

## Site Specific Environmental Risk Assessment

<b>Waste Operation</b>	Blackhill Quarry: Treatment of waste to produce soil, soilsubstitutes and aggregate including washing
<b>Location:</b>	Blackhill Quarry, Kings Road, Bramhope, Leeds, LS16 9JN
<b>Location of environmentally sensitive sites (km / m):</b>	Breary Marsh LNR and SSSI approximately 0.5km southwest, deciduous woodland at the south-western boundary
<b>Risk assessment carried out by:</b>	Environment Agency and MPG
<b>Date:</b>	06-Jan-23

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.	Low	Medium	Medium	Permitted waste types are inert and non-hazardous and do not include dusts, powders or loose fibres and have a low potential to produce bioaerosols, but the (dry) treatment activities may produce particulate matter. There is potential for increased dust generation from permitted activities during prolonged dry periods e.g. summer months, and / or windy weather, as stockpiles may be larger due to the increase throughput tonnage. Despite increase in annual tonnage, the largest throughput would go through the washplant, where there is very low likelihood of dust emissions. A proportion of waste would arrive at The Site pre-screened / crushed. No changes are proposed to the largest potential source of dust - dry aggregate recycling. Lower amounts of primary won materials from the quarry would be screened / crushed (in order to stay within limits on HGV movements), so the increase in waste tonnage would be offset by the reduction in processing of quarry-won, primary materials. Nearest residential property is over 150m north west of the site, not in path of prevailing wind direction. Other potentially sensitive receptors include the Public Park to the south / southwest of the site (not in prevailing wind direction) and residential properties 400m northeast of the site. These are partially within the prevailing wind direction but a significant distance from the site so no significant impacts are anticipated. A medium overall risk is therefore given, though this is not considered to be additional risk over existing permitted activities. Summer daily maximum temperature may be around 6 degrees higher compared to average summer temperatures	Daily dust monitoring, pre-emptive monitoring of weather forecasts. Wetting down of stockpiles, haul roads etc. when deemed necessary. Suspension of operations if daily dust monitoring determines unacceptable dust levels to be leaving the site boundary. Maintenance and cleaning of plant and equipment in accordance with manufacturer guidelines. Use of documents: dust mitigation strategy (Document Ref: <i>IMS OP 02 – F007 – MB Dust Action Plan - Rev 1 - Dec 2022</i> ) and other requirements in EMS. Risk management considered sufficient regarding climate change, though it is acknowledged that actions such as wetting down may be required more frequently.	Low
Local human population	As above	Amenity / Nuisance - dust on cars, clothing etc.	Air transport then deposition	Medium	Low	Medium	As above.	As above.	Low
Local human population, livestock and wildlife.	Litter	Nuisance, loss of amenity and harm to animal health	Air transport then deposition	Low	Low	Low	Local residents often sensitive to litter, however permitted waste types have low litter potential. Nearest residential property 150m away.	Waste types very unlikely to produce litter. Any litter would be cleared as needed. Not within / near to residential area. Potential litter (eg. plastics) automatically removed from washplant and transported off-site	Very 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	Road safety, local residents often sensitive to mud on roads. Increase in number of vehicles based on increased tonnage. Rainfall events could be up to 20% more intense than current extremes (peak rainfall intensity).	Road sweeper would be employed on internal roads if required, wheel wash facilities used, tarmac or sealed surfaces for approx. 200m into site, and HGVs unlikely to leave sealed surfaces once within site. Climate change may lead to higher rainfall amounts, particularly across winter, so additional maintenance (for example of the wheel wash) is accepted.	Low
Local human population	Odour	Nuisance, loss of amenity	Air transport then inhalation.	Low	Low	Low	Local residents often sensitive to odour, however permitted waste types have low odour potential. Additional tonnage and washplant unlikely to cause additional odour.	Odour controls not considered necessary due to waste types and processes.	Very low
Local human population	Noise and vibration	Nuisance, loss of amenity, loss of sleep.	Noise through the air and vibration through the ground.	Low	Medium	Medium	Local residents often sensitive to noise and vibration. Washplant adds new potential noise source, though not considered likely to cause unacceptable noise due to nature of operation and location within site. Existing practices that have the potential to produce noise will be unchanged by the variation.	A Noise Minimisation Plan is in place at The Site (Document Ref: <i>IMS OP 02 – F006 – MB Noise Minimisation Plan - Rev 1 - Dec 2022</i> ).	Very 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	Low	Medium	Low	Permitted wastes unlikely to attract scavenging animals and birds but may become nesting / breeding sites.	No mitigation required, wastes very unlikely to attract scavenging animals and birds. Significant distance to residential receptors. Nevertheless, should scavengers be identified, appropriate pest control specialists would be employed by the operator. Nesting / breeding is unlikely due to constant activity and throughput of waste and products.	Very low

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Local human population	Pests (e.g. flies)	Harm to human health, nuisance, loss of amenity	Air transport and over land	Low	Medium	Low	Permitted waste types unlikely to attract pests.	As above	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	Permitted waste types are inert and 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 is within Flood Zone 1.	Site is within Flood Zone 1, no specific mitigation required. Site will have appropriate drainage system to cater for predicted rainfall events, including 1 in 30 year storm event and 25% for climate change. Washplant uses closed-system.	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	Low	Low	Low	Site is secure, and permitted waste types are inert therefore only a low magnitude risk is estimated. Washplant introduces potential new hazard (climbing / deep water) but site security is considered sufficient.	EMS (as well as any HSE requirements) requirements are adhered to. Appropriate training and PPE is provided to all staff. Additional training for wash plant. Site security, including fencing and locked gates, CCTV and 24hr security.	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.	Low	Low	Low	Permitted waste types do not include any flammable materials so a low magnitude risk is estimated. Proposed changes would not increase risk.	EMS adhered to. Site security is in place (site is fenced and gated with CCTV and 24hr Security). Addition of wash plant very unlikely to cause additional fire risk.	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 fire fighters. Pollution of water or land.	As above.	Low	Low	Low	As above.	As above	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.	Low	Low	Low	Permitted waste types are inert and stored on sealed surfaces with sealed drainage system.	Sealed drainage system is maintained to appropriate standard. All processing and waste storage takes place on sealed surface areas. Stockpiled final products stored on sealed surface after washing to prevent excessive suspended solids potentially running off from site. Water calculations performed to ascertain the required size of surface water run-off storage from waste handling areas, where a lined lagoon contains surface water. The water is tested in accordance with the proposed regime and only discharged to the site's main lagoon if no thresholds are breached for certain parameters. Water testing is also carried out on the waters within the washplant system. Strict WAC and WAP mean only inert wastes are accepted to The Site.	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	Low	Low	Permitted wastes are non-hazardous and inert so harm is likely to be temporary and reversible. Sealed surfaces and sealed drainage system designed to collect surface water run-off.	As above	Very 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.	Low	Low	Low	Permitted wastes are non hazardous and inert, sealed surface with sealed drainage system means contaminated water would be unlikely to reach groundwater.	As above	Very low
Protected sites - European sites and SSSIs	Any	Harm to protected site through toxic contamination, nutrient enrichment, smothering, disturbance, predation etc.	Any	Low	Medium	Medium	Waste operations may cause harm to and deterioration of nature conservation site, distance to nearest SSSI (0.5km, separated by a Park and Otley Road).	No specific mitigation required due to distance from site; however, the SSSI comprises marshland and wet woodland for which the sealed drainage system at the site would act as mitigation to protect watercourses and groundwater including the SSSI.	Low