Environmental Risk Assessment

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For: Ringway Infrastructure Services Ltd

Site: Newport Pagnall

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Quality Assurance

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1. Introduction

1.1.1 This Environmental Risk Assessment (ERA) has been prepared to support a bespoke application for a wate operation. The proposed waste operation will involve the storage and passive treatment (dewatering) of street sweepings/ gully emptyings in a dedicated storage bay.

1.1.2 The Operator, Ringway Infrastructure Services Ltd (Ringway) operates a maintenance contract on behalf of National Highways covering sections of the M1, A5, A1M & A421 in the vicinity of Newport Pagnall Motorway Services (close to post code MK16 8DS).

1.1.3 This ERA supports a permit application for a bespoke permit to enable treatment (de-watering) of non-hazardous street-sweepings and gully waste.

1.1.4 Waste will arrive in enclosed vehicles, operated by Ringway. Waste is inspected and deposited within the dedicated concrete storage bay. Gully waste is allowed to drain to the ACO drain in front of the bay, which discharge to foul sewer. Remaining solid waste is stored temporarily until it is removed from site to an appropriately licenced facility.

1.2 Guidance

1.2.1 The Environment Agency 'Risk assessment for your environmental permit' guidance (available at https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit) (the Guidance) provides an overview of when an ERA is required and how to complete an ERA.

1.2.2 The Guidance states, 'you must do a risk assessment if you want to apply for or change (vary) a bespoke permit'.

1.2.3 This ERA is completed in accordance with the Guidance and includes the following considerations:

- Considering the hazards associated with the permitted activities;
- Identifying sensitive receptors;
- Identifying possible pathways from the sources of risk to a receptor; and
- Assess risks relevant to your specific activity and check they are acceptable and can be screened out.
- Outline control measures where risks are too high.

1.2.4 A copy of this ERA will be included within the Environmental Management System (EMS).

2. Site Setting

2.1.1 The facility will be operated from purpose-built, concrete storage bay within the National Highways Newport Pagnall depot, next to Newport Pagnall Services at Junction 14/15 M1, Newport Pagnell MK16 8DS (the 'Site'). The proposed permit boundary is shown on the Site Layout Plan.

2.1.2 The Site is set within a motorway services depot, which is a high-traffic area.

2.2 Waste Operation

2.2.1 The Operator services a maintenance contract out of the Newport Pagnall Motorway Services (close to post code MK16 8DS).

2.2.2 Maintenance includes clearing drains and gullies along a stretch of motorway and road sweeping, including responding to incidents such as flood events.

2.2.3 The sweepings will be stored in a dedicated concrete storage bay with sealed drainage. The bay is fronted with an arco drain which receives the passive drainage of the sweepings for discharge to foul sewer.

2.2.4 The storage bay will be used as a temporary storage depot / transfer station. This allows the Operator to maintain working capacity on their contract outside of operating hours of other facilities which would receive the waste, thus allowing them to provide a better public service to National Highways. Consequently, the waste will be stored for short durations only, typically overnight and removed from Site within a week.

2.2.5 The storage bay is constructed from 3-sided concrete walls, with sealed drainage, which drains to foul sewer via a silt-trap and hydrocarbon interceptor. The bay measures 11m L x 4m W x 1.9m H.

2.2.6 The Operator predicts that it will deposit a tanker of material per night. The water will be allowed to drain to sewer and the resulting drained silt will be removed to an appropriately licenced facility.

2.3 Waste types

2.3.1 The Site will accept a single waste code only - waste from street sweeping and gully emptying, see Table 1.

Table 1 Waste types

20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**

20 03	Other municipal wastes
20 03 03	Street cleaning residues including residues from gully emptying

3. Sensitive Receptors

3.1.1 Sensitive Receptors within 500m of the Site boundary have been identified and tabulated in Table 2 below.

Table 2 Sensitive receptors within 500m of the Site

No.	Name	Type	Direction	Dist. (m)
1	National Highways depot	Industrial	N	15
2	Ramada Hotel	Residential (transient)	SW	15
3	Newport Pagnall Services	Commercial	SE	30
4	M1	Highway	E	70
5	River Great Ouse LWS	Protected habitat	E, N, W,	75
6	Residences off Rowditch Furlong Rd	Residential	NW	100
7	Residences off R. Furlong Rd	Residential	S	105
8	Residences N. of Little Linford Ln	Residential	NW	160
9	Redhouse Park	Recreation	S	220
10	Migratory route (E. Eel, R. Lamprey)	Protected habitat	NW	375

3.2 List of Environmental Receptors

3.2.1 A Nature and Heritage Screen was run by the Environment Agency during basic pre-application advice. The screen returned the following habitats within up to 500m of the Site (Table 3).

Table 3 Protected features/ species within 500m

Screening distance	Protected feature/ species	Protected feature / species
200m	Local Wildlife Site	River Great Ouse
500m	Protected Species (River Great Ouse)	Code 2 European Eel migratory route River Lamprey migratory route

3.2.2 In the same Nature and Heritage Screen, the Environment Agency confirmed that there were none of the following protected sites within the relevant screening distance of the Site:

- Special Areas of Conservation (cSAC or SAC)
- Special Protection Area (pSPA or SPA)
- Marine Conservation Zone (MCZ)

- Ramsar
- Sites of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)
- Local Nature Reserve (LNR)
- Local Wildlife Sites (LWS)
- Ancient Woodland
- relevant species and habitats.

4. Risk Magnitude Estimations

4.1.1 This ERA has adopted a risk assessment approach to each potential hazard by combining the probability and magnitude of the potential risk to give an estimation of the risk prior to any mitigation measures. The risk management measures, which are designed to reduce the likelihood of occurrence, are then detailed followed by an estimation of the actual risk post-mitigation (residual risk rating).

4.1.2 The DEFRA guide to risk assessment indicates the approach of subjectively classifying the magnitude of potential consequences into four categories depending upon the degree of the impact that the potential risk could have and the context in which the risk is being assessed. The classification is used as a guide in this ERA.

4.1.3 The four categories are as follows:

- **Severe**: Possible irreparable damage to environmental resources;
- **Moderate**: Possible damage to environmental resources which are limited within a regional context;
- **Mild**: Possible effects might be transient damage to environmental resources which are commonplace on a regional basis and alternative sources are readily available;
- **Negligible**: The effects are negligible or might cause very slight temporary deterioration in the current environmental resource quality.

4.1.4 The matrix shown in Table 4 below considers the probability of the potential risk against the magnitude of the potential impact, thereby giving an estimation of the resulting likelihood of the risk occurring.

Table 4Risk estimation matrix

Probability of potential risk	Magnitude of potential impact			
	Severe	Moderate	Mild	Negligible
High	High	High	Medium/Low	Very Low
Medium	High	Medium	Low	Very Low
Low	Medium	Medium	Low	Very Low
Negligible	Medium	Medium/Low	Low	Very Low

4.1.5 The qualitative ERA has been based on the matrix outlined above.

4.1.6 The final stage of this ERA is the judgement of the severity of the residual risk rating following implementation of the mitigation measures.

Table 5Hazard identification and risk assessment

Hazard	Receptor	Pathway	Magnitude of risk	Risk Management	Probability of potential impact	Residual risk (following mitigation)
Releases of particulate matter (dusts)	Local human population	Air transport then inhalation	Medium	• Permitted waste types are inert and non-hazardous and do not comprise wholly or mainly of dusts, powders or loose fibres. • The site is not located within an Air Quality Management Area. • Wastes accepted to site are predominately wet/ saturated, reducing the opportunity for smaller fractions to become airborne. • Waste is stored within a dedicated concrete storage bay reducing the opportunity for dust becoming airborne and being transported off Site. • The Site will be regularly swept and cleaned to prevent tracking of mud on paved surfaces. • Vehicles and plant will be washed if necessary, within the storage bay area. • Nearby receptors are industrial / commercial occupants of the Newport Pagnall motorway services and are considered to have a low sensitivity to dust.	Low	Low
Odour	Local human population	Air transport then inhalation	Low / Medium	• Permitted waste types are inert and non-hazardous and are typically odour free. • Bring wet, there is some risk that organic material can decompose and produce malodour. • Malodourous waste will not be accepted to the Site. • Any waste on site which develops malodour will be removed from Site.	Low	Low
Litter	Nuisance, loss of amenity and harm to animal health	Air transport then	Low / Medium	• Permitted waste types are inert and non-hazardous and do not include litter. Due to the nature of	Low	Low

Hazard	Receptor	Pathway	Magnitude of risk	Risk Management	Probability of potential impact	Residual risk (following mitigation)
		deposition		motorway drain clearing, some incidental litter is possible. Any incidental litter will be handpicked from the solid material within the storage bay and disposed of. • Nearby receptors are considered to pose a source of litter (Motorway services) and pose a low sensitivity to litter. • Litter will not be permitted to leave the site boundary.		
Waste and mud on local roads	Nuisance, loss of amenity, road traffic accidents.	Vehicles entering and leaving site.	Medium	• Permitted waste types are inert and non-hazardous and do not comprise wholly or mainly of dusts, powders or loose fibres. • Wastes are brought to site in enclosed vehicles (streetsweeper and tankers) • Regular cleaning will be undertaken on vehicles, plant, site surfaces and the storage bay as necessary to prevent the tracking of mud which could be resuspended as dust. • The Site is located next to the M1 motorway which is considered to be a source of dust and particulates. Adjacent receptors will consequently have a low sensitivity to dust.	Low	Low
Noise and vibration	Nuisance and loss of amenity.	Noise through the air and vibration through the ground.	Low	• Equipment on site is maintained and serviced in accordance with manufacturers recommendations. • Vehicle and plant movements on Site will be minimal (<10 movements per day). • The Site is situated in the busy and noisy environs of the M1 Newport Pagnall motorway services, providing a high background noise level.	Low	Low
Scavenging animals and	Harm to human health - from waste carried off site	Air transport and over land	Low	• Permitted waste types are inert and non-hazardous and have a low potential to encourage scavenging	Negligible	Very Low

Hazard	Receptor	Pathway	Magnitude of risk	Risk Management	Probability of potential impact	Residual risk (following mitigation)
scavenging birds	and faeces. Nuisance and loss of amenity.			animals and scavenging birds.		
Pests (e.g. flies)	Harm to human health, nuisance, loss of amenity	Air transport and over land	Low	• Permitted waste types are inert and non-hazardous and have a low potential to encourage flies. • In the unlikely event of pest issues, the site will review their waste acceptance and storage policies to mitigate this.	Very low	Very Low
Flooding	If waste is washed off site it may impact buildings / gardens / natural habitats downstream with suspended solids. Volumes of waste are relatively small.	Flood water	Medium	• The Site is located in a Flood Zone 1 (low risk). • The washplant is situated on impermeable surfacing with a sealed drainage system and is a closed loop system designed with sufficient storm water capacity. • The nearby River Great Ouse is located within a Flood Zone 2 and 3, which poses a risk of flooding. The extents of that flooding do not extend to the developed areas between the site and the River Great Ouse.	Negligible	Low
Vandalism	Local human population and local environment.	Air transport and over land	Low	• The site is accessed only via a lockable gate and is secure. • The site has CCTV monitoring. • Gates are locked at all times and access is via an attended gate. • Gates and fencing are inspected daily by site operatives to identify deterioration, damage and the need for repair. • Fencing and gates are maintained and repaired to ensure their continued integrity. If damage is sustained, repair will be made within the same working day. If this is not possible, suitable	Negligible	Low

Hazard	Receptor	Pathway	Magnitude of risk	Risk Management	Probability of potential impact	Residual risk (following mitigation)
				measures will be taken to prevent unauthorised access to the site and permanent repairs will be affected as soon as is practicable. • All visitors to the site are required to sign in and sign out again on exit, thereby minimising the risk of unauthorised visitors on the site.		
Fire; Plant malfunction. Ignition of products which may support combustion.	Local human population and local environment.	Air transport, over land and fire fighting water.	Medium	• All equipment is subject to a planned preventative maintenance schedule. • There are no flammable liquids or process stored within the waste treatment area. • Wastes stored and treated on site are not combustible. • In the unlikely event of a fire, the following actions will be taken: – The fire brigade will be notified. The site will be immediately evacuated. • Records of any fire incidences will be kept on site together with a summary of remedial action taken. • The Environment Agency will be advised of all incidents of fire as soon as is practicable.	Negligible	Very low
Failure of equipment blockage of drain receiving gully	Local human population and local environment.	Over land to nearby land or surface water	Medium	• Staff will be trained in unloading the waste from the tanker to prevent spillage or limit potential for escape, in the event of a blockage. • Regular cleaning and maintenance will be undertaken to prevent blockages to the drainage system. • In the event of a blockage and water is not draining, unloading will stop. If necessary, the load will be reloaded using the gully sucking equipment on the vehicle.	Low	Low
Spillage of liquids, contaminated	All surface waters close to and downstream of site.	Direct run-off from site across ground	Medium	• Permitted waste types are inert and non-hazardous and discharge from site is via consented discharge	Low	Low

Hazard	Receptor	Pathway	Magnitude of risk	Risk Management	Probability of potential impact	Residual risk (following mitigation)
rainwater run-off from waste e.g. containing suspended solids.		surface, via surface water drains, ditches etc.		to foul sewer. • The Site is situated on concrete surfacing with sealed drainage.		

Drawing

Site Layout Plan 316660 DW02