

Standard rules SR2008No16 - composting in open systems

Introductory note

This introductory note does not form part of these standard rules.

When referred to in an environmental permit, these rules will allow the operator to operate a composting facility at a specified location, provided that the permitted activities are not carried out within 500 metres of a European Site¹, Ramsar site or a Site of Special Scientific Interest (SSSI); 250 metres of the presence of Great Crested Newts where it is linked to the breeding ponds of the newts by good habitat; 50 metres of National Nature Reserves (NNR), Local Nature Reserves (LNR), Local Wildlife Site (LWS), Ancient woodland or Scheduled Ancient Monument or 50 metres of BAP species/habitats.

The activities shall not be carried out within Groundwater Source Protection Zone 1 or 2 or if a Source Protection Zone has not been defined then within 250m of any well, spring or borehole used for the supply of water for human consumption, this must include Private Water Supplies. Furthermore, the storage, physical treatment and composting of wastes must be at least 250 metres away from the nearest sensitive receptor (typically a dwelling or workplace).

Permitted wastes include green wastes and animal manures but do not include any catering waste and animal wastes that are covered by the Animal By-Products Regulations². The total quantity of waste that can be accepted at a site under these rules must be less than 75,000 tonnes a year. These rules apply to facilities where the sanitisation stage of composting is carried out in open systems such as outdoor, turned windrows or aerated static piles. Composting can only be carried out under predominantly aerobic conditions in windrows located either indoors or outdoors; it cannot be carried out under deliberately anaerobic conditions. These rules will also not permit the burning of any wastes, either in the open, inside buildings or in any form of incinerator.

These rules do not allow any point source emission into surface waters or groundwater. However, under the emissions of substances not controlled by emission limits rule:

- Liquids may be discharged into a sewer subject to a consent issued by the local water company.
- Liquids may be taken off-site in a tanker for disposal or recovery.
- Clean surface water from roofs, or from areas of the site that are not being used in connection with storing and treating waste, may be discharged directly to surface waters, or to groundwater by seepage through the soil via a soakaway.

End of introductory note

¹ A candidate or Special Area of Conservation (cSAC or SAC) and proposed or Special Protection Area (pSPA or SPA) in England and Wales.

² The Animal By-Products Enforcement) (England) Regulations 2011 (SI 2011 No.881)and The Animal By-Products (Enforcement) (Wales) Regulations 2011 (SI 2011 No.600 W.88)

Rules

1 – Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with rule 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in these standard rules shall have convenient access to a copy of them kept at or near the place where those duties are carried out.

1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Avoidance, recovery and disposal of wastes produced by the activities

1.2.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
- (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.2.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 – Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in table 2.1 below ("the activities").

Table 2.1 activities	
Description of activities	Limits of activities
R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	Secure storage of wastes listed in table 2.2. Physical treatment and composting including sanitation and stabilisation of the types of waste listed in table 2.2.
R3: Recycling/reclamation of organic substances which are not used as solvents	

2.2 Waste acceptance

2.2.1 Waste shall only be accepted if:

- (a) it is of a type and quantity listed in table 2.2 below; and
- (b) it conforms to the description in the documentation supplied by the producer and holder.

Table 2.2. Waste types and quantities	
Maximum Quantities	
The total quantity of waste accepted at the site shall be less than 75,000 tonnes a year.	
Exclusions	
Wastes having any of the following characteristics shall not be accepted:	
<ul style="list-style-type: none"> • Consisting solely or mainly of dusts (except sawdust),, powders or loose fibres • Catering waste and other wastes containing animal by-products covered by the Animal By-Products Regulations (except waste code 02 01 06 below). • Wastes that are in a form which is liquid • Hazardous wastes • Wastes containing treated wood • Wastes containing wood-preserving agents or other biocides • Wastes containing persistent organic pollutants • Wastes containing Japanese Knotweed 	
Waste Code	Description
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 03	plant-tissue waste
02 01 06	animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site (consisting of animal faeces, urine and manure only and excluding non-biodegradable bedding)
02 01 07	wastes from forestry (consisting of biodegradable waste only)
02 01 99	wastes not otherwise specified (consisting of spent mushroom compost only)
02 03	wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 04	materials unsuitable for consumption or processing (consisting of biodegradable waste only)
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials (consisting of spent grains or hops only)
02 07 02	wastes from spirits distillation (consisting of whisky filter sheets or cloths only)
02 07 04	material unsuitable for consumption or processing (consisting of biodegradable waste only)
02 07 99	wastes not otherwise specified (consisting of malt husks, malt sprouts, yeast and yeast-like residues only)
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 01	wastes from wood processing and the production of panels and furniture
03 01 01	waste bark and cork
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04 (consisting of sawdust, shavings, cuttings, wood and particle board only)
03 03	wastes from pulp, paper and cardboard production and processing
03 03 01	waste bark and wood

03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation (consisting of fibre rejects only)
04	WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES
04 02	waste from the textile industry
04 02 10	organic matter from natural products (for example grease, wax) (consisting of un-dyed and untreated matter only)
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging (excluding veneers or plastic coatings).
15 01 03	wooden packaging (consisting of untreated packaging only)
15 01 05	composite packaging (consisting of biodegradable organic packaging only)
15 01 09	textile packaging (consisting of biodegradable fibres only)
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 02	wood, glass and plastic
17 02 01	wood (consisting of untreated wood only)
17 05	soils (excluding excavated soils from contaminated sites), stones and dredging spoil
17 05 06	dredging spoil other than those mentioned in 17 05 05 (consisting of dewatered spoil from inland waters only)
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE
19 05	wastes from the aerobic treatment of solid wastes
19 05 03	off-specification compost (only from a process operated according to PAS 100 and QP requirements, Waste Exemption T23 or another approved standard)
19 08	waste from waste water treatment plants
19 08 05	sludges from treatment of urban waste water
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard (excluding veneers or plastic coatings)
19 12 07	wood other than that mentioned in 19 12 06
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions (except 15 01)
20 01 01	paper and cardboard (excluding veneers or plastic coatings)
20 01 38	wood other than that mentioned in 20 01 37
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste (consisting of plant matter only)
20 03	other municipal wastes
20 03 02	waste from markets (consisting of biodegradable waste only)

2.3 Operating techniques

2.3.1 The activities shall be operated using the techniques and in the manner described in Table 2.3 below.

Table 2.3 Operating techniques

1. The storage, physical treatment and composting of wastes shall take place on an impermeable surface with sealed drainage system
2. Each composting batch shall undergo an identifiable sanitisation and stabilisation stage.
3. The storage, physical treatment and composting of wastes under anaerobic conditions shall be prevented.

2.4 The site

2.4.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan attached to the permit.

2.4.2 The activities shall not be carried out within:

- (a) 500 metres European Site or Site of Special Scientific Interest (SSSI);
- (b) a Groundwater Source Protection Zone 1 or 2 or if a Source Protection Zone has not been defined then within 250m of any well, spring or borehole used for the supply of water for human consumption. This must include Private Water Supplies;
- (c) 50 metres of the nearest sensitive receptor.
- (d) 250 metres of the presence of great crested newts, where it is linked to the breeding ponds of the newts by good habitat.
- (e) 50 metres of a site that has relevant species or habitats protected under the Biodiversity Action Plan that Natural Resources Wales considers at risk to this activity
- (f) 50 metres of a National Nature Reserve (NNR), Local Nature Reserves (LNR), Local Wildlife Site (LWS), Ancient woodland or Scheduled Ancient Monument.

3 – Emissions and monitoring

3.1 Emissions of substances not controlled by emission limits

3.1.1 Emissions of substances not controlled by emission limits (excluding odour) 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 Table 3.1 below and in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

Table 3.1 Appropriate measures for emissions not controlled by emission limits

Measures
1. The storage, physical treatment, composting and maturation of wastes shall take place in a well-ventilated building on an impermeable surface with sealed drainage system, or outdoors on an impermeable surface with sealed drainage system.
2. The storage, physical treatment, composting and maturation of wastes shall not take place in any form of enclosed reactor vessel.
3. The storage, physical treatment, composting and maturation of wastes under anaerobic conditions shall be prevented, or where that is not practicable, minimised.

3.1.2 The operator shall:

- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan;
- (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.1.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.2 Odour

3.2.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has

used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable, to minimise, the odour.

3.2.2 The operator shall:

- (a) maintain and implement an odour management plan;
- (b) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the specified period, a revised odour management plan;
- (c) implement any approved revised odour management plan from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.3 Noise and vibration

3.3.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan, to prevent or where that is not practicable, to minimise, the noise and vibration.

3.3.2 The operator shall:

- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.4 Monitoring

3.4.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake monitoring for the parameters, at the locations and at not less than the frequencies specified in table 3.4

3.4.2 The operator shall maintain records of all monitoring required by these standard rules including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

Table 3.4 Activities - Monitoring requirements				
Monitoring point	Substance or parameter	Monitoring frequency	Monitoring method	Other specifications
Internal for each composting batch during sanitisation and stabilisation stage	Temperature	At least daily during sanitisation, at least weekly during stabilisation stage	Temperature probe	Monitoring equipment shall be available on-site and used as required to maintain aerobic conditions and ensure compliance with these standard rules. Equipment shall be calibrated on a 4 monthly basis or as agreed in writing by Natural Resources Wales
	Moisture	None specified	Not specified	

4 – Information

4.1 Records

4.1.1 All records required to be made by these standard rules shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible or are capable of retrieval; and
- (d) be retained, unless otherwise agreed by Natural Resources Wales, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by these standard rules, unless otherwise agreed in writing by Natural Resources Wales.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by these standard rules to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.

4.2.2 Within one month of the end of each quarter, the operator shall submit to Natural Resources Wales using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.3 Notifications

4.3.1 Natural Resources Wales shall be notified without delay following the detection of:

- (a) any malfunction, breakdown or failure of equipment or techniques, accident or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
- (b) the breach of a limit specified in these standard rules; or
- (c) any significant adverse environmental effects.

4.3.2 Written confirmation of actual or potential pollution incidents and breaches of emission limits shall be submitted within 24 hours.

4.3.3 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.

4.3.4 Natural Resources Wales shall be notified within 14 days of the occurrence of the following matters except where such disclosure is prohibited by Stock Exchange rules:

- a) Where the operator is a registered company:
 - any change in the operator's trading name, registered name or registered office address; and
 - any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

- b) Where the operator is a corporate body other than a registered company:
 - any change in the operator's name or address; and
 - any steps taken with a view to the dissolution of the operator.
- c) In any other case:
 - the death of any of the named operators (where the operator consists of more than one named individual);
 - any change in the operator's name(s) or address(es); and
 - any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case them being in a partnership, dissolving the partnership.

4.4 Interpretation

- 4.4.1 In these standard rules the expressions listed below shall have the meaning given.
- 4.4.2 In these standard rules references to reports and notifications mean written reports and notifications, except when reference is being made to notification being made "without delay", in which case it may be provided by telephone.

"accident" means an accident that may result in pollution.

"Annex II" means Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

"authorised officer" means any person authorised by Natural Resources Wales under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in Section 108(4) of that Act.

"BAP" means Biodiversity Action Plan. This is a non-statutory plan created by the UK Biodiversity Partnership and the UK Government, in response to the Convention on Biological Diversity (CBD) signed in 1992. It describes the UK's biological resources, and commits a detailed plan for the protection of these resources.

"building" means a construction that has the objective of providing sheltering cover and minimising emissions of noise, particulate matter, odour and litter.

"compost" means a solid particulate material that is the result of composting, which has been *sanitised* and *stabilised*, and which confers beneficial effects when added to soil, used as a component of growing media or used in another way in conjunction with plants.

"composting" means the managed biological decomposition of biodegradable waste, under conditions that are predominantly aerobic and that allow the development of thermophilic temperatures as a result of biologically produced heat and that result in compost.

"composting batch" means an identifiable quantity of material that progresses through the composting system and when fully processed has similar characteristics throughout. For composting systems that operate on a continuous- or plug-flow basis, batches will be taken to mean a series of "portions of production".

"emissions of substances not controlled by emission limits" means emissions of substances to air, water or land from the activities, either from emission points specified in these standard rules or from other localised or diffuse sources, which are not controlled by an emission limit.

"European Site" means Special Area of Conservation or candidate Special Area of Conservation or Special Protection Area or proposed Special Protection Area in England and Wales, within the meaning of Council Directives 79/409/EEC on the conservation of wild birds and 92/43/EEC on the conservation of natural

habitats and of wild flora and fauna and the Conservation (Natural Habitats &c) Regulations 1994. Internationally designated Ramsar sites are dealt with in the same way as European sites as a matter of government policy and for the purpose of these rules will be considered as a European Site.

“*good habitat*” means rough (especially tussocky) grassland, scrub and woodland.

“*groundwater*” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“*groundwater source protection zones 1 and 2*” has the meaning given in the document titled "Groundwater Protection: Policy and Practice" published by the Environment Agency in 2006.

“*impermeable surface*” means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface, and should be read in conjunction with the term “sealed drainage system” (below).

“*Natural Resources Wales*” means the Natural Resources Body for Wales established by article 3 of the Natural Resources Body for Wales (Establishment) Order 2012. The Natural Resources Body for Wales (Functions) Order 2013 transferred the relevant functions of the Countryside Council for Wales, and functions of the Environment Agency and the Forestry Commission in Wales to the Natural Resources Body for Wales.

“*nearest sensitive receptor*” means the nearest place to the composting operations where people are likely to be for prolonged or frequent periods. This term would therefore apply to dwellings (including any associated gardens) and to workplaces where workers would frequently be present. It does not apply to the operators of composting facilities or their staff while carrying out the composting operation as their health is covered by Health and Safety legislation.

“*pollution*” means emissions as a result of human activity which may—

- (a) be harmful to human health or the quality of the environment,
- (b) cause offence to a human sense,
- (c) result in damage to material property, or
- (d) impair or interfere with amenities and other legitimate uses of the environment.

“*quarter*” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“*R*” means a recovery operation provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“*sanitisation*” means the actively managed and intensive stage of composting, characterised by high oxygen demand and temperatures of between 55 -70 °C for a period of at least 7 days. It relies on biological processes that together with conditions in the composting mass eradicate human and animal pathogens or reduce them to acceptably low, sanitary levels.

“*sealed drainage system*” in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

- (a) no liquid will run off the surface otherwise than via the system;
- (b) except where they may lawfully be discharged to foul sewer, all liquids entering the system are collected in a sealed sump.

“*SSSI*” means Site of Special Scientific Interest within the meaning of the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000).

“*stable, stabilized*” means the degree of processing and biodegradation at which the rate of biological activity has slowed to an acceptably low and consistent level and will not significantly increase under favourable, altered conditions

“stabilization stage” means the stage of composting following sanitization, during which biological processes, together with conditions in the composting mass, give rise to compost that is nominally stable

“treated wood” is any wood that has been chemically treated (e.g. to enhance or alter the performance of the original wood). Treatments may include penetrating oils, tar oil preservatives, waterborne preservatives, organic-based preservatives, boron and organo-metallic based preservatives, boron and halogenated flame retardants and surface treatments (including paint and veneer).

“Waste code” means the six digit code referable to a type of waste in accordance with the list of wastes established by Commission Decision 2000/532/EC as amended from time to time (the ‘List of Wastes Decision’) and in relation to hazardous waste, includes the asterisk.

“year” means calendar year commencing on 1st January.

End of standard rules