

Activity	Waste Recovery Operation: Use of waste in a deposit for recovery operation involving reclamation, restoration or improvement of land
Location:	Scarcewater Tip, Melbur China Clay Works, St Stephen, Truro, Cornwall, TR2 4EY
Risk assessment carried out by:	Dr Paul Gibbs, PAG Consultancy Ltd
Date:	21st + 22nd November 2019

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

- Parameter 1 Permitted activities - The storage and recovery of waste (R5, R10, R13)
- Parameter 2 Permitted wastes - Inert wastes and specified non-hazardous wastes as listed in the table of wastes
- Parameter 3 Maximum quantity of waste shall be limited to 212,500 tonnes or less

Parameter 4 The activities shall not be carried out within 500m of a European Site (candidate or Special Area of Conservation, proposed or Special Protection Area or Ramsar site) or a Site of Special Scientific Interest (SSSI); 50 metres of a site that has species or habitats protected under the Biodiversity Action Plan that the Environment Agency considers at risk to this activity, 250m of the presence of the great crested newts where it is linked to the breeding ponds of the newts by good habitat or 50 metres of a National Nature Reserve (NNR), Local Nature Reserves(LNR), Local Wildlife Site (LWS), Ancient woodland or Scheduled Ancient Monument.

Parameter 5 The activities must not be carried out within groundwater Source Protection Zones 1 and 2 or if a source protection zone has not been defined then not within 250 metres of any well, spring or borehole used for the supply of water for human consumption. This includes private water supplies.

Parameter 6 No point source discharges to controlled waters or groundwater

Parameter 7 The activities must not be carried out within 10 metres of any watercourse

Parameter 8 No waste may be deposited into a water body or sub-water table

Parameter 9 The activities shall not be carried out on historic, closed or operational landfills

Parameter 10 Activities must not be carried out in an air quality management area for PM10

Data and information				Judgement				Action (by permitting)	
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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).

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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 through prior organic waste treatment. Site waste management activities may produce dust from movement of vehicles, tipping, blending and landspreading operations especially in dry and also windy weather.	Activities shall be managed and operated in accordance with the IML EMS which includes measures to control waste acceptance and prevent/reduce the risk of dust being produced. Where dust is produced management systems exists to prevent it 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 mainly inert and have a low potential to produce bioaerosols through prior organic waste treatment. Site waste management activities may produce dust from movement of vehicles, tipping, blending and landspreading operations especially in dry and also windy weather.	Activities shall be managed and operated in accordance with the IML EMS which that includes measures to control waste acceptance and prevent/reduce the risk of dust being produced. Where dust is produced management systems exists to prevent it from leaving the site boundaries.	Low
Local human population.	Litter.	Nuisance, loss of amenity and harm to animal health.	Air transport then deposition.	Low	Low	Very low	Waste types compliant with the site permit should have a very low risk of litter from contraries in the waste as waste containing litter are not allowed under the permit waste acceptance criteria.	There are procedures in place to control waste acceptance. The IML EMS has procedures to remove and contain any litter to prevent it being deposited at the site, or to leave the site boundaries if material is inadvertently tipped on site, and litter escapes.	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 IML EMS has procedures to minimise the risk of mud and waste being tracked out onto the highway. This include wheel-cleaning facilities where appropriate. All vehicles delivering waste to the site must have adequate vehicle containment, such as sheeting, to prevent waste spillage prior to delivery at Scarcewater Tip.	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 mainly inert or have a low potential to produce odour as a consequence of prior organic waste treatment. Site waste management activities may produce odour as a result of tipping, blending and landspreading operations especially during warm and windy weather.	Activities shall be managed and operated in accordance with the IML EMS which includes measures to control waste acceptance and prevent/reduce the risk of odorous waste materials being delivered to site. Where odour is produced management systems exists to prevent it from leaving the site boundaries.	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.	The site is situated next to extensive mining operations, which have strict operating conditions to control noise and vibration. The operation of plant and equipment at Scarcewater Tip will be minimal and not cause nuisance to near neighbours outside the site boundary.	Very 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	Permitted waste types are mainly inert or have low potential to attract animals or birds as a consequence of prior organic waste treatment.	Activities shall be managed and operated in accordance with the IML EMS which includes measures to control waste acceptance and prevent/reduce the risk of waste materials being delivered to site which may be attractive to animals/birds.	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	Permitted waste types are mainly inert or have low potential to attract pests as a consequence of prior organic waste treatment.	Activities shall be managed and operated in accordance with the IML EMS which includes measures to control waste acceptance and prevent/reduce the risk of waste materials being delivered to site which may be attractive pests	Low

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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 or have undergone organic waste treatment. Therefore only a low risk from the actual waste permitted on site. 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 or flowable plastic conditions could form within some waste materials.	The IML management systems identify and minimise risks from unauthorised access and site security measures identified to prevent such access.	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 mineral based materials or moist organic waste treatment residuals, with a low-risk of combustion. Site machinery and fuels and oils are more of a risk but quantities would typically be low.	The IML management system identifies and minimises risks from unauthorised access and site security measures identified to prevent such access. The IML EMS also describes how any polluting liquids or materials will be handled and managed appropriately.	Very 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 and ditches.	Low	Medium	Low	Permitted waste types are inert mineral based materials or moist organic waste treatment residuals, with a low-risk of combustion. Site machinery and fuels and oils are more of a risk but quantities would typically be low.	The IML management system identifies and minimises risks from unauthorised access and site security measures identified to prevent such access. The IML EMS also describes how any polluting liquids or materials will be handled and managed appropriately.	Very low

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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	Potential for spillage from any fuel and oil storage for machinery or directly from machinery operating on the site.	The permit does 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 identifies and minimises risks. The system describes how any polluting liquids or materials will be stored safely and how machinery/plant will be maintained to prevent liquids from leaking.	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 or as a result of organic waste treatment and non-hazardous. Any waste washed off site is unlikely to be chemically hazardous however organic wastes may pose a biological risk in terms of oxygenation of water and physical particles may cause increased siltation and need for dredging. Waste may 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.	Waste storage area is bunded and landspreading activity is not permitted within 10m of a watercourse. The permit does not allow any point source discharges of contaminated water to controlled waters. Risk limited by waste acceptance procedures and limits to permitted waste types. Good onsite management practices are detailed on the IML EMS for controlling and containing water and leachate generated on the site.	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.	Medium	Medium	Medium	Permitted waste types are mainly inert or stabilised organic wastes so any waste should not contain hazardous substances or non-hazardous pollutants in quantities that pose a risk to groundwater.	The permit does not allow deposit in a groundwater Source Protection Zones 1 or 2 or if a source protection zone has not been defined then not within 250 metres of any well, spring or borehole used for the supply of water for human consumption. This includes private water supplies. The waste must also not be deposited in any controlled or surface waters or sub-water table. A mandatory waste acceptance procedure has been imposed to make sure a minimum standard is set. Mandatory operating techniques limit the use of specified non-inert wastes to surface uses. The management system sets out any additional stringent waste acceptance procedures to ensure only waste listed in the permit are deposited on site. The procedures also set out how to deal with rogue or non-conforming loads.	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.	Activities are not taking place within 500 metres of a Site of Special Scientific Interest (SSSI); or 250 metres within the presence of Great Crested Newts where it is linked to the breeding ponds of the newts by good habitat; 50 metres of a site that has species or habitats protected under the Biodiversity Action Plan that the Environment Agency considers at risk to this activity; and 50 metres of a National Nature Reserve (NNR), Local Nature Reserves(LNR), Local Wildlife Site (LWS), Ancient woodland or Scheduled Ancient Monument.	Low