

ODOUR MANAGEMENT PLAN


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Mekatek Ltd
Maerdy Industrial Estate

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1 ODOUR MANAGEMENT PLAN

1.1 Introduction

This document has been prepared by Sol Environment Ltd on the behalf of Mekatek Ltd for the operation of a waste recovery and recycling facility located at Unit C, Maerdy Industrial Estate, Rhymney, NP22 5PY (Permit Number to be determined).

The document provides a structured framework and approach in effectively managing potential odour releases associated with the storage and processing of potentially odorous waste.

This Odour Management Plan document (referred hereafter as the 'OMP') has been produced in accordance with the following document:

- Natural Resources Wales Technical Horizontal Guidance Note '*H4: Odour Management: How to comply with your permit*'

The purpose of this document is to outline the management control measures that may be established to prevent and control odour emissions and associated impacts from the site, if required.

1.2 Structure of Odour Management Plan

The OMP has been structured in accordance with the NRW H4 Odour Management Plan Guidance.

This OMP has been developed to clearly define the measures by which odour emissions will be controlled and prevented, namely by;

- Receipt and Management of Odorous Materials;
- Odour Monitoring;
- Response to Complaints; and
- Accident Management Plan.

The OMP considers the following aspects of the waste management facility:

- Sources of odour and their release;
- Actions to mitigate the effect of odour release;
- Details of the monitoring regime;
- Details of responsible persons; and
- Potential outcomes of each failure scenario in respect to odour impact.

1.3 Status of the OMP

The OMP is a “live” document and will form part of the key environmental management document for the facility. All monitoring procedures, responsibilities and compliance actions will be updated as and when required.

Any revisions in the OMP or associated Annexes will be updated and inserted accordingly.

2 DESCRIPTION OF WASTE ACTIVITIES

This OMP is being produced as part of the Bespoke Waste Operations permit application for a waste recovery and recycling facility.

This facility is located at Unit C, Maerdy Industrial Estate, Rhymney, NP22 5PY.

The application site is located within the south of the Maerdy Industrial Estate with industrial and commercial units to the north and west and residential dwellings of the town of Rhymney to the south and east. The site is roughly rectangular in shape and extends in area to 3ha. The site is bounded to the west by the Valley Railway Line.

The site comprises a steel frame building with tarmac, concrete and gravelled external areas. A vegetated railway siding is present to the east of the building and an old railway track and disused land in the west. The northern half of the main building is owned by Williams Medical Supplies.

The nearest residential development is located on Forge Crescent to the east and at a distance of 50m.

2.1 Process Overview

The waste recovery and recycling facility is designed to predominantly process waste electrical and electronic equipment (WEEE), selected source segregated packaging materials, plastics and metals. The site will accept 30,999 tonnes per annum and include the receipt, storage, segregation and mechanical processing into various grades of granular metals and plastics for sale as recovered product.

All recovered / processed materials are then stored within dedicated storage bays ready for offsite transfer and sale. Any waste materials that are not able to be recycled on site are stored pending off site transfer to other licensed waste management facilities for further processing or disposal.

All physical and mechanical processing takes place within the main processing building. The only external activities are the storage of wooden pallets which are stored before being collected and transferred off site and the storage of surplus waste skips containing recycled material or products prior to being transferred off site.

Materials will not be stored for a period exceeding 3 months, and will regularly be processed within 14 days.

A detailed list of European Waste Catalogue (EWC) codes of wastes that are accepted onsite is provided in Annex A. All wastes that are permitted will be in compliance with permit requirements.

2.2 Competent Operator

All personnel onsite are trained and competent and are both suitably qualified and experienced.

All personnel employed will be suitably trained and experienced at operating all plant and equipment associated with their particular role.

The Site Manager holds WAMITAB certification.

2.3 Odour Sources

Source Materials & Release

There will be no odorous materials accepted onto site and therefore there will be no odorous releases from the site.

In the unlikely event that any potentially odorous materials arrive on site, they will be inspected upon arrival and immediately rejected in accordance with *Working Plan Procedure MK-E03 – Waste Rejection*.

2.4 Nearest Sensitive Receptors

The Mekatek Ltd site is located in the south of Maerdy Industrial Estate on the edge of the town of Rhymney. The predominant surrounding land use is industrial, however residential developments are present to the south and east. The Valley Railway Line bounds the site to the west.

Sensitive receptors within 1 km of the site have been identified within Table 2.1 below.

Table 2.1: Sensitive Receptors				
ID	Receptor	Category	Distance (m)	Direction
1	Forge Crescent	Residential	50	E
2	River Rhymney	Water Body	200	N
			100	S
3	Williams Medical Supplies	Commercial & Industrial	Adjacent	N
4	Maerdy Industrial Estate Units	Commercial & Industrial	190 - 550	N
5	Capital Valley Industrial Park Units	Commercial & Industrial	50 - 260	W
6	Railway Line	Railway	20	W

7	St Clares	Residential	55	S
8	Allotment Gardens	Residential	240	E
9	Bryn Awel Primary School	Public	340	NE
10	Rhymney Comprehensive School	Public	660	S
11	Houses in Garden City	Residential	80 - 470	E
12	Houses in Pontllytyn	Residential	200 – 1000	S
13	Upper Rhymney Primary School	Public	730	N
14	Tredeggar & Rhymney Golf Course	Recreational	880	SE
15	Hospital	Public	865	N
16	Pontllytyn Primary School	Public	725	S
17	Rhymney Sports Ground	Recreational	800	N
18	Allotment Gardens	Residential	635	S
19	Valley Manor Nursing Home	Residential / Public	810	S

3 CONTROL MEASURES

The waste recycling and recovery facility will have a number of measures in place to control odour.

An environmental management system and operational procedures have been developed in accordance with good practice to ensure that no odourous waste is accepted on site.

Working plan procedures ensure that good operational practices are employed. Effective management and control of the process minimises odour generation.

The following sections detail management techniques, procedures and odour control measures to minimise the potential for odour generation from the waste recovery and recycling facility.

3.1 Receipt and Management of Odorous Materials

The primary management of odour is the control of wastes accepted at the Mekatek facility. The Environmental Management System (EMS) includes acceptance procedures which detail the European Waste Codes (EWC) accepted at the site and outline the procedures for rejecting non-conforming wastes including visual inspection to determine whether any wastes have malodorous properties.

The waste acceptance procedures are provided within Annex B and consist of the following:

- MK-E01 – Waste Pre-Acceptance;
- MK-E02 – Waste Acceptance; and
- MK-E03 – Waste Rejection.

Notwithstanding the EWC's codes stipulated in Annex A, waste shall not be accepted at the site which has any of the following characteristics;

- Odourous waste;
- Biodegradable waste;
- Waste showing evidence of charring, elevated temperatures or fire damage; or
- Liquids.

It should be noted that although the site accepts some EWC codes that have the *potential* to be odorous (i.e. waste packaging), no such odorous materials shall be accepted at the site. All waste packaging shall arrive at the site in clean condition or will be sent elsewhere for cleaning and processing before arrival at the site.

In addition, no waste will be stored for a time period greater than 3 months.

All waste unloading, loading and treatment will be undertaken within an enclosed building with roller shutter doors.

The majority of waste storage also takes place within the enclosed building. However, there is an external storage area which is used solely for the temporary storage of recycled material or products within skip containers, before being transferred off site. There will be no storage of loose processed recovered and recycled material.

All hazardous and WEEE processed recovered and recycled material will be stored within sealed skips. This ensures that material within them remains dry whilst also mitigating all possibility of weather ingress due to the sealed nature of the containers. Any non-hazardous processed recovered and recycled material will be stored within open skip containers.

No material is transferred into another container for transport. The area is purely for temporary storage before the skip is transferred off site. The external area is impermeable however it does not have sealed drainage

There will be no odorous materials accepted onto site, therefore there will be no odorous materials stored externally. However, before skips are transferred from the building, the processed recovered and recycled material will be inspected for any odourous properties. In the unlikely event that any potentially odourous materials are identified the waste load will be immediately rejected in accordance with Working Plan Procedure MK-E03 – Waste Rejection.

The skip containers will be stored for a maximum of 7days.

Therefore, there is no potential for odourous processed recovered and recycled material to be stored externally on site.

Good housekeeping practices are in place at the site, including an end of shift work station check.

The waste acceptance and control regime will result in there being no potential for odorous waste to be stored and processed at the site.

3.2 Response to Complaints

Receipt of an odour complaint will result in a prompt investigation and remedial action. The primary response to an odour complaint will be as detailed in accordance with the complaints procedure.

An Odour Complaint Report Form will be completed as soon as the complaint is received. A copy of the form is provided within Annex C.

An investigation shall be initiated into the cause of the complaint, this will involve as necessary:

- An olfactory survey following the procedure detailed in Section 4.2. The results of the survey will be recorded on the Odour Reporting Form provided within Annex C;
- An examination of the activities at the time of the complaint;
- An examination of the meteorological conditions at the time of the complaint; and
- A review of the effectiveness of operational and odour control procedures.

If the complaint is validated it will be treated as serious in nature and will trigger a review of the Odour Management Plan and its procedures.

3.3 Accident Management Plan

An accident management plan is incorporated into the environmental management system (MK-E09) as required by the Environmental Permitting Regulations.

The accident plan sets out the actions to be taken and measures required to prevent incidents and where an incident occurs the appropriate mitigation action to be taken.

The plan considers the following scenarios which could result in potential odour issues:

- Accidental acceptance of malodorous waste.

Please refer to Section 6 which provides more information on how any events which could cause odour emissions are managed.

4 MONITORING

The company will employ the following monitoring techniques to ensure that the Key Control Measures (Section 3) are maintained and effective, operational procedures are followed and that good practices are being implemented:

- Inspections by the Site Manager or delegated personnel; and
- Audits and inspections by Natural Resources Wales (if required).

4.1 Responsible Persons

All personnel on site will be responsible for the assessment of odour during operations. The operations will be overseen by the Site Manager who will be deemed competent through qualification, including Level 4 WAMITAB.

4.2 Olfactory ('Sniff Test') Monitoring

Although odour will be monitored daily during the site walkover checks, formal odour monitoring will be recorded monthly and observations shall be noted on the odour report form provided within Annex C. Surveys shall be carried out in accordance with the monitoring protocol contained within Natural Resources Wales Technical Guidance Note H4.

Suitable locations downwind of the site but internal to the site boundary will be chosen to carry out the sniff test to clarify that the impact is not detectable at the site boundary and able to create an offsite impact.

In the event that odour is detectable at the site boundary, further investigation will be required in the direction of the prevailing wind and closest sensitive receptor. This will also be recorded on the odour report form provided within Annex C.

The odour assessor must not be subject to significant odour in the 30 minutes prior to the assessment and shall be compliant with the requirements laid down in the Olfactory Survey procedure (detailed in Annex C). This is to ensure that monitors are not suffering from odour fatigue and will be sensitive to odours.

If any detectable odour is identified at the site boundary and is judged to be moderate (Odour Intensity Rank 3) then the Site Manager will be notified immediately and the olfactory survey will continue to attempt to determine the scope and extent of the odour plume, as follows:

- A suitable location downwind of the site and potentially sensitive receptor at which the odour plume is likely to extend will be selected for assessment;
- Survey will continue toward the facility until a site-related odour is perceived; and
- Assessment points perpendicular to the plume axis and equidistant from the site will then be monitored, subject to access requirements.

Monitoring frequencies shall be as detailed in Table 4.1.

Table 4.1: Monitoring Frequencies		
Parameter	Monitoring Technique	Frequency
Odour	Olfactory monitoring	Monthly perimeter checks. Increased frequency in response to complaints.
	Complaint monitoring	Continuous
Complaints	Corrective action monitoring	Post-implementation of a corrective action

The following scales will be used:

Table 4.2: Odour Intensity Scale	
Score	Intensity
0	No Odour
1	Very Faint Odour
2	Faint Odour
3	Distinct Odour
4	Strong Odour
5	Very Strong Odour
6	Extremely Strong Odour

Table 4.3: Hedonic Tone Scale	
Score	Intensity
+4	Very Pleasant
+3	Pleasant

+2	Moderately Pleasant
+1	Mildly Pleasant
0	Neutral Odour / No Odour
-1	Mildly Unpleasant
-2	Moderately Unpleasant
-3	Unpleasant
-4	Very Unpleasant

In the event that any detectable odour is identified at the nearest sensitive receptor that is judged to be distinct (Odour Intensity Rank 3 and above) and moderately unpleasant (Hedonic Rank -2 and above) then operations will cease and be postponed until further investigation.

4.3 Records

Monthly records shall be maintained during operations and include the following details:

- Results of equipment inspections and olfactory monitoring carried out by site personnel;
- Weather conditions including wind speed and wind direction;
- Operational problems including date, time, duration, prevailing weather conditions and cause of problem;
- Complaints received including address of complainant (if available);
- Details of corrective action taken, and any subsequent changes to operational procedures; and
- An evaluation of the effectiveness of control and abatement techniques used.

5 Compliance Action Plans

5.1 Control & Trigger Levels

Control trigger levels are presented below in Table 5.1.

Table 5.1: Control & Trigger Levels		
Parameter	Monitoring Technique	Control Levels
Odour	Routine olfactory monitoring	Odour Intensity ≥ 3 recorded at any monitoring location (persistent / transient nature noted and considered)
	Complaint monitoring	Receipt of complaint

5.2 Compliance Actions

A recording of Odour Intensity ≥ 3 during routine olfactory monitoring or the receipt of a complaint will necessitate further investigation into the causes and indicate whether further monitoring is required. Actions to be taken in the event of an exceedance will be dictated by the nature and extent of the exceedance(s) (e.g. by considering the magnitude of exceedance and whether it was event driven or on-going).

5.3 Detection of Strong Odour During Olfactory Survey

Detection of a strong odour, (i.e. 'bearable but offensive'), will initiate a more extensive olfactory survey to determine the extent of the odour plume (as described in Section 4.2). An investigation will be initiated into the cause of the odour. This shall involve as necessary:

- A review of the activities at the time of the olfactory survey; and
- A review of the meteorological conditions at the time of the olfactory survey.

5.4 Corrective Actions

The outcome of an investigation will determine the corrective actions to be implemented, they will consider, but not be limited to:

- Alteration to waste reception procedures and odour control measures employed;

- Review of all processes; and
- Update of OMP if new procedures are created.

5.5 Reporting

Exceedance of a control level will be investigated (as described above) and recorded. This includes recording the following:

- Nature of the incident;
- Date of occurrence(s);
- Results of the investigation;
- Details of responses/ action plans implemented;
- The event will be marked within the incident log; and
- The report of any exceedance will be made available to Natural Resources Wales on a quarterly basis.

6 Incidents and Emergencies

Consideration has been given to the types of abnormal events that have the potential to result in an odour impact. Abnormal events include the following:

- Acceptance of malodorous waste.

Acceptance of Malodorous Waste

All personnel onsite will be appropriately trained in the waste pre-acceptance, acceptance and rejection procedures. This should ensure that in the unlikely event that malodorous waste is accepted on site, it is immediately rejected. Mekatek owned HGV's are available to deploy the waste should the source of the waste not be available to collect.

Please refer to the sites waste acceptance procedures provided in Annex B for more information.

ANNEX A: EWC CODES

ANNEX B: WORKING PLAN PROCEDURES

ANNEX C: ODOUR REPORTING FORM

ODOUR REPORTING FORM				
Name of Assessor:				
Confirm Compliance with Reference Table 1:				
Survey Timings	Date			
	Start Time			
	Finish			
Location of Sniff Test :				
Weather Conditions (dry, rain, fog, snow etc)				
Wind Direction (e.g from the SW)				
Wind Strength (none, light, steady, strong, gusting)				
Cloud Cover (%)				
Temperature (°C)				
Precipitation				
Location ¹	Odour Intensity ²	Odour Extent ³	Odour Description ⁴	Receptor Sensitivity ⁵
Sketch Provide a sketch of test and source locations				
<div> ¹What site boundary points / sensitive receptor? ²Refer to Reference Table 2 ³Refer to Reference Table 3 ⁴Describe the character of the odour (e.g. rotten eggs, musty, earthy, drains etc) ⁵Refer to Reference Table 5 </div>				

Notes;

If odour intensity is judged as 3 or above at any external location on site boundary the Site Manager must be immediately notified

The extent of the plume should be investigated as follows:

Suitable locations downwind of the site on the site boundary will be chosen to clarify that the impact is not detectable at the site boundary and able to create an offsite impact.

In the event that the odour is detectable at the site boundary, an offsite investigation will be required in the direction of the prevailing wind and closest sensitive receptor. Continue toward the site until a faint odour is detectable.

Select further assessment points at right angles to the plume axis and equidistant from the facility to determine extent of plume.

REFERENCE TABLE 1

Requirements for Assessor

Assessor has not been exposed to waste related odours for previous 30 minutes

Assessor has not smoked or consumed strongly flavoured food or drink in previous 30 minutes

Scented toiletries should not be applied immediately before or during assessment.

Vehicle used for assessment should not contain deodoriser and care should be taken concerning odour in windscreen wash.

REFERENCE TABLE 2

Odour Intensity	Description
1	No detectable odour
2	Faint odour (barely detectable, need to stand still and inhale facing into wind.
3	Moderate odour (odour easily detectable while walking and breathing normally, possibly offensive)
4	Strong odour (bearable, but offensive odour – will my clothes hair/smell?)
5	Very strong odour (malodorous)

REFERENCE TABLE 3

Odour Extent	Description
1	Local and transient (only detected during brief periods when wind drops or blows)
2	Transient as above, but detected away from site boundary
3	Persistent but fairly localised
4	Persistent and pervasive up to 50m from site boundary
5	Persistent and widespread (odour detected > 50m from site boundary)

REFERENCE TABLE 4

Receptor Sensitivity	Description
1	Low (e.g. footpath, road)
2	Medium (e.g. industrial or commercial workplaces)

3	High (e.g. housing, pub/hotel etc)
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ANNEX D: ODOUR COMPLAINT REPORT FORM

ODOUR COMPLAINT REPORT FORM		
Time and date of complaint:		
Name and address of complainant:		
Telephone number of complainant:		
Date of odour:		
Time of odour:		
Location of odour, if not at above address:		
Weather conditions (i.e., dry, rain, fog, snow):		
Temperature (very warm, warm, mild, cold or degrees if known):		
Wind strength (none, light, steady, strong, gusting):		
Wind direction (e.g. from NE):		
Complainant's description of odour:		
○ What does it smell like?		
○ Intensity (see Reference Table 1):		
○ Duration (time):		
○ Constant or intermittent in this period:		
○ Does the complainant have any other comments about the odour?		
Are there any other complaints relating to the installation, or to that location? (either previously or relating to the same exposure):		
Any other relevant information:		
Do you accept that odour likely to be from your activities?		
What was happening on site at the time the odour occurred?		
Operating conditions at time the odour occurred (e.g. flow rate, pressure at inlet and pressure at outlet):		
Actions taken:		
Form completed by:	Date:	Signed;

REFERENCE TABLE 1	
Odour Intensity	Description
1	No detectable odour
2	Faint odour (barely detectable, need to stand still and inhale facing into wind.
3	Moderate odour (odour easily detectable while walking and breathing normally, possibly offensive)

4	Strong odour (bearable, but offensive odour – will my clothes hair/smell?)
5	Very strong odour (malodorous)

ANNEX E: RESPONSIBLE PERSONS

Annex E: Responsible Persons		
Control Measure	Responsible Persons	
	Implementation on-site	Overall Manager
Receipt and Management of Odorous Materials		
Response to Complaints		
Meteorological Conditions		
Olfactory Monitoring		
Record Keeping		
Complaint and Corrective Action Monitoring		