E.2

Environmental Risk Assessment

Slurry Lagoon, Nansmerrow Farm,
Tresilin, Turo

Version 2

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. Domestic dwellings within 1000m range of the facility as identified in the ESSD p6 and the sites DEMP p7-8	Releases of particulate matter (dust)	Harm to human health - respiratory irritation and illness.	Air transport then inhalation.	Low	Low	Low	The activities may produce dust from movement of vehicles, tipping operations and during the construction process in placing materials. The risk will be elevated in dry and windy weather.	The site activities will be stopped in windy and dry conditions where the potential for particulate to migrate and have an adverse effect on local dwellings. Control measures and monitoring are outlined in the DEMP p14. The ESSD concludes that there will be no adverse effects on local receptors.	Low
Members of the public using Public Rights of Way (Public Footpath) 375m and 990m As identified p6	Releases of particulate matter (dust)	Harm to human health - respiratory irritation and illness.	Air transport then inhalation.	Low	Low	Low	The activities may produce dust from movement of vehicles, tipping operations and during the construction process in placing materials. The risk will be elevated in dry and windy weather.	Local knowledge of the landowner states that the footpaths are little used during working hours through the week and that they are mainly used in evenings and weekends when the facility won't be operating.	Low

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 mainly 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.	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 mainly 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.	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. Any contaminants such as light plastics, wood and litter will be picked and stored in a skip container before disposal at a licenced facility	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 will 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. The facility is situated along a private road owned by the operator who has adequate equipment on site to clean metal roads before reaching the Public Highway.	Low

Local human population .	Odour .	Nuisance, loss of amenity.	Air transport.	Very low	Very low	**Very low**	Permitted waste types are mainly 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.	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 shall be minimised and not cause nuisance. A noise and vibration management plan may be required.	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.	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 mainly inert wastes that are not normally likely to encourage pest infestations.	Risk limited by permitted waste types and good onsite management practices detailed in managment system of non-conforming wastes.	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 mainly 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.	Activities are not permitted within 10 metres of a watercourse or to be deposited sub-water table. The written management system should identify and minimise risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances.	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 will identify and minimise risks from unauthorised access and site security measures identified to prevent such access. Site visitors will be informed of the Site Rules all staff working or using the site will be adequately trained in accordance with the sites EMS.	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 will 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 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 mainly 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 will identify and minimise risks. The system will describe how any polluting liquids or materials will be stored safely. Staff to be adequately trained in the event of.	Very 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.	The Rules do not allow any point source discharges of contaminated water to controlled waters. Distance criteria of 10 metres from watercourse. All liquids shall be provided with secondary containment. The written management system will identify and minimise risks. The system should describe how any polluting liquids or materials will be stored safely and how machinery/plant will be maintained to prevent liquids from leaking. A Spill Kit will stationed on site with a spill procedure. Staff will be trained in the event of. A specialist contractor is readily available in the event of a larger spill.	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 mainly 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.	Risk limited by waste acceptance rules and limits to permitted waste types. Good onsite management practices must be detailed in the management system for controlling and containing water and leachate generated on the site. The Hydrogeological Risk Assessment conclusion on page 20 summarised the potential risk as “very low”.	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 mainly 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.	The management system will set out any additional stringent waste acceptance procedures to ensure only waste listed in the Rules are deposited on site. The procedures will also set out how to deal with rogue or non-conforming loads. Waste Acceptance Procedure included in the Waste Recovery Plan. he Hydrogeological Risk Assessment conclusion on page 20 summarised the potential risk as “very low”.	Low
Protected Habbitat under the Biodiversity Framework within 50m.	Dust, noise, vibration 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.	Written Management System (EMS) to incorporate monitoring and surveillance of the habitat area. Environmental Policy Statement setting out operations commitment to the environment. Staff are trained to identify and monitor any such occurrence.	Low
Protected nature conservation sites - European sites and SSSIs.	Dust, noise contaminated run off of leachate etc.	Harm to protected sites through contamination smothering 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.	Written Management System (EMS) to incorporate monitoring and surveillance of the habitat area. Environmental Policy Statement setting out operations commitment to the environment. Staff Training.	Low