Henbury Bespoke Permit Environmental Risk Assessment

Facility: Henbury Pit

Location: Henbury Pit

Location of environmentally sensitive sites (km / m): Greater than 500m

Risk assessment carried out by: Leo Plant

Date: 20-Feb-24

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 (dusts) and micro-organisms (bioaerosols).	Harm to human health - respiratory irritation and illness.	Air transport then inhalation.	High	Medium	**High**	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 (apart from the operator and employees). There is potential for increased dust generation from permitted activities during prolonged dry periods e.g. summer months.	Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operation is suitably sited away from sensitive receptors. Noise will be limited by use of modern well maintained plant and equipment. Dust will be controlled by use of suppression in periods of dry weather.	Low
Local human population	As above	Nuisance - dust on cars, clothing etc.	Air transport then deposition	High	Low	**Medium**	As above. Local residents often sensitive to dust.	As above	Low
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. Litter is low risk for the operation however, any litter airising from activities will be cleared from any effected area outside the site.	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 including surrounding woodland	Binder/drying material Dusts e.g Cement/Lime/Drying Materials (Mixing Plant Mixing)	Harm to human health - respiratory irritation and illness. Loss of amenity	Air transport then inhalation.	Low	High	**High**	Binders are dusty in nature and are harmful to health.	Binders are contained in purpose built silos with filtration units. Deliveries are made using pumped piped discharge into the silo's. Mixing takes place in purpose built mixers with regulated discharge and contained mixing chambers.Water is added to the mix to further suppress any possibility of dust emissions. Regular maintenace is conducted to ensure efficient operation. Management plan in place for process control and emissions checks	Very Low
Local human population and local environment including surrounding woodland	Processing of Waste Dusts (Crushing/Sceening)	Harm to human health - respiratory irritation and illness. Loss of amenity	Air transport then inhalation.	High	Medium	**High**	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 (apart from the operator and employees). There is potential for increased dust generation from permitted activities during prolonged dry periods e.g. summer months.	Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operation is suitably sited away from sensitive receptors. Noise will be limited by use of modern well maintained plant and equipment. Dust will be controlled by use of suppression in periods of dry weather. Management plan in place for process control and emissions checks	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	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.	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.	Very low	Very low	**Very Low**	Local residents often sensitive to odour, however permitted waste types have low odour potential.	N/A	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	As above. Noise and vibration will be limited by use of modern well maintained plant and equipment.	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	**Low**	Permitted wastes unlikely to attract scavenging animals and birds but may become nesting / breeding sites.	N/A	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.	N/A	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.	Environmental Management System in place with the site having a very low risk of flooding.	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**	Permitted waste types are inert therefore only a low magnitude risk is estimated	Measures in place 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**	Permitted waste types do not include any flammable materials so a low magnitude risk is estimated.	Environmental Management System in place with controls for fire risk	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.	As above	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 low 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.. (applies to non- wastes such as fuels). Run-off restricted by bunding with appropriate measures. Wastes from potentially contaminated sites require analysis. Storage & spreading has distance limitations from	Very low
All surface waters close to and downstream of site.	As above	Chronic effects: deterioration of water quality	As above. Indirect run-off via the soil layer	Low	Low	**Low**	Waste types are non-hazardous and inert so harm is likely to be temporary and reversible.	As above	Very low
Abstraction from watercourse downstream of facility (for agricultural or potable use).	As above	Acute effects, closure of abstraction intakes.	Direct run-off from site across ground surface, via surface water drains, ditches etc. then abstraction.	Very low	Low	**Low**	Watercourse must have medium / high flow for abstraction to be permitted, which will dilute contaminated run-off.	As above. Also activities are in excess of 50 metres from any spring or well, or from any borehole not used to supply water for domestic or food production purposes or 50m from any spring or well or any borehole used for the supply of water for human consumption. This must include private water supplies	Very low

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Groundwater	As above	Chronic effects: contamination of groundwater, requiring treatment of water or closure of	Transport through soil/groundwater then extraction at borehole.	Low	Low	**Low**	Permitted wastes unlikely to contaminate groundwater.	As above	Very low
Local human population	Contaminated waters used for recreational purposes	Harm to human health - skin damage or gastro-intestinal illness.	Direct contact or ingestion	Very low	Medium	**Low**	Unlikely to occur, but might restrict recreational use.	Environmental Management System in place with the site having a very low risk of pathways to recreational waters	Very low
Protected sites - European sites and SSSIs	Any	Harm to protected site through toxic contamination, nutrient enrichment, smothering, disturbance, predation etc.	Any	Very low	Medium	**Low**	Waste operations may cause harm to and deterioration of nature conservation sites.	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. Also activities are not 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.	Very low