



Odour Management Plan

EPR/GB3490HG/A001

Nine Mile Point Waste Processing Facility

Hazrem Environmental Ltd

CRM 083 002



Contact Details:

Enzygo Ltd.
The Byre
Woodend Lane
Cromhall
Gloucestershire
GL12 8AA

tel: 01454 269237
fax: 01454 269760
email: peter.cumberlidge@enzygo.com
www: enzygo.com

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Author:	Steph Charnaud, Senior Consultant
Reviewer:	Peter Cumberlidge, Director

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Registered Office Stag House Chipping Wotton-Under-Edge Gloucestershire GL12 7AD

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1.0 INTRODUCTION

1.1. Overview

- 1.1.1. This Odour Management Plan (OMP) has been prepared as part of on-site operational documentation in support of the proposed waste processing facility at Nine Mile Point Industrial Estate, Cwmfelinfach, Caerphilly.
- 1.1.2. The operator of the facility will be Hazrem Environmental Ltd, hereby referred to as "the Operator".
- 1.1.3. Part 3 – Additional Guidance to Environment Agency Guidance Note EPR: 1.00 – *How to Comply with your Environmental Permit* lists those activities for which an Odour Management Plan is required. Household, Commercial and Industrial Waste Transfer facilities are included.
- 1.1.4. As a result an OMP has been prepared and will be transposed into the site's EMS following formal approval by Natural Resources Wales (NRW). The plan will be updated and reviewed in accordance with the requirements of the operator's management systems.
- 1.1.5. As the facility is not yet operational, it is also proposed to update this document following site commissioning to provide further detailed information where necessary on the proposed mitigation measures to be provided.
- 1.1.6. This OMP is intended to be used as a reference working document for operational staff on a day to day basis. It outlines the main potential odour sources at the proposed facility; the mitigation measures to be used to reduce the risk of odour nuisance; and the monitoring and reporting methods to be used when the facility becomes operational. It will be reviewed regularly and revised as required.

1.2. Aim and Objectives of the Odour Management Plan

- 1.2.1. This OMP has been compiled based on the requirements of *Guidance Note H4 – Odour Management*. Appendix 4 to H4 – Odour Management sets out the requirements for an Odour Management Plan (OMP) and considers that the objectives of an OMP should be designed to:
 - Identify all potential odours sources at the facility and any foreseeable situations which may compromise the operator's ability to prevent and/or minimise odour releases from the proposed site activities;
 - Identify and employ appropriate methods, including monitoring and contingencies, to control and minimise odour pollution;
 - Identify and employ appropriate control measures and actions that the operator will take to minimise the impact in the event that odour incidents occur;
 - Prevent unacceptable odour pollution at all times;
 - Reduce the risk of odour releasing incidents or accidents by anticipating them and planning accordingly; and
 - Provide a working document for on-site staff.
- 1.2.2. All OMPs need to consider sources, releases and impacts and use these to identify cost effective opportunities for odour management. For a particular activity, some methods may be more effective / applicable than others.

1.3. Relevant Guidance and Documentation

1.3.1. This OMP has been prepared with reference to the following key guidance documentation:-

- Environment Agency England and Wales (Version 6 – June 2013): How to Comply with your Environmental Permit;
- Environment Agency England and Wales (2011); H4 Odour Management Guidance Note; and
- Environment Agency Monitoring Technical Guidance Notes (Various)

1.3.2. An H1 Environmental Risk Assessment (ERA) has also been prepared in support of the Permit application which included an assessment of potential odours from the waste processing facility. Copies of these assessments are provided within Chapter 4 of the Permit application.

1.4. Regulated Activities

1.4.1. The Operator is applying to Natural Resources Wales (NRW) to operate a bespoke Part A Environmental Permit for a waste processing facility to produce solid recovered fuel and/or refuse derived fuel (SRF/RDF), for export to end users off site. The total quantity of waste to be accepted at the site will be no more than 100,000 tonnes of household, commercial and industrial wastes per annum.

1.4.2. Odorous waste is only likely to arise in the general waste stream which is a small component of the overall waste throughput at the site (<10% of the overall throughput).

1.5. Site Location

1.5.1. The site is centred at National Grid Reference (NGR) **ST 19235 91305** and is located on Nine Mile Point Industrial Estate on the edge of Cwmfelinfach in Caerphilly.

1.5.2. The Facility will occupy an area of approximately 1.09 hectares bounded to the east and west by industrial units, to the north by woodland and to the south, by Heol Tir Ton Road.

1.5.3. The site is currently grassland boarded with some trees.

1.5.4. Sensitive receptors are generally considered to represent places where people are likely to be for prolonged periods i.e. where members of the public / off-site workers may be exposed to harmful releases arising from the proposed development. The term "sensitive receptor" would therefore apply to dwellings and associated gardens and many types of workplaces.

1.5.5. The EA regard a place where people are likely to be present for more than 6 hours at any one time as being a sensitive receptor. The term does not apply to the operators of the permitted facility, their staff when they are at work or to visitors to the facility, as their health is covered by Health and Safety at Work legislation.

1.5.6. The nearest stand-alone residential property is approximately 470m to the North East from the perimeter of the site. The nearest place of work is immediately adjacent to the eastern boundary of the facility. Table 1.5.5 details the sensitive receptors

Table 1.5.6: Residential Receptors

Receptor	Type	Distance (m)	Direction
The site is located close to other Industrial and Commercial units on the Nine Mile Point Industrial Estate.	Commercial	0	E

Receptor	Type	Distance (m)	Direction
These lie to the east and west of the site. The closest of these is immediately adjacent to the facility.			
Residential properties at New Road, Wattsville	Residential	470	NE
Residential Properties at William Street, Cwmfelinfach	Residential	478	W

2.0 PROCESS DESCRIPTION

2.1. Process Description

- 2.1.1. The Nine Mile Point Waste Processing Facility will receive 100,000 tonnes of non-hazardous household, commercial and industrial waste per annum.
- 2.1.2. Odorous waste should make up no more than 10% of the overall throughput at the facility.
- 2.1.3. Waste deliveries will be received at the site during the following restricted operational hours:
- 07:30 to 18:00 hours Monday to Friday
 - 07:30 to 13:00 Saturday
 - No deliveries will take place on Sundays or Public/Bank Holidays
- 2.1.4. The treatment of waste will in general operate continuously 24 hours a day.
- 2.1.5. A full process description is provided in the Operational Techniques and Monitoring Plan reference CRM 083 002 PE R 006 and appended drawings in Chapter 6. In summary the waste will be brought to site in sheeted vehicles where it is unloaded in the Waste Reception Building for sorting and segregation of recyclables. The bulk of the waste will then be loaded into a pre-shredder and screened to remove fines, metals and plastics. The waste will then be shredded to the appropriate particle size, transferred to a dryer to reduce the moisture content, and the resulting SRF/RDF is then baled and wrapped. Prior to treatment all waste materials will be stored within the building which is on hardstanding. Baled and wrapped SRF/RDF will be stored outside the building on hardstanding.
- 2.1.6. The proposed Waste Processing Facility will comprise of the following primary elements:
- Weighbridge
 - Waste Reception Building
 - Storage areas for recycled wastes, metals, plastics, fines
 - Shredder
 - Screen
 - Separating equipment, magnets, heavy light separators and a near infra-red optical unit
 - Dryer
 - Bailer and Wrapper
 - SRF/RDF Storage; and
 - Site cabin with associated staff and visitor parking.

2.2. Odour Abatement System

- 2.2.1. The odour control and abatement system for the Nine Mile Point Waste Processing Facility has been designed to ensure that the proposed reception and process buildings are kept under negative pressure thus preventing fugitive emissions of odorous air from the buildings.
- 2.2.2. The waste reception building will be fitted with fast acting roller shutter doors and be kept under negative pressure with 3 air changes per hour.

- 2.1.3 The waste dryer will treat odours from exhaust gas using a Regenerative Thermal Oxidiser (RTO). Exhaust gas will first pass through a baghouse filter to reduce the dust content then onto the RTO.
- 2.1.4 All emissions from the waste reception and processing building will be passed through the waste dryer and RTO. The dryer is operational approximately 60% of the time. It will be operational during the hours in which waste is accepted into the facility thus ensuring its ability to combat odour when the doors are likely to be open.
- 2.1.5 The RTO system includes a number of features specifically designed for the exhaust air process;
- A combination of non-uniform ceramic packing media and monolithic blocs is used which is well proven in challenging installations
 - The RTO will be designed so that it can operate continuously at temperatures up to 850°C
 - The RTO will have a one second retention time, at high temperature, to give a high level of odour destruction
 - Offline back out system to remove organic particulates which could block the media beds over time.
- 2.1.6 After thermal oxidation the exhaust air will be passed to a stack.

3.0 SOURCES, PATHWAYS & RECEPTORS

3.1. Overview

- 3.1.1 Understanding the nature and extent of the odorous materials held on site is key to recognising and implementing appropriate control measures. Management of these materials primarily involves limiting the volume of material handled or utilising appropriate holding conditions designed to reduce the material's odour potential and the sites odour release.
- 3.1.2 The Nine Mile Point Waste Processing Facility emission points to air are described on the Table 3.1.2 below:

Table 3.1.2: Points Source Emissions to Air

Air Emission Point Reference and Location	Source of Emission	Emissions
A1	Dryer Stack	NOx, SO ₂ , Co, CO ₂ and particulates

3.2. Emissions Sources

Odour Forming Mechanisms

- 3.2.1 At the waste processing facility the greatest potential for odour generation will be when the waste is off-loaded in the reception building, when it is being stored for any length of time, when it's being sorted and treated, including drying and when it's loaded up for transport off-site.
- 3.2.2 Biodegradable waste, which may have been stored without aeration prior to being transferred to the waste processing facility, can become anaerobic in nature which will result in odours being generated when the material is stored and handled on-site.
- 3.2.3 Descriptions of potential sources of odour identified at Nine Mile Point Waste Processing Facility are summarised in Table 3.2.3 below.

Table 3.2.3: Inventory of Odour Sources at Nine Mile Point Waste Processing Facility

Ref	Aspect	Ref.	Potential Odour Source	Scenario
1	Incoming Vehicles	1.1	Incoming wastes in delivery vehicle	Odours emitted from vehicle.
2	Reception building when door opened	2.1	Fugitive emission from reception building	Odour from waste stored in the building.
3	Vehicle off-loading	3.1	Waste being tipped onto building floor	Tipping of waste releases trapped odours, and exposes new odour surfaces. Waste may have warmed in transport.
4	Washing Down	4.1	Wash water with waste residues	Wash water carries odorous residues from vehicle body/tank, spills to floor area and drains to foul sewer.

Ref	Aspect	Ref.	Potential Odour Source	Scenario
5	Waste storage and handling inside reception building	5.1	Storage of waste awaiting treatment	Odours released during decomposition. This may speed up in periods of warm weather.
		5.2	Waste undergoing treatment	Odours released when waste is disturbed during treatment operations.
		5.3	Leachate/effluent drainage from stored waste	Odours arising from effluent draining from waste along the floor.
6	Dryer	6.1	Emission point	Odours during abnormal operations.
		6.2	Waste handling	Odour release when waste is placed into dryer or removed.
7	Baled SRF/RDF	7.1	Storage of baled SFR/RDF outside the building	Odours from waste bales.
8	RDF/SRF loaded into lorries	8.1	Waste in lorries	Odour released from lorry.
9	External areas	9.1	Contaminated roadways	Odour generated by standing water and waste which has escaped from vehicles, process or = bales.
		9.2	Sediment and other organic matter in silt traps	Odour generated by standing water, due to silt and other matter blocking drains.
10	Full retention separators	10.1	Separators opened for emptying	Odour during emptying activities.

3.3. Odour Risk Assessment

- 3.3.1. An Odour Assessment was carried out by Air Quality Consultants (AQC) Ltd as part of a full assessment for air quality and odour for the proposed Nine Mile Point Waste Processing facility.
- 3.3.2. The odour risk assessment used a source-pathway-receptor approach to identify the potential risk of odour effects from the facility. The concept of this approach is that in order for an odour impact (such as annoyance or nuisance) to occur, there must be a source of odour, a pathway to transport the odour to an off-site location, and a receptor (e.g. people) to be affected by the odour.
- 3.3.3. In order to determine the risk of potential odour effects, a number of factors determining odour exposure were used. These factors are outlined as, and referred to as, the 'FIDOR' factors in the Environment Agency's H4 guidance document on odour management (Environment Agency, 2011). The FIDOR factors are:
- Frequency – the frequency with which odours are detected;
 - Intensity – the intensity of odours detected;
 - Duration – the duration of exposure to detectable odours;
 - Offensiveness – the level of pleasantness or unpleasantness of odours; and
 - Receptor – the sensitivity of the location where odours are detected, and/or the proximity of odour releases to an odour-sensitive location.
- 3.3.4. The overall source odour potential of Nine Mile Point Waste Processing Facility, is judged to be small. This is because of the likely limited quantities of odorous waste that will be delivered to the site and the odour control measure which will be in place. The overall significance of odour effects on sensitive receptors is considered to be negligible.

4.0 MITIGATION & CONTROL - NORMAL OPERATIONS

4.1. Introduction

- 4.1.1 The activities to be undertaken at the Nine Mile Point Waste Processing Facility will be primarily the storage, segregation, shredding, screening, separation, drying and bailing of waste for use as a fuel. No other potentially odorous activities will take place at the waste processing facility.
- 4.1.2 Relevant Guidance and the European Union BREF Best Available Techniques Guidance Documents state that odour prevention, in the first instance, by good housekeeping and good working practices, is the best and most effective means of mitigating odour. As such, the Nine Mile Point Waste Transfer Facility will endeavour at all times to ensure that good working practices are being adopted and that wherever practicable Best Available Techniques (BAT) are implemented for the management of waste on site.
- 4.1.1. The Waste Treatment Facility has been designed in such a way as to control any potential odorous emissions that may be generated whilst ensuring that Best Available Techniques (BAT) where appropriate, have been utilised.
- 4.1.2. The Operator has considered both source materials and process related activities as part of its mitigation strategy for odour management. Further details on the considerations for these are provided below.

4.2. Incoming Waste Controls

- 4.2.1. Control of incoming waste can often play a key role in the management of odour. The proposed Nine Mile Point Waste Treatment Facility will take up to 100 000tpa of waste.
- 4.2.2. The majority of waste is anticipated to be commercial/industrial waste, however some household wastes and other waste codes will be accepted. The main source of these materials will be other waste management facilities.
- 4.2.3. The plant and equipment at the site has been designed to accept and treat all of the wastes listed and EWC codes within the Permit Application (Appendix A in document reference CRM 083 002 PE R 006 OTMP).
- 4.2.4. All incoming loads will be inspected either by the Site Manager or and appropriately trained operative and any waste deliveries which are considered to be highly odorous, or likely to give rise to strong and offensive odours during storage on site, will be refused entry to the site.
- 4.2.5. Should the facility approach maximum capacity in terms of storage and throughput of waste, emergency contingency measures as described 4.3 will be put into place.
- 4.2.6. The odour potential of some waste can increase as it starts to age and biodegrade and this will be affected by the time of year. General waste containing potentially odorous materials will only be stored on site for up to 24 hours before it undergoes treatment.
- 4.2.7. Waste will be managed to achieve a first in first out 'FIFO' approach.

4.3. Contingency Arrangements

- 4.3.1. In the event that there is a malfunction or breakdown of essential equipment on site, and the plant cannot accept or process waste, emergency contingency measures will be put into place

to manage expected waste deliveries, until normal operations on site can resume as detailed in Table 6.6.3.

- 4.3.2. As all waste received at the site is from other waste management companies, these companies will be contacted when an abnormal operating situation which may lead to excessive waste building up on site is encountered, and asked to stop deliveries until the situation is resolved.
- 4.3.3. Any alternative recovery or disposal routes will always follow the principles of the Waste Hierarchy, and waste will be diverted to other facilities for treatment in priority to any alternative disposal option.

4.4. Storage of SRF/RDF and rejected wastes

- 4.4.1. RDF/SRF will be baled and wrapped five times so will minimise any odour.
- 4.4.2. RDF/SRF will generally be stored for 1 month prior to removal off site. RDF/SRF will be stored for a maximum of 3 months on site.
- 4.4.3. Storage for up to 600 bales of RDF/SRF is available on site.
- 4.4.4. Waste will be subjected to visual inspection when tipped in the waste reception building. If it is deemed unacceptable to be processed at the facility it will be reloaded onto the delivery vehicle and taken off site immediately.

4.5. Process Control

- 4.5.1. Operational measures and high standards of housekeeping implemented as part of the general site management of the Facility will also minimise the occurrence of fugitive odours from the day to day activities.
- 4.5.2. Any operations or materials identified as causing, or likely to cause, an odour annoyance beyond the site boundary, or if abnormal odours are experienced within the site, the Site Manager will modify those operations to reduce the risk of odour nuisance.
- 4.5.3. Key to ensuring successful management of odour the consideration of actions to be taken should there be abnormal/emergency operating conditions at the waste processing facility as a result of a failure or breakdown in the process management systems.
- 4.5.4. The Odour Control Matrix in Appendix A describes controls applied to odour sources identified in Section 3 above.

5.0 MONITORING & MAINTENANCE

5.1. Overview

- 5.1.1 The Operator will monitor odour emissions at the Facility to ensure that any odour releases that may occur do not result in the creation of an odour nuisance at a sensitive receptor. Monitoring is included in the Odour Management Matrix provided in Appendix A.

5.2. Monitoring

General / Odour Monitoring

- 5.2.1. Monitoring of odour emissions by sensory / olfactory field odour assessment (sniff testing) will be carried out by the Shift Supervisor or relevant person who has not been recently working in the waste reception building. It is recognised that staff normally exposed to the odours may not be able to detect or reasonably judge the intensity of odours off site. Sniff tests will record the perceived level of odour present at the site's Environmental Permit Boundary and will give an indication of the effectiveness of the current operating conditions at the site.
- 5.2.2. Such an assessment is a 'sensory' evaluation, as the human nose is used as the detector as opposed to a specific item of monitoring equipment, as no such equipment is available for the detection of odour.
- 5.2.3. Routine monitoring of odour will include:
- Daily sniff testing to a standard as defined by the EA's Horizontal Guidance Note 'H4 Odour Management, Environment Agency' March 2011;
 - Monitoring of weather conditions; and
 - Monitoring of complaints and other forms of community feedback.
- 5.2.4. Sniff testing will be carried out daily in all instances by the Shift Supervisor or a relevant person, in particular during periods when it will coincide with potentially odorous activities, but will also be undertaken in addition to the daily monitoring for the following reasons only:-
- During periods of adverse meteorological conditions;
 - During plant breakdowns or other periods of abnormal operation;
 - In the event that a complaint is received on site.
- 5.2.5. The Shift Supervisor and other relevant persons will be trained in the requirements of the Guidance Document H4 – Odour Management with specific reference to Sniff Testing. The Odour Monitoring Form in Appendix D will be used to record all sniff tests and incorporated into the facilities EMS.

5.3. Waste Reception Operations

- 5.3.1. As part of the daily checks the Shift Supervisor or other relevant persons will also undertake checks to ensure that the integrity of the reception building structure, door operation etc. has not been compromised, the results will then be recorded in accordance with the EMS.
- 5.3.2. Further checks of the dryer area including pipework, baghouse filter and the stack will be undertaken and recorded in the site diary.

- 5.3.3. Any identified maintenance or technical issues will be raised with the appropriate contact (i.e. onsite fitter / contractor / manufacturer) and rectified as soon as practically possible and a note will be made in the site diary.
- 5.3.4. In addition to the technical checks within the waste reception area all incoming wastes will also be visually and olfactorily checked to ensure they are suitable and in a suitable condition for processing.

Monitoring of Meteorological Conditions

- 5.3.5. Weather conditions will be recorded on a daily basis.

5.4. Control Measures during Routine Maintenance

- 5.4.1. When maintenance work is undertaken, there is the potential that the site is more vulnerable to fugitive releases of odour. There are a limited number of maintenance operations on-site which will contribute directly to odour generation. Emptying and maintaining the full retention separators has the potential to generate odours and is included in Appendix A: Odour Control Matrix which includes specific measures to minimise odour.
- 5.4.2. Whilst emptying the full retention separators perimeter sniff testing will increase and any odours noted and acted upon. Shall any highly offensive odours result, the activity will cease. Methods of removal of the contents of the interceptors will be reviewed and revised.
- 5.4.3. As detailed in Appendix A: Odour Control Matrix, odour minimization will be achieved through careful monitoring of incoming wastes and handling any potentially odorous wastes as a priority to reduce the potential to generate odours at source. Up to 10% of the predicted incoming wastes are more likely to be odorous.

6.0 ABNORMAL / EMERGENCY OPERATIONS

6.1. General

- 6.1.1 Operators must consider what incidents or emergencies might adversely affect the control of odour pollution in order that they can plan and take appropriate steps to reduce the likelihood of the incident occurring; minimise any impacts if the incident were to occur; and recover control of the process as quickly as possible.
- 6.1.2 It is not necessary to consider events which are either very unlikely to occur or where odour would be a minor element of the overall environmental impact. For example, if there was to be a major environmental incident in the Cwmfelinfach area (such as snow/major flooding) which affected the general area and prevented staff from getting to work, then odours would be a relatively minor aspect of the overall disruption and environmental impact.
- 6.1.3 However, events that are uncommon but reasonably foreseeable which could affect the running of the site and cause odour problems should be addressed e.g. deliveries may be affected from time to time or staff (internal and external) may be unavailable for some reason e.g. illness.

6.2. Abnormal Meteorological Conditions

- 6.2.1 In the event that meteorological conditions prevent delivery or dispatch vehicles, or staff arriving on site, emergency contingency plans will need to be followed to ensure the site can be remotely managed until the plant can return to operation under normal conditions. The Shift Supervisor and staff operatives will undertake daily weather checks to ensure that any abnormal weather conditions can be foreseen as much as possible and contingency arrangements can be put in place prior to any problem occurring on site. In the event that the site has to be closed due to severe weather conditions deliveries will be diverted to an alternative suitably permitted site for either recovery or disposal.

6.3. Breakdown of Process Equipment and Plant

- 6.3.1 Arrangements will be made with maintenance/service companies to ensure that breakdown or damage to any critical items will be dealt with and repair/replacement actioned as a matter of urgency.
- 6.3.2 Reserve equipment will be kept on site so that any failed parts are quickly replaced and unnecessary delays in ordering parts can be avoided.

6.4. Staffing Issues

- 6.4.1 The facilities standby staff rota will be actively managed, and in the event of staff illness, the shift supervisor will be available to carry out the role of the absent staff member and the Site Manager will carry out the Shift Supervisor's role.
- 6.4.2 Maintenance staff will also be available at short notice if required.

6.5. Accidents and Incident Releases

- 6.5.1 As identified above, under normal conditions the site has been designed to contain and abate odour releases, therefore the key potential hazards reside from abnormal events; primarily from accidents or incidents. This includes on site hazards from machinery failure, accidental spillages, vehicle collisions, fires resulting from arson and vandalism, and accidental fires.

6.6. Abnormal Conditions

- 6.6.1 In order to ensure adequate mitigation measures are in place to address all possible abnormal odour emission scenarios at the proposed facility, the possible scenarios and response measures to be implemented are presented in Table 6.6.3 below.
- 6.6.2 Following the occurrence of any abnormal / emergency scenario on site a full post-event investigation will be conducted and if necessary modifications to the control measures, mitigation equipment, training and contingency actions will be implemented and the OMP updated accordingly.
- 6.6.3 Where an event is found to be due to deviation from operational procedures, in-place staff will be re-trained in the operational procedures as necessary.

Table 6.6.3: Abnormal / Emergency Operations

Scenario	Abnormal / Emergency Operations	Location	Likely effect on emissions inventory	Contingency / Control Measures
Highly odorous waste received	Abnormal	Site entrance	Potential increase in odour emissions from stored waste if allowed on site	Site manager will refuse entry of the waste load
Highly odorous waste received	Abnormal	Reception building	Potential increase in odour emissions from stored waste	If highly odorous waste is not identified until load has been tipped, waste will be bulk loaded on to outgoing vehicles to be removed from site to disposal facility as a matter of priority.
Mechanical or electrical failure / preventing processing	Abnormal	Reception building	Potential increase in emissions of odour from prolonged waste storage	Programme of Preventative Maintenance will be employed on site to minimise any potential breakdowns or plant failure Instigate immediate investigation and remedial action as required. Arrangements will be made with local maintenance/service companies to ensure that breakdown or damage to any critical items will be dealt with and repair/replacement actioned as a matter of urgency If storage of waste is maximised then the further acceptance of waste will be restricted.
Failure of odour management systems.	Abnormal / Emergency	Reception building	Increased risk of fugitive emissions from the reception building.	Instigate immediate investigation and remedial action as required. If storage/treatment of waste is considered to be a risk then the further acceptance of waste will be restricted.
Restricted staff availability	Abnormal	All operational locations	Risk of increased impact from any area of site where normal operations affected	Several staff will be trained to operate the loading shovels and other mobile plant; all other equipment will be automated. If required hired staff could be employed temporarily as necessary.

Scenario	Abnormal / Emergency Operations	Location	Likely effect on emissions inventory	Contingency / Control Measures
Fire	Emergency	Reception Building Baled SRF/RDF Dryer	Risk of increased impact from any area of the site affected by fire during and after fire	Fire risk procedures will be adopted on site. If required following a fire, operations will cease until all plant and infrastructure is restored. Details of the Facility's fire risk procedures will be included within the Accident Management Plan.
Flood	Emergency	All operational locations	Risk of increased impact from any area of site affected by flooding during and after flood	Site is not located within a flood zone. In the extremely unlikely event that flooding should occur and waste has been submerged, there is a likelihood of degradation and onset of anaerobic conditions early, so this will require immediate treatment or removal off site. No further waste will be received on site until flooding abated
Extreme meteorologic al conditions	Abnormal / Emergency	All operational locations	No change anticipated	When extreme meteorological conditions occur inhibiting the adequate dispersion of odours or increasing risk of unacceptable exposure at receptors, potential odour generating activities such as waste reception will be suspended.
RTO Failure	Emergency	Reception building	Increased emissions while odour control is operating sub- optimally	Instigate immediate investigation and remedial action as required, utilising specialist contractors if necessary. In extreme cases if necessary (if long term failure anticipated and wastes generate unacceptable odours) remove malodorous wastes from areas affected (Offsite if necessary) and cease reception of wastes if necessary until system is repaired and proved to be effective . Programme of regular maintenance and repair works to be carried out by contractor as required.

7.0 RECORDS AND REPORTING

7.1. Complaints and Incident Review

- 7.1.1. Records of sniff testing undertaken will be noted on the odour monitoring form. Forms will be filed and kept in on site for inspection by NRW as and when required.
- 7.1.2. Should odour be detected at the site boundary, a note of this will be made in the site diary and the Shift Supervisor will take appropriate steps to mitigate the odour, which comprise as a minimum:
- Inspection of site operations to identify source through sniff testing;
 - Removal of any particularly offensively odorous wastes from site;
 - Review of acceptance and pre-acceptance procedures to prevent recurrence; and
 - Review of storage facilities to ensure that they are designed to minimise odour.
- 7.1.3. Odour complaints received at the facility will be reported to NRW and followed up on with on-site investigation, which will also be reported to NRW via the appropriate Environmental Permit Notification System.
- 7.1.4. It is not proposed to undertake any grab sample monitoring unless continuous odours are identified at the facility or multiple complaints are received. At such time this OMP will be reviewed and the requirement for such monitoring carefully re-evaluated.
- 7.1.5. It is vital to record and act upon complaints received and communicate the outcome of the investigation to the complainant. It is equally vital to undertake a review following complaints or incidents if warranted to implement further control measures or change behavioral practices on site to prevent the event from occurring again. The Operator will undertake a formal review of onsite processes following any major incident, and will routinely review any complaints received as and when they occur.
- 7.1.6. All records of events and actions taken will be retained as required by the Environmental Permit.

7.2. Notifying Natural Resources Wales

- 7.2.1. In the event that an accident or incident, which could impact on the environment, occurs the Operator will notify Natural Resources Wales as soon as practically possible, using the emergency 24hr phone line (0800 80 70 60). The Shift Supervisor or TCM for the facility will also notify the Regulatory Officer should any complaints be received directly to site, and advise what remedial measures or actions have been taken to address the problem. Copies of any material complaints received will be made available to Natural Resources Wales for review.

7.3. Odour Management Plan Review

- 7.3.1. The OMP will be reviewed by senior management following commissioning and every 4 years afterwards and immediately following any major incident / event.

Any technical and managerial changes on site will also initiate a review of the OMP to ensure that the odour control techniques and abatement systems remain appropriate for the site.

7.4. Cessation or Reduction of Operations

- 7.4.1. The Operator will prepare a site closure plan in line with Relevant Guidance to confirm how the site will be decommissioned to return it to a satisfactory state upon the cessation of activities.
- 7.4.2. The Site Closure Plan will be maintained on site and updated as circumstances change, for example, should there be any process changes or change of land use.
- 7.4.3. Records will be maintained of the location of facilities, as well as the services and sub-surface structures installed during the construction and operating phases of the facility.
- 7.4.4. De-commissioning will be in compliance with procedures outlined in the Site Closure Plan. During the de-commissioning process, operational records will be reviewed and assessed against any conceptual site model documented in the Permit application. If areas of deterioration during the operation of the site are identified these areas will be re-examined and the site will be returned to a satisfactory state as defined at the permit application stage.
- 7.4.5. Due consideration at this decommissioning phase will be given to ensuring any potential odour risks during dismantling or removal of plant / equipment from site.

8.0 COMPLAINTS PROCEDURE

8.1. Engagement with Neighbours

- 8.1.1 In the event of odour issues, the complaints procedure will be adhered to and will engage with the public, if required, and liaise with the local Natural Resources Wales Officer to determine appropriate steps. The operator intends to implement an open and transparent approach with the local community upon commencement of operations.

8.2. Responding to Complaints

- 8.2.1 The information/contact number will be provided on the site entrance board for the public to use should they wish to register a direct complaint to the Operator. Following any complaints received, the Operator will endeavour (where possible) to contact the complainant to provide feedback on actions taken to both assess the event and convey any remedial actions taken.
- 8.2.2 Where complaints are received directly from the public the Operator will follow the Odour Complaints Procedure presented in Appendix B.
- 8.2.3 All Complaints will be recorded on an Odour Complaint Form such as that presented in Appendix C. A record of any complaints will be forwarded to the site's Regulatory Officer. Information to be recorded includes the date, time, location/address of the complainant (where provided), time the odour was noted to be causing a nuisance and a description of the odour (from the complainant).
- 8.2.4 A trained member of staff will then attend the location of the odour complaint and undertake a walkover sniff test recording the results on an Odour Monitoring Form (Appendix D).
- 8.2.5 If odour is encountered, the source of it will be investigated by site management and the outcome of these investigations recorded.
- 8.2.6 Investigations will be carried out into the likely source and causes of the odour, including a review of the meteorological data. Where odour is identified, suitable remedial action will be implemented. All actions taken shall be recorded.
- 8.2.7 In such circumstances, an incident report will be completed and provided to Natural Resources Wales with suitable feedback provided to the complainant also.
- 8.2.8 Where no odour is observed, a record of the monitoring round will be taken, the meteorological data will also be checked for prevailing conditions at the time the odour was observed and a report will be provided to Natural Resources Wales with suitable feedback provided to the complainant.
- 8.2.9 The appropriate Environmental Permit Notification Forms will be used to report any odour incidences / complaints to Natural Resources Wales.

APPENDIX A – ODOUR CONTROL MATRIX

Odour Monitoring, Management and Control Matrix

Ref	Aspect	Ref.	Odour Source	Scenario	Odour Rating	Monitoring	Control
1	Incoming Vehicles	1.1	From raw waste within vehicle	Open vent/lid on tanker, lorry not closed, venting pungent odour as travels/static	Low	Checked at site reception.	Driver informed, vehicle company informed.
		1.2	Dirty Vehicle	Odorous waste on external parts	Low	Checked at site reception.	Driver informed, vehicle company informed. Vehicle washed prior to departure.
2	Reception building when door opened	2.1	Fugitive emission from reception building	Moderate odour intensity, mitigated by airflow into building	Med	Procedure undertaken by Shift Supervisor	Fast acting roller shutter doors.
3	Vehicle off-loading	3.1	Waste being tipped onto building floor	Tipping of waste releases trapped odours, and exposes new odour surfaces. Waste may have warmed in transport.	High	Checked when tipped	If required, given priority to be loaded into processing system.
4	Washing down	4.1	Wash-water with waste residues	Wash-water carries odorous residues from vehicle body/tank, spills to floor area and drains to sealed drainage system and sewer.	Med	Check made to ensure drainage system working. Check made to identify any liquid ponding in reception building.	Drainage system within building. Clean water available. Steam cleaning available. Negative pressure
5	Waste storage and handling inside reception building	5.1	Storage of waste awaiting treatment	Odours released during decomposition. This may accelerate in periods of warm weather.	Med	Waste checked at weighbridge prior to acceptance onto site where possible. Maintain a record of duration or storage of odorous.	Particularly odorous wastes will be rejected. Driver informed, haulier/waste producer informed.
		5.2	Waste undergoing treatment	Odours released when waste is disturbed during treatment operations	Med	Check made to ensure drainage system working adequately. Carry out sniff testing, increase frequency as required.	Controlled by containment in reception building and extraction system - negative pressure.
		5.3	Leachate/effluent drainage from stored waste	Effluent draining from waste along floor	Med		If required, waste is given priority for treatment. Housekeeping measures to maintain a clean site.

Ref	Aspect	Ref.	Odour Source	Scenario	Odour Rating	Monitoring	Control
6	Dryer	6.1	Emission point	Odour during abnormal operations	Low	SCADA system control. Operator checks	Regular maintenance carried out as directed by the manufacturer. Operator Training.
		6.2	Waste handling	Odour release when waste is disturbed, placed into dryer	Medium	Supervisor/manager checks. Operator procedures acceptable.	Operator training. Odour control system on dryer Dryer connected to building via pipework through which waste is transferred.
7	Baled SRF/RDF	7.1	Storage of baled SRF/RDF outside building	Odours from baled waste	High	Operator visual checks. Operator odour checks.	Bales will typically be stored for one month. Bales will not be stored for more than 3 months. Bales rotated on a 'first in' – 'first out' basis. Bales to be wrapped 5 times.
8	RDF/SRF loaded onto lorries	8.1	Waste in lorries	Odour release when bales are disturbed	Medium	Operator odour checks. Operator visual checks.	Bales a wrapped 5 times. Bales inspected for damage to wrapping during storage. Bales are typically stored for one month before being transported off-site. Bales are not stored for longer for 3 months.
9	External areas	9.1	Contaminated roadways	Odour from waste residues tracked out of building	Low	Daily inspections by site manager. Carry out sniff testing, increase frequency as required.	Housekeeping measures to maintain a clean site. Daily inspection and cleaning carried out based on the results of the inspection.
10	Full Retention Separators	10.1	Separators opened for emptying	Odour during the emptying activities	Med	Check operation weekly. Carry out sniff testing at the site boundary whilst emptying is in progress.	Good housekeeping measures. Regular emptying of separators in line with manufacturers recommendations to minimise odour generation.

APPENDIX B – COMPLAINTS PROCEDURE

Title: Odour Complaints Procedure
Issue Date: June 2015

1. Purpose

The purpose of this procedure is to provide details and define actions that employees of Hazrem Environmental Ltd are required to follow to ensure that best practice is employed on site, and that any odour complaints are appropriately managed. This procedure is for odour emissions only.

2. Scope

This procedure applies to odours arising from activities at Nine Mile Point Waste Processing Facility.

3. General

All odour complaints received at the site must be notified to the Shift Supervisor / designated TCM for the site who will be responsible for notifying Natural Resources Wales.

4. Procedure

1. Any odour complaint received will be reported to the Shift Supervisor.
2. If a complaint is received, the complaint report form will be completed, a copy will be kept in the site office and will be made available for inspection by Natural Resources Wales.
3. If details have been provided, the site manager will contact the complainant by telephone to discuss the nature of their complaint.
4. After details of the complaint have been compiled, the cause(s) will be investigated, with reference to:
 - The activities taking place on site at the time;
 - The timing of the complaint (whether weekday, weekend, daytime, evening) etc;
 - The weather conditions at the time.
5. The likely reasons for the complaint will be added to the form and the complainant will be contacted as appropriate;
6. Details of actions taken and updated plans will be forward to Natural Resources Wales;
7. Complete forms are filed and kept on site.

APPENDIX C - ODOUR COMPLAINT REPORT FORM

Odour Complaint Form Hazrem Environmental Ltd	
Facility to which Complaint relates	Date recorded
Reference number	
Name and address of caller (complainant)	
Telephone Numbers	
Date, time and duration of offending odour	
Odour description	
Any other comments from complainant	
Weather conditions	
Wind Direction and Strength	
Any other previous complaints relating to this odour	Yes / No
Any other relevant information	
Potential odour sources that could give rise to the complaint	
Operating conditions at the time offending odour occurred	
Follow-Up	
Date and time caller contacted	
Action taken	
Amendment required to the odour management plan?	Yes / No
Form Completed by:	Signed:

APPENDIX D – ODOUR MONITORING SURVEY FORM

Odour Management Checks/Sniff sheet

[illegible]



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The Byre,
Woodend Lane,
Cromhall,
Gloucestershire GL12 8AA
Tel: 01454 269 237

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STEP Business Centre
Wortley Road
Deepcar
Sheffield S36 2UH
Tel: 0114 290 3677

MANCHESTER OFFICE

76 King Street,
Manchester,
M2 4NH
Tel: 0161 413 6444

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