

Environmental Risk Assessment

Standard Facility:	Waste Operation: HCI Waste Transfer Station with treatment
Location:	Brunswick Wharf, Brook Street, Congleton
Location of environmentally sensitive sites (km / m):	Less than 50m (see below)
Risk assessment carried out by:	David Alcock
Date:	22-Jul-16

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 do not include dusts, powders or loose fibres but the treatment activities will produce particulate matter so a high magnitude risk is estimated.	Dust suppression is to be used on all screening plant with additional suppression via bowser and hose as required.	Low
Local human population	As above	Nuisance - dust on cars, clothing etc.	Air transport then deposition	Medium	Low	Low	Local residents comprise a mix of residents of nearby domestic properties and employees in various commercial or industrial operations.	As above	Low
Local human population, livestock and wildlife.	Litter	Nuisance, loss of amenity and harm to animal health	Air transport then deposition	Medium	Medium	Medium	Local residents comprise a mix of residents of nearby domestic properties and employees in various commercial or industrial operations. There are no livestock local to the site	Site perimeter is of concrete panel or palisade fencing and forms an effective litter barrier. Procedures in the Site Management Plan detail actions to be taken by staff to inspect the site daily and to deal with litter as it arises.	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	Local residents comprise a mix of residents of nearby domestic properties and employees in various commercial or industrial operations.	As above. A road sweeper is employed daily to keep site access roads and public highway free from dust/mud.	Low

Local human population	Odour	Nuisance, loss of amenity	Air transport then inhalation.	Medium	Medium	Medium	Permitted waste types do not include food waste, sludges or liquids which are likely to give rise to odour, but do include mixed HC&I wastes which have an odour causing potential if not handled correctly.	Management of odour is controlled by the Site Management Plan and is based on rotation of stocks and immediate removal of odourous wastes. The use of a mister to de-odourise wastes if odour is detected will also mitigate the risk of odour.	Low
Local human population	Noise and vibration	Nuisance, loss of amenity, loss of sleep.	Noise through the air and vibration through the ground.	Medium	Low	Low	Local residents comprise a mix of residents of nearby domestic properties and employees in various commercial or industrial operations. A noise assessment has been carried out which showed that predicted levels are within WHO and BS requirements.	A noise action plan has been produced which will ensure that site activities do not create a noise nuisance.	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	Permitted wastes may attract scavenging animals and birds. Specified low-risk wastes stored outside may become nesting / breeding sites.	Management of pests is controlled by the Site Management Plan and is based on rotation of stocks to prevent waste being used as a habitat. The use of a specialist pest control sub-contractor if scavenging animals are detected will also mitigate the risk.	Very low
Local human population	Pests (e.g. flies)	Harm to human health, nuisance, loss of amenity	Air transport and over land	Medium	Medium	Medium	Insect pests can multiply on some of the 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	Very low	Low	Low	Site topography makes flooding a very low risk. 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.	Site topography and a concrete panel fence on the uphill perimeter will effectively prevent any large scale flooding of the site.	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 non-hazardous so only a medium magnitude risk is estimated.	Activities shall be managed and operated in accordance with the Site Management Plan (which includes 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, 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 are non-hazardous so only a medium magnitude risk is estimated.	As above. Activities will be managed in accordance with the Site Management Plan (which includes fire and spillages). Spread of fire restricted by control of stock piles to no more than 20m2 and firebreaks or separation distances shall be maintained in accordance with Environment Agency guidance.	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	Risk of accidental combustion of waste is moderate.	As above. Activities will be managed in accordance with the Site Management Plan (which includes fire and spillages). Spread of fire restricted by control of stock piles to no more than 20m2 and firebreaks or separation distances shall be maintained in accordance with Environment Agency guidance. Permitted activities do not include the 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	Permitted waste types do not include sludges or liquids so only a medium magnitude risk is estimated. There is potential for contaminated rainwater to be produced from wastes stored outside buildings especially during heavy rain, however this area is connected to sewer via the interceptor and so pollution from this source is unlikely.	All liquids on site, such as fuels and oils for plant are stored either indoors or on impermeable drained surfaces. A spillage control procedure also forms part of the Site Management Plan.	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	Medium	Low	Low	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	Watercourse must have medium / high flow for abstraction to be permitted, which will dilute contaminated run-off.	As above. The site lies some 150m from the nearest surface water course.	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. The Ground investigation carried out as part of the Site Condition Report has identified that the site is underlain by a minor aquifer and is some 892m from the nearest groundwater abstraction point.	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 due to distances involved, but might restrict recreational use in extreme case.	As above, plus procedures in Site Management Plan will effectively mitigate this risk.	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	Very low	Very Low	There are no designated environmentally sensitive sites considered to be potentially at risk of impact from the site.	The location of the site and control of operations in accordance with the Site Management Plan makes the risk to environmentally sensitive sites negligible.	Very low

Notes: Red triangle indicates comment containing supporting information
Yellow columns contain drop down menus that allow automatic evaluation of risk in green column