

Environmental Risk Assessment

This Environmental Risk Assessment is based on the Environment Agency's generic risk assessment for SR2022 No4, and has been amended to reflect The Site's location, receptors, waste codes and permitted activities.

The Site is located at Universal Glass, Rotherham Road, Dinnington, Sheffield, S253RD (National Grid ref: SK 51145 86652)

Universal Glass physically treats glass waste streams, producing glass sand products. The stockpiling of incoming material and the crushing and screening of material is carried out outside. Glass product is stockpiled, bagged and stored inside.

The Environment Agency produces generic risk assessments for all standard rules permits. These list the potential risks and specify the measures (but they are not limited to) required to manage them.

Each risk comprises:

- information about the source, pathway and receptor – and the potential harm to that receptor
- a judgement of the level of risk and justification of that judgement
- actions for managing the risk (through permitting) and a residual risk rating after managing it

Risk management involves breaking or limiting the source-pathway-receptor linkage to reduce the risk.

Risk assessment parameters

This risk assessment is based on the following parameters.

Parameter Ref	Detail
1	These permitted activities: <ul style="list-style-type: none">• acceptance and storage and repackaging of waste• sorting, screening, separation, screening, crushing and compaction of waste for recovery• R13, R3 and R5
2	It is intended to accept glass from the following permitted waste types: <ul style="list-style-type: none">• 15 01 07: glass packaging

	<ul style="list-style-type: none"> • 19 12 05: clean uncontaminated processed glass waste • 19 12 12: wastes consisting predominantly of glass, with smaller fractions of packaging materials
3	Quantity of waste accepted at the facility is restricted to: <ul style="list-style-type: none"> • less than 75,000 tonnes each year
4	All waste shall be stored and treated on an impermeable surface with sealed drainage system.
5	The only point source discharges to controlled waters are clean surface water from the roofs of buildings and from areas of the facility not used for the storage or treatment of wastes. No other direct or indirect discharges are permitted.
6	The activities shall not be carried out within: <ul style="list-style-type: none"> • 500 metres of a European site (within the meaning of Regulation 8 of the Conservation of Habitats and Species Regulations 2017) or a Site of Special Scientific Interest, including candidate or proposed sites or Maritime Conservation Zone • a groundwater source protection zone 1 (SPZ1)
7	Outdoor treatment of wastes listed in parameter 2 of this table must not take place within: <ul style="list-style-type: none"> • 50 metres of a National Nature Reserve, Local Nature Reserve, Local Wildlife Site, Ancient woodland or Scheduled Ancient Monument; • 50 metres of any well, spring or borehole used for the supply of water for human consumption (including private water supplies); • 10 metres of an unculverted watercourse; • a groundwater source protection zone 1; • a specified Air Quality Management Area.
8	Hazardous waste shall not be mixed, either with a different category of hazardous waste, or with other waste, substances or materials.
9	There are no point source emissions to air. The only exception to this is if monitoring has indicated abatement is required for shredders treating waste containing Persistent Organic Pollutants. If required, the abatement system must be designed and maintained to ensure the emission does not exceed 5mg/m ³ dust.
10	Secondary containment follows the recommendations of CIRIA 736 report.

Receptor	Source	Harm	Pathway	Likelihood	Severity	Risk	Justification	Controls / Managing the risk	Residual risk
Local Human Population	Release of particulate matter (dusts)	Respiratory irritation & illness Nuisance – dust on clothing, cars etc.	Air: inhalation, ingestion or inoculation Deposition on food / crops followed by ingestion	High	Medium	High	<ul style="list-style-type: none"> Permitted waste is non-hazardous* and excludes dust, powders & loose fibres Activities include , screening & crushing Potential exposure to people living / working close to the site (exc. operator / employees) Potential for fugitive dust emissions from transfer & treatment during prolonged dry weather (e.g. Summer) 	<p>Outdoor treatment of waste glass cannot take place within an Air Quality Management Area. The Site is not located within an AQMA</p> <p>Permit requirement: emissions of substances not controlled by emissions limits shall not cause pollution</p> <p>Appropriate measures shall be followed including wetting down surfaces and stockpiles in dry weather, misting points on crusher and visual dust monitoring along site boundary</p> <p>Dust Emissions Management Plan & risk assessment review implemented if required</p>	Low
Local Human Population	Waste, litter and mud on local roads	Nuisance Loss of amenity Road traffic accidents	Vehicles entering & leaving site	Medium	Medium	Medium	<ul style="list-style-type: none"> Risk of unsafe road surfaces in wet weather Local residents often sensitive to mud on roads 	<p>Glass waste (prior to crushing and screening) is considered to have a low risk of being deposited on the road from vehicles</p> <p>Mud is unlikely to originate at site. Should mud be tracked into site by a vehicle, cleaning measures would be undertaken and tarmac surface</p>	Low

Receptor	Source	Harm	Pathway	Likelihood	Severity	Risk	Justification	Controls / Managing the risk	Residual risk
								Appropriate measures implemented (and documented in the management system) to prevent & minimise emissions inc. mud tracking & litter from site.	
Local Human Population	Odour	Nuisance Loss of amenity	Air: inhalation	Very Low	Very Low	Very Low	Waste types accepted (glass) are not odourous	No controls considered necessary	Very Low
Local Human Population	Noise & Vibration	Nuisance Loss of amenity for local residents & workplaces Loss of sleep	Air - (Noise) Ground -(Vibration)	High	Medium	Medium	Local residents are often sensitive to noise & vibration	Main potential source is due to crushing and screening which takes place behind a concrete block screening wall and internally. These activities are located in the southeast and south of the site, furthest away from the most residential receptors. A Noise Impact Assessment has modelled potential impacts and designed the mitigation walls implemented as well as limiting the operational hours. Noise Management Plan in the Noise Impact Assessment implemented	Low
Local Human Population	Scavenging animals & birds	Nuisance Loss of amenity	Animals / birds travelling over land & sir	Very low	Very low	Very low	Permitted wastes would not attract scavenging animals & birds	No controls considered necessary due to waste activities	Very Low

Receptor	Source	Harm	Pathway	Likelihood	Severity	Risk	Justification	Controls / Managing the risk	Residual risk
Local Human Population	Pests e.g. flies	Nuisance Loss of amenity	Flies travel through air / over land	Very low	Very low	Very low	Permitted wastes would not attract scavenging animals & birds	No controls considered necessary due to waste activities	Very Low
Local Human Population & Local Environment	Flooding of Site	Waste washed off-site contaminating buildings, gardens & natural habitats downstream	Flood water	Low	Medium	Medium	<p>Permitted waste stored in bays which can be 'sealed' from flood waters using OSMO barriers (or similar)</p> <p>Leachate may have a high suspended solids.</p>	<p>Not in a Flood Risk Area.</p> <p>Complies with sensitive location exclusions: Not within 500m of a European site, Ramsar, Site of Special Scientific Interest or Marine Conservation Zone; or within a groundwater source protection zone 1.</p> <p>Activities shall not be carried out within: (a) 50m of a National Nature Reserve, Local Nature Reserve, Local Wildlife Site, Ancient woodland or Scheduled Ancient Monument.</p> <p>(b) 50m of a site that has habitats protected under the Biodiversity Action Plan that the EA considers at risk to this activity;</p> <p>(c) 250m within the presence of Great Crested Newts where it is linked to the breeding ponds of the newts by good habitat;</p> <p>(d) 10m of a watercourse;</p>	Low

Receptor	Source	Harm	Pathway	Likelihood	Severity	Risk	Justification	Controls / Managing the risk	Residual risk
								<p>(e) an Air Quality Management Area (particulate matter PM₁₀)</p> <p>See the Protected Species section of this risk assessment below</p> <p>System includes controls to minimise risks from operations, maintenance, accidents, incidents & non-conformances.</p> <p>Accident Management includes assessment of flood risk, contingency plans (diversion of waste), emergency procedures (and associated communication)</p>	
Local Human Population & Local Environment	<p>Fire Arson and/or vandalism</p> <p>Spontaneous Combustion</p> <p>Electrical Faults</p>	<p>Respiratory irritation, illness and nuisance to local population.</p> <p>Injury to staff, firefighters or arsonists/vandals.</p> <p>Pollution of water or land.</p>	<p>Air – smoke & fumes</p> <p>Surface Water drains & ditches (direct run-off) – spillages & contaminated firewater</p>	Medium	Medium	Medium	Combustible Wastes stored / treated on site (Table 2.3a))	<p>Written Management System includes operations, maintenance, accidents, incidents & non-conformance, and measures to prevent / control fires & contain firewater.</p> <p>Fire Prevention Plan</p> <p>Waste Acceptance Procedures</p> <p>No burning of waste</p> <p>No Smoking / Vaping</p> <p>Nevertheless, the main waste accepted at the</p>	Low

Receptor	Source	Harm	Pathway	Likelihood	Severity	Risk	Justification	Controls / Managing the risk	Residual risk
								site is glass which is non-combustible.	
Risk to local human population, livestock and wildlife	Litter on surrounding land and in final material	Nuisance Loss of amenity Harm to animal health	Air & land – litter carried on wind and deposited on land	Low	Medium	Low	Local residents are sensitive to litter Waste types accepted under this permit are unlikely to cause litter	Management System includes Waste Pre-acceptance & Acceptance Procedures to minimise the risk of accepting non-conforming waste. Protected species local to the site have been assessed. See section in this risk assessment.	Low
Risk to local human population, livestock and wildlife	Unauthorised access to site	Injury to humans or livestock	Physical contact with on-site hazards (waste, plant and equipment)	Low	Low	Low	Management System includes procedures for worker and visitor safety.	Appropriate Measures Guidance implemented Written Management System including accident prevention, emergency response and site security measures. Emergency contact details displayed at site entrance Visitors / contractors receive H&S induction & Site Rules Site entrance is manned, 24-hour CCTV, and secure boundary with lockable gates.	Low

Receptor	Source	Harm	Pathway	Likelihood	Severity	Risk	Justification	Controls / Managing the risk	Residual risk
Surface waters close to and downstream of site	Acute effects from spillages, leachate and contaminated* rain-water run-off *suspended solids	Oxygen depletion Kill fish	Direct run-off from site over land, through surface water drains & ditches	Low	Low	Low	Potential for contaminated rain-water run-off from waste activities especially during heavy rain. Leachate may contain suspended solids.	Activities are not within 10m of a water course or located in a groundwater source protection zone 1. Waste is treated on a impermeable surface & sealed drainage. Written Management System includes operations, maintenance, accidents, incidents & non-conformances. Liquids stored in secure containers with secondary containment meeting CIRIA 736. Permit requirement: emissions of substances not controlled by emissions limits shall not cause pollution Appropriate Measures Guidance implemented. Site not located in flood risk area, however, contingency plans for the diversion of waste if required. Emergency / Contingency Procedures communicated to site operatives.	Low

Receptor	Source	Harm	Pathway	Likelihood	Severity	Risk	Justification	Controls / Managing the risk	Residual risk
Surface waters close to and downstream of site	Chronic effects from spillages, leachate and contaminated rain-water run-off	Deterioration to water quality	Direct run-off from site over land, through surface water drains & ditches Indirect run-off through soil	Low	Low	Low	Pollution likely to be detected quickly. Effects are temporary & reversible.	As above <u>and</u> : Liquids stored in secure containers with secondary containment. Permit requirement: emissions of substances not controlled by emissions limits shall not cause pollution Site drainage plan, clean and dirty water separated.	Low
Abstraction from watercourse downstream of facility (for agricultural or potable use).	Spillages, leachate and contaminated rain-water run-off	Acute effects and closure of abstraction.	Direct run-off from site across site surface, via surface water drains & ditches and through abstraction	Medium	Medium	Medium	Potential for contaminated rainwater run-off from waste activities carried out in the open especially during heavy rain.	As above and: The activities are not carried out within 50m of any well, spring or borehole used for the supply of water for human consumption, including private water supplies	Low
Groundwater	Spillages, leachate and contaminated rain-water run-off	Chronic effect requiring groundwater treatment / closure of borehole.	Transport through soil / groundwater and abstraction via borehole	Low	Medium	Low	Potential for contaminated rainwater run-off / leachate from waste activities especially during heavy rain. Potential for pollution to remain undetected for a long time.	Site is not in a groundwater source protection zone 1 All waste is stored & treated on an impermeable surface & sealed drainage. Liquids provided with secondary containment to CIRIA 736 standard	Low

Receptor	Source	Harm	Pathway	Likelihood	Severity	Risk	Justification	Controls / Managing the risk	Residual risk
Protected Sites e.g. National parks, AONB, MCZ, SSSI, SAC, SPA, RAMSAR etc.	Any	Nutrient enrichment Leachate Contaminated surface water run-off Smothering Disturbance Predation	Any	Low	Low	Low	Storage and treatment of waste may cause harm / deterioration of nature conservation sites.	The site is not located within close proximity to protected sites.	Low
Protected Species	Any	Dust / Air quality Leachate Contaminated surface water run-off Smothering Disturbance Predation	Any	Medium	Low	Low	Protected Species was flagged in the basic pre-app advice from the Environment Agency. A proportional ecological report has been produced for the site considering potential impact. Activities at the site have been assessed as having a low potential to impact protected species in proximity to the site.	The site is located in proximity with a protected species. Please see appended Ecological Assessment. Written Management System includes operations, maintenance, accidents, incidents & non-conformances, Waste Pre-acceptance & Acceptance Procedures to minimise the risk of accepting non-conforming waste. Permit requirement: emissions of substances not controlled by emissions limits shall not cause pollution Appropriate Measures Guidance implemented.	Low

Appendix A: Ecological Assessment