



Permit Application Section 4 - ERA High Pole Farm

Document Reference: 313/1--R1.1 - ERA



Minerals
Waste
Environment

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SECTION 4: Environmental Risk Assessment

4.1 Overview

4.1.1 As stated, this Bespoke Permit application intends to mirror Standard Rules SR2015 No.39. Therefore, the following risk assessment is based on the Generic Risk Assessment carried out by the EA for such a standard rules permit. Site specific references have been added to the Generic Risk Assessment.

4.1.2 As the only difference between this application and one for the standard rules is the proximity to a surface water course and private water supplies, a separate Hydrogeological Risk Assessment has been carried out, in conjunction with the Conceptual Site Model. The Hydrogeological Risk Assessment forms Section 3 of this application and reference to it is included in this Environmental Risk Assessment.

Environmental risk assessment based on standard rules set number SR2015 No.39 Version 1

Standard Facility:

Waste Recovery Operation: Use of waste in a deposit for recovery operation involving construction and/or reclamation, restoration or improvement of land

Location:

High Pole Farm

Risk assessment carried out by:

Environment Agency / MPG

Date:

15th March 2021

The scope of the permit and associated rules is defined by the following risk criteria:

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 No waste may be deposited into a water body or sub-water table

Parameter 8 The activities shall not be carried out on historic, closed or operational landfills

Parameter 9 Activities must not be carried out in an air quality management area for PM10

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).

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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.	Releases of particulate matter (dust) .	Harm to human health - respiratory irritation and illness.	Air transport then inhalation.	Medium	Medium	Medium	Permitted waste types are inert and have a low potential to produce bioaerosols. The activities may produce dust from movement of vehicles and tipping operations especially in dry and also windy weather.	Activities are not permitted within a specified air quality management area (AQMA) for particulate matter of 10 microns or less (PM10). Activities shall be managed and operated in accordance with a management system that includes measures to 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. Limited duration of works	Low
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 inert. The activities may produce dust from movement of vehicles and tipping operations especially in dry and also windy weather.	Activities shall be managed and operated in accordance with a management system that includes measures to 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. Limited duration of works.	Low
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.	There are rules in place to control waste acceptance. The management system should have procedures to remove and contain any litter to prevent it being deposited at the site or to leave the site boundaries. Rules can be invoked to require a litter management plan. Limited duration of works.	Very low
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.	The management system should contain procedures to minimise the risk of mud and waste being tracked out onto the highway. This may include wheel-cleaning facilities where appropriate. All vehicles should have adequate containment such as sheeting to prevent waste spillage. Works to be carried out during dry weather.	Low

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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).
Local human population .	Odour .	Nuisance, loss of amenity.	Air transport.	Very low	Very low	Very low	Permitted waste types are 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. Limited duration of works.	Very Low
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.	Haulage business already operated from adjacent premises. Noise and vibration shall be minimised and not cause nuisance. A noise and vibration management plan may be required. Limited duration of works.	Low
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. Limited duration of works.	Very low
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 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. Limited duration of works.	Low

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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).
Local human population and local environment.	Flooding of site.	If waste contaminated water is washed off site it may contaminate buildings, gardens, watercourses and natural habitats.	Flood waters .	Low	Medium	Medium	Permitted waste types are inert so any waste washed off site will add to the volume of local post-flood clean up workload rather than the hazard. However they may cause increased siltation and need for dredging in water courses. Increased suspended solids.	See Section 3 (Hydrological Risk Assessment). Works to be carried out in summer months. The works are specifically to reduce flooding of The Site. Very low probability of flooding as works would only be carried out during dry weather and would progressively reduce flood risk.	Low
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 or void spaces that people could fall into and wastes have a higher risk in wet conditions where deep mud could form.	The written management system should identify and minimise risks from unauthorised access and site security measures identified to prevent such access. Limited duration of working. Works to be carried out during dry weather.	Low
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 would typically be low.	The written management system should identify and minimise risks from unauthorised access and site security measures identified to prevent such access. The system should also describe how any polluting liquids or materials will be stored safely.	Very Low
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 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 would typically be low.	The written management system should identify and minimise risks. The system should describe how any polluting liquids or materials will be stored safely.	Very low

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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).
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 ceratina areas.	Low	High	Medium	Old waste deposits may be disturbed by additional waste deposits. Trapping of gas, increased pressure may cause gas to build up. However distance criteria mean that the probability of exposure is low.	Site has no previous waste (or other) development.	Low
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.	See Section 3 (Hydrogeological Risk Assessment).	Low
All surface waters close to and downstream of site.	Leachate from waste and contaminated rainwater run-off from waste e.g. suspended solids.	If waste contaminated water is washed off site it may contaminate watercourses and natural habitats leading to chronic effects: and deterioration of water quality.	Surface waters, leachate from infiltration through the waste	Medium	Medium	Medium	Permitted waste types are inert so any waste washed off site will not be chemically hazardous however they may cause increased siltation and need for dredging in water courses. It will also reduce water quality and may smother fish breeding grounds and invertebrate populations. The waste will not produce liquid in itself but rainwater percolating through the waste will produce a waste leachate which should still be very low in contamination.	See Section 3 (Hydrological Risk Assessment).	Low

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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 types are inert with limited uses of road planings and organic wastes so any waste should not contain hazardous substances or non-hazardous pollutants in quantities that pose a risk to groundwater.	Site not within groundwater Source Protection Zones 1 or 2. Strict Waste Acceptance procedures, and procedures for dealing with rogue loads contained in management system. Limited volume of waste. Located private water supplies unlikely to be downstream of groundwater flow, based on topography. See Section 3 (Hydrogeological Risk Assessment)	Low
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 causing disturbance through noise. Potential for run-off and siltation of habitats etc.	Site not within proximity determined in Standard Rules of any protected sites.	Low

Notes: Red triangle indicates comment containing supporting information

Yellow columns contain drop down menus that allow automatic evaluation of risk in green column

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	Very low	Low	Medium	High
High	4	8	12	16
Medium	3	6	9	12
Low	2	4	6	8
Very low	1	2	3	4

Very low
Low
Medium
High

	Very low	Low	Medium	High
Very low	1	2	3	4
Low	2	4	6	8
Medium	3	6	9	12
High	4	8	12	16

4.2 Summary

4.2.1 All reasonable, potential, risks arising from the proposed operations at The Site have been assessed and all are considered to pose a low or very low risk to the environment.

4.2.2 The overall environmental risk from the proposed development, as assessed in this document is, therefore, considered to be low.