

Environment Agency Policy

Our position on composting and potential health effects from bioaerosols

Policy number: 405_07

Policy statement: (please also read the explanatory notes below)

We will take into account the potential effects of bioaerosols^a on human health when authorising new waste composting^b facilities or changes to existing facilities. To do this, applicants will have to provide us with a site-specific bioaerosol risk assessment if there is a workplace^c or dwelling^d within 250 metres of the composting site boundary^e when they apply:

1. for a waste management licence^f or a pollution prevention and control permit^g for a new composting facility
2. to register an exempt composting facility^h
3. to modify a waste management licence or vary a pollution prevention and control permit for an existing composting facility where
 - any relevant control measures in the existing bioaerosol risk assessment will be changed
 - there is no existing bioaerosol risk assessment
 - the existing bioaerosol risk assessment is inadequate
 - the waste types or quantities are to be changed

The assessment must be based on clear scientific evidence and show that bioaerosols can and will be maintained at appropriate levelsⁱ at any workplace or boundary of a dwelling.

Where we consider that such a risk assessment is necessary and it is either missing or inadequate, we may refuse to grant the new licence or permit, vary the existing permit/modify the existing licence or register the facility as exempt.

This policy only covers the risks posed by bioaerosols on human health. Other risk assessments may be needed to cover, for example, the effects of bioaerosols on animal health.

Objectives:

- 1) To meet the relevant objectives as laid down by Article 4 of the Waste Framework Directive¹. This states that: Member States shall take the necessary measures to ensure that waste is disposed of without endangering human health and without harming the environment and, in particular:
 - without risk to water, air, soil and plants and animals,
 - without causing a nuisance through noise or odours
 - without adversely affecting the countryside or places of special interest.
- 2) To impose a level of regulation that is proportionate to the level of risk to the environment associated with that activity.

Primary Contact: Viv Dennis

Policy Author: Mark Okuniewski and Viv Dennis

Policy Sponsor: Liz Parkes

Signature of authorisation by Policy Sponsor (as set out in Schedule B of the NFSoD):



Version: 2

Date: 23 Oct 2007

Available from:

http://intranet.ea.gov/ams_document_library/icon tent/DocDir07/compo2.doc

Title	Our position on composting and potential health effects from bioaerosols				
No.	405_07	Status:	Version 2	Issue Date:	29/11/2007
					Page 1 of 5

If you have any queries on the content of this document or suggestions for improvement, refer to the Primary Contact named above.

If any term or acronym used in this document is unfamiliar you might find the definition in the Glossary on Easinet: Information Resources > [Glossary of Terms and Acronyms](#).

Title	Our position on composting and potential health effects from bioaerosols				
No.	405_07	Status:	Version 2	Issue Date:	29/11/2007
					Page 2 of 5

Explanatory Note

Our position on composting and potential health effects from bioaerosols

Policy number: 405_07

Background

This policy replaces the document “Agency Position on Composting and Health Effects”, dated 13 August 2001, which set out our position on permitting waste composting facilities. That document highlighted:

- the need for a site-specific bioaerosol risk assessment to accompany applications for any proposed new or modified composting facilities within 250m of dwellings or workplaces
- that there would be a presumption against permitting (and to object to any planning application) unless this risk assessment showed that bioaerosol levels would be maintained at appropriate levels at the dwelling or workplace

The need for the position statement arose from research published by the then DETR² and us³ which highlighted the potential risk to people’s health of bioaerosols produced during composting.

The original Position Statement referred to further research that would be needed to identify control measures that may allow operations within 250metres of the boundary of a dwelling or workplace. Research has continued since 2001 and we’ve published interim internal guidance on an environmental risk management framework for composting facilities⁴. We intend to publish the research and produce further guidance on risk assessment for external use.

This policy statement does not apply to operators of composting facilities or their staff as their health is covered by Health and Safety legislation. If a the only dwelling within the 250 metres is occupied by the operator then this policy statement will not apply unless the dwelling is visited by members of the public, such as if it is used as a bed and breakfast.

We’ve removed the reference to planning applications in this policy statement.

Definitions

a. Bioaerosols are microscopic, airborne particles including bacteria, fungal spores, protozoa and organic constituents of microbial and fungal origin.

b. Composting means the biological decomposition of organic materials, under conditions that are predominantly aerobic, and that allow the development of thermophilic temperatures as a result of biologically produced heat. It does not include Mechanical Biological Treatment (MBT) processes except where composting activities are also carried out at the same site. For licensing or permitting MBT plants, use the [378_05 Guidance on Environmental Controls for Mechanical Biological Treatment](#).

c. A workplace is defined as where workers would frequently be present. This should be the boundary of land under the ownership of the business unless it is confirmed that any land within that ownership is not, and is never, going to be used by workers except for short periods of time, for example for maintenance work, animal husbandry.

d. Dwelling includes the boundary of the garden of the domestic property. This does not include any land such as a paddock or field in the same ownership of the domestic property.

Title	Our position on composting and potential health effects from bioaerosols				
No.	405_07	Status:	Version 2	Issue Date:	29/11/2007
					Page 3 of 5

e. Composting site boundary. The bioaerosol risk assessment or application should include a plan of the composting facility showing the boundary of the permitted, licensed or exempt area. We will treat this as the composting site boundary unless there is a defined area within this where waste storage, processing and other waste handling operations are to take place. If this is the case, we will treat the boundary of this smaller defined area as the composting site boundary. In all cases, we will expect the composting site boundary to be physically identifiable on the ground once composting operations start.

f. Waste Management Licence as defined in the Environmental Protection Act 1990.

g. Pollution Prevention and Control Permit as defined in the Pollution, Prevention and Control Regulations 2000.

h. Exempt composting facility as specified under paragraph 12 schedule 3 of the Waste Management Licensing Regulations 1994, as amended. This exemption is under review by Defra.

i. Appropriate levels are defined as bioaerosol levels not exceeding:

- i) those before the start of the composting process or
- ii) bioaerosols levels no greater than 1,000 colony forming units (cfu) m⁻³ total bacteria, 1,000 cfu m⁻³ total fungi and 300 cfu m⁻³ gram-negative bacteria

There may be other activities close by that are producing bioaerosols that mean background levels are higher than we'd normally expect. This should not prevent the siting of a composting facility if it doesn't present an increased risk. We can't say at present what levels of bioaerosols present a health risk, so that's why we've adopted the precautionary approach to background levels. Research on dose response is underway.

Desired outcomes

- No new composting sites, or new processes at existing composting sites, that we regulate present a health risk to people living or working nearby.




Audience

- Policy, process and operational staff.
- Government and other bodies responsible for protecting public health.
- Those we regulate, and the general public.

References

- 1) Council Directive on Waste, 2006/12/EC
- 2) Health Effects of Composting - A study of three composting sites and review of past data, AEAT, 2001.
- 3) Monitoring the Environmental Impact of Waste Composting Plants R & D Technical Report P428, 2001.
- 4) [An Environmental Risk Management Framework for Composting Facilities in England and Wales](#); Environment Agency guidance dated October 2004.

Title	Our position on composting and potential health effects from bioaerosols				
No.	405_07	Status:	Version 2	Issue Date:	29/11/2007
					Page 4 of 5

Policy Implementation Plan																
Policy number: 405_07 Our position on composting and potential health effects of bioaerosols																
1. Who are the target audiences, and do they require awareness, training or education?	Our staff who process (Pollution Prevention and Control) PPC Permit or Waste Management Licence applications. Officers responsible for registration of exemptions from Waste Management Licensing, specifically para 12, schedule 3, Waste Management Licensing Regulations 1994. Awareness, training or education.															
2. What do they need to know?	Awareness of what the policy says, training and education on bio-aerosols on risk assessment of bio-aerosols.															
3. When do they need to know it?	From when this policy takes effect.															
4. How will they be told?	A targeted training day															
5. Who will tell them?	Process, Policy and expert from Science Group															
6. Monitoring progress Method(s): Success criteria: Date(s) undertaken: Comments:	Audit of permits, licences issued and exemptions registered within 12 months of the implementation date of policy. All permits, licences and exemptions checked have a risk assessment that satisfies the risk assessment guidance.															
7. Authorisation	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"></td> <td style="text-align: center;">Policy Sponsor</td> <td style="text-align: center;">Chair Approval Body</td> </tr> <tr> <td>Sign:</td> <td style="text-align: center;"></td> <td></td> </tr> <tr> <td>Name:</td> <td colspan="2">Liz Parkes</td> </tr> <tr> <td>Title:</td> <td colspan="2">Head of Waste</td> </tr> <tr> <td>Date:</td> <td colspan="2">23 Oct 2007</td> </tr> </table>		Policy Sponsor	Chair Approval Body	Sign:			Name:	Liz Parkes		Title:	Head of Waste		Date:	23 Oct 2007	
	Policy Sponsor	Chair Approval Body														
Sign:																
Name:	Liz Parkes															
Title:	Head of Waste															
Date:	23 Oct 2007															
8. Review Due	01/03/2009															