Caulmert Limited

Engineering, Environmental & Planning
Consultancy Services

Brecon Waste Transfer Station

Potters Waste Management

Odour Management Plan

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DISCLAIMER

BRECON WASTE TRANSFER STATION
ODOUR MANAGEMENT PLAN

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Appendix 1

1 INTRODUCTION

1.1 Background

1.1.1 The site has been permitted as a transfer station and civic amenity site since 1993. Sundorne Products (Llanidloes) Limited has operated the site as a transfer station on behalf of Powys County Council since 2001.

1.1.2 The Plan has been prepared in reference to the Environment Agency's Technical Guidance Note H4 Horizontal Guidance for Odour and the recommended Best Available Techniques (BAT) for odour control at waste management facilities.

1.1.3 Odour management is currently covered under the Site Working Plan rather than a separate standalone Odour Management Plan. This document forms an update to the existing Working Plan, describes the company's current management provisions and supplements them with further proposals to mitigate effects of potential malodours emissions.

1.1.4 This Odour Management Plan provides means of assessing the effectiveness of control measures. The proposed Odour Action Plan should be implemented in cases of failure and odour events.

1.1.5 The Operator intends to use this Plan during the facilities expected operational life. The Plan will be reviewed on an annual basis and when a new element of site infrastructure is introduced.

1.2 Process Description

1.2.1 The process involves bulking up of food waste, kerbside recyclables and dry mixed recycling within the building for onward transfer.

1.2.2 Waste is sorted on a picking line manually and passes along a series of conveyors through an overband magnet to remove ferrous metal and an eddy current separator to remove the non-ferrous metal both of which are then collected in separate storage bays below. A bottle piercer is also used.

1.2.3 All residual material will then be moved to automated bunkers by conveyor and then to a baler which will compact and bind the material to facilitate handling.

1.2.4 Treated waste such as plastics and metals are stored outside the building on impermeable pavement.

1.2.5 Untreated green waste is stored in the bay outside and bales of food waste and any potentially odorous waste remains in the building until transfer offsite.

1.2.5 The site setting is within a largely agricultural area in Wales. Most of the waste operations take place within the building, with some green wastes and dry recyclables are to be stored outside, the activity is therefore considered to have a low impact with regard to odour.

2 POTENTIAL ODOUR SOURCES

2.1 Sources

2.1.1 Potential sources of odour from the transfer bay include the reception, storage, treatment and onward transfer of wastes. Transfer and bulking of municipal solid wastes (MSW) may be odorous on receipt or become odorous during storage. Food wastes and other biodegradable materials have the potential to generate odour in the transfer bays.

2.1.2 Risk of odour from the transfer station is not considered to be high due to the nature and constituents of the waste and method of operation, processing waste within a building and regularly clearing waste in the transfer area.

2.1.3 Summary of potential odour sources:

- Odour from the reception of waste
- Odours from wastes stored in the bays within the building
- Odour from the treatment/rehandling of waste
- Odours from wastes stored in bays and as bales outside the building
- Odours from the despatch of waste

3 POTENTIAL RECEPTORS

3.1 Local Sensitive Receptors

3.1.1 Receptors surrounding the permitted boundary are shown in drawing 2778-CAU-XX-XX-DR-V.0003. The main receptors are agricultural with some residential receptors within 500m.

3.1.2 The closest human receptors are likely to be residents in the surrounding area.

3.1.3 A Special Area of Conservations (SAC) and Site of Special Scientific Interest (SSSI) are located approximately 310m to the east of the site, the sites are designated due to their species-rich fen-meadow comprising plants; these are not considered to be particularly sensitive to odour.

3.2 Odour Complaints

3.2.1 There has been no history of previous complaints relating to odour at Brecon.

4 WASTE OPERATIONAL ODOUR CONTROLS

4.1 General Control Measures

4.1.1 To ensure that odours are kept to a minimum at the Facility the following measures will be undertaken:

- Untreated waste is stored within the main transfer building with the doors closed or outside within lidded containers.
- Odorous wastes will be stored on site for no longer than 72 hours, regular clearance of this waste will ensure that the time these waste types are exposed is minimised.
- Putrescible waste will be stored for no longer than 2 days. Other wastes have a residence time of up to 7 days to minimise any potential odour impacts
- Roller shutter doors on the building to be closed if any odorous waste is detected within the building and shut during times of non-operation.
- Any incoming wastes generating strong odour will be loaded into the first available bulk vehicle departing the site.
- Most untreated wastes to be unloaded, stored and handled within a building providing aerial containment.
- Any significantly odorous materials detected upon off-loading will be covered or contained. If it cannot be stored safely without causing odour outside the site, it will be removed from site as soon as practicable.
- General housekeeping, such as sweeping of surfaces and machinery being cleared regularly of residue build up.
- Daily site inspections will include waste storage areas being checked to assess that stored waste within transfer bay or baled waste outside is not becoming odorous.
- Site staff have completed the relevant training and continued competency certificates are updated as necessary.
- Preventative maintenance takes place to ensure equipment continues to operate effectively to reduce the build-up of waste on site and therefore potential increases in odour.

5 ACCIDENT MANAGEMENT PLAN

5.1 Accident Scenarios

5.1.1 In accordance with EA guidance the following abnormal situations have also been considered:

5.2 Plant failure of malfunction

Situation

5.2.1 Breakdown or malfunction of the loader or shredder equipment resulting in the material being left for extended periods of time. The direct impact of this will be dependent on the length of time of the breakdown, the waste types and volume of waste being processed and weather conditions i.e. particularly high temperatures or prolonged periods of heavy rainfall etc.

Control Measure

5.2.2 In the event of a plant failure or malfunction, alternative equipment will be sourced as soon as possible until the equipment can be repaired or hired in as necessary. Planned deliveries of waste will be managed during this period and postponed if necessary.

5.2.3 All plant and equipment will be maintained and regularly serviced in accordance with the manufacturers recommendations and planned maintenance procedures to minimise breakdowns. Replacement plant, such as the loading shovel, and/or generators will be available within 24-48 hours. Specialist equipment such as shredders or screening equipment will be replaced as soon as practicably possible.

5.3 Odorous waste

Situation

5.3.1 Receipt of particularly odorous waste which has the potential to cause odour nuisance to receptors off site.

Control Measure

5.3.2 Pre acceptance, waste acceptance and rejection procedures in place.

5.3.3 Any significantly odorous materials detected upon off-loading will be covered or contained. If it cannot be stored safely without causing odour outside the site, it will be removed from site as soon as practicable.

5.4 Adverse meteorological conditions

Situation

5.4.1 Periods of adverse weather conditions including high rainfall leading to flooding, low / high temperatures, temperature inversions and high winds towards the direction of the sensitive receptor.

Control Measure

5.4.2 Following adverse weather conditions such as continued and persistent high winds towards the receptors operations will commence as soon as possible when favourable conditions resume. However, occasionally operations will have to be undertaken during adverse weather conditions in order to minimise the potential for an increased impact at a later date.

5.5 Process failure

Situation

5.5.1 Breakdown of the process and failure to maintain optimum conditions resulting in anaerobic conditions developing within the process material and/or final product. This could result from prolonged storage times.

Control Measure

5.5.2 Any process failure will be managed and controlled as per the previous sections above.

5.6 Site staff

Situation

5.6.1 Shortage of trained operational staff resulting in waste material being stored for longer periods without processing in the reception or storage area.

Control Measure

5.6.2 In the event there is a shortage of operational staff at the Facility, alternative staff will be sourced from other facilities or hired in as necessary. If necessary waste deliveries will be controlled until the situation can be rectified.

5.7 End product outlet/transport haulier

Situation

5.7.1 The identified outlet for the end product is no longer able to accept the material at short notice or the transport haulier is unavailable.

Control Measure

5.7.2 There are a number of alternative waste hauliers who can be contacted in the event the regular haulier is unavailable to remove the finished product from the site.

5.8 Force Majeure and Odour

5.8.1 Finally, unexpected circumstances such as a fire or explosion on site or an act of vandalism could trigger the release of discernible odours. Under these circumstances odour related contingency measures will be covered under the Odour Action Plan and will be dealt with as promptly as possible. Remediation and reporting procedures for the above are as required within the Permit.

6 ENGAGING WITH THE NEIGHBOURS

6.1 Complaints Procedure

6.1.1 As part of this Odour Management Plan, engagement with the neighbours will be undertaken.

6.1.2 Typically complaints about the site are usually received via Natural Resources Wales, although Potters Waste Management can also deal with complaints received directly where necessary. In the event of a complaint being received the following can be implemented:

- Information can be provided to the local neighbours (via NRW) regarding the point and method of contact for the Facility in the event an odour has been detected or they want to discuss any activities etc at the Facility.
- The neighbours can be advised that any complaints / concerns will be addressed immediately following identification / notification and contingency action implemented.
- The neighbours can be advised of any corrective action and a follow up call carried out if required.

6.1.3 The Operator will continue to maintain a routine liaison with Natural Resources Wales regarding odour nuisance. In the event of odour complaint being received by NRW the complaint is passed to the Operator for the investigation. Every complaint is recorded.

6.1.4 The odour investigation procedure will also include the following elements:

- Site walk-over coupled with olfactory monitoring along the site boundary assessment of the site operations which took place prior to and at the time of the complaint in relation to their odour potential and other on-site sources of odours;
- Assessment of the weather conditions prior to and at the time of the complaint.
- A suitably trained person who is familiar with the site conditions and the 'sniff-testing' monitoring technique will carry out odour investigations at the site. In the event of a substantiated complaint being received, then mitigation measures will be used for the areas/activities which were cause of the particular odour event (Section 7.3)

6.1.5 A follow up report on the investigation will be issued to the EA if the complaint is found to be substantiated and if requested, to the Local Authority. The report will identify improvements proposed to reduce the potential for future complaints. Any new recommendations will then be incorporated in the Odour Management Plan and the operating procedures.

7 MONITORING

7.1 Schedule

7.1.1 Odour monitoring will be undertaken in order to assess how successful the operational management and mitigating control measures are at the Facility and to identify if necessary whether odour is causing a potential nuisance to ensure that appropriate remediation measures are adopted early.

7.1.2 Monitoring will be undertaken by designated staff who will be fully trained by Site management. All site personnel will be responsible for reporting any problem odours identified during their day to day operations.

7.1.3 Monitoring at the Facility will consist of the following; see later sections for further detail:

Parameter	Monitoring Technique	Frequency
Meteorological Monitoring	Local weather information	Manually checked at start of each working day and logged
Olfactory Monitoring	Site perimeter. Off Site checks (towards the identified receptors in event of malodours detected at	Daily (or more frequently following odour complaints)

Parameter	Monitoring Technique	Frequency
	boundary or following a complaint)	
Complaints Monitoring	Logged in accordance with Complaints procedure	Ad-Hoc

7.2 Meteorological Monitoring

7.2.1 The nearest weather station will be utilised for meteorological monitoring at the Facility and will as a minimum include monitoring for wind speed, direction, precipitation, rainfall, temperature etc.

7.2.2 Weather conditions will be noted at a time of an odour survey, and assessed in terms of any odour effects beyond the site boundary. This would indicate which local receptors lie downwind of the site. The following weather conditions are considered to be unfavourable with regard to the effects of the potential odour emissions and should be considered when assessing odour events:

- Weather conditions, especially wind speed and direction, are important factors which influence odour dispersion. Stronger winds (>6m/s) reduce the impact of odours due to greater dilution and dispersion than lighter winds, whereas wind direction determines the direction of odour dispersion.
- The greatest risk of poor odour dispersion tends to occur on cool nights, with low wind speed, during anti-cyclonal conditions and in the presence of a temperature inversion. These conditions often happen during the cold part of the year and can result in odours being transported over long distances from the source.
- Calm weather spells (wind speed <0.1m/s) results in omni-directional dispersion of odours from the site as it is regulated largely by diffusion in the air. Under such conditions, all locations directly adjacent to the source would be expected to be impacted by fugitive emissions.
- Conversely, high temperatures during the warm part of the year may often lead to increased stale waste (dustbin-like) odours due to acceptance of waste which was stored in warm conditions up to 2 weeks before being delivered on site, and could result in increased complaints from residents living near the site.
- The mean wind direction recorded for Powys is blowing from South to North.

7.2.3 In the event of odour complaints, the data enables complaints to be assessed against the meteorological conditions for the relevant period. Meteorological information will be recorded on the Safeguard system which is logged internally and sent to the EA.

7.3 Olfactory Monitoring

7.3.1 As part of the daily inspections, appropriately trained and experienced Site personnel will carry out olfactory monitoring off site at selected locations.

7.3.2 Additional locations for monitoring may also be included, depending on the frequency and location of any complaints received at the Facility.

7.3.3 The monitoring results will be recorded on the Site Daily Inspection Sheet, which forms part of the Site's Management System.

7.3.4 Olfactory monitoring will be carried out in accordance with the recommendations detailed in the EA H4 guidance, including avoid strong foods or drinks and strongly scented deodorisers or toiletries etc for at least half an hour prior to the monitoring. In addition individuals suffering from a cold, sore throat or sinus problems that may impair their ability to detect odours will not be used.

7.3.5 The designated person will exit their vehicle and remain in the locality for a minimum of 1 minute whilst breathing normally. Any external activities that may contribute to odour generation in the surrounding area will also be noted on the form and an assessment of the intensity of the odour will be made using the key provided. The routine monitoring points have already been assessed for sensitivity but should any additional locations be used the sensitivity will be entered using the key provided.

7.3.6 In the event odour is detected above intensity ranking 3 (moderate odour), the Facility management will be informed immediately and the approximate location and extent of the odour plume assessed and site operations reviewed and remediated.

7.4 Complaints Monitoring

7.4.1 Any complaints received directly by the Facility or via the Regulatory bodies, including the NRW and Local Authority, will be recorded on the system. Investigation will then be undertaken via olfactory monitoring at the location of the complaint and on site to substantiate the extent and location of the plume and the source of the odour will be identified.

7.4.2 If necessary monitoring will also be carried out at the nearest sensitive receptors to the Facility and the monitoring results recorded.

8 REMEDIAL ACTION PLAN

8.1.1 Following receipt of a complaint or identification of an odour at the Facility, the following action plan will be undertaken, including:

- Additional olfactory monitoring as detailed above to identify the extent of the odour plume and potential cause for the odour i.e. waste material and / or process activity.
- Examination of the operational activities at the Facility at the time of the odour complaint or odour identification.

- Examination of the meteorological conditions at the time of the complaint or odour identification.
- Examination of the process conditions i.e. temperature and moisture content of the process piles, maturation materials and length of storage etc.
- Carry out a review of the operational procedure and process controls and instigate any control measures immediately following identification of the problem.

8.1.2 Further olfactory monitoring will be carried out to ensure the issue has been addressed and to monitor the effectiveness of any control measures undertaken.

8.2 Record Keeping and Reporting

8.2.1 The procedure for recording will be undertaken as detailed above. All information is recorded digitally and maintained within a digital database. All information can be accessed via computer within the Site office and will be made available to Natural Resources Wales on request. This record keeping already forms part of the Facilities Management System.

8.3 OMP Review

8.3.1 This OMP will be reviewed on a regular basis or following receipt of a significant substantiated complaint that requires a change in management procedures for the Facility.

APPENDIX 1

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