

## Composting case study

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### ABSTRACT

Garden waste delivered by the public to a recycling centre is stockpiled, shredded and delivered to the on-farm composting site. The material is forced, together with aeration pipes into 60 metre long EcoPods using specialist machinery. The temperatures achieved during the composting process are fully monitored and controlled using a forced aeration system. The composting site operates under a waste management licence exemption and has temporary planning approval. Concerns raised about the site include increased heavy traffic, leachate, noise nuisance, birds and vermin, odours, dust and bio-aerosols harmful to health. Local residents remain intolerant of the composting system. The planning authority acknowledge that current legislation can be a barrier to the development of large scale composting operations.

*Keywords: on-farm composting, organic production, legislation*

### INTRODUCTION

A one-year pilot study has been established to investigate the opportunities and challenges of development of an on-farm composting system. The main objectives are to

- highlight where planning and licensing regulations impinge on the development of on-farm composting
- raise awareness of composting and educate a wide range of interest groups
- demonstrate how garden waste can be transformed into a useful product for application to organic farmland.

Garden waste is delivered by the public to a recycling centre and placed in a dedicated skip. The shredded material is stockpiled and shredded before delivery to the composting site where it is forced into 60 metre long EcoPods together with aeration pipes. The temperatures achieved during composting are fully monitored and the forced aeration system adjusted to control heat generation and maintain optimum conditions within the system.

### LEGISLATION

The use of non-organic plant wastes on organic land is restricted under organic farming standards (UKROFS 2001). Soil Association approval to apply the compost to organic land was required. A waste management licence exemption to compost biodegradable waste was granted by the Environment Agency. A planning application for an on-farm composting site, previously used for storage

of brought in non-organic manure raised a number of issues. The County Highways department required detail of size and weight of vehicles, average and peak vehicle movements and type of plant and machinery used. The County Acoustics Engineer was concerned about potential noise nuisance from plant and machinery. The Environment Agency was concerned about ground water contamination from leachate and the creation of bio-aerosols during handling and turning of the compost. English Nature required assurance that the spread of noxious weeds such as Japanese knotweed would not occur. Local residents concerned about increased traffic, noise, dust, odour, vermin, unsightly rubbish and fly tipping objected to the planning application. Actions taken to address these issues included

- a water interest survey to ensure that there were no potable water supplies in the vicinity lying down gradient of the site
- a noise impact assessment to compare day and night time background noise levels with those when plant and machinery were operational
- transportation of only shredded material to the site to comply with noise level restrictions, to reduce bulk and minimise traffic movements
- selection of a contained composting system
- restrict composting activity on the site to filling and emptying EcoPods

Temporary planning approval was granted for one year from the start of the composting operation.

## **PROJECT OUTCOMES**

The project has provided a valuable opportunity to disseminate information and raise awareness about on-farm composting amongst farmers and other interest groups. It also facilitated dialogue and information exchange with Local and County planning and waste management teams who acknowledge that current legislation is a barrier to the development of composting operations. Local residents are intolerant of the composting system even though it is less disruptive than many unrestricted farm activities. In this particular on-farm situation there was no alternative to a contained composting system. If this becomes commonplace, the costs involved might prevent farmer involvement in composting and diminish the role of agriculture in reducing landfill of biodegradable waste in the UK. Nevertheless, Duchy College and Kerrier District Council are committed to continue development of on-farm composting and educational input.

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## **REFERENCES**

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