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1 Introduction

As part of our application to vary the permit at Wheeldon Brothers Royton to extend the permitted area it is a requirement that we produce an Odour Management Plan.

Background

The Royton site is located in Royton, Oldham and is operated by Wheeldon Brothers to provide bulking facilities to support the local commercial contracts. The facility diverts waste away from landfill and contributes to UK and European recycling/recovery targets.

Purpose and Scope

This OMP provides information on the measures to be implemented to control odour emissions from the Royton site. The OMP addresses the Environment Agency's general requirements for OMPs as part of the permitting process, as described in Environment Agency Technical Guidance Note H4¹. H4 recommends a simple document along the following lines:

Environment Agency H4 guidance on the content of an OMP

- A process description, particularly describing odorous, or potentially odorous, activities or materials used.
- identification of all the release points for each of the activities.
- identification of possible failures or abnormal situations for the main process or for odour abatement equipment.
- a listing of the consequences for odours of the failures or abnormal situations.
- a description of the measures put in place to deal with these risks; and
- a list of the actions in detail and who is responsible for carrying them out.

To meet these requirements, this OMP is structured as follows

- Section 2 a description of the site and process.
- Section 3 measures that are used to control odour during normal operations.
- Section 4 routine maintenance and inspection.
- Section 5 routine monitoring, recording and reporting.
- Section 6 measures that will be used to control odour during maintenance and any abnormal events; and
- Section 7 document updates and reviews

¹ Environment Agency Technical Guidance Note IPPC H4, Horizontal Guidance for Odour, March 2011.

2 Description of the Site and Process

This section of the OMP contains the following:

- Site overview a description of the site function and layout, neighbouring communities and sensitive receptors.
- Process description a description of the plant, operations and controls.
- Odour source inventory a summary of the main sources of odour, their locations and the materials/activities involved, and the characteristics of the odour sources (e.g. fugitive or controlled, point, area or volume, release height, likely odorous compounds, quantities likely to be released, pattern of release, method of control).

2.1 Site Overview

2.1.1 Overview of Site Function and Layout

The Royton site is operated as part of the commercial business by Wheeldon Brothers under its contract to provide a waste management service to local and national businesses in the area. The facility diverts waste away from landfill and contributes to UK and European recycling/recovery targets. The purpose of the process is to bulk material for onward transport to recycling, recovery and disposal facilities.

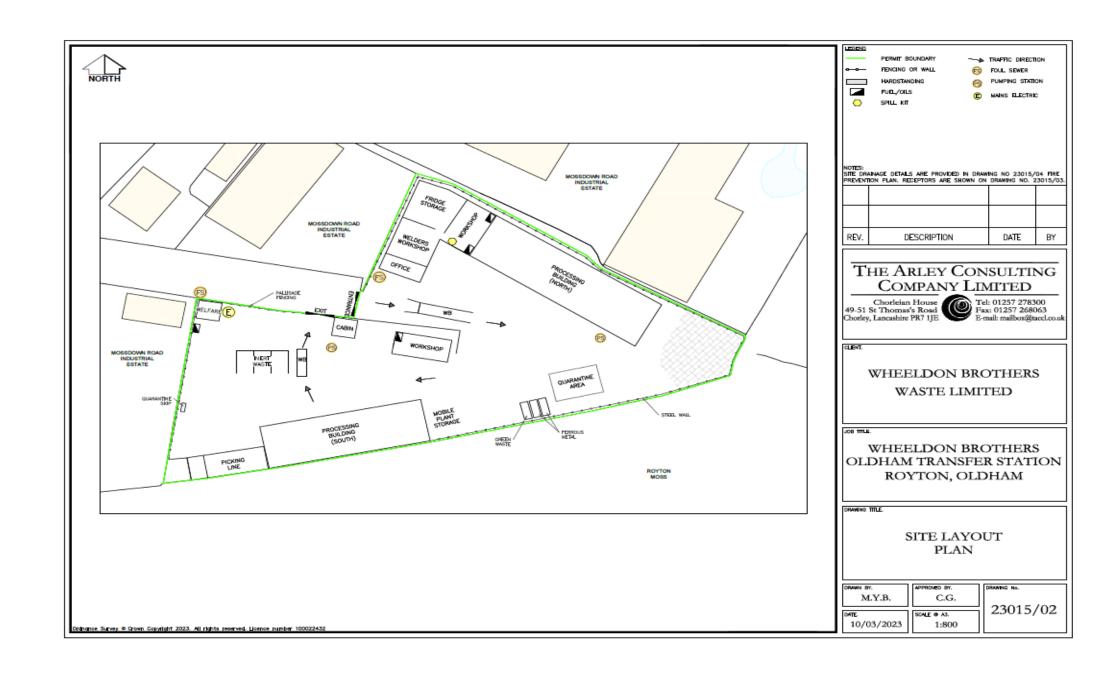
The site is permitted to process 74,499 tonnes per annum. The transfer station located with the commercial operation with vehicular access via Mossdown Road for HGVs and for smaller vehicles and private cars which leads directly into the car park. A plan of the site is shown in Figure 2.1.

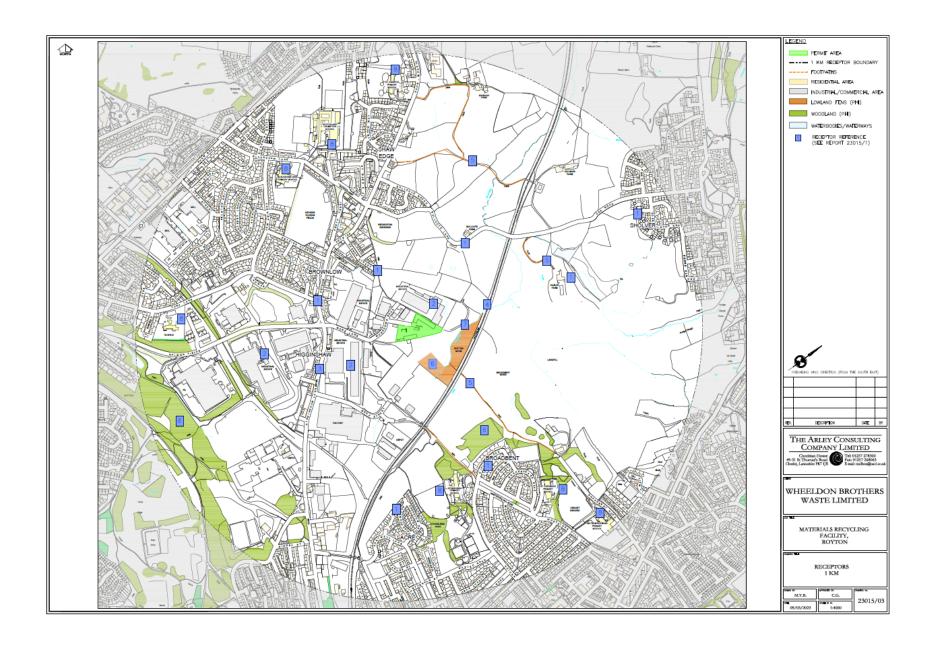
The transfer station features a mobile odour suppression system, which can be located at any part of the site. Especially if there are odour issues highlighted on site.

2.1.2 Neighbouring Communities, other Odour Sources and Sensitive Receptors

The Royton site is situated on Mossdown Road, In Royton Oldham. The area is predominantly industrial with other similar buildings nearby. The nearest residential area is some 250m away to the Northwest of site on Herron Street, Brownlow.

Figure 2.1. Site Location, Wheeldon Brothers Royton





2.2 Process Description

2.2.1 Waste Delivery and Reception

Waste Acceptance at the Royton Site.

On arriving at the site, all waste vehicles report to the weighbridge, where the details of the type, quantity, origin and haulier of the waste are recorded. Waste delivery vehicles are then directed to the appropriate bulk bay by the site operatives where they deposit their load into the storage area. In addition to any necessary pre-screening in accordance with the agreed protocol, waste delivered to the site is checked to ensure it conforms to the waste types permitted at the site and whether any of the loads are unacceptably odorous. The delivery vehicles then leave the transfer station via the weighbridge and exit using the Main gate.

Waste Dispatch from Royton Site.

All vehicles exiting the site leave via the weighbridge. All loads of waste are sheeted/covered prior to leaving the site. Registered waste carriers only transport all Waste.

2.2.2 Operation Phase

WTS/RDF Operation

Commercially derived solid waste is deposited in the transfer station bays/areas as directed by the weighbridge operator and site operatives. The waste is inspected during deposit for any non-permitted materials or odorous wastes.

The waste is stockpiled using a wheeled loading shovel and is then checked by a 360 grab to remove any recyclable materials or contamination. This material is then transferred into a hopper used to feed the shredder. The material is shredded and passed through two trommels and a picking line and then through an over band magnet to remove metal from the refuse derived fuel. The refuse derived fuel is then stockpiled on the other side of the building to the outgoing waste stockpile.

The produced RDF is loaded onto articulated trailers using a loading shovel and grab.

Sufficient transportation to end destinations is provided to ensure that waste is not retained on site for longer than permitted. Our site management is tasked with transferring readily biodegradable materials off-site within 24 hours of deposit wherever possible.

The site also recycles wood, metal, garden waste, cardboard and food waste. These are all located away from the main building.

A mobile odour suppression system is also available on site should any odour issues be highlighted.

2.3 Odour Sources

2.3.1 Generation of Odours at the Transfer Station

The transfer station is expected to handle commercial waste, which has an odour potential.

With the instigation of the production of refuse derived fuel, this also introduces another potential odour source into the transfer station.

Therefore, there is the potential for odours to arise from the handling and moving of commercial waste and the refuse derived fuel production, and as described previously in Section 2.2.

Food waste is tipped in the food waste bay, which is separate from the transfer station, where it is loaded into bulk load tippers. Waste is moved into the containers as soon as is practically possible. Food waste containers are removed from site every two days, with the ability to move the containers every day when the volume of waste increases. The doors to the food waste bay are kept close when there are no activities occurring in the area (loading, tipping, cleaning).

Sufficient transportation to end destinations is provided to ensure that waste is not retained on site for longer than permitted. Our site management is tasked with transferring readily biodegradable materials off-site within 48 hours of deposit wherever possible.

2.3.2 Odour Source Inventory

Table 2.1 on the following pages contains the Odour Source Inventory for the Royton transfer station. It provides a summary of the main sources of odour, their locations and the materials/activities involved, and the characteristics of the odour sources (e.g. fugitive or controlled, point, area or volume, release height, likely odorous compounds, quantities likely to be released, pattern of release and method of control).

It is important to note that, apart from fugitive emissions from the incoming and outgoing loads of wastes which includes loading and unloading, all sources of odour identified are contained within the main buildings or containers.

Table 2.1 WTS odour source emissions inventory

Source	Location	Activity &	Type of	Likely	Means of control	Release to atmos	ohere
		materials involved	emissions	odorous compounds		Description	Characteristics
Waste delivery & reception	Site access road and weighbridge	Incoming loads of commercial waste	Fugitive to outside air	Fresh waste odours	Measures to control at source listed in Section 3.1	Vehicle paths along the access road (fugitive line source)	Close to ground level intermittent release, at ambient temperature.
	Waste reception and tipping areas	Opening and closing of vehicle access doors	Fugitive to outside air	Fresh waste odours	Measures to control at source listed in Section 3.1	Escapes periodically from open doors (fugitive area source)	Close to ground level intermittent release, at ambient temperature.
		Tipping of waste into pile; storage	Fugitive. Peak at receipt & movement	Fresh waste odours	Measures to control at source listed in Section 3.1. Containment within building and treatment by odour neutraliser in the transfer station as required	Escapes from high level ventilation slats	Elevated, continuous release, at ambient temperature.
		Handling and transfer of waste	Fugitive neutraliser	Waste odours	Measures to control at source listed in Section 3.1 Containment within the building and treated with odour neutralizer as required.		
Transfer of waste in transfer stations	Loading bays of transfer station	Opening and closing of vehicle access doors	Fugitive	Waste odours	Measures to control at source listed in Section 3.3 Contained in building and treated with odour neutralizer as required.	Escapes periodically from high level ventilation slats	Elevated, continuous release, at ambient temperature.
	Site access road and weighbridge	Outgoing loads of Refuse derived fuel waste	Fugitive	Waste odours	Measures to control at source listed in Section 3.3 Contained by sheeting loads and dedicated containers.	Vehicle paths along the access road (fugitive line source)	Close to ground level intermittent release, at ambient temperature.
	Site access road and weighbridge	Outgoing loads of commercial waste	Fugitive	Waste odours	Measures to control at source listed in Section 3.3 Contained by sheeting loads and dedicated containers.	Vehicle paths along the access road (fugitive line source)	Close to ground level intermittent release, at ambient temperature.
Food Waste delivery & reception	Site access road and weighbridge.	Incoming loads of food waste.	Fugitive	Food waste odours	Measures to control at source listed in Section 3.1	Vehicle paths along the access road (fugitive line source)	Close to ground level intermittent release, at ambient temperature.

Food Waste delivery & reception	Waste reception and tipping areas	Opening and closing of vehicle access doors	Fugitive to outside air	Food waste odour	Measures to control at source listed in Section 3.1	Escapes periodically from open doors (fugitive area source)	Close to ground level intermittent release, at ambient temperature.
		Tipping of waste into pile; storage	Fugitive. Peak at receipt & movement	Food waste odour	Measures to control at source listed in Section 3.1. Containment within the building and treatment by odour neutraliser in the food waste bay as required	Escapes periodically from open doors (fugitive area source)	Elevated, continuous release, at ambient temperature.
		Handling and transfer of waste	Fugitive neutralizer	Food waste odour	Measures to control at source listed in Section 3.1 Containment within the food bay and treated with odour neutralizer as required.		
Transfer of food waste in transfer stations	Food waste bay	Opening and closing of vehicle access doors	Fugitive	Food waste odour	Measures to control at source listed in Section 3.3 Contained in building and treated with odour neutralizer as required.	Escapes periodically when loading trailers.	Elevated, continuous release, at ambient temperature.
	Site access road and weighbridge	Outgoing loads of Refuse derived fuel waste	Fugitive	Food waste odour	Measures to control at source listed in Section 3.3 Contained by sheeting loads and dedicated containers.	Vehicle paths along the access road (fugitive line source).	Close to ground level intermittent release, at ambient temperature.

3 Odour Control during Normal Operation

This section of the OMP describes how WB will control odour impacts from normal operations. A full description of the odour controls has been given.

A great deal can be done to minimise the quantities of odours at site or to minimise their release by good working practices and process control, whereas it is much more difficult to improve atmospheric dispersion. Therefore, the Royton site works in accordance with the accepted hierarchy of preferred controls, that is:

- i) prevent formation/release of odour in the first place.
- ii) where this is not practicable, minimise the release of odour;
- iii) abate excessive emissions; then
- iv) dilute any residual odour by effective dispersion in the atmosphere.

As shown by the Odour Source Emissions Inventory, in Tables 2.1 the transfer station has the potential to generate odours.

3.1 Waste Delivery and Reception

3.1.1 Good Working Practices/Housekeeping Measures to Minimise Odour Releases

Weighing and recording

All incoming loads are weighed and recorded appropriately. Incoming delivery vehicles are directed to the weighbridge at the entrance of the site, and the quantity, type and originator of the waste are recorded before being deposited in the designated area of the WTS. The weighbridge operator questions the driver of the vehicle to ensure that it is carrying what it is supposed to.

Pre-investigation Protocol

Commercial Waste

A protocol has been agreed on the matter of pre-screening to avoid/manage the deposit of malodorous waste. Following any necessary pre-screening in accordance with the protocol, waste is deposited in the transfer station, where it undergoes a check for any non-permitted or malodorous materials. When confirmed as acceptable the waste is then stockpiled using a wheeled loading shovel

before being processed to produce refuse derived fuel, and subsequently, loaded into articulated trailers for disposal/recovery.

Food Waste

A protocol has been agreed with the collection company on the matter of pre-screening to avoid/manage the deposit of malodorous waste. Following any necessary pre-screening in accordance with the protocol, waste is deposited into the food bay, where it undergoes a check for any non-permitted or malodorous materials. When confirmed as acceptable the waste is then stockpiled using a wheeled loading shovel. It is then arranged for a bulk tipper to attend site for disposal/recovery.

Input Controls

A major factor affecting the potential for odour emissions at the waste delivery and reception stage is the content and nature of the waste and how it is managed when it is received at the facility. Wheeldon odour control procedures include:

- 1. Pro-active monitoring for non-permitted or malodorous waste at time of deposit.
- 2. Daily pro-active odour monitoring at off-site sensitive receptor locations
- 3. Waste is contained inside the transfer station after screening for contamination.
- 4. Mobile Deodorising unit is switched on as required (based on the monitoring undertaken)
- 5. Site management is tasked with transferring residual waste off-site within 48 hours of deposit wherever possible
- 6. Good site housekeeping (regular cleaning of the operational areas)

Output Controls

- 1. All vehicles are loaded as soon as possible.
- 2. All waste is loaded into enclosed vehicles (roof/sheet)
- 3. All vehicles are inspected prior to departure and any waste remaining on the exterior of the vehicle/wheels after loading is removed

Cleaning WTS

Regular cleaning of the equipment, mobile plant and operational areas such as reception buildings, food bay, roads and drainage channels discourage odour generation from old degrading materials.

3.1.2 Containment of Residual Odour Releases

The accepted best practice² approach from primary control of odour from the transfer station is containment within the building after discharge from delivery vehicles. In accordance with this

approach, the transfer station operations take place within the vehicle tipping area. Odour can also potentially be released at the front of the transfer station.

3.1.3 Control of Residual Odour Releases

The transfer station as a mobile odour suppression system, which temporarily masks and disguises the smell of the waste. The odour suppression agent is sprayed through misting nozzles. All machinery is inspected daily and recorded in line with the company management system; they are regularly maintained and repaired when necessary. The site keeps an adequate supply of deodoriser.

An appropriate cleaning regime is implemented, to prevent the build up of odorous residues.

3.2 Product storage, shredding & dispatch in Transfer Station and Food Bay

3.2.1 Good Housekeeping Measures to Minimise Odour Releases

There are no significant odours generated from the product storage and shredding of material in the transfer station or food bay; however good housekeeping measures are, nevertheless, undertaken, keeping all areas clean and tidy. There are suitable cleaning facilities in the external area.

3.3 Transfer of Waste in Transfer Station and Food Bay

3.3.1 Good Housekeeping Measures to Minimise Odour Releases

At this stage all waste is treated as required using the odour suppression unit. In addition, good housekeeping measures are undertaken, with suitable cleaning facilities in the shredding area and external area.

3.4 Management Responsibilities, Training and Complaints Handling

This section of the OMP provides information on:

- · staffing responsibilities.
- staff training.
- complaint management, investigation and resolution procedures.
- provision of a complaints telephone line; and
- communication with external stakeholders.

3.4.1 Roles and Responsibilities

Wheeldon Brothers are committed to managing effectively the impacts of odour from the Royton site. This commitment extends from policies produced at director's level, to the resources available to the competent personnel, to the abilities of the personnel managing odour-critical work tasks. This section describes the responsibility for the management and operation of the transfer station.

The Business Management System contains Operating Standards and Company Procedures which are understood and effectively maintained at all levels within the company.

The company has appointed managers with executive authority and responsibility for implementing the Business Management System. Work instructions, job descriptions and procedures exist for critical areas of the Company's activity and have been issued to or made available to personnel responsible for undertaking these tasks.

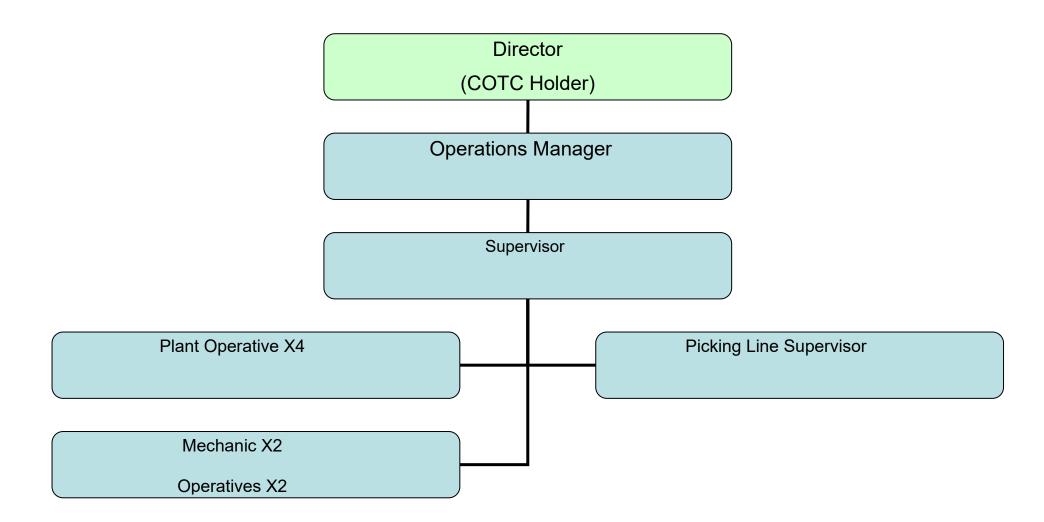
The site staff usually at the Royton site facility is provided in Figure 3.4.1. Further information on roles and responsibilities is given below:

- The transfer station is within the management area of the Operations Manager. As a site handling waste on a continuous basis there is a dedicated Supervisor who has responsibility for operation of the site and reports to the operations manager and director and is responsible for the site operatives who will work to cover the operational hours of the site.
- During night hours and weekends a number of staff are available on-call.
- Process operational staff on the transfer station site are also responsible for making observations
 on the ground of general process performance during their daily attendance on the site. During
 carrying out their daily routine duties on the site, staff are instructed to note and observe any
 unusual odour occurrences and to report these to the Supervisor or Operations Manager on the
 site.
- Maintenance is provided by external provider as required, routine preventative maintenance and reactive breakdown maintenance, including provision of standby which delivers skilled resources for priority breakdowns.

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The Environment Agency will be notified within 7 days of any changes in technically competent management and the name of the incoming person together with evidence that that person has the required technical competence.

Figure 3.4.1 Staffing structure at the Wheeldon Brothers Royton Site



3.4.2 Training and Competence

3.4.2.1 General Procedures for Training and Competency of Staff

Training and competency of staff is controlled by the Wheeldon Business Management System. The Management System covers training, awareness, and competence. The company identifies the training requirements of its employees and provides suitable resources to ensure they have the required knowledge, skills and expertise to carry out their duties. This includes their roles and responsibilities in complying with the policy statements, the Business Management System, and all relevant legislation. This is achieved through induction training for new employees, awareness training for all and specific training as required. Contractors and all people performing tasks on behalf of the Company will be made aware of the policy and relevant Business Management System requirements and will be competent in the roles undertaken.

3.4.2.2 Training and Competency of Operational Staff at the WTS Facility

All staff at the facility are made fully aware of the need to be constantly vigilant regarding site odour control and management procedures. To minimise risk of emissions, particular emphasis will be given to:

- awareness of their responsibilities for avoiding odour nuisance.
- actions to minimise emissions during abnormal conditions

3.4.3 Complaints Handling and Communications

Wheeldon Brothers has in place a comprehensive system of monitoring and inspection to check odour control measures are functioning effectively at the transfer station. However, in the event that an odour complaint is received, it is important that complaints are properly and systematically dealt with and acted upon.

The management of complaints is controlled by the Wheeldon Business Management System, which states that the Company will maintain a register of all complaints and in all cases managers shall ensure that all complaints have been adequately handled and that any measures necessary to prevent a recurrence have been put in place.

This section of the OMP describes:

- How WB will respond to any odour complaint.
- How WB will investigate any odour complaints, take the appropriate steps and actions, and keep directors informed; and
- How WB will communicate to appropriate bodies routinely and in response to any incidents or planned maintenance.

3.4.4 Complaints Management and Registration

The following procedure for dealing with odour complaints is based on guidance from Defra in the Code of Practice on Odour Nuisance from Sewage Treatment Works. It describes who is responsible for dealing with the different aspects of the complaint.

3.4.4.1 Publicising contact details for odour complaints

Members of the public are able to contact WB with any odour complaints about the facility by the following means.

- By telephone the site office (01706 849 561) will normally be manned from Monday to Friday between the hours of 08:00am and 17:00pm. Saturday between the hours 07:00am 12:00pm.
 Outside of these hours, and on infrequent occasions during the above hours when an immediate reply cannot be made, there will be an answer phone service.
- Or via email at oldham@wheeldonbrothers.co.uk

Once a complaint has been received and the details collected, the complaint must be processed. This involves the following actions: -

3.4.4.2 Complaint registration

WB maintains a record of all complaints received. In the event that WB receives a complaint alleging potential odour nuisance from the facility:

- a) the complaint will be fed into the registration system.
- b) complaints data will be recorded in a systematic way, enabling comparison with standard odour descriptors, with wind direction and with site work activities.

The facility complaints register is inspected monthly by the directors to obtain the data necessary for complaints monitoring and analysis.

3.4.4.3 Roles and responsibilities for complaints management

The following personnel will be responsible for ensuring that all complaints and recorded and appropriately addressed:

Directors

Operations Manager

Site Supervisor

3.4.4.4 Collecting the relevant complaint details.

The recommended minimum information that needs to be collected for each complaint is:

- the time and date when the offensive odour were observed;
- the location (within approx. 100 m) where the offensive odour was observed, e.g. postal address, grid reference) and its sensitivity.
- the Complainant's description of odour. This should include a subjective description of all the factors necessary to make an assessment of the impact of the odour, including intensity, character (preferably on the basis of a choice from standardised descriptors given in Environment Agency Technical Guidance Note H4), relative unpleasantness (either pleasant, unpleasant or neutral), frequency and duration.
- the identity of the complainant, if possible, to assess the repeated nature of complaints.
- the residential address of the complainant; and
- any other information the complainant can offer on activities at the alleged odour source.

It is also necessary to collect (by observation or further investigation) the following additional information to allow subsequent analysis and collation of complaints:

- wind direction and speed, and atmospheric stability class at the time of complaint; and
- any process incidents at the time of complaint.

A standardised form (based on that used by the Environment Agency in its H4 technical guidance note) is used for recording this information.

Table 3.4.4 Form for the recording of an odour-related complaint

Odour Complaint Repor	t Form			Sheet No			
Date:	Date: Installation to which complaint relates Grid Refer						
Name and address of con	nplainant:						
Tel no. of complainant:							
Time and date of complain	nt:						
Date, time and duration of	f offending odour:						
Location of odour, if not a	t above address:						
Weather conditions (i.e., o	lry, rain, fog, snow):						
Cloud cover (0-8):							
Cloud height (low, high, ve	ery high):						
Wind strength - (light, ste gusting) or use Be							
Wind direction:							
Complainant's description fluctuating):	of odour (i.e. compa	rison with other odd	urs, stro	ng/weak, continuous,			
Has complainant any other	er comments about th	e odour?					
Are there any other comprelating to the same expos		nstallation, or to tha	t locatior	n? (either previously or			
Any other relevant information:							
On-site activities at time the	ne odour occurred:						
Operating condition at time offensive odour occurred (e.g. flow rate, pressure at inlet and pressure at outlet)							
Actions taken:							
Form completed by			Signed				

3.4.5 Investigation of Odour Complaints

This escalating response procedure shows what investigative actions will be taken in response to a complaint. The aim of the investigative actions will be to establish:

- i) the source of the odour complaint; and
- ii) the impact of the odour.

A series of investigative tools, of increasing sophistication, will be used until these two questions can be satisfactorily answered. This then enables the appropriate odour controls to be applied if the impact is significant and the source is confirmed as the facility.

3.4.5.1 Complaint Investigation

Investigation will start with an initial screening of the complaint. If the screening process "fails to confirm" the odour incident the odour investigation will stop at that point. If the screening process confirms the odour incident, then a more detailed investigation is carried out.

The object of the initial screening is to quickly identify those odour complaints that are unlikely to be due to the WTS facility or food bay, perhaps because they result from some other activities in the area.

Initial screening should consider the following:

- knowledge of potential sources on the facility (tie-up with work activities in progress, any plant problems, etc).
- knowledge of potential sources in the locality other than the facility.
- wind direction at the time of the alleged odour episode (in relation to the locations of the facility and the complainant).
- distance of the complainant from site; and
- concurrent odour monitoring data (e.g. daily perimeter sniff tests).

If an assessor is able to attend rapidly after a complaint it may be possible to carry out effective appraisal of the complaints independently by a sniff test.

WB will inform the complainant of the outcome of the screening/investigation and whether or not any action is to be taken.

3.4.5.2 Further investigation of the complaint

If the initial screening is unable to discount the facility as the source of the odour complaint, then further investigation will be conducted, which will either 'confirm' and 'further characterise' the odour incident as due to the facility, or it will 'fail to confirm' the incident.

Further investigation will be by means of a graded response, designed to answer the questions:

- Is the episode due to the facility? (i.e. source verification); and
- How bad is the episode? (i.e. assessment of impact).

WB may use odour monitoring (including, but not necessarily restricted to sniff testing) to provide data to answer these questions or provide additional confirmation. The monitoring effort is increased in a graduated way until the data generated is sufficient to answer the relevant questions being asked. If the level of monitoring being carried out at a particular stage in the graded response cannot answer the question (either at all, or with sufficient confidence to satisfy directors) then monitoring should move to the next level.

As well as monitoring, WB may be able to obtain more detailed information from operator records about process conditions, observations, or inspections at the time of complaint – this would allow odour trends to be identified and possibly reconciled with particular process operations or maintenance.

3.4.6 Communications with External Parties

3.4.6.1 Communicating with the Environment Agency

In the event that any complaint is made by a member of the public about any matter associated with the facility, WB will give notice in writing to the Environment Agency no later than the next working day after the complaint is received. This written notification will normally be in the form of an email. The notification will include a description of the complaint, the name and address of the person making the complaint, and the action proposed as a result, unless agreed by the Environment Agency. Depending on the nature of the complaint, it will not always be possible to resolve the matter within this short timescale. In such cases an indication will be given that further investigations are necessary.

3.4.6.2 Communicating with complainants.

In the case of answer phone messages and complaints submitted by email or by letter, an acknowledgement and initial response will be given by telephone or by email within 48 hours, provided that telephone or email contact details have been given by the complainant. Where complaints cannot be resolved on initial contact and further investigations are required, a written response will be made within 10 working days of submission of the complaint.

The primary reasons for further investigation of complaints are to assess potential nuisance and identify the probable cause and source of the odour so that nuisance can be reduced or stopped. In

the case of further investigations, WB will communicate to the complainant the course of action likely to be taken so as to ensure that there is transparency and also to establish at the outset clear targets and goals for determining the success of any control measures.

The level of annoyance associated with odours can often be reduced if affected individuals are provided with credible information about what they are smelling, the process that generates the odours, any factors affecting dispersion, what health impacts might be associated with the odour, what efforts are being undertaken to control odours and what is being done in response to their complaint. These actions can help affected individuals to moderate their own emotions of powerlessness and fear which may be exacerbated by odour. Liaison with the local community, offering credible reassurance and taking complaints seriously are often effective means of mitigating odour nuisance. To put this into practice, WB will aim to communicate the following message:

- The reason for the odour.
- The likely duration of the odour
- What plan is in place to end the odour episode
- What preventative plan will be implemented to prevent a re-occurrence
- What grievance procedure the aggrieved party can take
- Who is the responsible person on site to contact

4 Outline Maintenance and Inspection

This section of the OMP describes how WB will address the following issues to help maintain the effectiveness of odour controls:

- plant performance.
- · reagents and consumables; and
- planned inspection and maintenance

4.1 General

Planned maintenance and inspection is crucial to maintaining the effectiveness of odour control measures. WB ensures the good performance of all plant, both the main treatment processes and odour control equipment. An effective, planned inspection and preventative maintenance schedule is employed on all odour-critical plant and equipment, as specified below. This includes:

- a written maintenance programme; and
- a record of maintenance.

The sections below detail how often different pieces of plant are maintained.

4.2 Building Containment

In order to achieve overall odour containment and thus to minimise unplanned releases of odour to atmosphere, it is essential that the integrity of the main building fabric is maintained continuously, other than during periods of essential maintenance.

4.3 Shredders, Loaders and Shovels

All machinery will be operated in accordance with the manufacturers planned maintenance schedule in order to minimise the risk of breakdown. Where breakdown occurs, we have on site plant maintenance staff on site to repair. We also have spare mobile plant to cover breakdowns.

5 Routine Monitoring, Recording and Reporting

Monitoring has an important role to play in assessing the effectiveness of operational practices to prevent and contain odours; and in assessing the nature and extent of an odour problem should it arise.

This section of the OMP describes how the effectiveness of operational practices and controls will be checked by:

- · monitoring of changes on site; and
- monitoring of effects off site (at the site boundary and beyond).

5.1 Monitoring of Odour Emissions at Source

In the widest sense the term monitoring includes both emissions monitoring of odour (or a surrogate parameter) and inspections of the process, buildings and equipment to check that emissions are being contained and controlled to meet the accepted standards of good practice in relevant guidance.

WB monitoring strategy includes daily inspection of the odour control equipment.

5.2 Monitoring of Odour at the Site Boundary and Sensitive Receptors

5.2.1 General Approach to Off-site Monitoring

WB monitors the emissions at the site boundary to identify any odours emitted from the operation so that appropriate measures can be taken. The routine monitoring techniques at the Royton site - sniff tests and complaints monitoring - are recognised as appropriate tools in current best-practice for odour assessments in Defra's Local Authority Guide on Odour, the Environment Agency guidance H4 and the former Internal Guidance on Odour from Waste Management Facilities. The techniques are well suited for checking how well the odour controls are performing and ensuring residual odour releases do not result in odour nuisance at sensitive receptors.

It is not appropriate to set "boundary limit" values for sniff tests and complaints monitoring. These routine monitoring techniques do not generate absolute, quantitative results that can be compared to a limit value but are subjective and subject to validation by checking activities on site and complaints. The monitoring is designed to act as a trigger for management actions and investigations if they indicate a problem.

Details of how the results will be recorded and submitted, and action plans for investigation, remedial measures and procedural changes in the event of detected abnormal emissions, are given in Section 5.4.

5.2.2 Sensory Field Odour Assessment by the `Sniff Test`

Monitoring of odour exposure by sensory field odour assessment ("sniff testing") uses odour assessors to record the attributes of the odour. The assessment is "sensory" in that the human nose is used as the detector – a sound approach considering that no analytical instrument can give a unified measure of a complex mixture of compounds that quantifies it as a unified whole in the same way that a human experiences odour. This technique is recommended in Defra's Local Authority Guide on Odour, the Environment Agency guidance H4 and the former Internal Guidance on Odour from Waste Management Facilities as being suitable for daily monitoring of odours at the boundary of the site.

WB carries out daily walk round surveys carrying out sniff-testing at a number of identified sensitive receptor locations around the site boundary and, if necessary (e.g. in the event of any complaints being received), at other additional locations.

Table 5.2 Summary of field odour (sniff test) monitoring at the site boundary

Sampling Time	Approximately 5 minutes at each location		
Sampling locations	North Yard		
	South Yard – In bound weighbridge		
	South Yard – Shredder		
	South Yard – Shredded Waste		
	South Yard – Food Bay		
	Site Exit		
	Dronsfields – Mossdown Lane		
	Heyside – Closest Residential Area		
Sampling and analysis method	Based the Environment Agency Sniff Test protocol in H4		
Odour Categories	None, faint, moderate and strong		
Person carrying out the assessment	A WB member of staff		
Monitoring frequency	Daily		
Weather Information to be noted	General weather conditions including wind direction.		
TS Information to be noted	first transfer station input		

Details of how the results are recorded and submitted are given in Section 5.4. Sniff testing is designed to detect any abnormal odour emissions. In the event that abnormal odour is detected, the source of the odour would be investigated and remedial action taken, as necessary, as described in Section 5.3.

5.2.3 Complaints Monitoring

Quite separate from the procedural reaction to a received complaint, is the monitoring of complaints levels. This technique – complaints monitoring - is an important tool for assessing the level of odour impact. The Environment Agency recognises in its former *Internal Guidance on Odour from Waste Management Facilities* that reliable complaints, in themselves, should be considered a form of monitoring, and complaints should be treated as if they were monitoring data.

WB implements a system of complaints monitoring and analysis. Complaints are collected, registered, validated and summarised on a monthly basis for review by Directors and managers.

Complaints are a very important indicator of community dissatisfaction (although not the only one) and the technique of complaints monitoring is a powerful tool. However, it is important to bear in mind that complaints are only a symptom of annoyance or nuisance; there are various reasons why complaint level is not an exact indicator of odour annoyance or nuisance itself. Nevertheless, the collection, maintenance and analysis of complaints records is an important method of indicating the effectiveness or otherwise of measures implemented to reduce nuisance due to odour. Whilst complaints are not a perfect indicator of nuisance, a change in the number of complaints is a reasonable indicator of improving or worsening impact due to odour. It is certainly true that the level of annoyance due to odour is extremely difficult to distinguish from factors such as traffic, noise, dust or just a perception of general unpleasantness on a personal level. It is also quite common for a large proportion of complaints to be received from a very limited number of people in the community. Therefore, odour complaints are most useful when used as a prompt for further investigations.

5.3 Recording of Results, Reporting and Actions

5.3.1 Recording of Results and Reporting

Recording of results

WB maintains records of all monitoring carried out under this OMP and these records will be retained, unless otherwise agreed by the Environment Agency, for at least 6 years from the date when the records were made.

Reporting

Any records required to be submitted by the Environmental Permit will be supplied to the Environment Agency as specified in the permit.

5.4 Odour Monitoring Form

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			Odour Report	Form				Date:
Location	North Yard	In Weighbridge	RDF Shredder	Shredded Waste	Food Bay	Site Exit	Dronsfields	Heyside
Time of Test								
Duration of Test								
Person Undertaking Test								
Weather								
Temperature								
Wind Strength								
Wind Direction								
Type of Test								
Odour Categories								
Is the Source Evident?								
Time of first input								
Any other Comments or Observations								

6 Odour Control during Maintenance and Abnormal Events

This section of the OMP deals with the management and control of odours during maintenance and emergency periods and is crucial to the Odour Management Plan. This section describes how WB will operate an action plan for abnormal event scenarios (including emergencies, maintenance, breakdowns, weather anomalies, etc). This is a summary of the foreseeable situations that may compromise the operator's ability to prevent and/or minimise odorous releases from the process and the actions to be taken to minimise the impact. Such actions may be as simple as temporarily preventing the receipt of waste to the more drastic shutting down of the plant. The action plan is intended to be used by operational staff on a day-to-day basis.

In the following pages, a tabular risk assessment has been compiled. This table:

- identifies the conditions under which abnormal operational conditions or failures might arise.
- describes what these are.
- summarises the potential impacts from the identified abnormal/failure situations and assesses the degree of those impacts; and
- describes how these conditions could be prevented and/or mitigated and controlled.

Most odour problems at the facility are due to the receipt of aged waste. The majority of the odour can be controlled in some way by having a pre-screening protocol in place, effective management, good housekeeping and the handling of waste.

Where routine, planned and emergency maintenance of the facility doors or the odour neutralisation system must be carried out, and there is a likelihood of odour being released to atmosphere in quantities sufficient to result in detection off-site, a detailed risk assessment of the activity is conducted. As part of this, issues of odour generation, release and control are considered. The detailed risk assessment methodology and accompanying forms for carrying out unplanned works are described in a separate documented Work Procedure kept on site under Wheeldon's Management System, to which reference should be made.

Where the risk of an off-site odour event occurring is judged to be medium or high, the Wheeldon directors will be briefed to advise of a potential problem leading to possible complaints, together with the Environment Agency.

In the event of a serious breakdown of machinery, such that material cannot be transferred, then deliveries to the site will be stopped to ensure compliance with permit conditions. Alternatively, replacement machinery will be brought onto site.

Identify the release point(s) and areas	Identify possible abnormal operation or failure that would lead to an odour event	What are the consequences of such an abnormal situation or failure	What measures should be in place to prevent or reduce the abnormal situation or failure	What actions are should be taken and who will be responsible
Access route at facility and outside reception area.	Delivery of a large volume of waste over a short period of time.	Fugitive release of waste odours from delivery vehicles unable to discharge their loads – vehicles left standing at the site entrance. The acceptance of waste when the facility is operating at full capacity, leading to operational problems – with knock on effect of increased potential for odour generation, especially in the waste reception hall due to prolonged holding times.	WB will apply the following policy with waste suppliers: (1) Define maximum tonnages that can be accepted on a day-to-day basis. (2) Agreed delivery schedules, paying particular attention to public holidays. (3) Entitlement that wastes can be rejected if the facility is over supplied. Recording of the amount of waste accepted onto the facility on a daily basis. Contingency plan to manage over supply of waste, including possible diversion to other facilities to accept rejected loads and options to return to supplier.	Management team responsible for negotiating WB supplier policy and a contingency plan. Weighbridge operator to record waste weights and call a member of the management team if the maximum acceptance criteria is exceeded. Member of the management team to decide if waste should be rejected and if so whether it should be returned to the supplier or sent to another licensed site.
	Accumulation of spill of waste from delivery vehicles.	Uncontrolled release of odours from open area source.	Cleaning procedure and schedule for site entrance, weighbridge, fuel and outside reception areas.	Member of the management team to carry out regular inspections of all areas to detect spills. If spills detected, spilt materials and debris will be transferred to the reception hall and hardstanding hosed down.

•			he process and lead to the generation	What actions are should be taken and who
Identify the release point(s) and areas	Identify possible abnormal operation or failure that would lead to an odour event	What are the consequences of such an abnormal situation or failure	What measures should be in place to prevent or reduce the abnormal situation or failure	will be responsible
	Accident involving delivery vehicle causing major spillage of waste.	Uncontrolled release of odours from open area source – potential to lead to odour annoyance at the sensitive receptor.	Response plan to deal with accidents.	Member of the management team to initiate accident response plan – delivery vehicle made safe. If drivable, remaining material discharged into reception hall or vehicle removed off site. Spilt materials and debris immediately collected and transferred into reception hall. Spill area then cleaned and hosed down.
Tipping area	Delivery of particularly malodorous waste	Fugitive releases of highly odorous emissions – potential to lead to odour annoyance at the sensitive receptor.	The Weighbridge Operator will identify malodorous waste at site entrance/weighbridge and call a member of the management team. The manager shall, if necessary, reject the load	WB operatives will receive training on managing malodorous waste. If highly odorous material is tipped in the waste reception area and the operator identifies it as being malodorous it will be isolated from other incoming material and then either reloaded into the original delivery vehicle or loaded into a container where it will be taken off site, e.g. to landfill. If malodorous waste is discharged in the reception hall not having been identified at the weighbridge, the Shovel Driver will immediately inform a member of the management team. The manager shall make arrangements to remove the load from site without undue delay.
	Tipping area waste not processed within the planned maximum	Potential for inherently odorous material may cause odour to be detected at nearby sensitive receptors.	Corrective action/Preventative action – place a maximum allowable volume on waste suppliers to reduce the risk of overload occurring.	A member of the management team will inform the Environment Agency and additional vehicles and equipment will be deployed to remove odorous material and return tonnage to normal

Abnormal operati	Abnormal operations and failures that have the potential to affect the process and lead to the generation of odour						
Identify the release point(s) and areas	Identify possible abnormal operation or failure that would lead to an odour event	consequences of such an	What measures should be in place to prevent or reduce the abnormal situation or failure	What actions are should be taken and who will be responsible			
	permitted storage period.		The Shovel Loader will ensure that waste is processed according to the date and time of its arrival. Delivered waste – to be processed as quickly as possible and within the permitted period.	levels.			

7 Document Updates and Reviews

WB is committed to an internal auditing process and to developing documented auditing procedures (forms) to record the process. The updating and review of controlled documents is controlled by the WB Business Management System.

The Environment Agency will be provided reasonable access to audit the implementation of the OMP, the sniff test results, complaints records and records of WB compliance with the OMP.

It is WB intent that the change mechanism should provide for improvements in management practice and organisation, to allow the OMP to be a living document, whereby changes to plant, equipment and practices that improve the operation of the facility and do not detract from overall environmental performance, are not unduly delayed or hindered. It is envisaged that the OMP will be reviewed and updated at on a regular basis.

Save for reformatting, Sections 3, 5 and 6, on monitoring and management respectively, will not be altered without consultation with the Environment Agency.