

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<i>What is the agent or process with potential to cause harm?</i>	<i>What are the harmful consequences if things go wrong?</i>	<i>How might the receptor come into contact with the source?</i>	<i>What is at risk? What do I wish to protect?</i>	<i>How likely is this contact?</i>	<i>How severe will the consequences be if this occurs?</i>	<i>What is the overall magnitude of the risk?</i>	<i>On what did I base my judgement?</i>	<i>How can I best manage the risk to reduce the magnitude?</i>	<i>What is the magnitude of the risk after management?</i>
Dust/Particulates									
Particulate matter and dusts from delivery and dispatch and handling of wastes/materials, including trafficked mud and debris, preparation engineering	Harm to human health – respiratory irritation and illness.	Air transport, deposition then inhalation.	Local human population (R2, R3, R4, R5, R7, R14, R15, R17, R18, R19, R21, R22, R24, R25, R26, R27 & R29)	Moderate	High	Moderate-High	During the early part of the infilling operations wastes will be deposited directly into the flooded quarry void, reducing the potential for being generated. With regard to Receptors R2, R3, R4, R7, R14 & R17 (public highways and rights of way) dust from the waste recovery operation poses very little risk to human health due to the transient nature of these receptors, as members of the public are simply passing through these areas and no long-term dust exposure will occur. Dust may be a nuisance to these receptors.	All delivery and dispatch vehicles to be sheeted or fully enclosed. Mechanical road sweeper and/or towed spray bowser will prevent waste surfaces and haul roads from becoming dry and dusty, especially during periods of dry weather.	Low
	Nuisance – dust on property, clothing etc.	Air transport then deposition	Local human population (R2, R3, R4, R5, R7, R14, R15, R17, R18, R19, R21, R22, R24, R25, R26, R27 & R29)	Moderate	Moderate	Moderate	An area of human occupation within 50m of the Skelbrooke Quarry Extension Area (Receptor R5 – Skelbrooke village) is located north / north-east of the site, therefore, the prevailing wind (directed west / west-southwest) will not blow dust directly into the residential area. These receptors are also located ~130m from the operation areas of the site.	Operational staff to be trained to assess dust generation at the site throughout the working day. Further visual assessment to be carried out daily by the site operations manager and the Environmental Managers. All haul roads outside of the quarry void to be of concrete hardstanding and kept free from mud and debris Vehicle speed limits will be imposed to prevent dust arising	Low
	Smothering of habitats and crops	Air transport then deposition	Local wildlife habitats/species (R6, R8, R9, R10, R11, R12, R13, R16, R20 & R28)	Moderate	Moderate	Moderate	R6 (agricultural land) surrounds the site in all directions, therefore, such land is situated downwind of the prevailing wind direction which may experience some nuisance issues from dust. R8 & R9 are located to the east of the site; meaning they are downwind of the prevailing wind direction. Therefore, dust may enter the stream and spring waters. Given the distance from the site of these receptors (>290m) and the limited amount of dust likely to be emitted from the site, it is not likely to affect habitats or cause water quality to decline. R10 (the Skell River) is situated north and therefore the prevailing wind will not direct dust emissions to this receptor. R11, R13, R16, R20 & R28 (woodlands) are located >440m south / south-east of the site, therefore the prevailing wind will not direct dust to these receptors. Most dust will have deposited within 200m of the operational areas. Wastes will not consist solely or mainly of dusts, powders or loose fibres.	All waste which may potentially contain dust, fibres or particles will be placed at the base of the working face and covered immediately. A Dust Management Plan has been prepared and will be maintained throughout the active tipping phase of the development.	Low

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Odours									
Odours from delivery and dispatch of wastes/materials Handling and deposition of waste	Nuisance, loss of amenity	Air transport then inhalation.	Local human population (R2, R3, R4, R5, R7, R14, R15, R17, R18, R19, R21, R22, R24, R25, R26, R27 & R29)	Very Low	Moderate	Low	<p>Only non-biodegradable wastes will be accepted at the site.</p> <p>The site is located in rural setting, meaning that human receptors are typically more dispersed.</p> <p>Areas of human occupation within 300m of site boundary (R5).</p> <p>Receptors R2, R3, R4, R7, R14 & R17 (public highways and rights of way) are not likely to be affected by odours due to their transient nature.</p>	<p>All wastes loads delivered and dispatched from the site will be sheeted or fully enclosed.</p> <p>Odorous wastes will be deposited and covered immediately by other suitable non-malodourous waste material. The quantity of malodourous waste accepted on site will depend on the quantity of non-malodourous waste available to carry out this management method.</p> <p>All wastes to be inspected prior to acceptance at the site.</p> <p>Operational staff to be trained to assess odour generation at the site throughout the working day. Further olfactory assessment will be carried out daily by the site operations manager and the operator's Environmental Managers.</p> <p>An Odour Management Plan will be maintained for the site.</p>	Very Low

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Litter									
<p>Litter within waste deposited at the site</p> <p>Tracking of mud and debris onto public roads causing accident, hazards and nuisance to road users.</p>	<p>Nuisance, loss of amenity, road traffic accidents and harm to animal health</p>	<p>Vehicles entering and leaving site.</p> <p>Air transport and then deposition</p>	<p>Local human population, livestock and wildlife. Local road users.</p> <p><i>(All Receptors)</i></p>	Very Low	Moderate	Low	<p>Only non-hazardous waste, principally consisting of natural occurring materials, will be accepted at the site.</p> <p>Fencing and screens in place to capture any windblown litter.</p> <p>Internal roadways and wheel washes present at the quarry prior to vehicles exiting on Straight Lane.</p>	<p>All deliveries or dispatches of waste to be sheeted or enclosed to prevent windblown litter.</p> <p>All vehicles to be inspected prior to leaving site. Wheel cleansing facilities to be provided / utilised as appropriate.</p> <p>Internal roads will comprise hard surfacing to minimise tracking of mud and debris onto public roads. Where public roads will be monitored daily and more frequently during adverse weather conditions.</p> <p>Security/litter fencing will be maintained along site boundary to prevent litter escaping. Additionally, portable litter screens will be erected around the operational areas of the waste recovery operation. Litter caught in these screens will be removed. In the unlikely event that these screens fail to capture any windblown litter, will be collected from the adjoining landfill sites at weekly intervals, or collected from outside the site boundary within 24 hours.</p> <p>The site entrance will be inspected daily for evidence of mud and debris. Daily litter inspections will be carried out across the site.</p> <p>Site entrance to be mechanically swept to remove mud and debris deposited. Litter picking to be carried out upon signs of litter generation. The source of any litter will also be investigated and remedied.</p> <p>During adverse weather, waste at the highest risk of being windblown will be deposited at a lower level within the cell, or if this is not possible, acceptance of such waste will be refused.</p>	Very Low

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Mud and Debris									
Waste debris and mud on local roads Tracking of mud and debris onto public roads causing accident, hazards and nuisance to road users.	Nuisance, loss of amenity, road traffic accidents and harm to animal health	Vehicles entering and leaving site.	Local human population, livestock and wildlife. Road users <i>(All Receptors)</i>	Very Low	Moderate	Low	Internal roadways and wheel washes present at the quarry prior to vehicles existing on Straight Lane.	<p>All deliveries or dispatches of waste will be sheeted or enclosed.</p> <p>All vehicles will be inspected prior to leaving the site. Wheel cleansing facilities will be provided / utilised as appropriate (e.g. during wet weather).</p> <p>When needed, a mechanical road sweeper will be utilised to prevent mud and other debris building up on public highways surrounding the site.</p> <p>The site entrance will be inspected daily for evidence of mud and debris. Internal roads will comprise hard surfacing (granular material covered by brick or concrete rubble) to minimise tracking of mud and debris onto public roads.</p> <p>Public roads will be monitored daily and more frequently during adverse weather conditions.</p> <p>Security fence to be maintained along site boundary to prevent litter escaping and daily litter inspections carried out on site.</p>	Very Low

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Scavengers and Pests									
Scavenging animals and scavenging birds, Pests (e.g. flies) attracted to or infesting wastes	Harm to human health – from waste carried off site and faeces. Nuisance and loss of amenity. Negative effects on habitats and crops	Air transport and over land.	Local human population, crops and local habitats. (All receptors)	Very Low	Low	Very Low	Only non-biodegradable waste will be accepted at the site. The site is located in a rural area and, therefore, a variety of wildlife is likely to be in relatively close proximity to the proposed waste recovery operation. An increase in pests and scavengers to the area could create a nuisance.	Deposited waste will comprise quarry fines, soils and stone from local areas. This type of waste is highly unlikely to attract scavengers and pests. Discharge of deliveries to the site will be supervised by trained site operatives. Visual inspection of incoming wastes will be undertaken at the weighbridge. Daily visual inspections will be carried out on site. Staff will be trained to recognise and alert the relevant personnel of any suspected pest infestations. Standard operational techniques will be adhered to, including the maintenance of a small operational area and the rapid emplacement and compaction of wastes. In the unlikely event that flies, or other insects are found to be present and posing a nuisance, insecticides will be utilised that offer both rapid and long-lasting results. Should scavenging birds present an issue, appropriate bird scarers, distress calls and decoys shall be deployed (following consultation with the EA).	Negligible

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Noise & Vibration									
Noise and vibration caused by engine noise and vibrations from loading shovel, lorry movements etc.	Nuisance, loss of amenity, loss of sleep or harm.	Noise through the air and vibration through the ground.	Local human population (R2, R3, R4, R5, R7, R14, R15, R17, R18, R19, R21, R22, R24, R25, R26, R27 & R29)	Low	Moderate	Low-Moderate	Distance of site from receptors (mainly R5; residential area within 300m). Site Operations restricted to: 07:30 to 18:00 Monday to Friday 07:30 to 13:00 on Saturdays No working on Sundays or Bank Holidays.	All mobile plant used on site to have 'broadband' type reverse alarms (i.e. no tonal 'beeper' type). Proposed operating hours to be restricted to those described in the report. Maintain the mobile plant and ensure all silencers are fitted and in good working order and effective. Ensure the haul road between the plant area is well maintained, minimum gradient and as smooth as practicable. Drivers of HGV's or mobile plant should be instructed to avoid leaving engines running unnecessarily or excessive revving of engines. As far as practicable, maintain maximum separation distance for plant to receptors located north off Doncaster Lane. For example, keep any fixed plant such as water pumps or portable generators as far south of the site as possible and HGV tipper vehicle haul roads as far south as practicable. Provide liaison with local residents to inform them of site activities and a means of contact in case of any complaints	Low

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Water									
Generation of contaminated run-off and leachate from waste deposits and other hazardous substances handled on site (e.g. fuels, oils etc).	Harm to protected site through nutrient enrichment, leachate, contaminated surface water runoff,	Surface water run-off, and sub-surface transport of leachates then base and spring flows to rivers.	Groundwater, surface water bodies and their associated habitats. (R1, R8, R9 & R10)	Low	Moderate	Low-Moderate	Leachate will not be an issue at the site owing to the fact that deposited wastes will comprise quarry fines, soils and stone derived from local areas to ensure compatibility with the site conditions and eliminate the pollution risk. As an additional safety measure, waste will be tipped at the edge of the flooded void and visually inspected prior to being pushed into the flooded area (e.g. via dozer).	As stated, the nature of the waste eliminates the risk of leachate contamination to surrounding ground and surface waters. Oil/fuel leaks from plant and equipment on site will be dealt with via designated management points and infrastructure.	Very Low
Flooding of the site	Contamination of buildings, gardens, agricultural land, natural habitats etc downstream resulting from waste washed off-site.	Flood waters	Local human population, crops and local habitats. (All receptors)	Low	Low	Low	Upon review of the Environment Agency flood risk map, the site is not at risk of flooding. Additionally, the site is located outside of the floodplain and is therefore unlikely to flood even in extreme conditions. Furthermore, the type of waste to be deposited here is non-hazardous and locally derived, therefore, even in the unlikely event of flooding there is low pollution / contamination risk to nearby receptors.	While the flood risk on site is very low, the restoration proposals for the Skelbrooke Extension site will incorporate a surface water lagoon to provide flood storage attenuation for surface water run-off management on the capped main landfill facility.	Very Low

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Accidents									
On site hazards: wastes, machinery, vehicles, surface water lagoon.	Bodily injury	Direct physical contact	Local human population (R2, R3, R4, R5, R7, R14, R15, R17, R18, R19, R21, R22, R24, R25, R26, R27 & R29)	Low	Moderate	Low-Moderate	–	<p>The site is surrounded by continuous, high fencing and gates are locked shut outside of operational hours.</p> <p>Signs are present at the site entrance and along the perimeter to deter trespassers.</p> <p>Additionally, should the proposals within this application be accepted, the risk posed by the on-site flooded void will be removed as restoration levels will be reached and the gradient at the lagoon edges will be shallow.</p>	Very Low
Fire resulting from arson/vandalism or an accident causing the release of polluting materials (smoke or fumes) to air, water or land.	Bodily injury	Direct physical contact	Local human population (R2, R3, R4, R5, R7, R14, R15, R17, R18, R19, R21, R22, R24, R25, R26, R27 & R29)	Low	Moderate	Low-Moderate	Only non-combustible waste will be accepted at the site.	<p>All flammable substances (e.g. fuels) will be kept in bunded / double skinned tanks and secured.</p> <p>The waste to be deposited is not flammable and no waste will be burned within the confines of the site.</p> <p>Firefighting equipment at the site will be clearly marked and tested, at appropriate intervals, to confirm their suitability and functionality. Site personnel will be made aware of the locations of all firefighting equipment and will be trained in their correct use.</p>	Very Low

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Leaks and Spillages from on site plant/vehicles, waste, contaminated rainwater run off or from firewater.	Deterioration of water quality, contamination of ground/surface waters,	Direct run off from site across ground surface, indirect runoff via the soil layer or transport through soil/groundwater	Groundwater, surface water bodies and their associated habitats. (R1, R8, R9, & R10)	Low	Moderate	Low-Moderate	R8, R9 & R10 (spring, stream and river) are located 290m, 320m and 360m from the site respectively. These are all considerable distances from the site, and it is highly unlikely that, should a spill occur, the resulting liquid would reach these receptors. Additionally, the waste to be deposited will be non-hazardous and locally derived, with very low pollution risk.	Waste acceptance procedures will be in place to fully characterise and inspect waste prior to acceptance. As mentioned, this will be non-hazardous and compatible with the site and surrounding areas. Daily visual site inspections will be conducted. Spillages will be dealt with as a matter of urgency. Any spillages of dry wastes will be cleared by either manual or mechanical means, for example handpicking, sweeping or shovelling, dependant on the size and location of the spillage. Minor spillages of liquid will be contained using spillage kits or any suitable readily available absorbent material. This material will be disposed of in a manner appropriate to the type of material absorbed. In the event of a major spillage of liquid such as heavy plant oil/fuel, actions will be taken to ensure no off-site transfer can occur, the incident will be reported to the appropriate personnel, access to the spillage site will be restricted until a clean-up solution is implemented and if necessary inert low permeability material such as clay will be utilised to temporarily contain the spill.	Very Low
Protected Species and Habitats									
On site activities	Harm to a protected site through contamination, nutrient enrichment, smothering, disturbance, predation etc.	Any	Protected species and habitats (none within 2km) (R10, R12, R13, R16, R20 & R28)	Low	Low	Low-	The only protected habitats located within 2km of the site are Local Wildlife Sites (R10, R12, R13, R16, R20 & R28) comprising deciduous woodland. Only non-hazardous wastes will be accepted at the site. Dust emissions are considered above.	Due to the nature of the waste to be deposited, there is very low pollution / contamination risk. The waste will comprise quarry fines, soil and stone sourced from local areas which will prevent any contamination to local areas occurring. These wastes would not result in nutrient enrichment. Additionally, as wastes are to be deposited within the quarry void, there is very little risk of lateral dust migration which could smother local habitats.	Very Low