

APPENDIX 1 : Generic Risk Assessment

Standard Facility:

Waste Operation: HCl Waste Transfer Station with treatment and asbestos storage

Location:

Applies to all potential locations.

Location of environmentally sensitive sites (km / m):

Greater than 500m (see below)

Risk assessment carried out by:

Environment Agency

Date:

25-Jun-12

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

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| Parameter 1 | Permitted activities - The storage and repackaging of waste (D15, R13, D14) and treatment consisting only of manual sorting, separation, screening, baling, shredding, crushing or compaction of non hazardous waste (D9, R3, R4, R5). |
| Parameter 2 | Permitted waste types - Non hazardous and hazardous (asbestos only) Household, Commercial and Industrial Waste |
| Parameter 3 | Quantity of waste accepted at the facility: <75,000 tonnes per annum, including not more than 10 tonnes per day of asbestos |
| Parameter 4 | The quantity of tyres stored at the facility shall not be more than 50 tonnes |
| Parameter 5 | The quantity of asbestos stored at the facility shall not be more than 10 tonnes |
| Parameter 6 | All wastes shall be bulked, transferred or treated inside a building, except for specified low-risk waste which may be bulked, transferred or treated outside. However, specified low risk waste must be treated inside a building if the activities are being carried out within an Air Quality Management Area (AQMA) designated for particulate matter in the form of PM10. |
| Parameter 7 | All waste shall be stored in a building or outside within a secure container, except for specified low-risk waste which may be stored outside without using containers. |
| Parameter 8 | Asbestos waste shall be double bagged and stored within secure lockable containers |
| Parameter 9 | All waste shall be stored and treated on an impermeable surface with sealed drainage system, except for specified low-risk waste which may be stored and treated on hard standing. |
| Parameter 10 | 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 11 | 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). |

Parameter 12

The activities are not carried out predominantly using a limited number of the permitted waste types in a manner which significantly increases any of the risks compared to the generic operation of this type of facility, for example predominantly storing wastes which present a significant increase in fire risk.

Parameter 13

The activities shall not be carried out within 50m of any well, spring or borehole used for the supply of water for human consumption. This must include private water supplies.

Abbreviations:

SR - Standard Rule

SR (emissions of substances not controlled by emission limits - buildings) - emissions of substances shall not cause pollution....., with appropriate measures:

bulking, transfer or treatment in a building; storage in a building or secure container;

waste storage and treatment.... on impermeable surface with sealed drainage (except);

specified waste storage and treatment.... on hard standing or on impermeable surface with sealed drainage.

SR (asbestos) - Asbestos is the only permitted hazardous waste and there are several standard rules to manage the risk:

quantity received shall not exceed 10 tonnes per day; quantity stored shall not exceed 10 tonnes; there shall be no treatment;

storage conditions shall be double bagged.....within clearly identified, segregated, secure, lockable containers on

an impermeable surface with a sealed drainage system.

Data and information				Judgement				Action (by permitting)	
Receptor	Source	Harm	Pathway	Frequency 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 the residual risk to the Asset?
Local human population	Airborne asbestos fibres	Respiratory illness i.e. lung cancer and mesothelioma	Air transport then inhalation.	Low	High	Medium	Potential for exposure is low because of separate health and safety controls to protect employees	SR (asbestos)	Low

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	Medium	Low	Low	SR (emissions of substances not controlled by emission limits - buildings). SR (if required) - emissions management plan. Long term increases in particulate levels are restricted by SR - treatment of specified low risk wastes shall be carried out inside a building if the activities are located within an AQMA designated for PM10.
	Local human population	As above	Nuisance - dust on cars, clothing etc.	Air transport then deposition	Medium	Low	Medium	Low	As above	As above
	Local human population, livestock and wildlife.	Litter	Nuisance, loss of amenity and harm to animal health	Air transport then deposition	Medium	Medium	Medium	Medium	Local residents often sensitive to dust.	Local residents often sensitive to litter.
	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	Medium	Local residents often sensitive to mud on roads.	As above. Appropriate measures could include clearing litter arising from the activities from affected areas outside the site.
										As above. Appropriate measures could include clearing waste, litter and mud arising from the activities from affected areas outside the site.

Local human population	Odour	Nuisance, loss of amenity	Air transport then inhalation.	Medium	Medium	Medium	Local residents often sensitive to odour.	SR - emissions shall be free from odour.... SR (if required) - odour management plan. Odour will be restricted by SR (emissions of substances not controlled by emission limits - buildings).	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	SR - emissions shall be free from noise and vibration.... SR (if required) - noise and vibration management plan. Noise will be restricted by SR (emissions of substances not controlled by emission limits - buildings).	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	Medium	Medium	Medium	Medium	Permitted wastes may attract scavenging animals and birds. Specified low-risk wastes stored outside may become nesting / breeding sites.	SR - emissions of substances not controlled by emission limits (including those from scavenging animals, scavenging birds and other pests) shall not cause pollution...Access to waste is restricted by SR (emissions of substances not controlled by emission limits - buildings). Access to hazardous waste is restricted by SR (asbestos).	Very
Local human population	Pests (e.g. flies)	Harm to human health, nuisance, loss of amenity	Air transport and over land	Medium	Medium	Medium	Medium	Insect pests can multiply on permitted wastes, particularly in summer months	As above	Low
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	Medium	Low	Low	Apart from asbestos, permitted waste types are 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.	SR - management system (will include flood risk management). Waste washed off site restricted by SR (emissions of substances not controlled by emission limits - buildings). Hazardous waste washed off site restricted by SR (asbestos).	Very

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	Medium	Medium	Apart from asbestos, permitted waste types are non-hazardous so only a medium magnitude risk is estimated.	SR - activities shall be managed and operated in accordance with a management system (will include site security measures to prevent unauthorised access). Access to waste restricted by SR (emissions of substances not controlled by emission limits - buildings). Access to hazardous waste restricted by SR (asbestos).	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, firefighters 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	Medium	Medium	Permitted waste types do not include sludges or liquids and, apart from asbestos, are non-hazardous so only a medium magnitude risk is estimated.	As above. SR - management system (will include fire and spillages). Spread of fire restricted by SR (emissions of substances not controlled by emission limits - buildings). Spread of fire to hazardous waste restricted by SR (asbestos). SR - tyre storage no more than 50 tonnes.	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 firefighters. Pollution of water or land.	As above.	Medium	Medium	Medium	Medium	Risk of accidental combustion of waste is moderate.	As above (excluding comments on access to waste). Permitted burning of waste.	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.	Acute effects: Oxygen depletion, fish kill and algal blooms	Direct run-off from site across ground surface, via surface water drains, ditches etc.	Medium	Medium	Medium	Medium	Permitted waste types do not include sludges or liquids so only a medium magnitude risk is estimated. There is potential for contaminated rainwater run-off from wastes stored outside buildings especially during heavy rain.	SR - All liquids shall be provided with secondary containment.... (applies to non- wastes such as fuels). Run-off restricted by SR (emissions of substances not controlled by emission limits - buildings).	Very
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	Medium	Low	Low	Low	Apart from asbestos, waste types are non-hazardous so harm is likely to be temporary and reversible.	As above	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.	Medium	Medium	Medium	Medium	Watercourse must have medium / high flow for abstraction to be permitted, which will dilute contaminated run-off.	As above	Low

Groundwater	As above	Chronic effects: contamination of groundwater, requiring treatment of water or closure of borehole.	Transport through soil/groundwater then extraction at borehole.	Medium	Medium	Medium	There is a potential for contaminated rainwater run-off or leachate from permitted waste types.	As above. Also the activities shall not be carried out within 50m of any well, spring or borehole used for the supply of water for human consumption. This must include private water supplies.	Low
Local human population	Contaminated waters used for recreational purposes	Harm to human health - skin damage or gastro-intestinal illness.	Direct contact or ingestion	Low	Medium	Low	Unlikely to occur, but might restrict recreational use.	SR (emissions of substances not controlled by emission limits - buildings). SR - emissions of substances not controlled by emission limits...SR (if required) - emissions management plan.	Very
Protected sites - European sites and SSSIs	Any	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.	SR (emissions of substances not controlled by emission limits - buildings). SR - activities shall not be carried out within 500m of a European Site or SSSI. (Distance criteria as agreed with Natural England/Countryside Council for Wales).	Low

Notes:

Red triangle indicates comment containing supporting information

Yellow columns contain drop down menus that allow automatic evaluation of risk in green column