Generic risk assessment for bespoke recovery permit

Standard Facility: Waste Recovery Operation: Use of 220,000 tonnes of waste in a deposit for recovery operation involving restoration of land

Location: Newthorpe Quarry

Risk assessment carried out by: Environment Agency / MPG Ltd.

Date: 20-Mar-23

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**	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 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.	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.	Low
Local human population and the environment.	Climate Change	Potential for increased likelihood of dust generation.	Air transport then inhalation / deposition.	Low	Medium	**Medium**	Summer daily maximum temperature may be around 6°C higher compared to average summer temperatures now. Drier summers, potentially up to 34% less rain than now.	As above. Negligible effect, no need for additional mitigation as current practices account for a dynamic approach to dust emissions (e.g., frequency of use of mitigation measures may increase).	Very low
Local human population.	Litter.	Nuisance, loss of amenity and harm to animal health.	Air transport then deposition.	Low	Low	**Very low**	Waste types unlikely to contain significant amounts of litter, WAP dictate that loads containing litter would not be accepted.	Strict WAP. The management system will have procedures to remove and contain any litter to prevent it being deposited at the site or to leave the site boundaries. If litter discovered in a load post-tipping, picking of non-conforming materials would be carried out. Site daily checks include a daily site boundary walk-around and litter collection, where necessary.	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 and site conditions may produce mud especially during wet weather.	The management system contains procedures to minimise the risk of mud and waste being tracked out onto the highway. Hardcore access track is south of the site from the B1222 immediately off the A1 and is approximately 850m long.	Low

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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.	Strict WAP.	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.	Noise and vibration will not increase above existing levels from approved quarrying and recycling operations, which are considered acceptable. Site is predominately surrounded by agricultural land. Nearest residential property is approximately 300m north (separated by woodland and a railway line) and 300m northeast (separated by fields, a	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 inert wastes that are not normally attractive to animals and birds.	Risk limited by permitted waste types and strict waste acceptance procedures.	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 strict waste acceptance procedures.	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 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 suspended solids in local watercourse.	Activities are not within 10 metres of a watercourse or to be deposited sub-water table. Nearest surface water course is Newthope Beck approximately 200m north of extension boundary. The site would be restored with placement of soils with a profile designed to promote efficient surface runoff to a peripheral drainage system.	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.	The quarry is secured with perimeter fencing (post and wire waiste height) with large security gates (1.8 metres) at the entrance, and 24hr CCTV.	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.	As above.	Very Low
Local human population and local environment.	Accidental fire causing realease 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.	Fuel is only stored within the haulage yard and the fuel is stored in a double bunded tanks. A spill kit is available on site at all time.	Very low

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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 stafff and local	Gas migrating laterally through waste deposit and building up in ceratina areas.	Low	High	**Medium**	No old gas generating waste deposits on-site.	Site has no previous waste 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**	Waste types are solid. Potential for spillage from any fuel and oil storage for machinery or directly from machinery operating on the site.	Fuel is only stored within the haulage yard and the fuel is stored in double bunded tanks. A spill kit is available on site at all time.	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 could cause increased suspended solids in local watercourses. 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	Activity is not within 10m of a watercourse. Nearest surface water course is Newthope Beck approximately 200m north of extension boundary. Pathway to surface water is through groundwater, groundwater pathway 'blocked' by clay liner. See Hydrological Risk Assessment.	Low
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. One private water supply within the site boundary whcih was used by the operators for dust suppression. Selby DC confirmed no unlicensed private water supplies within 2km radius of the site as part of HRA. Clay liner would be installed to 'block'	Low
Local human poppulation and local environment. Site staff (flash floods).	Climate Change	Increased run-off from stored wastes, flash floods. Site drainage system is overwhelmed.	Flood waters.	Low	Medium	**Medium**	The biggest rainfall events are up to 20% more intense than current extremes (peak rainfall intensity). At its peak, the flow in watercourses could be 30% more than now, and at its lowest it could be 65% less than now.	Drainage system has capacity sufficient for changes due to climate change, emergency measures to suspend operations.	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. The nearest SSSI is Micklefield Quarry approximately 1km northwest.	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
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