

Risk Assessment for bespoke Environmental Permit

Facility: Waste Operation; Clinical Waste & Healthcare Waste treatment & Transfer Station

Location: Building 21 - 21D67 Sub Basement Room, 21B78/21B85 Autoclave Rooms Alderley Park

Location of environmentally sensitive sites: N/A

Risk Assessment carried out by: Bruntwood Management Services Ltd

Date: 12/02/2025

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

Parameter 1 Permitted activities - The storage and treatment of waste (D15, D9, R13, D14)

Parameter 2 Permitted waste types - Clinical & Healthcare Waste

Parameter 3 Quantity of waste accepted at the facility: <75,000 tonnes per annum, including a maximum 10 tonnes per day of hazardous waste.

Parameter 4 The quantity of hazardous waste stored at the facility shall be less than 10 tonnes.

Parameter 5 The treatment of hazardous waste for disposal shall not exceed 50 tonnes per day.

Parameter 6 The treatment of waste shall take place within a building on an impermeable surface with sealed drainage system.

Parameter 7 All waste shall be stored in a building or a sealed container.

Parameter 8 All waste shall be stored on an impermeable surface with sealed drainage system.

Parameter 9 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 10 The permitted activities shall not be carried out within 200m 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 11 The activities shall not be carried out within Groundwater Source Protection Zone 1, or if a Source Protection Zone has not been defined then 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
STAATT - State and Territorial Association on Alternative Treatment Technologies
SR (emissions of substances not controlled by emission limits) - emissions of substances shall not cause pollution..., with appropriate measures:
all treatment in a building... on an impermeable surface with sealed drainage system;
all storage in a building...or within sealed containers.... on an impermeable surface with sealed drainage system;
separate storage of cytotoxics, waste medicines, sharps etc; refrigerated storage of body parts....; etc

Data and information				Judgement				Action (by permitting)	
Receptor	Source	Harm	Pathway	Possibility 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 consequence 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	Release of particulate matter (dusts) and infectious micro-organisms (bioaerosols)	Harm to human health – respiratory irritation and illness	Air transport then inhalation	High	High	High	Treatment activities are likely to cause releases. There is potential for exposure if anyone is living or working close to the site (apart from the	Waste is only accepted in bags or containers and manually sorted. Reusable containers require disinfection before leaving site, Site surfaces and static containers require	Low

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							operator and employees)	periodic disinfection. Waste treatment must take place within a building and achieve STAATT Level III. Bespoke Permit (emissions of substances not controlled by emission limits). Bespoke Permit (if required) – emissions management plan.	
Local human population	As above	Nuisance – dust on cars, clothing etc.	Air transport then deposition.	Low	Low	Low	Local residents often sensitive to dust.	As above	Very 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 often sensitive to litter.	As above. Appropriate measures could include clearing litter arising from the activities from affected areas outside the site.	Low
Local human population	Waste litter and mud on local roads	Nuisance, loss of amenity, road traffic accidents	Vehicles entering and leaving site.	Low	Medium	Low	Local residents often sensitive to mud on roads.	As above (no appropriate measures defined). Appropriate measures could include 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.	Hih	high	High	Local residents often sensitive to odour.	Bespoke Permit – emissions shall be free from odour....Bespoke Permit – The operator shall maintain and implement an odour management plan.	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	Bespoke Permit – emissions shall be free from noise and vibration.....Bespoke Permit (if required) – noise and vibration management plan.	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	High	High	Permitted wastes include infectious materials and may attract pests.	Bespoke Permit – emissions of substances not controlled by emission limits (including those from scavenging animals, scavenging birds and other pests) shall not cause pollution.	Low

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Local human population	Pests (e.g. flies)	Harm to human health, loss of amenity	Air transport and over land	Medium	High	High	Permitted wastes include infectious materials and may attract pests	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				Bespoke Permit – management system (will include flood risk management). Releases of hazardous waste storage 10 tonnes, Bespoke Permit (emissions of substances not controlled by emission limits) and Bespoke Permit – All liquids shall be manually sorted and provided with secondary containment.... (Applies to wastes).	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	Medium	Medium	Although some permitted waste types are hazardous, a medium magnitude risk is estimated.	Bespoke Permit- Activities shall be managed and operated in accordance with a management system (will include site security measures to prevent unauthorised access). Access to hazardous wastes restricted by Bespoke Permit – maximum hazardous waste storage 10 tonnes, Bespoke Permit (emissions of substances not controlled by emission limits) and Bespoke Permit – all liquids shall be provided with secondary containment.... (Applies to wastes).	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 fire water by direct run-off from site and via surface water drains and ditches.	Medium	Medium	Medium	Although some permitted waste types are hazardous and some are flammable, a medium magnitude risk is estimated.	As above. Bespoke Permit – management system (will include fire and spillage).	Low
Local human population and local environment	Accidental fire causing the release of polluting materials to	Respiratory irritation, illness and nuisance to local population, .	As above.	Low	Medium	Low	Risk of accidental combustion of wastes is low.	As above excluding comments on access to waste. (Permitted	Low

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	air (smoke and fumes) water or land.	Injury to staff or firefighters. Pollution of water or land.						activities do not include the burning of waste).	
All surface waters close to and downstream of site	Spillage of liquids, leachate from waste, contaminated rain water runoff 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	Medium	Low	Although Permitted waste types include some hazardous liquids, a low magnitude risk is estimated.	Bespoke Permit – maximum hazardous waste storage 10 tonnes. Bespoke Permit (emissions or substances not controlled by emission limits) all waste is in bags or containers and manually sorted, so any spillage is likely to be small and detected quickly. Bespoke Permit – all liquids shall be provided with secondary containment..... (Applies to waste).	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	Medium	Low	Permitted waste types include hazardous liquids so harm may not be temporary or reversible.	As above	Low
Abstraction from watercourse downstream of facility (for agricultural and portable 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.	Low	Medium	Low	All waste is in bags or containers. Although permitted waste types include some hazardous liquids a low magnitude of risk is estimated. Watercourse must have medium/high flow for abstraction to be permitted, which will dilute contaminated run-off.	As above. Also the activities shall not be carried out within groundwater source Protection Zone 1, or if a source protection Zone has not been defined then within 50 m of any well spring or borehole used for the supply of water for human consumption.	Low
Groundwater	As above	Chronic effects: contamination of groundwater, requiring treatment of water or closure of borehole.	Transport through soil/groundwater, then abstraction at borehole.	Low	Medium	Low	Permitted waste types include hazardous liquids so harm may not be temporary or reversible.	As above. Also the activities shall not be carried out within groundwater source Protection Zone 1, or if a source protection Zone has not been defined then within 50 m of any well spring or borehole used for the supply of water for human consumption.	Low
Local human population	Contaminated waters used for recreational purposes.	Harm to human health – skin damage or gastrointestinal illness.	Direct contact or ingestion.	Low	Medium	Low	Unlikely to occur but might restrict recreational use.	Bespoke Permit (emissions of substances not controlled by emission limits). Bespoke	Very low

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								Permit (if required) – emissions management plan.	
Protected sites – European sites and SSSI's	Any	Harm to protected site through nutrient enrichment, smothering, disturbance, predation etc.	Any	low	medium	Low	Waste operations may cause harm to and deterioration of nature conservation sites.	Bespoke Permit – activities shall not be carried out within 200m of a European site or SSSI. (Distance criteria as agreed with Natural England/Countryside Council for Wales).	Low
Protected species (great crested newt) Pollution, Disturbance	Any	Harm to habitat via pollution or disturbance	Any	Low	High	High	Waste operations may cause harm to Protected species and their habitats	Waste is only accepted in bags or containers and manually sorted. Reusable containers require disinfection before leaving the site, Site surfaces and static Containers require periodic disinfection. Waste treatment must take place within a building and achieve STAATT Level III. Bespoke Permit (emissions of substances not controlled by emission limits). Bespoke Permit (if required) – emissions management plan. The site employs a horticultural team, led by a qualified horticultural manager, to manage and maintain on-site habitats	Low
Local wildlife sites Polluation	Any	Harm to habitat via pollution	Any	Low	High	High	Waste operations may cause pollution to wildlife areas	As above	Low
Ancient woodland (Beech wood) Pollution Disturbance	Any	Harm to protected site through nutrient enrichment, smothering, disturbance, predation etc.	Any	Low	High	High	Waste operations may cause harm to and deterioration of nature conservation sites.	As above	Low