



DCO Submission

Environmental Statement

**Chapter 4:** Air Quality and Odour  
**Appendix 4.6:** Outline Odour Management Plan

Document 6.4F

On behalf of  
**Oxfordshire Railfreight Limited**

Prepared by Phlorum  
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## Appendix 4.6: Outline Odour Management Plan

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### Introduction

The purpose of this outline OMP is to indicate appropriate measures that would be taken to help assess, reduce and manage odour emissions arising from the excavation and reprofiling of parts of the landfill. The purpose of any measures proposed is to protect the quality of the environment where odorous releases from the excavation of capped wastes might cause adverse effects on public health and wellbeing. This is in line with the Environment Agency's guidance on managing odours as part of an Environmental Permit<sup>1</sup>.

A detailed OMP will be produced once a detailed method statement for the excavation works has been produced, which is anticipated to be when a contractor has been appointed to undertake the excavation and landfill reprofiling works. A detailed OMP will be required as part of a future phase-specific CEMP.

As such, the principal purpose of this outline OMP is to demonstrate that suitable measures and methods are available that can be employed to effectively manage any odour emissions from the reprofiling works such that their impacts will not be significant. Such measures are routinely used as part of industry best practice to limit odorous emissions from the operation of large landfill sites in England, under the requirements of their Environmental Permits. Guidance from the IAQM on the assessment of odour for planning<sup>2</sup> also states that *"It is recognised that at the planning application stage, some of the detailed design features of the proposed development scheme may not yet be available"* and, as such, *"planning authorities should work on the assumption that such pollution control regimes will operate effectively [i.e. that an appropriate OMP will be implemented effectively]"*.

The objectives of OMPs are to:

- 🌱 Identify potential odour sources;
- 🌱 Assess the risk to receptors that might be affected;
- 🌱 Design and implement working methods to prevent or minimise odour risks;
- 🌱 Where risks remain, put in place mitigation measures to abate odour emissions;
- 🌱 Promptly and effectively respond to any odour incidents or abnormal operating conditions;

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1 Environment Agency (2025). *Odour management : comply with your environmental permit*. Available from: <https://www.gov.uk/guidance/odour-management-comply-with-your-environment-permit>

2 Institute of Air Quality Management (2018). *Guidance on the assessment of odour for planning*.

- Carry out regular audits, inspections and monitoring;
- Maintain effective communication with regulators and local communities that might be affected by odours; and
- Regularly review the OMP so that it remains effective, and any necessary changes are implemented as soon as practically possible.

## Odour Risk Assessment

As a standalone document to comply with an Environmental Permit, an OMP should describe the context of the odour risk in line with the source→pathway→receptor conceptual model of environmental pollution impact. These elements are discussed in **ES Chapter 4: Air Quality and Odour**.

In summary, for the Proposed Development the odour source is buried wastes at the capped landfill, which will be exposed, relocated and laid down at the site before being covered with appropriate final capping materials. Fugitive odours will therefore likely comprise gases and volatile particulates from decomposed organic wastes. The pathway will be the distance between the landfill sources and nearby receptor locations, combined with the time period over which the wastes will be exposed. The sensitive receptors are residential properties within approximately 1,200m of the site, which is the maximum distance considered in the odour risk assessment (albeit that the assessment has indicated that the maximum distance where significant odour impacts could occur is around 500m). The nearby Valencia Waste Management Facility offices could also be sensitive to increased odour, subject to the prevailing wind direction.

It is currently proposed that the reprofiling of capped wastes will be undertaken sequentially, with parcels of land that are as small as practically possible being worked at any one time (each parcel would typically be around 150m by 150m in area). This will minimise the size/surface area of the odour sources. As each parcel is completed, it will be covered with cover materials before the next parcel is worked on.

In a similar vein, the laydown areas where the excavated wastes will be redeposited will also be covered in a sequential pattern as the land profiles are reached from the tipping of wastes and capping materials.

As the majority of odours are expected to be released when odorous wastes are mechanically disturbed, the most odorous activities will likely be the excavation of the wastes, the loading of the wastes onto dumpers, and the dumping of the wastes at the laydown areas. It is expected that odours from exposed but undisturbed or settled wastes, including wastes loaded and transported in dumper skips, will be less significant.

## Odour Control Measures

The general principles of odour management and control follow the risk hierarchy of: prevention; containment; abatement/mitigation; and effective management of the process.

To make way for the Proposed Development, relocation and reprofiling of part of the capped landfill has been determined to be the most suitable construction option. No tenable alternative methods have been identified, and hence prevention of the proposed works is not an appropriate odour control measure.

In terms of containment of odours from the relocation of capped wastes, the principal control method is to work exposed and disturbed areas of odorous wastes in areas that are as small as practicably possible and that will be covered with capping materials as soon as practicably possible. After this, the next level of control is the application of appropriate mitigation measures.

The treatment of waste by landfilling is a method of waste management that has been used in the UK for more than 150 years. Odour control measures on modern landfill sites are thus well-developed and are proven to work. The active management of odours in response to changing operational conditions, such as where active cells are located, and weather conditions (such as wind speeds and direction), ground conditions and temperature (wet and warm conditions being conducive to organic waste decomposition and odour generation) mean that mitigation measures can usually be quickly and proactively employed (and/or reactively, depending on the risk identified or impact caused).

Appropriate mitigation measures that will likely form part of the detailed OMP for the excavation and reprofiling works include the following:

- 🌿 Segregation of particularly odorous wastes if any hotspots of such are uncovered during excavation of worked areas;
- 🌿 Use of daily cover materials to contain odorous wastes at the end of each working day (the effect of daily cover on odour emissions has been included in the modelling assessment);
- 🌿 Odour-producing activities to be restricted to the hours of 08:00 and 18:00 to reduce periods when elevated odours might occur;
- 🌿 Use of temporary geo-textile sheeting to cover exposed stockpiles of particularly odorous wastes and some exposed wastes – or to replace daily cover where it is considered a more effective containment measure;
- 🌿 Where practical, managing the programme so that exposed wastes of greatest risk are handled at times when their impact on receptors will be minimised (e.g. by scheduling works in higher risk areas early in the morning or in colder weather when impacts or emissions will likely be reduced);

- Capping exposed areas of waste with final cover materials as soon as is practicably possible; and
- Use of localised mobile suppression systems (cannons or booms) to direct the spraying of water mists to suppress odours emitted from disturbed wastes where reprofiling is taking place (odour neutralising or masking agents to be used when and if necessary).

## Proactive Management of the Proposed Works

The final level of the risk hierarchy is to ensure that management practices are effectively designed and implemented so that potential odour impacts are identified before they cause offsite problems, or that when they occur, they are dealt with as soon as possible afterwards.

Effective management and execution of the detailed OMP will require there to be regular monitoring of odours and site practices, and for there to be appropriate responses to any odour issues identified.

Odour monitoring, secured through the detailed OMP, is likely to include:

- Daily site walkovers by trained staff to ensure good operational practices are maintained and that potential odour issues are identified quickly; and
- Regular boundary sniff testing, which will be stepped up in higher risk conditions (e.g. during warm weather when the wind is blowing towards sensitive receptors).

There will also be a defined complaints procedure, which will allow complaints to be received and acted upon. This procedure will include the following:

- Clear information on how to complain being made available to the general public (e.g. ensuring contact details are clearly displayed at or close to the site, or online via any project related web-pages);
- Production of an easily accessible form for complaints that will contain information on the date and time of the issue, the receptor location and the nature and duration of the issue (e.g. weather details, site activities at the time etc.); and
- Clear responsibility and lines of communication established so that the appropriate people receive the complaint as soon as possible and then promptly investigate it and take suitable mitigation action, if necessary.

In addition to responding to complaints, there could be other, unexpected or abnormal operating conditions that might require contingency measures to abate them. These could include the following:

- Encountering highly odorous wastes unexpectedly – e.g. hotspots of odorous wastes being uncovered during the reprofiling works;

- ❖ Failure of covering or abatement measures – e.g. insufficient cover materials being used or geotextile sheeting being accidentally ripped or torn; and
- ❖ Prolonged adverse weather conditions – e.g. extreme wet weather causing wastes to be inadvertently spread in muddy vehicle tracks and wheels, or prolonged warm weather increasing biological decomposition of wastes.

Rapid responses to complaints or unexpected conditions could include the following contingency measures:

- ❖ Immediate re-covering of exposed odorous waste hotspots, where practical;
- ❖ Temporary cessation of odour generating works (e.g. stopping excavation or dumping of waste materials); and
- ❖ Deployment of additional odour suppression measures (e.g. using additional suppression mist systems with neutralisers or masking agents).

In order to maintain the relevance and effectiveness of the detailed OMP, it will be reviewed regularly to ensure that it continues to be appropriate and effective. Additional reviews will take place following any significant changes to site activities (e.g. the movement to a new working parcel or laydown area) or following significant odour incidents and/or substantiated complaints.



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