

Site Specific Risk Assessment

Standard Facility:

Waste Operation: Treatment of waste to produce soil, soilsubstitutes, aggregate & composting ion open

Location:

Land to West of Flight Ways Business Park (Egded Green Plan S21-628/002)

Location of environmentally sensitive sites (km / m):

Less than 500m (see below)

Risk assessment carried out by:

Southwest Environmental Limited

Date:

20-May-12

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.	High	Medium	High	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 treatment activities will produce particulate matter so a high magnitude risk is estimated. The permitted level of throughput and potential size of the facility means there is potential for exposure if anyone is living or working close to the site (apart from the operator and employees). There is potential for increased dust generation from permitted activities during prolonged dry periods e.g. summer months.	Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions. permit (if required) - emissions management plan.	Low
Local human population	As above	Nuisance - dust on cars, clothing etc.	Air transport then deposition	High	Low	Medium	As above. Local residents often sensitive to dust.	As above	Low
Local human population, livestock and wildlife. Inc Dunkeswell woodland and Hutshayes Farm	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.	As above. Appropriate measures could include clearing litter arising from the activities from affected areas outside the site.	Very low

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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.	As above. Appropriate measures could include clearing waste, litter and mud arising from the activities from affected areas outside the site.	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.	emissions shall be free from odour.... Please see odour management plan.	Very low
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	emissions shall be free from noise and vibration..... Please see noise and vibration management plan.	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.	Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.	Very low
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

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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.	requires a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances (will include flood risk management).	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	Medium	Low	Low	Permitted waste types are inert therefore only a low magnitude risk is estimated	activities shall be managed and operated in accordance with a management system (will include site security measures to prevent unauthorised access).	Low
Local human population and local environment.Inc Dunkeswell woodland and Hutshayes Farm	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.	Medium	Low	Low	Permitted waste types do not include any flammable materials so a low magnitude risk is estimated.	permit -requires a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances (will include fire and spillages).	Low
Local human population and local environment Inc Dunkeswell woodland and Hutshayes Farm	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.	Medium	Low	Low	As above.	As above (excluding comments on access to waste). Permitted activities do not include the burning of waste.	Low

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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 do not include sludges or liquids so only a medium magnitude risk is estimated. No point source emissions to water are permitted, but there is potential for contaminated rainwater run-off from wastes stored outside buildings especially during heavy rain.	All liquids shall be provided with secondary containment.... (applies to non-wastes such as fuels). Run-off restricted by permit on emissions of substances, with appropriate measures. Wastes from potentially contaminated sites require analysis. Storage & spreading has distance limitations from watercourses.	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	Low	Low	Low	Waste types are non-hazardous and inert so harm is likely to be temporary and reversible.	As above	Very low
Abstraction from watercourse downstream of facility (for agricultural or potable use).	As above	Acute effects, closure of abstraction intakes.	Direct run-off from site across ground surface, via surface water drains, ditches etc. then abstraction.	Low	Low	Low	Watercourse must have medium / high flow for abstraction to be permitted, which will dilute contaminated run-off.	As above. Also activities must be 50 metres from any spring or well, or from any borehole not used to supply water for domestic or food production purposes or 50m from any spring or well or any borehole used for the supply of water for human consumption. This must include private water supplies	Very low

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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 unlikely to contaminate groundwater.	As above	Very low
Local human population	Contaminated waters used for recreational purposes	Harm to human health - skin damage or gastrointestinal illness.	Direct contact or ingestion	Low	Medium	Low	Unlikely to occur, but might restrict recreational use.	Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions. permit (if required) - emissions management plan.	Very low

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Protected sites - European sites and SSSIs also relevant to Dunkeswell woodland and Hutshayes Farm	Any	Harm to protected site through toxic contamination, nutrient enrichment, smothering, disturbance, predation etc.	Any	Medium	Medium	Medium	Waste operations may cause harm to and deterioration of nature conservation sites.	Emissions of substances not controlled by emission limits (excluding odour and noise) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions. At 500 metres or above, the potential hazards from the permitted activities pose a low risk to the broad sensitivity of species and habitats groups. The standard permit only applies at this distance or more. It is also a requirement of SR. Also activities should not be within 250 metres with the presence of great crested newts, where it is linked to the breeding ponds of the newts by good habitat; or 50 metres of a site that has relevant species or habitats protected under the Biodiversity Action Plan that the Environment Agency considers at risk to this activity or 50 metres of a National Nature Reserve (NNR), Local	Low

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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.	Medium	Medium	Medium	Permitted wastes may attract scavenging animals and birds.	No waste will be brought on to site that contain scavengable content, with out first agreeing and implementing a pest control plan with the environment agency.	Low
As above.	Pests (e.g. flies).	Harm to human health, nuisance, loss of amenity.	Air transport and over land.	Medium	Medium	Medium	Insect pests can multiply on permitted wastes, particularly in summer months of when waste is odorous and attracts flies	Anaerobic conditions will be avoided, feedstock's mixed and processed within 5 days of reception. Rejection of infected material, temperatures will be raised to minimise pupa.	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	Medium	Medium	Waste types are non-hazardous and therefore should not be a high risk. Leachate may be high in BOD but may be diluted with flood water and therefore be low risk	permit -requires a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents,	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.	Medium	Medium	Medium	Permitted waste types are non-hazardous therefore only a medium magnitude risk is estimated.	activities shall be managed and operated in accordance with a management system (will include site security measures to prevent unauthorised access). Emergency contact details will be displayed at the site entrance. This would not necessarily be appropriate	Low

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Local human population and local environment. In c Dunkeswell woodland and Hutshayes Farm	Fire risk from stockpiles, 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, firefighters or arsonists/vandals. Pollution of air, water or land.	Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches.	Medium	Low	Low	Waste will be maintained with adequate moisture correction as per industry standard so that is is not readily combustible. Permitted waste types are organic and non-hazardous therefore only a low magnitude risk is estimated. All stockpiled material will be stabilised and will be monitored for increased temperatures. Action will be taken to reduce any temperatures. Maximum stockpiled material will be 5 metres in distinct windrows.	As above. management system (will include fire and spillages).	Low
Local human population and local environment. In c Dunkeswell woodland and Hutshayes Farm	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 firefighters. Pollution of water or land.	As above.	Low	Low	Low	As above	As above. Permitted activities do not include the burning of waste.	Low

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All surface waters close to and downstream of site.	Spillage of liquids, leachate from waste, contaminated rainwater run-off from waste with high organic content.	Acute effects; oxygen depletion, fish kill and algal blooms	Direct run-off from site across ground surface, via surface water drains, ditches etc.	High	Medium	High	There is a high potential for contaminated rainwater run-off from waste operations outside especially during heavy rain.	all operations must be more than 10 metres from a water course. all liquids in containersshall be provided with secondary containment.... Run-off restricted by permit on emissions of substances not controlled by emissions limits (exc. odour) shall not cause pollution, with appropriate measures may include controls to prevent over-filling of storage systems. Permitted waste types do not include sludges or liquids.	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.	High	Low	Medium	There is a high potential for contaminated rainwater run-off or leachate from waste operations outside. Consequence is low because pollution is likely to be detected quickly and effects are temporary and reversible.	As above	Low

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Abstraction from watercourse downstream of facility (for agricultural or potable use).	As above	Acute effects, closure of abstraction intakes.	Direct run-off from site across ground surface, via surface water drains, ditches etc. then abstraction.	High	Medium	High	There is a high potential for contaminated rainwater run-off from waste operations outside especially during heavy rain. Watercourse must have medium / high flow for abstraction to be permitted, which will dilute contamination so consequence is medium.	As above	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.	High	High	High	There is a high potential for contaminated rainwater run-off or leachate from waste operations outside. Consequence is high because pollution may continue for a long time before it is detected.	As above. permit - The activities shall not be carried out within a groundwater source protection zone 2, or if a source protection zone has not been defined then within 250 metres of any well, spring or borehole used for the supply of water for human consumption. This must include private water supplies.	Low
Local human population.	Contaminated waters used for recreational purposes	Harm to human health - skin damage or gastro-intestinal illness.	Direct contact or ingestion.	Medium	Medium	Medium	Unlikely to occur, but might restrict recreational use.	permit (emissions of substances not controlled by emission limits). permit (if required) - emissions management plan. Sanitisation temperatures will be reached to allow pasteurization of material.	Low

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Protected sites European sites and SSSIs protected species/habitats and other nature conservation sites.	Any	Harm to protected site through nutrient enrichment, leachate, contaminated surface water run off, smothering, disturbance or predation.	Any	Medium	Medium	Medium	Waste composting operations may cause harm to and deterioration of nature conservation sites.	Activities will not be carried out within 500m of a European Site or SSSI 250 metres of Great Crested Newts where it is linked to the breeding ponds of the newts by good habitat, 50 metres of a site that has relevant species or habitats protected under the Biodiversity Action Plan that the Environment Agency considers at risk to this activity., 50 metres of Local Nature Reserves(LNR), Local Wildlife Site (LWS), Ancient woodland or Scheduled Ancient Monument.	

Notes: Red triangle indicates comment containing supporting information
 Yellow columns contain drop down menus that allow automatic evaluation of risk in green column