

# Risk assessment for bespoke treatment of waste to produce soil, soil substitutes and aggregates

<b>Standard Facility:</b>	Waste Operation: Treatment of waste to produce soil, soil substitutes and aggregate
<b>Location:</b>	Ripon Street Depot
<b>Location of environmentally sensitive sites (km / m):</b>	200m
<b>Risk assessment carried out by:</b>	Becka Bessant - Environmental Monitoring Solutions
<b>Date:</b>	25-Feb-21

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

- Parameter 1 Permitted activities - The storage of waste (R13) and treatment to produce soil, soil substitutes roadstone and aggregate(R3,R5).
- Parameter 2 Permitted waste types - Non Hazardous as listed in rules other than waste consisting solely or mainly of dusts, powders or loose fibres or waste in liquid form
- Parameter 3 Quantity of waste accepted at the facility: 100,000 tonnes per annum.
- Parameter 4 The only point source discharges to controlled waters or groundwater, are surface water from the roofs of buildings and from areas of the facility not used for the storage or treatment of wastes.
- Parameter 5 All activities must be 10 metres from any watercourse and be 50 metres from any spring or well, or of any borehole not used to supply water for domestic or food production purposes or 50m from

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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	Releases of particulate matter (dusts)	Harm to human health - respiratory irritation and illness.	Air transport then inhalation.	High	Medium	Medium	Permitted waste types are inert and non hazardous and do not include dusts, powders or loose fibres and have a low potential to produce bioaerosols, but the treatment activities will produce particulate matter so a high magnitude risk is estimated. The permitted level of throughput and potential size of the facility means there is potential for exposure if anyone is living or working close to the site (not including the operator and employees). There is potential for increased dust generation from permitted activities during prolonged dry periods e.g. during summer months.	Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions. (if required) - emissions management plan. - Regular site inspections will take place - Good house keeping on site i.e roads swept on a regular basis, stockpile management - Dust suppression will take place where required - Activities will cease if deemed to be causing an issue	Low
Local human population	Releases of particulate matter (dusts)	Nuisance - dust on cars, clothing etc.	Air transport then deposition	High	Low	Medium	As above. Local residents often sensitive to dust.	Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions. (if required) - emissions management plan. - Regular site inspections will take place - Good house keeping on site i.e roads swept on a regular basis, stockpile management - Dust suppression will take place where required - Activities will cease if deemed to be causing an issue	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, livestock and wildlife.	Litter	Nuisance, loss of amenity and harm to animal health	Air transport then deposition	Low	Low	Low	Local residents often sensitive to litter, however permitted waste types have low litter potential.	As above. Appropriate measures could include clearing litter arising from the activities from affected areas outside the site.	Very low
Local human population	Waste, litter and mud on local roads	Nuisance, loss of amenity, road traffic accidents.	Vehicles entering and leaving site.	Medium	Medium	Medium	Road safety, local residents often sensitive to mud on roads.	As above. Appropriate measures could include clearing waste, litter and mud arising from the activities from affected areas outside the site.	Low
Local human population	Odour	Nuisance, loss of amenity	Air transport then inhalation.	Low	Low	Low	Local residents often sensitive to odour, however permitted waste types have low odour potential.	Emissions shall be free from odour. The nature of waste does not give rise to odours. This will be checked during the waste acceptance as outlined in the EMS manual.	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	Emissions shall be free from noise and vibration. There is minimal plant working on site. The plant working on site shall be well maintained. If a noise survey is required by the regulators, this will be carried out in accordance with BS4142 and issued within a month of the request.	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	Medium	Low	Permitted wastes unlikely to attract scavenging animals and birds but may become nesting / breeding sites.	The daily site inspection will identify if pests or nesting birds are present on site. If they are, the control measures in the EMS Manual will be implemented.	Very low
Local human population	Pests (e.g. flies)	Harm to human health, nuisance, loss of amenity	Air transport and over land	Low	Medium	Low	Permitted waste types unlikely to attract pests.	The daily site inspection will identify if pests or nesting birds are present on site. If they are, the control measures in the EMS Manual will be implemented.	Very low

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Local human population and local environment	Flooding of site	If waste is washed off site it may contaminate buildings / gardens / natural habitats downstream.	Flood waters	Low	Low	Low	Permitted waste types are inert and non hazardous so any waste washed off site will add to the volume of the local post-flood clean up workload, rather than the hazard.	Activities will be managed and operated in accordance with the written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances (will include flood risk management).	Very low
Local human population and / or livestock after gaining unauthorised access to the waste operation	All on-site hazards: wastes; machinery and vehicles.	Bodily injury	Direct physical contact	Medium	Low	Low	Secure boundary fence to perimeter of site. Permitted waste types are inert therefore only a low magnitude risk in event of unauthorised entry to site.	Activities shall be managed and operated in accordance with a written management system. Management system to include site security measures to prevent unauthorised access.	Low
Local human population and local environment.	Arson and / or vandalism causing the 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 or arsonists/vandals. Pollution of water or land.	Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches.	Medium	Low	Low	Secure boundary fence to perimeter of site. Permitted waste types are inert therefore only a low magnitude risk in event of unauthorised entry to site.	Activities shall be managed and operated in accordance with a written management system. Management system to identify and minimise risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances (including fire and spillages).	Low
Local human population and local environment	Accidental fire causing the release of polluting materials to air (smoke or fumes), water or land.	Respiratory irritation, illness and nuisance to local population. Injury to staff or fire fighters. Pollution of water or land.	As above.	Medium	Low	Low	As above.	Activities shall be managed and operated in accordance with a written management system. Management system to identify and minimise risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances (including fire and spillages). Permitted activities do not include the burning of waste.	Low

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All surface waters close to and downstream of site.	Spillage of liquids, leachate from waste, contaminated rainwater run-off from waste e.g. containing suspended solids.	Acute effects: oxygen depletion, fish kill and algal blooms	Direct run-off from site across ground surface, via surface water drains, ditches etc.	Low	Low	Low	Permitted waste types do not include sludges or liquids so only a medium magnitude risk is estimated. No point source emissions to water are permitted, but there is potential for contaminated rainwater run-off from wastes stored outside buildings especially during heavy rain.	All liquids shall be provided with secondary containment. Activities shall be managed and operated in accordance with a written management system. Management system to identify and minimise risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances (including fire and spillages).	Very low
All surface waters close to and downstream of site.	Spillage of liquids, leachate from waste, contaminated rainwater run-off from waste e.g. containing suspended solids.	Chronic effects: deterioration of water quality	Direct run-off from site across ground surface, via surface water drains, ditches etc. Indirect run-off via the soil layer	Low	Low	Low	It is unlikely that water from site will reach surface waters as there is no surface water close to site. Waste types are non-hazardous and inert so harm is likely to be temporary and reversible.	All liquids shall be provided with secondary containment. Activities shall be managed and operated in accordance with a written management system. Management system to identify and minimise risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances (including fire and spillages).	Very low

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Groundwater	Spillage of liquids, leachate from waste, contaminated rainwater run-off from waste e.g. containing suspended solids.	Chronic effects: contamination of groundwater, requiring treatment of water or closure of borehole.	Transport through soil/groundwater then extraction at borehole.	Low	Low	Low	Permitted wastes unlikely to contaminate groundwater.	All liquids shall be provided with secondary containment. Activities shall be managed and operated in accordance with a written management system. Management system to identify and minimise risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances (including fire and spillages).	Very low
Protected sites - European sites and SSSIs	All	Harm to protected site through toxic contamination, nutrient enrichment, smothering, disturbance, predation etc.	Any	Medium	Medium	Medium	Waste operations may cause harm to and deterioration of nature conservation sites.	Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved dust and emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions. At 500 metres or above, the potential hazards from the permitted activities pose a low risk to the broad sensitivity of species and habitats groups. The standard permit only applies at this distance or more. It is also a requirement of SR. Also activities should not be within 250 metres with the presence of great crested newts, where it is linked to the breeding ponds of the newts by good habitat;. or 50 metres of a site that has relevant species or habitats protected under the Biodiversity Action Plan that the Environment Agency considers at risk to this activity or 50 metres of a National Nature Reserve (NNR), Local Nature Reserves(LNR), Local Wildlife Site (LWS), Ancient woodland or Scheduled Ancient Monument.	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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