

Generic risk assessment for standard rules set number SR2012 No7 v1.0

Standard Facility:	Waste Operation: Composting in Open Systems less than 75,000 tonnes per annum and no more than 75 tonnes per day
Location:	Applies to all potential locations.
Location of environmentally sensitive sites (km / m):	Greater than 500 metres (see below)
Risk assessment carried out by:	Environment Agency
Date:	15-Jan-13

The scope of the permit and associated rules is defined by the following risk criteria:

- Parameter 1 Permitted activities - The storage of waste prior to composting (R13) and composting including shredding etc. (R3)
- Parameter 2 Permitted waste types - Non-hazardous biodegradable waste, including non-treated wood, vegetable matter and animal manure (excluding catering waste and other wastes covered by the Animal By-Products Regulations 2011)
- Parameter 3 Quantity of waste accepted at the facility: less than 75,000 tonnes per annum.
- Parameter 4 All waste shall be stored and treated on an impermeable surface with sealed drainage system.
- Parameter 5 The only point source discharges to controlled waters are surface water from the roofs of buildings and from areas of the facility not used for the storage or treatment of wastes.
- Parameter 6 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.
- Parameter 7 The activities shall not be carried out within 250 metres of the nearest sensitive receptor.
- Parameter 8 The activities shall not be carried out within 500 metres of a European Site (candidate or Special Area of Conservation, proposed or Special Protection Area or Ramsar site) or a Site of Special Scientific Interest (SSSI).
- Parameter 9
- Parameter 10 SR - activities shall not be carried out within 250 metres of Great Crested Newts where it is linked to the breeding ponds of the newts by good habitat, 50 metres of a Local Nature Reserves(LNR), Local Wildlife Site (LWS), Ancient woodland or Scheduled Ancient Monument; 50 metres from BAP species/habitats

Data and information				Judgement				Action (by permitting)	
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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).

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Local human population.	Release of micro-organisms (bioaerosols).	Harm to human health - respiratory irritation and illness.	Air transport then inhalation, ingestion or inoculation.	High	High	High	Composting activities produce and release bioaerosols e.g. micro-organisms. There is potential for exposure if anyone living or working close to the site (excluding operator and employees).	SR - activities shall not be carried out within 250 metres of the nearest sensitive receptor. SR (emissions of substances not controlled by emission limits). SR (if required) - emissions management plan and risk assessment review.	Low
Local human population.	Releases of particulate matter (dusts).	As above.	Air transport then inhalation.	High	High	High	Permitted waste types do not include dusts, powders or loose fibres but composting produces and is likely to release particulates. There is potential for exposure if anyone living or working close to the site (excluding operator and employees).	As above	Low
Local human population.	As above.	Nuisance - dust on cars, clothing etc.	Air transport then deposition.	High	Low	Medium	As above	As above	Low

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Local human population.	Releases of particulate matter (dusts) and micro-organisms (bioaerosols).	Gastro-intestinal illness.	Air transport then deposition on garden fruit/vegetables and then ingestion.	Medium	Medium	Medium	Most dust will be washed off by rain or during food preparation for feedstocks. No loose powders and dusts are permitted. Waste moisture levels will be optimised.	As above	Very Low
Local and distant human population.	As above.	As above. Includes eating crops grown within 250 metres of the site.	Air transport then deposition on commercial/wild fruit/vegetables then ingestion.	Medium	Medium	Medium	As above. Proportion of diet from this source will be low.	SR (emissions of substances not controlled by emission limits). SR (if required) - emissions management plan.	Very low
Local human population, livestock and wildlife.	Litter	Nuisance, loss of amenity and harm to animal health.	Air transport then deposition.	Medium	Medium	Medium	Local residents often sensitive to litter.	As above. Appropriate measures could include clearing litter arising from the activities from affected areas outside the site.	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	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. Roads to be swept and damped down as necessary.	Low

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Local human population.	Odour	Nuisance, loss of amenity.	Air transport then inhalation.	High	High	High	Composting produces and is likely to release odour. There is potential for exposure if anyone living or working close to the site (excluding operator and employees). Local residents often sensitive to odour.	SR - activities shall not be carried out within 250 metres of the nearest sensitive receptor. SR - The storage, physical treatment and composting of wastes under anaerobic conditions shall be prevented. SR - emissions shall be free from odour at levels.... SR requires an odour management plan including appropriate measure to reduce odour problems eg. minimising storage times prior to processing, contingency arrangements for smelly wastes delivered to site.	Low
Local human population.	Noise and vibration.	Nuisance, loss of amenity, loss of sleep or harm.	Noise through the air and vibration through the ground.	Medium	Medium	Medium	Local residents often sensitive to noise and vibration.	SR - emissions shall be free from noise and vibration and a noise and vibration management plan will be documented and revised as required.	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.	SR - activities shall not be carried out within 250 metres of the nearest sensitive receptor. SR - emissions of substances not controlled by emission limits. SR (if required) - emissions management plan and risk assessment review. Appropriate measures for waste operations as set out in "How to comply with your environmental permit" SR requires each composting batch to undergo sanitisation	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	SR -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).	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.	Medium	Medium	Medium	Permitted waste types are non-hazardous therefore only a medium magnitude risk is estimated.	SR - 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 for composting on private farms.	Low
Local human population and local environment.	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 runoff 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 it 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. SR - management system (will include fire and spillages).	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 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.	SR- all operations must be more than 10 metres from a water course. SR - all liquids in containersshall be provided with secondary containment.... Run-off restricted by SR 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. SR - 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

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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.	SR (emissions of substances not controlled by emission limits). SR (if required) - emissions management plan. Sanitisation temperatures will be reached to allow pasteurization of material.	Low
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.	SR - activities shall 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.	Low

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