

Risk Assessment - 213189/RA

Table 1. Assessment of odour risks

Hazard	Receptors	Harm	Pathway	Probability of Exposure	Consequence	Magnitude	Justification	Risk Management	Residual Risk
Odour from suitable soil wastes. Fugitive emissions from: - Storage activities - Placement of waste - Transfer and delivery activities	Residential dwellings (Gratton House & Ramslade Farm) < 150 m north of the site. Residential dwellings along Hare Lane, including Lower Hare Farm (owned by the Landowner), Oak Ridge, West Town Farm, and Wheale House. Agricultural land adjacent to the site. Surrounding Public Right of Way footpath to the south west of the site. Temporary construction workers due to work on site. Flora and fauna surrounding the site, including the priority deciduous woodlands adjacent to the site.	Nuisance, harm to health and loss of amenity value.	Atmospheric (fugitive). Air transport then inhalation.	Low	Medium	Low	Waste types being imported will predominantly be from construction and demolition sites and will not include odour generating wastes (putrescible waste). Strict waste acceptance procedures and controls on the type of waste streams accepted, as stated in the Waste Importation plan. No other permitted waste types are to be accepted, therefore will not biodegrade to produce offensive odours. Recording any complaints and implementing controls, as outlined in the Operational Working Plan (OP).	Low	

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Table 2. Assessment of noise and vibration risks

Hazard	Receptors	Harm	Pathway	Probability of Exposure	Consequence	Magnitude	Justification	Risk Management	Residual Risk
Noise and vibration emissions mobile plant, delivery lorries, unloading and placement activities.	Residential dwellings (Gratton House & Ramslade Farm) < 150 m north of the site. Residential dwellings along Hare Lane, including Lower Hare Farm (owned by the Landowner), Oak Ridge, West Town Farm, and Wheale House. Agricultural land adjacent to the site. Surrounding Public Right of Way footpath to the south west of the site. Temporary construction workers due to work on site. Flora and fauna surrounding the site, including the priority deciduous woodlands adjacent to the site.	Levels of noise that cause loss of amenity and nuisance to users and residents in the locale.	Airborne	Medium	Medium	Low	Works will adhere to normal operating hours. Although some potential noise risk when near restoration levels, this will be relatively short-term noise. There is no fixed plant and is mobile construction plant only. The ground levels provide natural screening for majority of works.	All operatives inducted on the requirement to reduce noise emissions and adherence to the site's working hours. All plant and vehicles will meet current guidance and will be maintained in line with manufacturer's requirements. All equipment and vehicles, when not in regular use, shall be switched off. Stripped topsoil to be banded 3 m high to break line of sight, reducing noise emissions to sensitive receptors.	Low

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Table 3. Assessment of fugitive emissions (other than odour, noise and vibration)

Hazard	Receptors	Harm	Pathway	Probability of Exposure	Consequence	Magnitude	Justification	Risk Management	Residual Risk
To Air									
Dust from on and off-site vehicle operations, unloading, placement and handling of waste, and use of internal haul routes.	Residential dwellings (Gratton House & Ramslade Farm) < 150 m north of the site.	Harm to human health, respiratory irritation, and illness.	Airborne then inhalation.	Low	Medium	Low	Operations have the potential to generate dusts from off-site movements during prolonged dry periods.	Measures to control dust are set out in the DEMP (213189/DEMP)	Low to very low
	Residential dwellings along Hare Lane, including Lower Hare Farm (owned by the Landowner), Oak Ridge, West Town Farm, and Wheale House.	Nuisance – deposit on cars, homes, clothing etc.	Airborne then deposit.	Very Low	Low	Very Low	The risk of dust emissions comes from HGV's, and the movement and placement of waste.		
	Agricultural land adjacent to the site.	Harm to ecosystem – dust deposit of vegetation.	Airborne then inhalation.	Low	Medium	Low	Locally, well naturally screened.		
	Surrounding Public Right of Way footpaths						No resident receptors within 100 m of the site.		
	Temporary construction workers due to work on site.								
	Deciduous Woodland habitats adjacent to the site (namely Dinney Copse and Raddy Cleave Copse) and further Decidious Woodland habitats surrounding the site.								
To Controlled Waters									
Run-off from site surfaces or spillages.	Pond located within the south western boundary of the site.	Passive leaching to ground or existing land drains, from contamination	Land then surface water drainage systems.	Medium	High	Medium	Permitted waste types do not include leachates or liquids.	Controls on types of wastes accepted through the implementation of the Importation Plan (213189/IP)	Low

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Hazard	Receptors	Harm	Pathway	Probability of Exposure	Consequence	Magnitude	Justification	Risk Management	Residual Risk
	The Alphin Brook and associated tributaries. Underlying groundwater within strata. Secondary A aquifer in Ashton Mudstone Member – Mudstone.	or spillages on hardstanding surface and directly entering drainage system.					Surface water managed in accordance with OP. Importation protocol supported by site specific Controlled Water Risk Assessment deeming it low risk.	Temporary and permanent swale's will be installed to receive site run-off and discharged into temporary surface water lagoons. All fuel storage areas will be bunded to 110 % capacity. Spill kits will be provided on site. Inspection and management regime as per OP All staff and operatives will be trained as per pollution prevention requirements.	
Run-off and infiltration from site surfaces or spillages.	Potentially isolated and localised groundwater underlying site.	Pollution to aquifer.	Land infiltration through free draining hardstanding.	Medium	High	Medium	Permitted waste types do not include leachates or liquids.	Controls on types of wastes accepted and placed on site. Mobile bunded fuel bowser to be used with pipes and valves protected with spill trays. All staff and operatives will be trained as per pollution prevention requirements.	Low
Mud and litter									
Litter from storage areas and mud from site operation.	Humans (as per odour) and fauna.	Nuisance, loss of amenity and reduced safety.	Air and land.	Low	Medium	Low	Permitted wastes have low litter potential as waste is mainly C&D origin.	All visible litter on site boundaries will be cleared. Internal and external haulage routes will be maintained by mechanical	Low

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Hazard	Receptors	Harm	Pathway	Probability of Exposure	Consequence	Magnitude	Justification	Risk Management	Residual Risk
								sweeping to ensure mud is not generated. A wheel wash for tipper lorries will be present and maintained on site. Inspection and corrective action regime will be undertaken in line with site management system.	
Pests and vermin									
Storage of waste attracting pests and vermin.	Human	Can cause increase populations and infestations of rats, mice, flies and other vermin. Result is harm to health, loss of amenity and nuisance.	Air transport and over land.	Low	Low	Low	All of the waste has low to negligible risk of organic / litter content to attract pests and vermin.	Adherence to waste acceptance procedures. Inspection of site by Site Manager on frequent basis. Implementation of controls as required.	Low

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Table 4. Foreseeable Accident risk assessment and management

Hazard	Receptors	Harm	Pathway	Probability of Exposure	Consequence	Magnitude	Justification	Risk Management	Residual Risk
Fire (accidental, arson) and smoke.	Humans (as per odour) and environment.	Damage and loss of amenity, nuisance and carcinogenic particulates.	Direct contact, airborne.	Low	Severe	Medium	In the event of a major incident there is a serious health risk. Wastes to be imported or re-used are non-combustible soils only.	No wastes will be burned on site. All storage of waste and plant in accordance with existing EMS. The management of the waste has been developed in line with industry guidance to minimise volumes to manageable sizes. Incidents to be recorded in the Site Diary.	Low
Spillage of fuels, oils, or polluting material.	Soil, surface waters and groundwater.	Pollution and/or contamination.	Land and drainage systems.	Low	High	Medium	Oils and fuels will be locked in a sealed container, when not in use.	The Contingency Plan will incorporate spillage controls. A spill response and accident prevention plan will form part of the site specific Environmental Management System (EMS). All staff will be trained on controls.	Low
Spillage of waste.	Human health (as per odour), surface water drainage, groundwater.	Loss of amenity and nuisance, pollution and/or contamination.	Land, drain and air.	Low	High	Medium	Uncontrolled release could cause health or pollution issues.	All vehicles accessing the site will be sheeted or fully enclosed. Unloading and loading will be controlled at all times. Incidents recorded in the Site Diary.	Low
Direct physical contact between humans and all wastes, machinery and vehicles.	Human health (site operatives and local population).	Bodily harm.	Direct contact.	Medium	High	Medium	No public access during works. All wastes will adhere to the Importation	Activities to be managed in accordance with site health and safety management system.	Low

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Hazard	Receptors	Harm	Pathway	Probability of Exposure	Consequence	Magnitude	Justification	Risk Management	Residual Risk
							Protocol and appropriate human health limits. There is no additional risk from the new proposals from machinery and vehicles. This remains unchanged.	Access to wastes to be restricted to trained and competent personnel. Delineation of activities and personnel.	

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Table 5. Assessment of ground gas risks

Hazard	Receptors	Harm	Pathway	Probability of Exposure	Consequence	Magnitude	Justification	Risk Management	Residual Risk
Inhalation of ground gases generated by waste deposit beneath the proposed earthworks. Inhalation of ground gases generated by soils from proposed earthworks Inhalation of volatile vapours with elevated concentrations of determinants. Explosive risk from bio-gas/ground gases. Surcharging of existing Made Ground during capping.	On site land users (agricultural) Temporary construction staff.	Intoxication Explosion Nuisance/loss of amenity	Emissions from existing Made Ground or imported material to air.	Severe	Negligible	Low	The imported waste material will be of mineral / soil content with low organic content. The risk of ground gas generation deposited wate is negligible. There will be no engineered cap, and waste deposit will be surfaced with topsoil. The likely gas migration pathway will dissipate slowly from the top of the waste deposit.	Adherence to importation protocol and construction scheme.	Very Low
	Off-site land users (public right of way) Residential properties circa 150 m north and 240 m west & south of the operational site.	Intoxication Explosion Nuisance/loss of amenity	Emissions from existing Made Ground or imported material to surrounding ground to air.	Severe	Negligible	Low	The imported waste material will be of mineral / soil content with low organic content. The risk of ground gas generation deposited wate is negligible. The surrounding land uses are low risk and no residential properties within 100 m of the inert waste landfill.	Adherence to importation protocol and construction scheme.	Very Low

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Table 6. Assessment of Stability Risk

Hazard	Receptors	Harm	Pathway	Probability of Exposure	Consequence	Magnitude	Justification	Risk Management	Residual Risk
Landslides, subsidence, or ground heave from places waste, GSL, or restoration soils.	On site land users (agricultural). Temporary construction staff. Off-site land users (public right of way). Human health (site operatives). Flora and fauna surrounding the site, including the priority Deciduous Woodlands located adjacent to the site (namely, Dinney Copse and Raddy Cleave Copse).	Harm to human health. Harm to infrastructure. Harm to the wider environment.	Land.	Low	High	Medium	The imported waste will be inert and stable material. The land will be filled in phases whereupon it will be compacted to prevent instability. Placement method will adopt benching technique on steeper gradient slopes. Existing site contours are "bowled" and any instability would be contained within the site. Risk to residential receptors is negligible. The surrounding land uses are low risk and no residential properties within 100 m of the inert waste landfill.	Adherence to importation protocol (213189/IP) and construction scheme.	Low