



**AN APPLICATION FOR AN ENVIRONMENTAL PERMIT  
TO AUTHORISE THE DEPOSITION OF WASTE ON  
LAND AS A RECOVERY ACTIVITY FOR THE  
RESTORATION OF WILLINGTON LOCK QUARRY, ST  
NEOTS ROAD, BEDFORD TO AGRICULTURE AND  
NATURE CONSERVATION**

**APPENDIX H**

**ENVIRONMENTAL RISK ASSESSMENT REPORT (ERA)**

Report reference: BRE/WL/SE/1729/01/ERA  
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Technical advisers on environmental issues

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## 1. Introduction

- 1.1** MJCA is commissioned by Breedon Trading Limited (Breedon) to prepare a Waste Recovery Plan (WRP) for the deposition of waste on land as a recovery activity in order to restore Willington Lock Quarry, St Neots Road, Bedford (the site) to agriculture and nature conservation. This document comprises a nuisance and amenity environmental risk assessment (ERA) prepared to support the application based on the risk screening matrix provided in Table ERA 1 and the assessment presented in Table ERA 2.
- 1.2** The ERA considers potential receptors and pathways for impacts based on the understanding of the environment surrounding the site that is presented in the Environmental Setting and Site Design (ESSD) report presented at Appendix F to the application report and in particular Figure ESSD 1, Figure ESSD 2 and the maps included in the Envirocheck reports provided at Appendix ESSD E to the ESSD report. The assessment of the risks associated with the restoration of the site is based on the information on the design and operation of the site described in the ESSD report and the general principles in the Environment Agency guidance “Risk assessments for your environmental permit” published on the GOV.UK website on 1 February 2016.
- 1.3** The selection of potential receptors has been informed by information presented on the Defra MAGIC website and the Environmental Statement (ES) prepared in support of the application for planning permissions references 17/03351/EIAWM and CB/17/05654/MW. This risk assessment takes into consideration receptors within 500m of the site with the exception of statutorily designated nature conservation sites for which the relevant distance is up to 2km.
- 1.4** Based on information reviewed on Defra’s MAGIC website there are no Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Ramsar Sites, Local Nature Reserves (LNRs) or National Nature Reserves (NNRs) located within 2 km of the site.

## 2. Conclusions

- 2.1** The ERA presented in Table ERA 2 that has been completed to support the application demonstrates that the operation of the facility has a low or very low risk of adverse impact on the surrounding environment including sites of heritage or nature conservation interest.
- 2.2** There is a high pressure gas main aligned east to west which passes beneath the site. It is understood that Breedon consider that it is highly unlikely that the gas pipeline will be removed or relocated, although ultimately this is a decision which will be taken by Cadent who operate the pipeline. Given that there will be a significant cost to divert the pipeline apparatus it may be that the most cost effective solution will be for Cadent to leave the apparatus in-situ and to recompense Breedon for loss of profits through retention of a 'pillar of support'. On the assumption that the Cadent underground high-pressure gas remains, there are protection measures in place for the gas main including minimum standoffs which are specified in the agreement with Cadent in respect of the mineral extraction and restoration operations. On the assumption that the gas main will remain the mineral extraction hence recovery operations will not encroach on the gas main and there will be no damage to the gas main. No assessment of the impact on sensitive receptors is needed in respect of damage to the gas main.

**TABLES**

Table ERA 1 Risk screening matrix (deposit of waste on land as a recovery activity)

RISK TYPE	ODOUR		NOISE AND VIBRATION		FUGITIVE EMISSIONS								
					PARTICULATE MATTER				LITTER		BIRDS, VERMIN AND INSECTS		MUD ON THE ROAD
GENERIC HAZARDS	Waste storage and handling	Waste delivery	Waste delivery	Waste storage and handling	Waste delivery	Waste storage and handling	Restored surfaces	Access routes	Waste delivery	Waste storage and handling	Waste delivery	Waste deposition	Vehicle Movements
GENERIC RECEPTORS <sup>1</sup>													
DOMESTIC DWELLING			X	X	X	X	X	X					
SCHOOLS AND COLLEGES													
HOSPITALS													
OFFICES/COMMERCIAL PREMISES			X	X	X	X	X	X					
INDUSTRIAL PREMISES													
PUBLIC FOOTPATH OR BRIDLEWAY			X	X	X	X	X	X					
HIGHWAYS OR ROADS					X	X	X	X					X
PARKS AND PUBLIC OPEN SPACES													
FARMLAND WITH LIVESTOCK					X	X	X	X					
FARMLAND ARABLE					X	X	X	X					
PRIORITY HABITAT					X	X	X	X					
NATURE SITE OF LOCAL IMPORTANCE (e.g. LNR, CWS)			X	X	X	X	X	X					

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GENERIC RECEPTORS <sup>1</sup>													
SITE OF SPECIAL SCIENTIFIC INTEREST (within 2km)													
SPECIAL AREA OF CONSERVATION (within 2km)													
SPECIAL PROTECTION AREA OR OTHER RELEVANT SSSI (within 2km)													
LISTED BUILDINGS (within 500m)					X	X	X	X					
SCHEDULED MONUMENT (within 500m)													
AIRPORT													
RAILWAY													
SURFACE WATER					X	X	X	X					

X = generic receptor type present and generic hazard considered as part of this assessment set out in Table ERA 2

<sup>1</sup> All generic receptors within 500m have been identified unless an alternative distance has been identified.

**Table ERA 2 Assessment of nuisance and amenity risks associated with the permanent deposit of inert waste at Willington Lock**

What do you do that can harm and what could be harmed?			Assessing the risk			Managing the risk	
Hazard	Receptor (see Table ESID 2)	Pathway	Probability of exposure	Consequence	What is the overall risk?	Risk management	What is the residual 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?	How likely is this contact?	What is the harm that can be caused?	What is the risk? The balance of probability and consequence	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	What is the risk that still remains?
<b>Odour</b>							
There are no potential sources of odour at the site.						The wastes will be inert wastes. Acceptance procedures will be in place.	Negligible
<b>Noise</b>							
Mobile plant and vehicles including waste deposition	Local human population/ properties	Air	Medium to low	Nuisance from noise	Medium to low	<p>The potential impacts of noise from the development have been assessed as part of the planning application process and the control of noise is the subject of conditions 24 to 28 of planning permission reference 17/03351/EIAWM and conditions 20 to 23 of planning permission reference CB/17/05654/MW.</p> <p>Measures to minimise the generation of noise from the activities will be implemented at the site including the use of site plant and vehicles fitted with appropriate silencers and non tonal reversing alarms. All site based plant and vehicles will be the subject of a planned maintenance programme and will be maintained accordingly. The internal haul roads and access road will be inspected on a regular basis and maintained so that potholes are identified and repaired as soon as is reasonably practicable.</p>	Very low



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						Condition 26 of planning permission reference 17/03351/EIAWM and Condition 22 of planning permission reference CB/17/05654/MW specify that the development authorised by the permissions shall not take place unless and until a scheme for the monitoring and control of noise from the operational site has been submitted to and approved in writing by the Local Planning Authority. A Noise Management Plan was submitted in August 2019 pursuant to Condition 26 of planning permission reference 17/03351/EIAWM and Condition 22 of planning permission reference CB/17/05654/MW.	
<b>Vibration</b>							
Mobile plant and vehicles including waste deposition	Local human population	Ground	Low to very low	Nuisance from vibration	Medium to low	Potential sources of vibration are limited to site-based activities only. It is considered that these are more likely to be associated with ground borne vibration rather than transmissions of vibration through the air. Based on the nature and location of the proposed activities it is considered unlikely that ground borne vibration will have a significant effect on potential receptors within the vicinity of the site. In the unlikely event that vibration becomes an issue in respect of the permitted operations at the site a vibration management plan will be prepared and implemented.	Very low

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<b>Fugitive emissions</b>							
Particulates from access routes, waste delivery, waste storage and waste deposition	Local human population / properties / farmland arable / public highway / water bodies / sensitive habitat	Air	Low	Deposition of particulate matter	Medium to low	<p>The potential impacts of dust from the development have been assessed as part of the planning application process and mitigation measures have been developed. Condition 29 of planning permission reference 17/03351/EIAWM and condition 24 of planning permission reference CB/17/05654/MW state that no soil stripping shall take place on site unless and until a Dust Mitigation Plan (DMP) has been submitted to and approved in writing by the Local Planning Authority. A DMP was prepared and submitted to the Local Planning Authority in a report dated November 2019. A Dust and Emissions Management Plan (DEMP) is presented at Appendix N to the application report.</p> <p>Wastes comprising solely or mainly dusts, powders or loose fibres will not be accepted. Detailed procedures for the management of particulate matter at the site will be implemented including non-acceptance of wastes with a significant potential to give rise to windblown dust during adverse weather conditions together with visual monitoring and dampening of granular waste loads, haul roads and other areas during dry conditions using a mobile bowser. Vehicle speeds will be</p>	Low to very low

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						limited to 10mph and an appropriate dust monitoring regime will be implemented.	
The inert wastes that will be accepted have a very low potential to generate gas						Waste deposited in the site area will be under close visual observation by site personnel at all times during placement and levelling when the presence of biodegradable waste materials in the waste will be clearly visible so that biodegradable materials inadvertently deposited can be removed. The site waste acceptance and operational procedures will provide confidence that the deposited waste is inert.	Negligible
The inert wastes that will be accepted have a very low potential to generate litter or to attract birds, vermin or insects.						Acceptance procedures will be in place. The waste types to be accepted at the site have a very low potential to generate litter, attract scavenging animals and scavenging birds or insects.	Negligible
Mud and debris deposited on the public highway	Public highway	Vehicle movements	Low	Mud on the public highway	Low	The site entrance is from St Neots Road. The haul road from the site entrance to the site reception area is approximately 470m long and comprises either concrete or tarmacadam. From the site reception area the internal site haul roads comprises hard standing internal haul roads such as compacted reject aggregate. Vehicles leaving the site will travel over nearly half a kilometre of	Low

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						concrete or tarmacadam before reaching the public highway. There is a wheel wash at the site which is used as necessary by HGVs leaving the site. The length and construction of the internal haul roads together with the use of the wheel wash by HGVs leaving the site will minimise the risk that significant quantities of mud and debris are deposited on the public highway. All site roads and the wheel wash will be inspected daily and maintained in a condition consistent with minimising the risk of the accumulation of mud and debris on the highway. A mobile road sweeper will be used as necessary.	
<b>Accidents</b>							
Waste stored and deposited on site	Local human population gaining unauthorised access to the waste operation	Direct physical contact	Low	Bodily injury	Low	The inert waste types that will be accepted at the site should not cause harm to human health by virtue of their composition. Security measures which are implemented currently as part of the mineral extraction operations comprising the use of fencing, safety signs and regular inspections will continue to be implemented to minimise the potential for unauthorised entry to the site. Footpath 3 and National Cycle Route 51 will be diverted around the site boundary.	Very low
Vehicle movements on site	Local human population gaining	Direct physical contact	Low	Bodily injury	Medium	Security measures are implemented in respect of the existing mineral extraction operations and will continue to be implemented to minimise the	Low

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	unauthorised access to the site					potential for unauthorised entry to the site. Vehicles will employ suitable non-tonal reversing alarms. Footpath 3 and National Cycle Route 51 will be diverted around the site boundary.	
Accidental release of fuel	Water resources	Infiltration to ground	Low	Contamination of water resources	Medium	Company operational, maintenance, inspection and accident management procedures are in place and will continue to be implemented. Spillage kits are available and site personnel are trained in their use.	Low
Flooding	Surrounding receptors including roads, buildings and agricultural uses	Flood waters	High	Contamination of surrounding receptors including roads, buildings and agricultural uses.	High	The inert waste types that will be accepted at the site should not result in contamination by virtue of their composition. Following restoration ground levels in the proposed inert fill areas will generally be similar to pre-extraction ground levels, therefore minimising the risk of increased surface water run-off. As the imported inert materials generally will be similar to site won restoration materials there will be no significant change in the rate of transfer of run-off from the site to the surface water system as a result of the proposed use of imported restoration materials. As the wastes that will be stored and deposited at the site will be in areas which generally are below the surrounding ground level it is unlikely that materials will be washed off site.	Low
Fire	Atmospheric emissions	Air	Very low	Nuisance from smoke and odour	Very low	As the materials deposited at the site will be non-flammable and non-combustible the risk of	Very low

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				Contamination of water resources		occurrence of fires is negligible. As a result associated risks from fire-fighting water being discharged to controlled waters are negligible.	
Waste operations may cause harm to and deterioration of nature conservation sites.	Protected sites - European sites and SSSIs	Air or run off	Very Low	Harm to protected site through contamination, nutrient enrichment, smothering, disturbance, predation etc.	Very Low	There are no European sites or Sites of Special Scientific Interest within 2km of the site.	Negligible
Waste operations may cause harm to and deterioration of nature conservation sites.	Wildlife sites of regional or local importance and protected habitat including priority habitat. Local Wildlife Sites (LWS), Local Nature Reserves (LNR)	Air or run off	Very Low	Harm to protected site through toxic contamination, nutrient enrichment, smothering, disturbance, predation etc.	Very Low	There are no non-statutory designated sites of nature conservation interest located within 500m of the site. There are three LWS within the vicinity of the site including Great Barford Gravel Pits County Wildlife Site (CWS), Blunham Disused Railway CWS and the River Great Ouse CWS. Whilst Priority Habitats in the form of a small area of Deciduous Woodland and Wet Woodland lie within the vicinity of the site together with the protected species European eel ( <i>Anguilla anguilla</i> ) and its migratory route as well as the migratory route of the River lamprey ( <i>Lampetra fluviatilis</i> ), the potential hazards from the permitted activities pose a low risk to the broad sensitivity of species and habitats	Negligible

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						groups. Measures are in place to minimise the risk of unacceptable impacts from the waste operations on the surrounding environment which will be protective also of local nature conservation and habitat features.	
Waste operations may cause harm to and deterioration of heritage conservation sites.	Designated heritage sites – Scheduled Monuments and Listed Buildings	Direct physical contact	Low	Deterioration of designated heritage sites	Low	There is one listed building within 500m of the site, Old Mills Cottage, which is approximately 220m east north east of the site. Measures will be in place to minimise the risk of unacceptable impacts from the waste operations on the surrounding environment.	Low