

FEDW HIR ECO CENTRE WASTE TRANSFER STATION

Odour Management Plan

Prepared for: Tip Top Toilets

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Appendix 01: Odour Survey Methodology

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1.0 Introduction

Tip Top Toilets has instructed SLR Consulting Limited (SLR) to prepare an Odour Management Plan (OMP) for the Fedw Hir Eco Centre Waste Transfer Station (WTS) in Aberdare.

This OMP has been prepared as part of a Schedule 5 response for the bespoke Environmental Permit (EP) application submitted to Natural Resources Wales (NRW) under reference number PAN-002844 issued 31st July 2018.

This OMP outlines the methods by which Tip Top Toilets shall systematically assess, reduce and prevent potentially odorous emissions from the WTS during normal operational conditions and during potential abnormal events.

1.1 Odour Regulation

NRW guidance document, 'How to comply with your environmental permit, Version 8, October 2014', states that a dedicated OMP is required for a WTS accepting the proposed waste type (20 03 04).

Additional guidance, 'How to comply with your permit – H4 Odour Management, Version 2, October 2014, describes how the IPPC Directive includes odour in the definition of pollution and requires that *"...all the appropriate preventive measures are taken against pollution ..."*. This Directive has been transposed in the UK by the Environmental Permitting Regulations (EPR) and sites encompassed within these Regulations will have the odour conditions.

No activities covered by Schedule 1 of the EPR are carried out at the Fedw Hir WTS, however, this OMP has due regard to the principals set out in H4.

1.2 OMP Objectives

The OMP is a working document with the specific objectives of ensuring:

- Potential odour impact is considered as part of routine operations;
- Odour is primarily controlled at source by good operational practices, the correct use and maintenance of plant;
- All 'appropriate measures' are taken to prevent or, where that is not reasonably practicable, to minimise odorous emissions to air from the operations; and
- Minimisation of the risk of unplanned odour releasing incidents or accidents that could result in annoyance by anticipating and planning for them.

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 site, the mitigation measures to be used to reduce the risk of odour nuisance and the monitoring and reporting methods to be used. It shall be reviewed regularly and revised as required.

1.3 OMP Structure

According to NRW guidelines, an OMP should contain the following elements:

- An assessment of the risks of odour problems, from normal and abnormal situations, for example of weather, temperature, or breakdowns, as well as accident scenarios;
- The appropriate controls (both physical and management) needed to manage those risks;
- Suitable monitoring;

- Actions, contingencies and responsibilities when problems arise;
- Regular review of the effectiveness of odour control measures; and
- Emission limits (where appropriate).

The OMP is also required to include clear statements to demonstrate that Tip Top Toilets understands and accepts its responsibilities. In particular, it demonstrates:

- That Tip Top Toilets, either directly or through its contractors or subcontractors, ensures that equipment on site is operated and maintained such that it is effective in the control of odour at all times;
- That Tip Top Toilets is familiar with the characteristics of the processes and equipment on site and have identified the areas of risk of emissions from odour;
- How Tip Top Toilets reduce or cease operations if necessary to avoid serious odour pollution;
- How Tip Top Toilets engage with neighbours to minimise their concerns and complaints; and
- How Tip Top Toilets respond to complaints.

2.0 Sources, Releases and Impacts

This section provides an inventory of potential odour sources, release points, pathways and receptors relevant to the WTS.

2.1 Description of Operations

It is proposed that the site will be operated as a waste storage and transfer facility, accepting and storing up to 1,500,000 litres¹ of sewage waste per annum. There will be no treatment of this waste on site.

It is anticipated that waste quantities will continue to increase as the business grows and the proposed annual waste acceptance quantity has been calculated to reflect this future growth.

The site will hire out welfare facilities (toilets, showers and welfare units) for private and commercial events and to the construction industry within the local area. The units will be stored on site, as shown on Drawing 002. Units will be delivered to wherever needed and collected by Tip Top Toilet's own vehicles.

Upon cessation of the hire, Tip Top Toilets collect the units and transport them via their own vehicles back to the site. Upon arrival at the site the units will be emptied into either the storage tank or into an IBC. The waste will be transferred and accepted on site under the European Waste Catalogue (EWC) code 20 03 04 – septic tank sludge.

The tank and any IBC's will be contained within Waste Storage Area 1 as shown on Drawing 002. This will comprise a weatherproof poly tunnel with a fully engineered bunded area capable of providing bunding for up to 28,800 litres (28.8m³) of waste.

It is anticipated that Waste Storage Area 2, also marked on Drawing 002, will be developed within the near future to benefit from the same poly tunnel and engineered bunding arrangement. To retain flexibility, the maximum waste storage amount has been calculated based upon both waste storage areas being developed (57.6m³).

Waste will only be stored within sealed tank (s) sited on impermeable surfacing with engineered drainage such as is currently provided within Waste Storage Area 1. The development of Waste Storage Area 2 is likely to reflect that currently seen in Waste Storage Area 1 (albeit considering any revised standards or market conditions).

Waste will be bulked up on site and when at capacity, the tank and / or IBC's emptied by an appropriate contractor and removed off site to a suitably permitted facility.

Chemical toilets require chemical dosing to ensure health and safety measures are met. A purpose built COSHH containment shed will be located on site, as shown on Drawing 002.

The site will wash down each unit between hire. The wash down utilises a steam cleaner, jet wash, water and additional chemicals. The wash down occurs at the location shown on Drawing 002.

The wash bay will be accompanied by an above ground septic tank which will be adjacent to the wash bay within a bunded tank capable of holding 110% of the capacity of the tank. The septic tank will be emptied as required.

Currently, the site has approximately 180 units on site consisting of 52 event units, 89 site units, 8 disabled, 11 urinals, 8 luxury trailers and 9 welfare units.

¹ Using the WRAP conversion data, July 2014, which states EWC 20 03 04 as 1 tonne = 0.92 m³, 1,500,000 litres equates to 1380 tonnes per annum.

2.2 Odour Sources

The acceptance of septic tank sludge waste (20 03 04) has the potential to be odorous in nature. Table 2-1 below summarises the potential odour generation sources present.

Table 2-1
Odour Generation Sources

Activity	Location	Factors Affecting Source	Odour Risk
Delivery of Waste	Designated waste reception and storage area shown on Drawing 002 as 'Storage Area 1'.	State of decomposition on arrival at the facility; and Integrity of Storage Area 1.	Medium
Handling of Waste	Designated waste storage area and wash down area shown on Drawing 002 as 'Storage Area 1'.	State of decomposition on arrival at the facility; Wash down procedures; Quantity of waste; and Integrity of Storage Area 1.	Medium
Storage of Waste	Designated waste storage area shown on Drawing 002 as 'Storage Area 1'.	State of decomposition on arrival at the facility; Storage time before removal from site; and Integrity of Storage Area 1.	Medium
Removal of Waste	Designated waste storage area shown on Drawing 002 as 'Storage Area 1'.	Storage time before removal from site; and Integrity of Storage Area 1.	Low

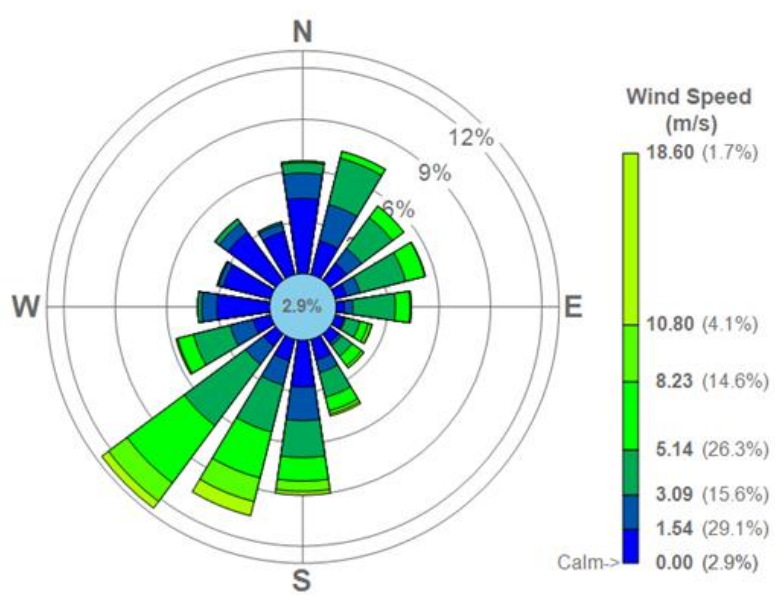
2.3 Pathways

The pathway by which odours may impact upon receptor locations is a result of atmospheric dispersion. In general, high wind speeds lead to emitted odour being rapidly dispersed and diluted due to turbulence, and conversely low wind speeds inhibit the dilution of odours.

The Department for Environment, Farming and Rural Affairs (Defra) confirm that the site is not located within an area designated as an Air Quality Management Area.

Prevailing wind directions are considered in assessing the likelihood and management of fugitive emission risks. Wind speed and direction data have been obtained for 2013 from the Sennybridge meteorological station. A wind rose of speed and direction is presented in Figure 2-1. It shows the prevailing wind to be from the south west. As a result, the potential impact of fugitive emissions is likely to be greater to the north east of the site.

Figure 2-1
Sennybridge Meteorological Station, 2013



2.4 Receptors

The likelihood and frequency of exposure to odour arising from the facility is determined by the magnitude of release, the prevailing meteorological conditions, and the distance and direction of receptors in relation to the facility.

Potentially sensitive receptor locations for odour are typically defined as locations where people spend time and expect a reasonable level of amenity. Therefore, residential properties are generally regarded as the most potentially sensitive locations and recreational areas being of medium sensitivity.

Site setting and receptors are further detailed in Section 3 of this report.

3.0 Site Setting and Receptors

3.1 Site Setting

The site is centred on National Grid Reference SN 99357 06198, and located at Fedw Hir, Llwydcoed, Aberdare, CF44 0DX. The surrounding area is predominantly open and agricultural land. The location of the site is illustrated on Drawing 001.

Tip Top Toilets own a large area of land, approximately 14 acres which encompasses the EP boundary as well as offices, associated buildings and a residential building (owned and occupied by Tip Top Toilets) to the south.

Drawing 002 shows the layout of the site which in summary comprises waste and non-waste storage areas, welfare facilities, a biomass boiler and kiln.

3.1.1 Surface Water

There are multiple surface water receptors within a 1km radius of the site.

The Nant y Faeldref conjoins with the Nant y Gwyddel approximately 30m to the north east of the proposed boundary. The Nant y Gwyddel then continues to flow to the east of the site. A further tributary, the Cwm Cae'rodyn flows approximately 170m to the west before also joining the Nant y Gwyddel.

There are several other surface water bodies near the site including Nant Hir Reservoir approximately 640m north.

3.1.2 Commercial and Industrial

The Llwydcoed Crematorium is located approximately 235m to the north and north east.

3.1.3 Recreational Areas

A sports court and the Welfare Sports Ground are located approximately 650m and 925m to the south of the permit boundary respectively.

3.1.4 Agricultural, open land and mixed-use land (industrial and commercial with residential / agricultural use)

A public right of way extends around the southern and eastern edge of the proposed site boundary within 50m of the site.

Agricultural, open land and mixed-use land is located in all directions from the site.

The nearest industrial premises belong to Tip Top Toilets and is operated to the south of the boundary.

Further mixed-use land includes that located approximately 175m to the south (residential and livery), 230m to the south east (residential and industrial premises) and 250m to the north east (residential and commercial premises).

Agricultural premises (residential farm buildings and associated infrastructure) are located in all directions, the closest of which is located approximately 400m to the west of the boundary.

3.1.5 Transport network

The site is accessed via a no-through road off Cwmynysminton Road to the south, or via a track that leads through the crematorium to the north. The wider road network is shown on Drawing 003.

3.1.6 Woodland

Searches conducted on the Defra Multi Agency Geographical Information for the Countryside (MAGIC) mapping website² show numerous areas of woodland present in the vicinity of the site. The closest area of woodland is adjacent to the boundary to the east which is also listed within the National Forest Inventory.

3.1.7 Ecology

All cultural and natural receptors within 1km of the site boundary are shown on Drawing 004.

European/International Sites

Further searches on the MAGIC website highlight 2 Sites of Special Scientific Interest (SSSI) within 1km of the site:

- Bryncarnau Grasslands, dedicated for its species-rich grassland; and
- Tir Mawr a Dderi Hir, dedicated for its important grassland habitats.

3.1.8 Cultural Heritage

There are numerous National Monuments within a 1km radius of the site, the closest of which is Cwm Llwydcoed Southern Track, approximately 140m east. Furthermore, the Llwydcoed Crematorium, approximately 235m north and north east of the site is a Cadw Listed Building.

3.2 Summary of Sensitive Receptors

Table 3-1 and Drawings 003 and 004 show the locations of receptors that are considered to be potentially sensitive and could reasonably be affected by odours produced by the waste management activities. Those to the north east, which may be at higher risk from the prevailing wind direction, are highlighted in bold. The receptor most likely to be affected is the Llwydcoed Crematorium to the north east. The crematorium is likely to be occupied by people in buildings on a non-frequent basis and therefore is not considered high risk in the same way as a residential property would be.

The Bryncarnau Grasslands SSSI are also potentially at risk from the prevailing wind direction, due to being located north east of the site. The risk of odour emissions affecting these sites is considered to be low due to the distance from the site (between 40m and 900m from the boundary) and the likelihood that odour will disperse across the woodland (approximately 100m in width) before reaching the SSSI. In the event of abnormal weather conditions (warm/dry) increasing the likelihood of odour reaching these sites, Section 6.3 of this OMP shall be followed.

The risk of odour reaching the agricultural buildings located north east of the site is deemed to be low due to the distance from the boundary (approximately 800m).

Table 3-1
Potentially Sensitive Receptors

Receptor Name	Receptor Type	Direction	Approximate Closest Distance from Licence Boundary at Closest Point
Local Receptors within 1000m of the site			

² <http://magic.defra.gov.uk/>, accessed March 2018

Receptor Name	Receptor Type	Direction	Approximate Closest Distance from Licence Boundary at Closest Point
Local Road Network	Transport	N,E,S,W	Adjacent
Tip Top Toilets Ltd Premises	Industrial	S	Adjacent
Surface water features, including Nant y Gwyddel and Nant y Faeldref	Surface Water	E	30
Agricultural Land / open land	Agricultural / open land/ rights of way	N, E, S, W	Adjacent
Agricultural premises	Agricultural premises including residential dwellings	S	180
Mixed residential / industrial / commercial and agricultural premises.	Industrial	SE	175m
Llwydcoed Crematorium	Commercial/Industrial	N, E	235
Recreational areas	Recreational	S	650
Residential Properties off the unnamed road to the North.	Residential	N	390
Residential Properties off Tre Ifor	Residential	S	565
Nant Hir Reservoir	Surface Water	N	640
Ecological and Cultural Receptors within 1000m of the site			
Areas included within the National Forest Inventory	Ecological	E	Adjacent
Bryncarnau Grasslands SSSI	Ecological	N, E	40
National Monuments including Cwm Llwydcoed Southern Track	Cultural	N,E,S,W	140
Llwydcoed Crematorium Listed Building	Cultural	N, E	235
Tir Mawr a Dderi Hir SSSI	Ecological	W	760

4.0 Odour Control Measures – Normal Operations

This section presents the principles of controlling odour generation and release at the facility and the specific control and management measures employed on site. This includes measures to control the generation and release of odour from the sources detailed in Table 2-1.

The overall aim in the operation is to apply Best Available Techniques (BAT). For this reason, the facility shall be operated and managed in accordance with the accepted hierarchy of preferred controls, that is:

- Control odour at source to prevent the formation or emission of odorous compounds in the first place;
- Where this is not practicable, to minimise the release of odour through containment;
- Abate excessive emissions; then
- Dilute any residual odour by effective dispersion in the atmosphere.

4.1 Waste Storage Area

The waste storage area 1 is located within a weatherproof poly tunnel with a fully engineered bunded area and impermeable surfacing. Storage of waste within this area will consist of a single larger waste storage tank sized at 20,000l and individual IBC's as required.

Only a small proportion of the building is south facing and therefore receives less sunlight than a building oriented to the south. The doors to the waste storage are predominately left closed due to the frequency of deliveries which therefore reduces the risk of odour escape.

4.1.1 Storage Tank

The waste storage tank is appropriately sized for the proposed operations on site. The tank will be fully sealed and will benefit from a sealed coupling allowing fully contained transfer of waste from the tanker to the tank and vice versa. The tank will require a venting system to ensure the efficient pneumatic transfer of waste.

4.1.2 IBCs

A number of IBCs appropriate for the storage requirements on site will be stored in storage area 1 in addition to the storage tank. Each IBC can contain 1000 litres of liquid waste.

4.2 Wash Bay

The site will wash down each unit between hires. The wash down utilises a steam cleaner, jet wash, water and additional chemicals. The wash down occurs at the location shown on Drawing 002.

The wash bay consists of a 3 sided enclosure with impermeable surfacing and a sealed drainage system. Any wash down liquid will drain via fall to pipework towards the partially buried septic tank adjacent to the wash bay.

4.2.1 Partially Buried Septic Tank

The wash bay is accompanied by a partially buried septic tank which will be adjacent to the wash bay within a bunded area capable of holding 110% of the capacity of the tank. The septic tank will be emptied as required via a sealed hose connected to the tank leading to a removal tanker.

4.3 Waste Acceptance Procedures

4.3.1 Hours of Operation

Due to the nature of operations on site, the hours of operation can be seasonal and ad hoc.

Average office and operational hours are primarily within 07:30 to 17:00, however later deliveries to site are possible.

4.3.2 Waste Control

Waste will be brought onto site within Tip Top Toilet's own vehicles and subject to waste acceptance procedures including visual inspection and basic characterisation:

- Only Tip Top Toilet vehicles will transport waste into site;
- As waste is transferred, a basic characterisation will be carried out to ensure no non-conforming waste is present;
- Any accidental acceptances of unauthorised waste will be rectified immediately, with the waste isolated within an IBC, appropriately stored and labelled, recorded within the site diary and removed from site as soon as practicable; and
- Records will be kept of waste acceptances and any non-conformances.

4.3.3 Waste Quarantine Procedures

Given the nature of the waste proposed to be stored on site, and the means by which it will arrive on site (via Tip Top Toilet's own vehicles), it is considered there is a negligible risk for any non-conforming waste to arrive on site.

Should non-confirming waste be found after units have arrived back on site, the waste will be emptied into an IBC and kept separate and labelled as such. Non-conforming wastes will be removed from site as soon as reasonably practicable and NRW informed as required should additional assistance be needed.

4.4 Odour Control

There is no active odour extraction on site however the following measures are in place to control odour:

- All potentially odorous waste shall be stored within the sealed tank / IBC's within the dedicated enclosed waste storage area;
- Waste is bulked up and removed as required, no treatment is carried out on the waste;
- The waste storage area is swept and washed down as required;
- The wash down bay is cleaned between uses; and
- Ongoing regular inspections of the site throughout operational periods are carried out to identify odour problems.

4.5 Mitigating Potential Impacts (Neighbour Relations)

As outlined in Section 3.1, the closest receptor is the large area of land to the south encompassing offices, associated buildings and a residential building owned by Tip Top Toilets. Neighbour relations are not considered relevant in this case as the land is owned and occupied by Tip Top Toilets.

The closest receptor where neighbour relations are considered to be relevant is the Llwydcoed Crematorium, 235m north and north east of the site. The nearest residential receptor is located 390m north of the site.

The following measures have been adopted to ensure a 'good neighbour' approach to local residents:

- Telephone number is available for residents to contact the site;
- Responding to odour complaints promptly and keeping complainant informed of outcome of investigation: and
- Meetings to be held with local residents if required in discussion with the NRW.

5.0 Monitoring and Maintenance

The site manager will be ultimately responsible for the monitoring of odour. Findings from monitoring shall be recorded in the site diary.

5.1 Monitoring Odorous Releases

5.1.1 Olfactory Checks

Ongoing olfactory monitoring is carried out by all site staff during operational hours. All site operatives will remain vigilant when looking for signs of odour and issues will be reported to the site manager.

Weekly monitoring is carried out onsite which included odour. Monitoring will be recorded within the checklist, as detailed in Appendix OT3.

5.1.2 Sensory Field Odour Assessment

These checks are to be done by nominated site operatives and involve sensory field odour assessment ("sniff testing"). The assessment is "sensory" in that the human nose is used as the detector. Appendix 01 details an Odour Survey Methodology and Appendix 02 includes an Odour Assessment Check Sheet.

Sniff testing will be employed in the following circumstances:

- Odour reported by site operatives as part of ongoing checks; and
- In the event that complaints are received, at the locations of sensitive receptors as part of the complaint investigation procedure outlined in Section 6.3.

If a complaint or notification is raised from outside of this process, then any appropriate information is to be entered into the site diary.

The first assessment of an odour shall be conducted by the site manager who will determine whether the odour has or is likely to leave site. The site manager shall assess the following to determine the likelihood:

- Time since odour first detected (any longer than immediate detection will increase likelihood of odour leaving the site);
- Location of source (within a sealed building or container or outside); and
- Current meteorological conditions (strong or gusty winds)

If it has not, and is not likely to leave site, the problem that caused the odour shall be cleaned or deodorised to prevent continuation of odour. All information regarding action taken shall be recorded on the external odour assessment sheet.

If an odour at a level which could cause pollution is likely to leave the site boundary the site manager shall, as appropriate:

- Deodorise the source of the odour;
- Establish the source and determine the cause of particularly odorous waste to establish the most appropriate course of action;
- Record all findings in the site diary; and
- Assess whether NRW should be informed.

If the odour is thought to come from within the waste storage area, then the procedure within section 6.1 of this OMP should be followed.

5.2 Monitoring Impacts

Monitoring of impacts shall be achieved by recording and monitoring complaints. Complaints may be reported directly to site or via Local Environmental Health if it is felt necessary.

Complaints records shall include: date and time, nature of complaint, locality of complaint, name of complainant (if available), a summary of investigation and actions taken and outcome.

In the event of a complaint, more frequent (daily) off-site olfactory monitoring shall be undertaken until the issue is resolved as described in Section 6.3.

5.3 Record Keeping

In response to complaints or odour being recorded on site the following records will be recorded and kept:

- Results of inspections and any olfactory monitoring carried out by site personnel;
- Weather conditions;
- Operational problems including date, time, duration, prevailing weather conditions and cause of problem;
- Complaints received including address of complainant (if available); and
- Details of corrective action taken and any subsequent changes to operational procedures.

These shall be recorded in the site diary. The site manager will be ultimately responsible for ensuring that records are kept.

Regular weekly checks are recorded in accordance with Appendix OT3.

6.0 Contingencies

In accordance with guidance on odour management plans, contingency plans have been defined to react to situations where monitoring indicates that a potential odour source is not completely under control, or that adverse impact has occurred.

The following incidents could result in the loss of control of odorous substances and have the potential to cause an unacceptable short-term impact on the local community but are not considered an emergency situation (which is detailed in Section 7).

These situations have been identified as:

- Damage to the waste storage area or wash bay;
- Detection of site odour at the site boundary or off-site during routine odour surveys; and
- Receipt of an odour complaint that is attributable to the site.

6.1 Damage to Waste Storage Area or Wash Bay

If the containment afforded by the poly tunnel or wash bay construction is compromised as a result of damage, the initial response shall be to instigate temporary repairs. If required, waste shall not be received, and units will not be washed until effective temporary repairs have been implemented.

Where unacceptable off-site odour exposure is traced back to the site under such conditions, the adequacy of the temporary repairs shall be reviewed and improved, and permanent repairs instigated as soon as practicable.

6.2 Discovery of Odour during Routine Odour Survey

The following actions shall be taken if odour is discovered during a routine odour survey:

1. Inform the site manager immediately.
2. The site manager shall assess if any of the following are occurring:
 - a. Particularly odorous waste being delivered;
 - b. Abnormal operating conditions;
 - c. Abnormal meteorological conditions; or
 - d. Any of the emergency situations in Section 7 of this OMP.
3. Immediate action shall be taken to contain the odour if possible by closing the doors to the waste storage area.
4. If an odour is at a level likely to cause pollution has left the site, or has the potential to, NRW shall be informed in line with the EP conditions.

6.3 Receipt of an Odour Complaint

The following actions shall be taken on receipt of an odour complaint:

1. The site manager shall be informed of the odour complaint as soon as possible, including the location, time and date (if reported) of the complaint being lodged.
2. The site manager (or any appointed representative) shall undertake the following assessment process:

- a. Review of the waste operations and environmental control systems at the site prior to and at the time of the complaint to include;
 - i. Determine if waste was being received at the time of the complaint;
 - ii. Determine if any abnormal operating conditions were being undertaken;
 - iii. Determine if any accidents or incidents requiring contingency actions were being undertaken (Section 6 of OMP);
 - iv. Determine if any emergency situations existed at the time (Section 7 of OMP).
- b. Review of the meteorological conditions (wind speed) prior to and at the time of the complaint – to establish whether a pathway can be established between the site and the complainant; and
- c. Review the previous history of complaints at the location identified.

If the site manager considers that a source and pathway may be present between the site and the complainant, the site manager (or appointed representative) shall visit the complaint location as soon as is possible to subjectively determine odour presence/absence and, if present, odour characteristics and intensity in accordance with the procedure detailed in Appendix 01.

7.0 Emergency Plans

This section details the emergency actions that would be undertaken in case of accidents (or incidents) which would result in the loss of control of odorous substances and could have an unacceptable short-term impact on the local community.

The section considers the emergency scenarios, measures taken to minimise their occurrence and short-term measures to minimise impacts.

7.1 Fire

The action plan in the event of a fire is detailed in the Operating Techniques document completed as part of the EP application (402.07841.00001/OT).

With regard to management of odour impact, the key principals are prompt responses that contain the fire and attempt to extinguish it, minimise damage to containment and mitigation infrastructure.

NRW would be informed of any such occurrence and information would be made available to local residents if requested by NRW with regard to the measures being taken and the timescale to completion.

7.2 Damage to Buildings Resulting in Exposure of Waste

Details of emergency procedures are as follows:

- Identify problem;
- Notify site manager;
- Make temporary repairs and continue accepting waste;
- Undertake monitoring to determine whether repairs are effective;
- If repairs are not effective, remove odorous waste as soon as practicable;
- Make permanent repairs as soon as is practicable; and
- In extreme circumstances, cease acceptance of odorous wastes and inform NRW.

7.3 Staff Absence

The site benefits from staff presence on a regular basis. This method of operation incorporates many levels of redundancy meaning that the facility will always have personnel on stand-by.

Prolonged or short-term staff shortages will therefore not affect the ability of the site to operate effectively.

If prolonged, widespread absence occurs, the site shall be cleared of waste and operations shall be suspended.

7.4 Flooding

The NRW Long term flood risk map³ reveals that the sites south-eastern corner is at low risk of flooding from surface water.

³ NRW Long Term Flood Risk Map , <https://naturalresources.wales/evidence-and-data/maps/long-term-flood-risk/?lang=en>, accessed in February 2018

If this section of the site becomes flooded, it is unlikely to inhibit effective reception and storage of delivered waste. In the unlikely event that flood water encroaches on the waste storage area, waste shall be removed from site immediately.

7.5 Power Failure

In the event of failure of power, operations would be suspended until power is reinstated on site.

7.6 Failure of Equipment

A routine maintenance plan and inspection schedule for equipment shall be implemented by Tip Top Toilets. This includes inspection of the sealed storage tank, IBCs and septic tank.

8.0 Document Updates and Reviews/Management

The site manager shall be responsible for implementing the OMP at Fedw Hir Eco Centre WTS.

It will be their responsibility to highlight the significant aspects of the OMP to all relevant employees and contractors and to ensure that the required monitoring is carried out in line with Section 5 of this OMP.

8.1 General Procedures for Training and Competency of Staff

All staff, in due regard to Section 2.3 of the Operating Techniques document (Ref: 402.07841.00001/OT), shall be trained in all odour management and mitigation methods for Fedw Hir Eco Centre WTS. If the OMP is updated at any point, all staff shall be communicated to.

8.2 Odour Management Plan Review

This OMP is a controlled document and a comprehensive record of the results of the monitoring and inspection programme contained within this OMP shall be kept for inspection.

The specification for the periodic review and update of the OMP shall, in line with the recommendations of the H4 Odour Guidance, take place on an annual basis, as a minimum.

However, the OMP is intended to be a live document which serves as a reference during daily operations and as such should be updated should the following occur:

- Significant changes are made to the plant or operational practices;
- There is a change to the management structure, designation of responsibility or training provision;
- NRW requests that the OMP is updated, in their role as regulator; or
- Complaints are received, which on subsequent investigation result in the identification of further control measures or remedial action, in addition to those set out within this OMP.

APPENDIX 01

Odour Survey Methodology

The odour assessor should not be subject to significant site odour in the 30 minutes prior to the assessment. This is to ensure that monitors are not suffering from odour fatigue and shall be sensitive to site odours. Furthermore, the following exclusions shall apply:

- Staff members that are regularly exposed to site odours for longer than 30 minutes; and
- Any staff members known or suspected of having a very poor sense of smell should not be used for odour monitoring routinely.

The inspections shall be undertaken as follows:

1. The inspector should walk slowly and breathe normally. The inspector should begin their assessment at areas of expected low odour concentration, i.e. upwind of the site, and should move to areas of high odour concentration. If odour is detected while walking, the intensity should be recorded as at least 3 (distinct), or higher.
2. If an odour cannot be detected whilst walking, the inspector should periodically stand still and inhale deeply facing upwind. If odour is then detected, but can only be detected in this manner, the odour 'intensity' should be recorded as 2 (faint).
3. Following detection of any odour of intensity 3 or above at the site boundary during an odour inspection, the following measures shall be taken:
 - a. The olfactory survey shall deviate to determine the extent of plume downwind (at or above an intensity level 3) and at potential receptors affected. Contingency measures outlined in Section 6.4 shall be followed; and
 - b. An on-site inspection shall be carried out seeking to trace any observed odour back to source so that the appropriate corrective and/or preventative action can be taken (with regard to Contingency Measures detailed in Section 6).

On-site inspections would be undertaken by continuing the olfactory survey methodology onto the site to inspect all potential odour sources. Particular attention shall be paid to the entrance to the storage areas.

The site manager shall be notified immediately of any detected odours that are considered to have the potential to give rise to significant off-site odour impact (intensity 3 at a receptor location). The contingency measures detailed within Section 6.0 should be followed.

APPENDIX 02

Odour Assessment Check Sheet

Background Information			
Person Undertaking Survey (& Position)			
Date		Time	
Description of Wind Strength (i.e. strong, gusty)			
Wind Direction			
Weather (i.e. sunny, overcast)			
Temperature (degree Celsius)			

Survey Results			
Location	Intensity (1-5) (see below)	Persistence (A-E) (see below)	Characteristic (see below)
Northern boundary			
Eastern boundary			
Southern Boundary			
Western Boundary			
Closest Property			
If odour is strong / persistent additional information to be detailed below			

Intensity	
1	No detectable odour
2	Faint odour (barely noticeable)
3	Moderate odour (odour easily detected)
4	Strong odour (bearable but offensive)
5	Very strong odour (instinct to walk way)

Persistence		
A	Occasional	Less than 10% of the time
B	Intermittent	10-30% of the time
C	Frequent	30-50% of the time
D	Persistent	50-75% of the time
E	Constant	>75% of the time

Investigation		
If during the survey the odour is strong or persistent at any location on the site boundary, the following information requires completion regarding plant operation.		
Waste Delivery	Has waste recently been delivered to site?	
	If yes, were the correct procedures	

	followed?	
Storage	Is there any odorous waste stored on site?	

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