

Risk assessment for Bespoke Permit based on standard rules set number SR2015 No.39 Version 1

Facility:	Waste Recovery Operation: Use of waste in a deposit for recovery operation involving construction and/or reclamation, restoration or improvement of land
Location:	Kempsford Quarry, Stubbs Farm, Washpool Lane, Kempsford, Gloucestershire, GL7 4NJ
Risk assessment carried out by:	GWP Consultants LLP
Date:	19th February 2019

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.	Medium	Medium	Low	Permitted waste is inert and has a low potential to produce bioaerosols, but the activities will produce some particulate matter so a medium magnitude risk is estimated. There is potential for increased dust generation from permitted activities during prolonged dry periods e.g. summer months. Residential properties are located c. 400m west of site operations, but wind rose data from Fairford Royal Air Force Base indicates a prevailing west south-westerly wind direction.	Implementation of Site Operation procedures to reduce releases in accordance with Environmental Management System (EMS) e.g. dust suppression during dry periods.	Low

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Local human population.	As above.	Nuisance - dust on cars, clothing etc.	Air transport then deposition.	Low	Low	Low	As above. Local residents often sensitive to dust.	As above.	Low
Local human population.	Litter.	Nuisance, loss of amenity and harm to animal health.	Air transport then deposition.	Very low	Very low	Very low	Permitted waste is inert and has low litter potential. Local residents often sensitive to litter.	Implementation of Site Operation procedures and Waste Acceptance Criteria in accordance with EMS.	Very low
Local human population.	Waste, litter and mud on local roads.	Nuisance, loss of amenity, road traffic accidents.	Vehicles entering and leaving site.	Very low	Very low	Very low	Road safety, local residents often sensitive to mud on roads. Permitted waste is inert and has low litter potential.	Implementation of Site Operation procedures and Waste Acceptance Criteria in accordance with EMS.	Very low
Local human population .	Odour .	Nuisance, loss of amenity.	Air transport then inhalation.	Very low	Very low	Very low	Local residents often sensitive to odour, however permitted waste is inert and has low odour potential. Residential properties are located <400m west of site operations, but wind rose data from Fairford Royal Air Force Base indicates a prevailing west south-westerly wind direction.	Implementation of Site Operation procedures and Waste Acceptance Criteria in accordance with EMS.	Very low

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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. Residential properties are located c. 400m west of site operations.	Implementation of Site Operation procedures in accordance with EMS.	Low
Local human population, RAF Fairford.	Scavenging animals and scavenging birds.	Harm to human health - from waste carried off site and faeces. Nuisance and loss of amenity. Aeroplane birdstrike.	Air transport and over land. Flight.	Medium	Medium	Medium	Permitted waste is inert and is unlikely to attract scavenging animals and birds but may become nesting / breeding sites. Creation of in-lake features do deter bird presence. Residential properties are located c. 400m west of site operations. RAF Fairford located c. 1km northwest of the site.	Implementation of Site Operation procedures and Waste Acceptance Criteria in accordance with EMS.	Low
Local human population.	Pests (e.g.) flies.	Harm to human health. Nuisance, loss of amenity.	Air transport and over land.	Low	Very low	Very low	Permitted waste is inert and is unlikely to attract pests.	As above. Permitted activities do not include the burning of waste.	Very 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	Low	Low	A detailed Environment Agency assessment of flood risk (Ref: OX_0850_01) shows the lake area to have an annual flood probability of ≤1.0% (Flood Zone 2), whilst the western and eastern bank areas have an annual flood probability of ≤1.0% +20% river flows.	Not applicable.	Low

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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 .	Very low	High	Low	Permitted waste is inert and therefore a low magnitude risk is estimated.	Implementation of Site Operation, Waste Acceptance and Health and Safety procedures in accordance with EMS.	Very 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, fire fighters 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.	Very low	Medium	Very low	Permitted waste is inert and therefore a very low magnitude risk is estimated.	Implementation of Site Operation, Waste Acceptance, Health and Safety and Accident, Incident and Emergency procedures in accordance with EMS.	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 or fire fighters. Pollution of water or land.	As above.	Very low	Medium	Very low	As above.	As above. Permitted activities do not include the burning of waste.	Very low

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Local human population and local environment.	Build up and emissions of gas from old waste deposits on the permitted site	Respiratory irritation, illness and nuisance to local population. Risk of explosion and injury to staff and local population.	Gas migrating laterally through waste deposit and building up in ceratina areas.	Very low	Very low	Very low	Not applicable as there are no old wsate deposits on the site. Permitted waste is inert and therefore a very low magnitude risk is estimated.	Not applicable.	Very 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 and invertebrate kill and algal blooms .	Direct run-off from site across ground surface, via surface water drains, ditches etc.	Very low	Very low	Very low	Permitted waste is inert and therefore a very low magnitude risk is estimated. Site EMS ensures that the likelihood of a contamination event is minimised.	Implementation of Site Operation, Waste Acceptance, Health and Safety and Accident, Incident and Emergency and Oil / Fuel Spill procedures in accordance with EMS.	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.	Very low	Very low	Very low	As above.	As above.	Very low

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Groundwater	As above.	As above.	Transport through soil / groundwater then extraction at borehole.	Very low	Very low	Very low	As above. The site is not situated within a Groundwater Source Protection Zone. No Groundwater Abstraction Licenses located near to site.	As above.	Very low
Protected nature conservation sites - European sites and SSSIs.	Any.	Harm to protected sites through toxic contamination, nutrient enrichment, smothering, disturbance, predation, etc.	Any.	Very low	Very low	Very low	No protected nature conservation sites within the vicinity of the site. Proposed work at the site poses a very low risk of impacting the hydrological and hydrogeological environment.	Implementation of Site Operation, Waste Acceptance, Accident, Incident and Emergency and Oil / Fuel Spill procedures in accordance with EMS.	Very low

Notes: Red triangle indicates comment containing supporting information

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

	Very low	Low	Medium	High
High	4	8	12	16
Medium	3	6	9	12
Low	2	4	6	8
Very low	1	2	3	4

Very low
Low
Medium
High

	Very low	Low	Medium	High
Very low	1	2	3	4
Low	2	4	6	8
Medium	3	6	9	12
High	4	8	12	16