankment is located on the alluvial flood plain on the north side of the Great River Ouse Valley. The land slopes gently to the south with an elevation of approximately 87 m AOD.

2.1.4 The site is designated as poor quality agricultural land.

2.1.5 EA Nature and Heritage Conservation Screening Report (Bespoke Waste) EPR/LB3404KN/A001 (Appendix B to this ERA) identified the following ecological receptors:

- Protected Species: Code 2 – within 500 m,
- Protected Habitats: Deciduous woodland – within 50 m.

2.1.6 Upon further detailed screening by RPS (detailed within the Environmental Risk Assessment) none of the above identified receptors are within screening distances for environmental permitting and, therefore, are not expected to experience negative impacts from the operation of the scheme. See the receptor plan, Figure 1-2, below.

2.1.7 According to the British Geological Society's 'Geology of Britain Viewer', the site is located on the bedrock geology of the site comprises Peterborough Member – Mudstone: sedimentary bedrock formed between 166.1 and 163.5 million years ago during the Jurassic period.

2.1.8 Superficial deposits are mapped adjacent to the site:

- To the west the bedrock is overlain with Till, Mid Pleistocene – Diamicton. Sedimentary superficial deposit formed between 860 and 116 thousand years ago during the Quaternary period.
- To the east are River Terrace Deposits - Sand and gravel. Sedimentary superficial deposit formed between 2.588 million years ago and the present during the Quaternary period.
- To the south lie superficial deposits of Alluvium - Clay, silt, sand and gravel. Sedimentary superficial deposit formed between 11.8 thousand years ago and the present during the Quaternary period.

2.1.9 The Mudstone bedrock is considered unproductive as an aquifer, i.e., a rock layer or drift deposit with low permeability that has negligible significance for water supply or river base flow. The combined classification for the site is: Unproductive Bedrock Aquifer, No Superficial Aquifer. Therefore, no groundwater flow is expected.

2.1.10 To the north and west of the site lies a Secondary Undifferentiated Aquifer (assigned where it is not possible to attribute either category A or B to a rock type. In general, these layers have previously been designated as both minor and non-aquifer)

2.1.11 To the east and south lies a Secondary A Aquifer (permeable layers 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. These are generally aquifers formerly classified as minor aquifers).

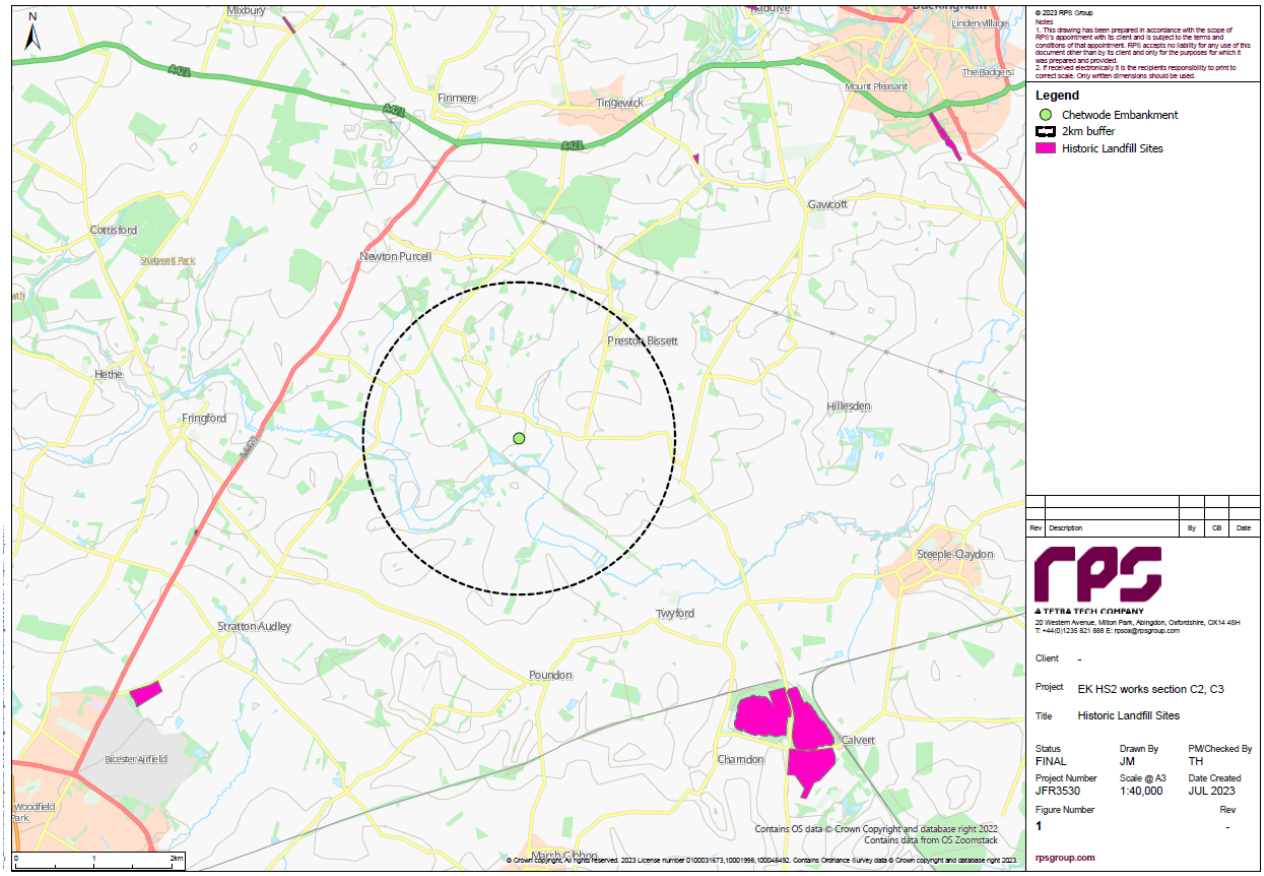
2.1.12 There are no identified Groundwater Source Protection Zones (GSPZ) within a 2 km radius of the site. The Groundwater Vulnerability Maps show the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a single square kilometre. By virtue of lying over an unproductive aquifer with no superficial aquifer, groundwater vulnerability at this site is classified as low.

2.1.13 The nearest watercourse is Padbury Brook that flows adjacent to the southeast site boundary at its closest point. Padbury Brook has a “Moderate” overall rating, with “Fail” Chemical rating and “Moderate” ecological rating, according to Environment Agency records from 2019.

2.1.14 The EA flood risk maps[2] have been consulted and it is shown that the areas of the site to be used for the waste recovery activity are located in flood zone 1, an area with a low probability of flooding.

2.1.15 Figure 2-1 below shows that there are no historic landfills within close proximity to the site.

**Figure 2-1: Historic Landfill Sites**




[2] Flood map for planning - GOV.UK (flood-map-for-planning.service.gov.uk)

# 3 ENVIRONMENTAL RISK ASSESSMENT

3.1.1 As stated in section 1.1.3 this ERA has been produced in line with EA ERA guidance.

3.1.2 This guidance states that "If you are applying for a bespoke permit but most of your activities are covered by standard rules, you only need to do a risk assessment for the activities or risks that are not covered by the generic risk assessment for those standard rules."

3.1.3 The standard rules risk assessment for Standard rules SR2015 No.39, Use of waste in a deposit for recovery operation (Construction, reclamation, restoration or improvement of land other than by mobile plant) has several parameters which must be met on order for a Standard Rules (SR) permit to be applicable. These are shown below:

- *Parameter 1 - Permitted activities - The storage and recovery of waste (R5, R10, R13).*
- *Parameter 2 - Permitted wastes - Inert wastes and specified non-hazardous wastes as listed in the table of wastes.*
- *Parameter 3 - Maximum quantity of waste shall be limited to 60,000 cubic metres or less.*
- *Parameter 4 - The activities shall not be carried out within 500m of a European Site (candidate or Special Area of Conservation, proposed or Special Protection Area or Ramsar site) or a Site of Special Scientific Interest (SSSI); 50 metres of a site that has species or habitats protected under the Biodiversity Action Plan that the Environment Agency considers at risk to this activity, 250m of the presence of the great crested newts where it is linked to the breeding ponds of the newts by good habitat or 50 metres of a National Nature Reserve (NNR), Local Nature Reserves(LNR), Local Wildlife Site (LWS), Ancient woodland or Scheduled Ancient Monument.*
- *Parameter 5 - The activities must not be carried out within groundwater Source Protection Zones 1 and 2 or if a source protection zone has not been defined then not within 250 metres of any well, spring or borehole used for the supply of water for human consumption. This includes private water supplies.*
- *Parameter 6 - No point source discharges to controlled waters or groundwater.*
- *Parameter 7 - The activities must not be carried out within 10 metres of any watercourse.*
- *Parameter 8 - No waste may be deposited into a water body or sub-water table.*
- *Parameter 9 - The activities shall not be carried out on historic, closed or operational landfills.*
- *Parameter 10 - Activities must not be carried out in an air quality management area for $PM_{10}$.*

3.1.4 Aside from Parameter 2 all parameters are met by this waste recovery operation. The waste to be recovered within the landscape and visual bund at Chetwode Embankment have been excavated from the Finmere Quarry historic landfill site and have physically screened/ treated prior to the proposed use. As dug the waste would have been classified as 17 05 04 which does not have an exclusion for fines. However, as the waste is subject to mechanical treatment off site it is categorised as a Chapter 19 code (19 12 12).

3.1.5 Within the SR permit 19 12 12 is restricted to crushed bricks, tiles, concrete and ceramics and excludes the presence of fines (of which an element will be included within this operation) and therefore a bespoke permit is required.

3.1.6 This ERA provides an assessment of risks to environmental amenity and from accidents that could arise from operation of the facility and uses the following approach for identifying and assessing the risks in six steps:

- Step 1: Identify and consider risks for your site, and the sources of the risks,
- Step 2: Identify the receptors (people, animals, property and anything else that could be affected by the hazard) at risk from your site,
- Step 3: Identify the possible pathways from the sources of the risks to the receptors,
- Step 4: Assess risks relevant to your specific activity and check they're acceptable and can be screened out,
- Step 5: State what you'll do to control risks if they're too high,
- Step 6: Present your assessment as part of you permit application.

3.1.7 The risk assessment is based on the generic risk assessment set out in SR2015 No39 with changes and additions made to reflect the bespoke permit activity.

**Table 3-1: Modified version of the Generic risk assessment for standard rules set number SR2015 No39**

| Data and information | | | | Judgement | | | | Action (by permitting) | |
|---|---|---|---|---|---|---|---|---|---|
| **Receptor** | **Source** | **Harm** | **Pathway** | **Probability of exposure** | **Consequence** | **Magnitude of risk** | **Justification for magnitude** | **Risk management** | **Residual risk** |
| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| Local human population. | Releases of particulate matter (dust). | Harm to human health - respiratory irritation and illness. | Air transport then inhalation. | Medium | Medium | Medium | The activities may produce dust from movement of vehicles and tipping operations especially in dry and also windy weather.<br><br>Waste to be accepted at the site may include fines from | Activities are not permitted within a specified air quality management area (AQMA) for particulate matter of 10 microns or less ($PM_{10}$). Activities shall be managed and operated in accordance with a management system that includes measures to | Low |

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| | | | | | | | the mechanical treatment of the waste. Therefore, there is potentially a slight increased risk of dust emissions from this operation. Whilst there is a potential slight increase in risk the probability remains medium as only a small | prevent and reduce risk of dust being produced and where it is produced from leaving the site boundaries. Rules can be invoked to require a particulate management plan.<br><br>Additional management at the site will include the increased monitoring for dust emissions especially | |

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| | | | | | | | proportion of waste accepted at the site will consist of fine materials and this will be mixed within larger fractions of the waste. The probability of exposure and consequence will remain unchanged and therefore | during dry periods. If waste is found to be dry/dusty and posing a higher risk of dust emission it will be dampened. A bowser and hose will be available on site. Waste will be placed directly into the landform, levelled and compacted on the same day. Once it is in-situ within the embankment | |

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| | | | | | | | the overall risk will not change. | it is not expected to generate dust. | |

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| Local human population. | Releases of particulate matter (dust). | Nuisance - dust on cars, clothing etc. | Air transport then deposition. | Medium | Low | Medium | Permitted waste types are mainly inert but do include fines from the mechanical treatment. The activities may produce dust from movement of vehicles and tipping operations especially in dry and also windy weather. | Activities will be managed and operated in accordance with a management system that includes measures to prevent and reduce risk of dust being produced. Visual assessments will be carried out to protect local amenity and, where dust is observed, action will be taken, including | Low |

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| | | | | | | | | damping down deposited waste, to prevent or minimise dust from leaving the site boundaries.<br>Rules can be invoked to require a particulate management plan.<br>Additional management at the site will include the increased monitoring for dust emissions especially during dry | |

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| | | | | | | | | periods. If waste is found to be dry/dusty and posing a higher risk of dust emissions, it will be dampened. A bowser and hose will be available on site.<br>Waste will be placed directly into the landform, levelled and compacted on the same day. Once it is in-situ within the embankment | |

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| Local human population. | Litter. | Nuisance, loss of amenity and harm to animal health. | Air transport then deposition. | Low | Low | Very low | Waste types if compliant with the rules should have a low risk of litter from contraries in the waste. | Waste acceptance procedures will control the waste imported to the site and stipulate how non-conforming loads will be identified and dealt with. The management system will have procedures to remove and contain any litter to prevent it being deposited at the site or to | Very low |

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| | | | | | | | | leave the site boundaries.<br>Rules can be invoked to require a litter management plan. | |
| Local human population. | Mud and waste on road. | Nuisance, loss of amenity, road traffic accidents. | Tracked on tyres of vehicles entering and leaving the site and from loads which are not properly contained. | Medium | Medium | Medium | Waste types are typically ones that will produce mud especially during wet weather.<br><br>No significant change to the overall | The management system will contain procedures to monitor and minimise the risk of mud and waste being tracked out onto the highway. This may include wheel-cleaning | Low |

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| | | | | | | | risk is expected to the tracking of mud from the site via vehicle tyres due to the presence of fines. The magnitude of the consequence will not change as the probability and consequence remain unchanged. | facilities where appropriate. All vehicles will have adequate containment such as sheeting to prevent waste spillage. | |

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| Local human population . | Odour . | Nuisance, loss of amenity. | Air transport. | Very low | Very low | Very low | Permitted waste types are mainly inert and therefore should not be odorous. | The management system should contain procedures to prevent non-permitted wastes being deposited at site and to deal with rogue loads if they do occur. There is a dormant Rule that can be utilised if odour should be a problem. | Very Low |

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| Local human population. | Noise and vibration. | Nuisance, loss of amenity, loss of sleep. | Noise through the air and vibration through the ground. | Medium | Medium | Medium | Local residents often sensitive to noise and vibration but there is usually low potential for exposure. | Noise and vibration shall be minimised and not cause nuisance. A noise and vibration management plan may be required. The distance to sensitive receptors means that noise associated with the deposition of waste into the landscape bund is unlikely to | Low |

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| | | | | | | | | have an impact. | |
| Local human population. | Scavenging animals and scavenging birds. | Harm to human health from waste carried off site and faeces. Nuisance and loss of amenity. | Air transport and over land. | Low | Low | Very low | Wastes are limited to mainly inert wastes that are not normally attractive to animals and birds. | Risk limited by permitted waste types and good onsite management practices detailed in management system of non-conforming wastes. | Very low |

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| Local human population and local environment. | Pests (e.g.) flies. | Harm to human health. Nuisance, loss of amenity. | Air transport and overland. | Low | Medium | Medium | Wastes are limited to mainly inert wastes that are not normally likely to encourage pest infestations. | Risk limited by permitted waste types and good onsite management practices detailed in management system of non-conforming wastes. | Low |
| Local human population and local environment. | Flooding of site. | If waste contaminated water is washed off site it may contaminate buildings, gardens, watercourses and | Flood waters. | Low | Medium | Medium | Permitted waste types are mainly inert so any waste washed off site will add to the volume of local post- | Activities are not permitted within 10 metres of a watercourse or to be deposited sub-water table. The written management | Low |

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| | | natural habitats. | | | | | flood clean-up workload rather than the hazard. However, they may cause increased siltation and need for dredging in water courses. Increased suspended solids.<br><br>A higher proportion of dusty waste accepted at the site | system should identify and minimise risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances.<br>Mitigation to prevent fines being transported from the site during flooding include the following: | |

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| | | | | | | | may increase its mobility during flooding. The waste may also be slower to be deposited and therefore, travel further in flood waters. The probability of the risk remains low as the site is located in flood zone 1 which is | shallow bunds to slow down the floodwater and allow time for dust to be deposited,<br>Deposited waste will be levelled and compacted on the same day.<br>No waste will be stored on site within temporary stockpiles,<br>Furthermore, weather will be monitored as part of the EMS so | |

| Data and information | | | | Judgement | | | | Action (by permitting) | |
|---|---|---|---|---|---|---|---|---|---|
| **Receptor** | **Source** | **Harm** | **Pathway** | **Probability of exposure** | **Consequence** | **Magnitude of risk** | **Justification for magnitude** | **Risk management** | **Residual risk** |
| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| | | | | | | | an area with a low chance of flooding.<br><br>The magnitude of the risk remains medium. | flooding events can be predicted and managed prior to the event. | |
| Local human population and /or livestock gaining unauthorised access to the waste operation. | All on-site hazards, wastes, machinery and vehicles. | Bodily injury. | Direct physical contact. | Low | High | Medium | Permitted waste types are inert therefore only a low risk from the actual waste. However, there could be stockpiles that people could climb | The written management system should identify and minimise risks from unauthorised access and site security measures identified to prevent such access. | Low |

| Data and information | | | | Judgement | | | | Action (by permitting) | |
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| | | | | | | | or void spaces that people could fall into, and wastes have a higher risk in wet conditions where deep mud could form. | The site is secured to restrict unauthorised access. | |

| Data and information | | | | Judgement | | | | Action (by permitting) | |
|---|---|---|---|---|---|---|---|---|---|
| **Receptor** | **Source** | **Harm** | **Pathway** | **Probability of exposure** | **Consequence** | **Magnitude of risk** | **Justification for magnitude** | **Risk management** | **Residual risk** |
| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| Local human population and the environment. | Arson and/ or vandalism causing the release of polluting materials to air (smoke or fumes) and firewater or spillage of polluting liquids to water or land. | Respiratory irritation, illness and nuisance to local population. Injury to staff, fire fighters or arsonists/ vandals. Pollution of water or land. | Air transport of smoke. Spillages and contaminated firewater by direct run-off from and via surface water drains and ditches. | Low | Medium | Low | Permitted waste types are inert so very low-risk of combustion. Site machinery and fuels and oils are more of a risk, but quantities of flammable material held on site will typically be low. | The written management system will identify and minimise risks from unauthorised access and site security measures identified to prevent such access. The system will also describe how any polluting liquids or materials will be stored safely. The site is secured to restrict | Very Low |

| Data and information | | | | Judgement | | | | Action (by permitting) | |
|---|---|---|---|---|---|---|---|---|---|
| **Receptor** | **Source** | **Harm** | **Pathway** | **Probability of exposure** | **Consequence** | **Magnitude of risk** | **Justification for magnitude** | **Risk management** | **Residual risk** |
| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| | | | | | | | | unauthorised access.<br><br>Site vehicles will be subject to regular maintenance and will carry fire extinguishers of the appropriate type. | |
| Local human population and local environment. | Accidental fire causing release of polluting materials to air (smoke or fumes), water or land. | Respiratory irritation, illness and nuisance to local population. Injury to staff, fire fighters. Pollution of | Air transport of smoke. Spillages and contaminated firewater by direct run-off from and via surface water | Low | Medium | Low | Permitted waste types are inert so very low-risk of combustion. Site machinery and fuels | The written management system will identify and minimise risks from unauthorised access and site security measures | Very low |

| Data and information | | | | Judgement | | | | Action (by permitting) | |
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| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| | | water or land. | drains and ditches. | | | | and oils are more of a risk, but quantities of flammable material held on site will typically be low. | identified to prevent such access. The system will also describe how any polluting liquids or materials will be stored safely.<br><br>Site vehicles will be subject to regular maintenance and will carry fire extinguishers of the appropriate type. | |

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| **Receptor** | **Source** | **Harm** | **Pathway** | **Probability of exposure** | **Consequence** | **Magnitude of risk** | **Justification for magnitude** | **Risk management** | **Residual risk** |
| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| Local human population and local environment. | Build up and emissions of gas from old waste deposits on the permitted site | Respiratory irritation, illness and nuisance to local population. Risk of explosion and injury to staff and local population. | Gas migrating laterally through waste deposit and building up in certain areas. | Low | High | Medium | There are no old waste deposits at the site. As shown in Figure 2-1 there are no records of former landfill sites within 2 km of the Chetwode Embankment site. | The distance criteria prohibit use on historic, closed or operational landfills. | Low |

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| **Receptor** | **Source** | **Harm** | **Pathway** | **Probability of exposure** | **Consequence** | **Magnitude of risk** | **Justification for magnitude** | **Risk management** | **Residual risk** |
| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| All surface waters close to and downstream of site. | Spillage of liquids, including oil. | Acute effects: fish and invertebrate kill. | Direct run-off from site across ground surface, via surface water drains, ditches etc. | Low | Medium | Medium | Wastes are solid and mainly inert. Potential for spillage from any fuel and oil storage for machinery or directly from machinery operating on the site. | Point source discharges of contaminated water to controlled waters are not permitted. All liquids will be provided with secondary containment. The written management system will identify and minimise risks. The system will describe how any polluting liquids or materials will be stored | Low |

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| **Receptor** | **Source** | **Harm** | **Pathway** | **Probability of exposure** | **Consequence** | **Magnitude of risk** | **Justification for magnitude** | **Risk management** | **Residual risk** |
| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| | | | | | | | | safely and how machinery/plant will be maintained to prevent liquids from leaking. | |
| All surface waters close to and downstream of site. | Leachate from waste and contaminated rainwater run-off from waste e.g., | If waste contaminated water is washed off site, it may contaminate watercourses and natural | Surface waters, leachate from infiltration through the waste | Medium | Medium | Medium | Permitted waste types are non-hazardous.<br><br>The fine material within the | Activity not permitted within 10m of a watercourse. Point source discharges of contaminated water to | Low |

| Data and information | | | | Judgement | | | | Action (by permitting) | |
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| **Receptor** | **Source** | **Harm** | **Pathway** | **Probability of exposure** | **Consequence** | **Magnitude of risk** | **Justification for magnitude** | **Risk management** | **Residual risk** |
| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| | suspended solids. | habitats leading to chronic effects: and deterioration of water quality. | | | | | wastes has the potential for greater mobilisation by rainfall giving rise to increased suspended solids and subsequent increased risk of siltation. The closest surface water receptor is the Padbury Brook, flows adjacent to the | controlled waters are not permitted. Risk limited by waste acceptance rules and limits to permitted waste types. Good onsite management practices must be detailed in the management system for controlling and containing water and leachate generated on the site. | |

| Data and information | | | | Judgement | | | | Action (by permitting) | |
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| **Receptor** | **Source** | **Harm** | **Pathway** | **Probability of exposure** | **Consequence** | **Magnitude of risk** | **Justification for magnitude** | **Risk management** | **Residual risk** |
| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| | | | | | | | southeast of the site The magnitude of the risk remains medium. Suspended solids could potentially be transported to Padbury Brook. However, it is a relatively long distance for them to be transported, and it has been | Mitigation to prevent fines/suspend solids being transport from the site during flooding include the following: The shallow bund gradient is designed to slow the flow of floodwater and allow time for suspended solids to be deposited, Waste will be deposited in situ and will | |

| Data and information | | | | Judgement | | | | Action (by permitting) | |
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| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| | | | | | | | identified that there is a general incline from the site to Padbury Brook which will further facilitate the deposit of sediment prior to reaching the receptor. | be levelled and compacted on the same day.<br>No waste will be stored on site within temporary stockpiles,<br><br>Weather will be monitored as part of the EMS so flooding events can be predicted and managed prior to the event. | |

| Data and information | | | | Judgement | | | | Action (by permitting) | |
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| **Receptor** | **Source** | **Harm** | **Pathway** | **Probability of exposure** | **Consequence** | **Magnitude of risk** | **Justification for magnitude** | **Risk management** | **Residual risk** |
| What is at risk? What do I wish to protect? | What is the agent or process with potential to cause harm? | What are the harmful consequences if things go wrong? | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement? | How can I best manage the risk to reduce the magnitude? | What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment). |
| Groundwater | Leachate from waste and contaminated rainwater run-off from waste e.g., Suspended solids. | Chronic effects: contamination of groundwater, requiring treatment of water or closure of borehole. | Transport through soil/groundwater then extraction at borehole. | Medium | Medium | Medium | Permitted waste type is non-hazardous. Any waste should not contain hazardous substances or non-hazardous pollutants in quantities that pose a risk to groundwater. | The site is not within source protection zones 1 or 2. There are no British Geological Survey borehole records within 250m of the site. Strict waste acceptance procedures will be implemented at the site and are submitted with this application. | Low |

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| Protected nature conservation sites - European sites and SSSIs. | Dust, noise, contaminated run-off leachate etc. | Harm to protected sites through contamination, smothering, disturbance etc. | Any | Low | Medium | Medium | Emissions to air may cause harm to and deterioration of nature conservation sites. Vehicles moving on and around site may cause disturbance through noise. Potential for run-off and siltation of habitats.<br><br>Waste to be accepted at the site includes fines from the mechanical treatment. Therefore, there is an increased risk of dust emissions from this operation. However, the likelihood remains | Activities will be managed and operated in accordance with a management system that includes measures to prevent and reduce risk of dust being produced. Visual assessments will be carried out to protect local amenity and, where dust is observed, action will be taken, including damping down deposited waste, to prevent or minimise dust from leaving the site boundaries. Rules can be invoked to require a particulate management plan. | Low |

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| | | | | | | | low as there are no SSSIs, SACs, SPAs or RAMSAR sites within 2km of the site. There are also no ancient woodlands or deciduous woodlands within 50m. The closest deciduous woodland is 62m south of the site.<br>There are also no NNRs, LNRs or LWSs within 50m of the site. There are no scheduled ancient monuments within 250m of the site.<br><br>The magnitude of the risk remains medium. | Additional management at the site will include the increased monitoring for dust emissions especially during dry periods. If waste is found to be dry/dusty and posing a higher risk of dust emissions, it will be dampened. A bowser and hose will be available on site.<br>Waste will be placed directly into the landform, levelled and compacted on the same day. Once it is in-situ within the embankment it is not expected to generate dust. | |

# 4 CONCLUSION

4.1.1 This ERA has been undertaken following EA guidance and has considered the risks from the operations at the site for odour, noise, fugitive emissions and the potential for accidents and incidents.

4.1.2 The assessment concludes that with the measures detailed above, the risk from the activity ranges from very low to low and therefore is not likely to be significant.

# REFERENCES


1. Environment Agency, Risk assessments for your environmental permit - https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit
2. Geology of Britain Viewer - http://mapapps.bgs.ac.uk/geologyofbritain/home.html?

# Appendices

# Appendix A

## Site Plans

# Appendix B

## Environmental Screening