

Generic risk assessment for draft 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:

Pasture House Quarry, Southowram.

Risk assessment carried out by:

Silkstone Environmental Ltd

Date:

24-Sep-21

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 & workforce on site.	Releases of particulate matter (dust) from site operations (trafficking of plant and vehicles during infilling, including those coming from external, off site sources).	Harm to human health - respiratory irritation and illness.	Air transport then inhalation.	Low	Low	Low	The site is not located within a specified Air Quality Management Area (AQMA). 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. The nearest dwelling is at 30m distance at Pasture House Farm. The next nearest residential property is 70m at Holly Royd House. The main residential area of Southowram is approximately 250m to the west.	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. Examples include no overloading of vehicles, site speed limits observed throughout. Waste discharge heights are kept to a minimum at all times. During periods of high wind, waste loads are dampened down prior to transportation	Low
Local human population.	Litter.	Nuisance, loss of amenity and harm to animal health.	Air transport then deposition.	Very Low	Low	Low	The potential for litter being generated coming from the waste to be deposited which consists of concrete sludge from the stone processing factory is very low.	There are rules in place to control waste acceptance. 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.	Very low

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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.	Low	Medium	Medium	Some of the waste types may have the potential to 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. In addition, HGV's track across approx 250m of hardstanding on the site access and then a rumblegrid prior to joining the highway. Mud and dirt will be cleaned through the use of an onsite road sweeper. All vehicles will have adequate containment such as sheeting to prevent waste spillage.	Low
Local human population.	Vehicle movements to / from site causing noise, vibration and air pollution.	Nuisance, loss of amenity, road congestion.	Air transport, ground vibration, visual.	Low	Low	Low	The inert waste tipping operations will be indiscernible from the existing quarrying operations. HGV's exporting stone to the factory will be backloaded with waste when possible so will not have an increased impact on the local human population.	There will be no increase in traffic volumes associated with the importation of factory waste for restoration. Written Management System protocols to be followed to minimise noise and dust from site operations.	Low
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 contains procedures to prevent non-permitted wastes being deposited at site and to deal with rogue loads if they do occur.	Very Low
Local human population.	Operation of plant and machinery during infilling operations causing noise and vibration.	Nuisance, loss of amenity, loss of sleep. Disruption of wildlife habitats.	Noise through the air and vibration through the ground.	Low	Low	Low	Local residents often sensitive to noise and vibration but there is low potential for exposure and waste tipping operations will be indiscernible from existing quarrying operations.	Noise and vibration shall be minimised and not cause nuisance as outlined in the Written Management System document. Increase in noise level at receptor from the site is considered indiscernible from normal quarrying operations. There will be no increase noise at receptor for the same reasons and the barrier attenuation of quarry faces.	Low

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Local human population.	Scavenging animals and scavenging birds.	Harm to human health from waste carried off site and animal faeces. Nuisance and loss of amenity.	Air transport and over land.	Very low	Very low	Very low	Wastes types 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
Local human population and local environment.	Pests (e.g.) flies.	Harm to human health. Nuisance, loss of amenity.	Air transport and over land.	Very Low	Very low	Very low	Wastes types 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.	Very 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.	Very low	Very low	Very low	The land immediately surrounding the recovery operation has been graded so that it slopes away from the quarry void. Rainfall that enters the quarry void will pool in the base of the quarry. Once restored, surface water to seep in to waste mass or run off down slope and drain freely through the adjacent land to the south. Inert waste only will be deposited, therefore low potential for contamination in soils which may otherwise leach into floodwater.	The written management system identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances.	Very 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 there is only a very low risk from the actual waste. The site is not located in a populated area. However there could be stockpiles that people could climb or void spaces that people could fall into and quarry high walls to climb / fall off from and wastes have a higher risk in wet conditions where deep mud could form.	The written management system identifies how to minimise risks from unauthorised access and specify site security measures to prevent such access.	Low

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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.	Low	Medium	Medium	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. Site is secured with lockable gates to prevent unauthorised access during out of hour times.	The written management system identifies and minimises risks from unauthorised access and site security measures identified to prevent such access. The system also describes how any polluting liquids or materials will be stored safely.	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.	Low	Medium	Medium	Permitted waste types are at a very low-risk of combustion. Site machinery and fuels and oils are more of a risk but quantities would typically be low, with storage of oils/fuels and refuelling done off site.	The written management system identifies and minimises risks and describes how any polluting liquids or materials will be stored safely. In the event of a fire all personnel follow the Marshalls health and safety guidance note is the submitted company EMS.	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	Low	Low	Potential for very small spillages from machinery operating on the site. The nearest watercourse is Red Beck approx 450m east and therefore any such spillages are likely to be highly diffuse and unlikely to be detectable upon reaching receptors.	The written management system identifies how risks will be minimised. All fuels/oils shall continue to be provided with secondary containment (bunding of diesel and waste oil tanks. Drip trays to be placed under stationary plant. Spill kits to be provided at clearly identifiable locations. Oil and fuel drums not stored on or in vehicles operating in the quarry void. Plant not stored on site when not operational and maintained and refuelled off site.	Low

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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	Low	Low	Low	Permitted waste types are inert so any waste washed off site will not be chemically hazardous. If needed, off site imported soils and stones (17 05 04) would exclude those derived from contaminated land. These will be used for final landscaping(if required) and thus will have the greatest impact on surface runoff once the site is closed. The closest water body to the site is Red Beck approx 450m to the east.	Risk limited by permitted inert waste and non-hazardous waste codes and good onsite management practices for controlling and containing water and leachate generated on site. In addition, implementation of management system of non-conforming wastes e.g. waste acceptance procedures (WAP). Extremely low probability of exposure, as waste stream consists only of inert fill and concrete sludge from the block factory at the adjacent Brookfoot Works. Surface soils derived from sites which are not contaminated and have associated WAC and chemical data to support their clean status. Onsite borehole monitoring at perimeters to continue. Ground water monitoring data to be submitted to the EA on a six monthly basis to provide assurance that any impact on groundwater from the site can be detected.	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.	Low	Medium	Medium	The site is not located on a groundwater Source Protection Zone 1 or 2. The material will not be deposited in any controlled or surface waters or sub-water table. Permitted waste types are non-hazardous or inert so any waste should not contain hazardous substances or non-hazardous pollutants in quantities that pose a risk to groundwater. Off site imported soils and stones (17 05 04) exclude those derived from contaminated land. Mixing of mudstone and concrete sludge likely to create low permeability barrier to mitigate any low level leachate which may be generated.	The management system sets out any additional stringent waste acceptance procedures (WAP) to ensure only waste listed in the Rules are deposited on site and how any rogue or non-conforming loads will be dealt with. Extremely low probability of exposure, as waste stream consists only of inert quarry backfill and concrete sludge from the block factory on site. Ground water monitoring data to be submitted to the EA on a six monthly basis to provide assurance that any impact on groundwater from the site can be detected.	Low
Local habitats (including any protected nature conservation sites - European sites and SSSIs).	Dust, noise, contaminated run-off leachate etc.	Harm to protected sites through contamination, smothering, disturbance etc.	Air transport as dust, migration via ground and surface water and direct contact.	Low	Low	Low	There are no ecological designations in proximity to the site that would be affected by the operations.	All operations are to be confined within the quarry void and therefore no loss of habitat is anticipated. Importation of soil and sub soils material under waste code 17 05 04 (excluding soils from contaminated sites) to provide growing medium for planned amenity grassland which will ultimately improve the site's ecological value.	Low

Notes: Red triangle indicates comment containing supporting information
Yellow columns contain drop down menus that allow automatic evaluation of risk in green column

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

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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