

Biomass Boilers at Waste Drying Plant, Gibson Lane, Melton, Hull, HU14 3HH

Odour Management Plan Update – Schedule 5 Request

25th March 2021

PRESENTED TO

Eco-Power Environmental Ltd

Gibson Lane
Melton, Hull
HU14 3HH

PRESENTED BY

NALO, Tetra Tech

Executive Park, Avalon Way,
Anstey, Leicester, LE7 7GR

P +44 (0)116 234 8000
NALO.UK@tetrattech.com

Prepared by:

Dr Zhiyuan Yang 25th March 2021

Principal Environmental Consultant

Reviewed by:

Matthew Smith 25th March 2021

Senior Environmental Consultant

Authorised by:

Nigel Mann 25th March 2021

Director

REVISION HISTORY

Issue	Date	Status
1	25 th March 2021	First Issue – Update of existing Odour Management Plan
2		
3		
4		

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1.0 INTRODUCTION

1.1 BACKGROUND

Eco-Power Environmental Limited Commissioned Tetra Tech (formally WYG) to update an existing Odour Management Plan (“OMP”) at Waste Drying Plant, at Gibson Lane, Melton, Hull, HU14 3HH.

The OMP has been produced for Eco-Power Environmental (Hull) Limited (“Eco-Power”), formerly Attero Recycling Limited, as part of the Environmental Permit (“EP”) application at Gibson Lane, Melton, Hull, East Yorkshire, HU14 3HH. This OMP will form part of Eco-Power’s Environmental Management System (“EMS”).

The existing OMP was issued on March 2020, ref: Eco 09.03.2020/OMP.

In connection with this OMP update, Tetra Tech has updated the air quality assessment and odour assessment report. The updated air quality and odour assessment report was issued in a separate stand-alone document

1.2 OMP UPDATE REQUIREMENT BY SCHEDULE 5

After reviewing both Tetra Tech’s existing air quality report and the Eco-Power’s existing OMP, Mr Matthew Woollin, Environmental Officer, Permitting and Support Centre, Quadrant 2, 99 Parkway Avenue, Parkway Business Park, Sheffield S9 4WF, issued a letter dated 22nd January 2011, requires to provide the information detailed in the attached schedule. The information is required in order to determine the application for a permit duly made on 21st October 2020 (Application number: EPR/MP3107PP/A001).

The Schedule 5 letter requests the addition information on both odour modelling assessment and odour management plan (OMP). The details of the copy of the letter are presented in Appendix A

The air quality assessment has been updated accordingly and presented in a separate report by Tetra Tech. Eco-Power’s OMP has been revised to meet the EA’s Schedule 5 requirement with regard to “Odour management plan” In this report.

The EA’s requests related to the OMP are presented in *italic* and the Tetra Tech’s responses are in **blue** below.

20. Consider alternate odour monitoring location points, especially in the North Ferriby area.

Tetra Tech (Tt) Response (20):

- Alternate odour monitoring location points have been presented in Chapter 4.4 and Figure 4.3.

21. Confirm the location and purposes of the monitoring locations on figure 2 of the OMP that appear to be within or on top of the building.

Tetra Tech (Tt) Response (21):

- The odour monitoring location points have been presented in Figure 4.3.

22. The OMP needs to consider the risk of odour generated by the operation of the wood fuelled boilers.

Tetra Tech (Tt) Response (22):

- Odour control measures for the operations of the wood fuelled boilers are presented in detail in Chapter 4.3.
23. *Revise the OMP review triggers to account for information provided by complaint investigation and actual impact of the proposed activity (especially use of wood fuelled boilers and drying line).*

Tetra Tech (Tt) Response (23):

- First Site Trigger Point for Odour is detailed in Chapter 4.4.
 - The complaint investigations are discussed in Chapter 4.4 and Chapter 4.7.
24. *Provide detail as to how public engagement will be initiated and encouraged.*

Tetra Tech (Tt) Response (24):

- The public engagement has been discussed in Chapter 4.6
25. *Provide indicative examples for how odour from the boilers or drying could be reduced if determined to be the source of odour.*

Tetra Tech (Tt) Response (25):

- The examples for how odour from the boilers could be reduced are presented in Chapter 4.3.
26. *Define what represents a substantiated complaint.*

Tetra Tech (Tt) Response (26):

- A substantiated complaint means a complaint which has been investigated by the Environment Agency/the licensing agency as a result a violation of regulations has been found. If a complaint does occur, However, the procedures of response to complaints detailed in the Chapter 4.7 will be followed and appropriate mitigation measures will be taken to control the odour.
27. *This application seeks to add a drying activity using wood fuelled appliances to provide heat. Please revise your best available techniques assessment (BAT assessment) to ensure that all the necessary procedures and operating techniques are updated to include the wood fuelled appliances and drying activity of the SRF. Please ensure that it addresses all the requirements of the Waste Treatment BAT conclusions¹. Namely; please revise BAT 10, 12 and 13 to ensure you have adequate monitoring and management of odours on the site with regards to emissions from the wood fuelled appliances and the drying of SRF.*

Tetra Tech (Tt) Response (26):

- The revised OMP has been updated in compliant with the requirement of the BAT 10, 12, 13 to ensure that there are adequate monitoring and management of odours on the site with regards to emissions from

the wood fuelled appliances and the drying of SRF.

1.3 REQUIREMENT FOR AN ODOUR MANAGEMENT PLAN

Transwaste Recycling and Aggregates Limited (“Transwaste”) currently operate a waste facility plant at Melton Waste Park under a waste facility Environmental Permit issued by the Environment Agency (“EA”) (EPR/BP3792LD, issued 17/01/2017). Eco-Power wish to obtain a section of the permitted land with the intention of operating a Waste Recovery Facility. Transwaste will surrender the permit for the area and Eco-Power will hold an EP for the area once the application is approved.

The proposed activity is the production of fuel from waste via physical, mechanical and thermal treatment. Residual waste is delivered from the adjacent waste processing site, shredded and run through a number of separation systems (trommel, magnetic, ballistic, infrared) before being placed on a drying floor. Waste heat from biomass boilers provides heat to reduce the moisture content of the residual waste Solid Recovered Fuel (“SRF”). The dried SRF is then pelletised (heat applied and material is passed through an extruder), cooled and stored prior to transfer off site for use as fuel.

Waste will be delivered to Eco-Power from several waste companies and stored in a waste storage building which is just outside of the main building. The waste will be transferred to the main building when required ready for rapid processing.

Approximately 340,000-360,000 tonnes per annum of residual waste will be accepted from the waste suppliers to the Eco-Power site. The waste will comprise of commercial and industrial waste, construction and demolition waste and residual waste from material recovery facilities.

This OMP has been written to meet the Environment Agency’s (“EA”) general requirements for OMPs as described in the Horizontal Guidance Note H4 ‘*Odour Management – How to comply with your environmental permit*’ (March 2011) and the EA Sector Guidance IPCC S5.06 ‘*Guidance for the Recovery and Disposal of Hazardous and Non Hazardous Waste*’ (Issue 4, 2004). The Waste Treatments Industries Best Available Techniques Reference Document (“BREF”) (August 2006) will be considered as it covers installations associated with a number of waste treatments, including recovery and disposal of waste. The BREF is to be formally updated shortly. Therefore, the formal final draft (October 2017), now referred to as the Waste Treatments (“WT”) BREF, will also be considered.

This OMP addresses the following issues:

- The materials and/or activity which could produce odour and the potential point(s) of odour release;
- Identification of potential sensitive receptors;
- Process controls and procedures;
- Potential corrective actions; and
- Record keeping.

The OMP provides information on the potential odour impacts from the Installation and the mitigation measures to be implemented. These measures are linked to the Installation's EMS and will include operational and control measures for normal, as well as abnormal conditions.

The OMP also provides a management framework comprising of proactive and reactive measures to manage and control potential odour releases from the Installation. This proactive approach will facilitate the ongoing development of operational procedures and controls as part of an on-going commitment to improving environmental performance. Reactive procedures will also be established within the OMP for the logging, evaluation and implementation of corrective actions in the unlikely event of any odour related complaints being received.

1.4 DESCRIPTION OF THE SITE AND PROCESS

1.4.1 Site location and settings

The Installation is located at Gibson Lane, Melton, Hull, East Yorkshire, HU14 3HH. The Site is centred on the Ordnance Survey ("OS") National Grid Reference ("NGR") 496792 425410 and will occupy an area of approximately 0.94 Ha.

The Eco-Power Site Location plan with the proposed Environmental Permit boundary (red outline) is shown in **Figure 1-1**. The Transwaste Recycling and Aggregates Limited ("Transwaste") site boundary is highlighted with a green outline.

The site layout plan is shown in **Figure 1-2**.

Figure 1-1 Indicative Site Boundary

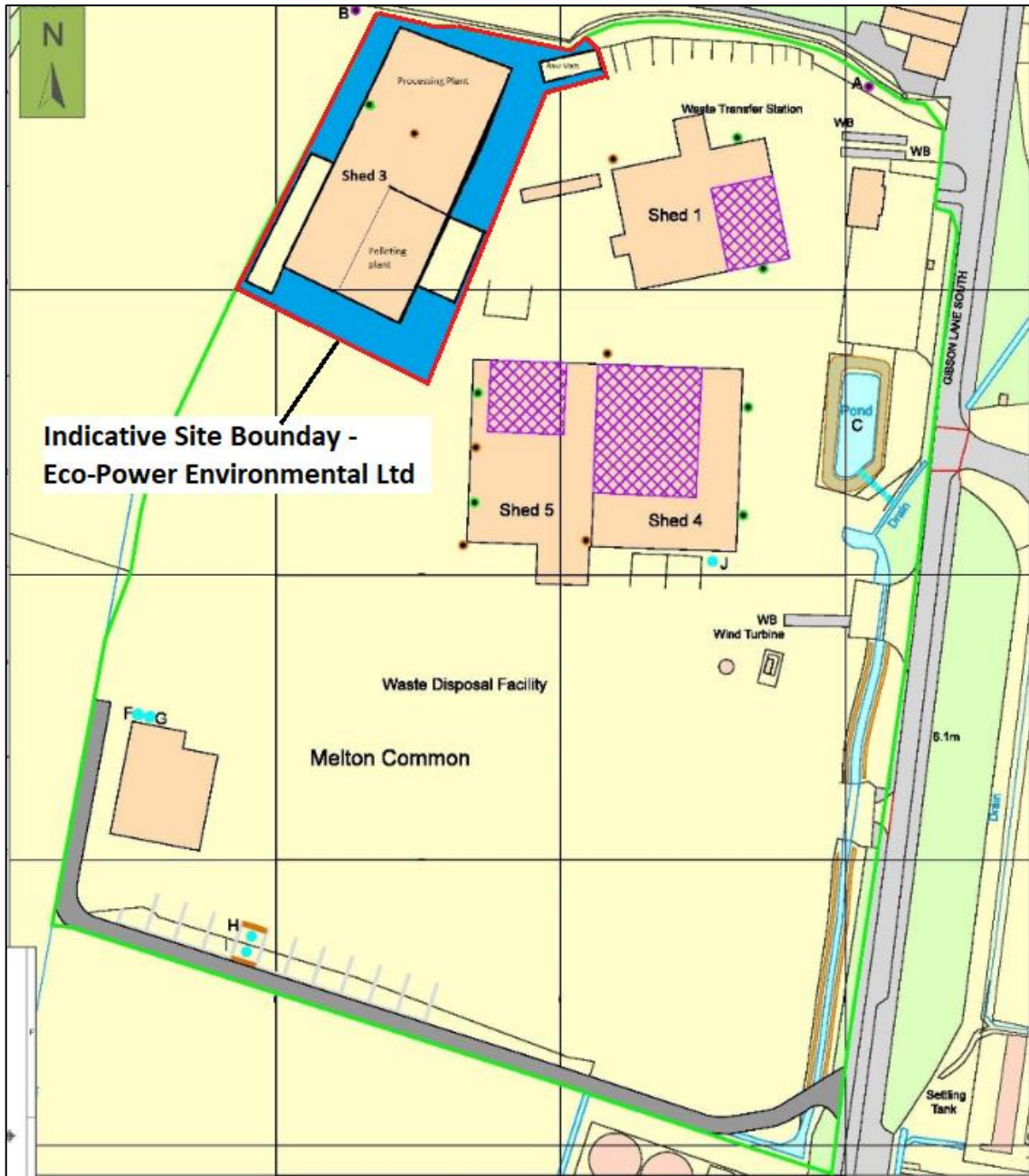
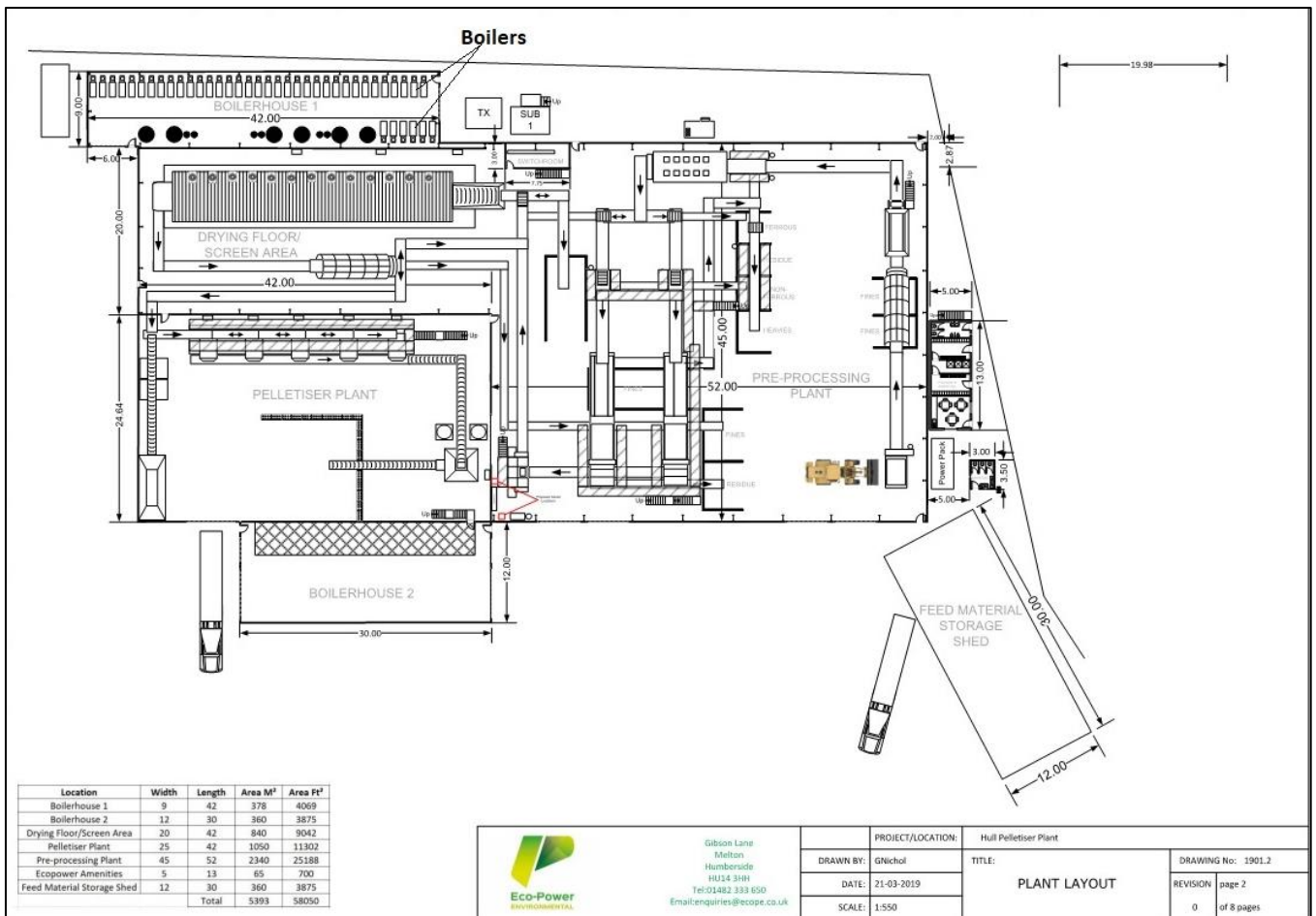


Figure 1-2 Site Layout



The installation is situated within Melton Waste Industrial Estate on Gibson Lane and the surrounding land uses are provided in **Table 1-1**. At present, the closest receptors are the neighbouring Transwaste which Eco-Power operate from within their site boundary and have shared access.

Table 1-1 Summary of Surrounding Land Uses within 1km of the Installation Boundary

Boundary	Description
North	Residential (Melton and Welton villages) primary school, sixth form college, shops, a church and several public houses. Railway line. Melton Park industrial Estate off Redcliff Road.
East	Residential (North Ferriby Village), school, shops, church, railway station, football club. Industrial Estate off Brickyard Lane.
South	Humber Estuary, Industrial Estate off Gibson Lane, Welton water activities.
West	Residential (Brough town), school, sports club, village halls, railway station, public houses, and shops.

1.4.2 Description of the Processes Undertaken

Eco-Power propose to operate under the listed activity detailed in **Table 1-2** under the Environmental Permitting (England and Wales) Regulations 2016 (“EP Regulations”) as amended.

Table 1-2 Proposed Schedule 1 Activity

Activity listed in Schedule 1 of the EP Regulations	Description of Specified Activity
Section 5.4 A(1)(b)(ii)	Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving one or more of the following activities, and excluding activities covered by Council Directive 91/271/EEC – (ii)pre-treatment of waste for incineration or co-incineration.

The proposed Waste Recovery System at the site will consist of:

- shredding;
- separating;
- drying; and
- pelletising.

The waste management operations to be carried out at the site as specified in Annex I and Annex II of the Waste Framework Directive 2008, and specified in the existing Environmental Permit, are detailed below:

- R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where the waste is produced);
- R3: Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes);
- R4: Recycling/reclamation of metals and metal compounds;
- R5: Recycling/reclamation of other inorganic materials;
- D9: Physico-chemical treatment not specified elsewhere which results in final compounds or mixtures which are disposed of by an of the operations numbered D01 to D12;
- D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced); and
- D14: Repackaging prior to submission to any of the operations numbers D1 to D13.

2.0 POTENTIAL ODOUR SOURCES, MATERIALS AND PROCESSES

2.1 LEVELS OF ODOUR

Individuals may have different responses to the same odorous compounds i.e. if they find it acceptable or objectionable and offensive. Perception of odour is also influenced by other senses such as sight and taste.

For the purposes of this OMP, the three levels of odour as illustrated in Figure 1 of the EA's Horizontal Guidance Note H4 (March 2011) will be used in the assessment. The description of each level, together with the action required in each case is provided in **Table 2-1**.

Table 2-1 Three Levels of Odour

Level of Odour	Action Required
Unreasonable odour amounting to serious pollution being or is likely to be caused (regardless of whether appropriate mitigation measures are being used).	Further action must be taken or you may have to reduce or cease operation.
Odour pollution is or is likely to be caused beyond the site boundary.	Implement appropriate measures to minimise the odour.
No odour arises beyond the site boundary or is likely to arise.	No further action required.

Table 2-2 provides an odour inventory for the Eco-Power Installation detailing European Waste Codes ("EWC") and the corresponding waste types permitted to be stored on site which have the potential to give rise to odour.

Table 2-2 Potential Odour Sources

EWC Code	Description
19	Wastes from waste management facilities, off site waste treatment plants and the preparation of water intended for human consumption and water for industrial use
19 12 10	Combustible waste (refuse derived fuel)
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11

3.0 POTENTIAL RECEPTORS

3.1 CONSIDERATIONS FOR IDENTIFYING SENSITIVE RECEPTORS

To determine the level of odour impact (see **Table 2-1**) which may arise from the Installation, the sensitivity of the receiving environment and potential receptors must be considered.

The degree of sensitivity in a particular location is based on the characteristics of the land use, including the time of day and the reason why people are at the particular location (e.g. for work, recreation or residence).

Other non-meteorological factors which influence odour concentrations include:

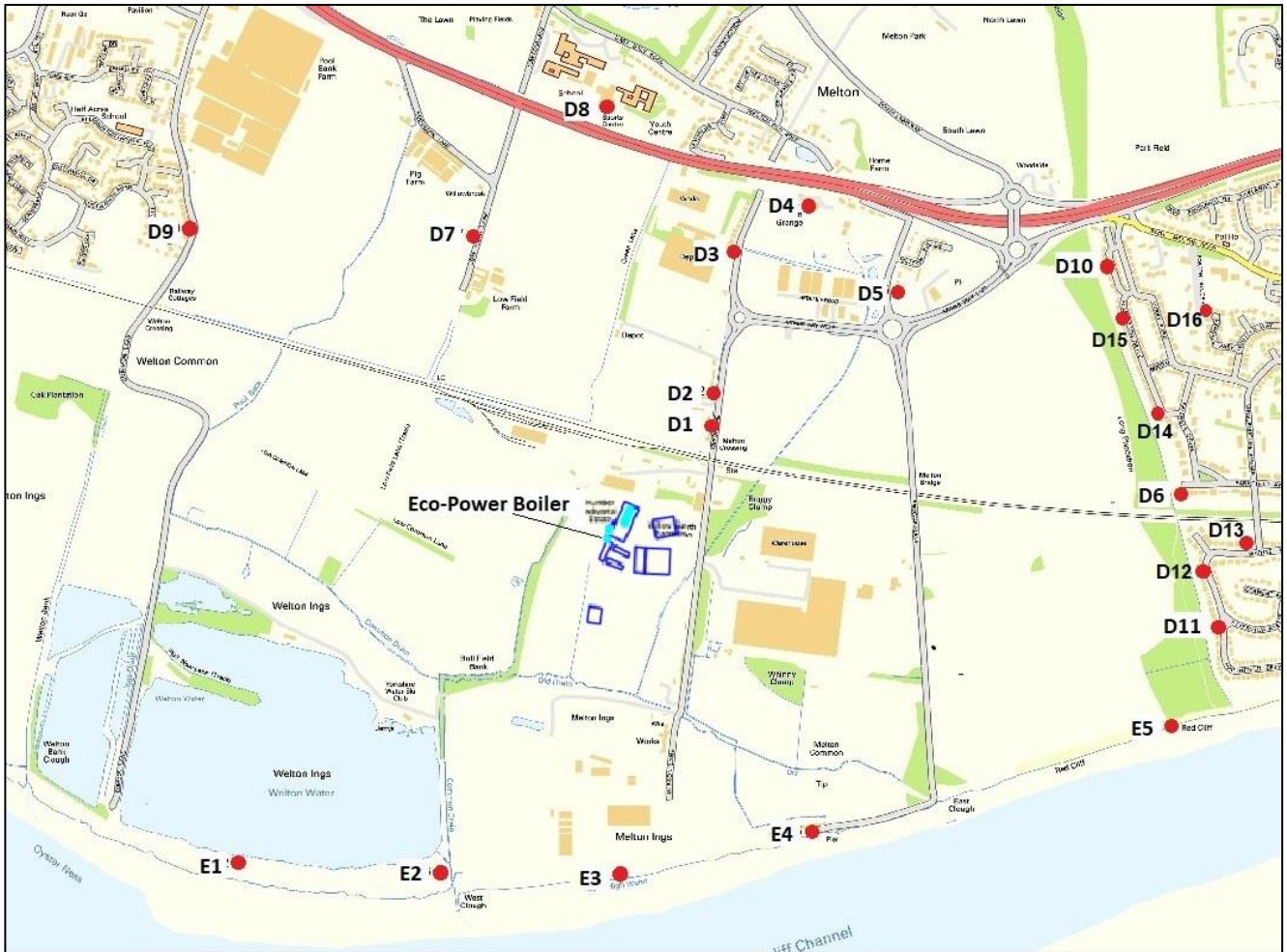
- distance from the odour source - the closer the receptor is to an odour source the higher the odour concentration will be at that location;
- the height of the release, generally, the higher the point of release the lower the odour concentration in the vicinity of the odour source; and,
- emission characteristics - stronger odour sources will affect a wider area than weaker sources.

Potential sensitive receptors surrounding the Environmental Permit (“EP”) boundary are presented in **Table 3-1** and **Figure 3-1**.

Table 3-1 Nearby Sensitive Receptors

Site ID	Discrete Sensitive Receptor	UK NGR (m)	
		X	Y
D1	100 Gibson Lane South	496955	425795
D2	88 Gibson Lane South	496966	425882
D3	54 Gibson Lane	497015	426249
D4	The Coach House, Melton Grange, Main Road	497209	426365
D5	21 Brickyard Lane	497442	426144
D6	25 the triangle, North Ferriby	498166	425622
D7	Lowcroft Farm, Lowfield Lane	496343	426287
D8	South Hunsley School, 41 East Dale Road	496689	426616
D9	62 Common Lane	495613	426302
D10	79 Plantation Drive	497983	426212
D11	75 Southfield Drive	498268	425278
D12	87 Riverview Avenue	498219	425426
D13	29 Marine Avenue	498340	425491
D14	12 Plantation Drive	498106	425838
D15	66 Plantation Drive	498019	426081
D16	10 Ashdale Park	498243	426085

Figure 3-1 Sensitive Receptor Locations



4.0 OPERATIONAL AND PROCESS CONTROLS

4.1 ODOUR MANAGEMENT STRATEGY

Eco-Power's OMP strategy is to minimise any releases through good working practices and the use of suitable process control measures, which represent Best Available Techniques ("BAT"). A strategy based on the hierarchical structure shown in **Figure 4-1** will be used at the Installation.

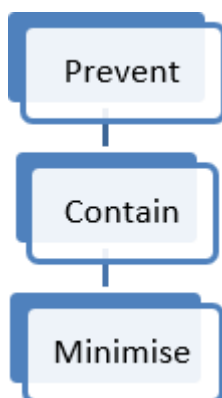


Figure 4-1 OMP Strategy

4.2 ODOUR CONTROL MEASURES

BAT 12 of "COMMISSION IMPLEMENTING DECISION (EU) 2018/1147 of 10 August 2018, establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council", states:

2BAT 12. In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:

- *a protocol containing actions and timelines;*
- *a protocol for conducting odour monitoring as set out in BAT 10;*
- *a protocol for response to identified odour incidents, e.g. complaints;*
- *an odour prevention and reduction programme designed to identify the source(s); to characterise the contributions of the sources; and to implement prevention and/or reduction measures."*

The techniques for odour control have taken into consideration the relevant indicative BAT requirements detailed in the EA Sector Guidance IPCC S5.06 'Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste' (Issue 4, 2004) and the Waste Treatments BAT Conclusions Document (August 2018).

The following general management techniques are employed at the Installation:

- good housekeeping regimes will be implemented throughout the site building and storage area;
- waste will be inspected on arrival for any obvious signs of exceptional or problematic malodours;
- waste types for acceptance will be controlled by the Environmental Permit conditions and the manual inspections of waste will confirm acceptance;
- staff will be suitably trained in the conditions of the permit and EMS;
- non-conforming materials would be segregated and stored at a designated area prior to removal off site and returned to suppliers as soon as practicable; and,
- the site will be managed in accordance with an EMS which is reviewed regularly to ensure it remains appropriate and up to date.

Table 4-1 details the environmental risk assessment undertaken for fugitive emissions to air from odour arising from the Installation. It can be observed that the control measures implemented reduce the overall risk to low/medium.

Table 4-1 OMP Risk Assessment and Control Measures

Potential Odour, Source or Pathway	Identified Receptor(s)	Pathway	Control Measures	Probability of Exposure	Consequence	Overall Risk
Release of odour from installation	Human population in surrounding area	Release to air windblown	<p>Waste pre-acceptance and acceptance procedures are enforced and waste will only be accepted when there is sufficient treatment capacity within the Installation. Eco-Power have an enclosed container just outside the building where waste will be moved as required for rapid processing.</p> <p>Strategic operational planning will ensure minimum waste storage time on site. Planning will also take into consideration the meteorological conditions, including wind direction, when undertaking the waste activities on site.</p> <p>Waste discharged into the waste reception area which is found to be excessively malodorous will be immediately removed from site and returned to the suppliers. The area of the deposit will be swept, washed down and disinfected as appropriate</p> <p>Good housekeeping and working practices specifically relating to the control of odour are incorporated into EMS to ensure that the appropriate standard of site cleanliness and tidiness is maintained.</p> <p>Routine daily site inspections are undertaken which includes olfactory/sniffing monitoring, as well as checking for the presence of pests, litter and spillages. These checks are recorded on the Daily Site Monitoring Check Sheet. An example of which is provided in Appendix D.</p>	Low to medium control measures should prevent any fugitive odour releases from reaching the identified receptors	Odour nuisance	Low to medium

4.3 ODOUR CONTROL MEASURES FOR BIOMASS BOILERS

4.3.1 Reduce Smoke Coming Out of Biomass Boilers

The best practice for reduce the smoke when burning consists of the following:

- (1) Use a moisture meter to measure the water content of the wood - moisture levels should be 20% or less before burning.
- (2) Check for signs the wood is ready to burn if you cannot use a moisture meter.
 - a. weight – when comparing similar sized logs and the same species, if the log is heavier this can indicate it is still wet.
 - b. sound – a hollow sound when tapping indicates dry logs.
 - c. cracked ends – can indicate dry logs.
 - d. bark – the looser the bark the drier the log.
 - e. colour – dry wood can be lighter in colour.
- (3) Regularly maintaining the boilers means it will perform better.

4.3.2 Maintenance of the Biomass Boiler Odour Control System.

The deep-bed activated odour control filter will be maintained and serviced in order to achieve the operations efficiency. The odour control filter will be serviced according to the manufacture recommendations or be maintained every 6 to 12 months. This time frame may increase or reduce for extreme or very light applications.

4.4 ODOUR MONITORING PLAN

Monitoring Type and Frequency

Sniff testing (to check ambient air on or off site) will be undertaken at a regular basis or in response to complaints.

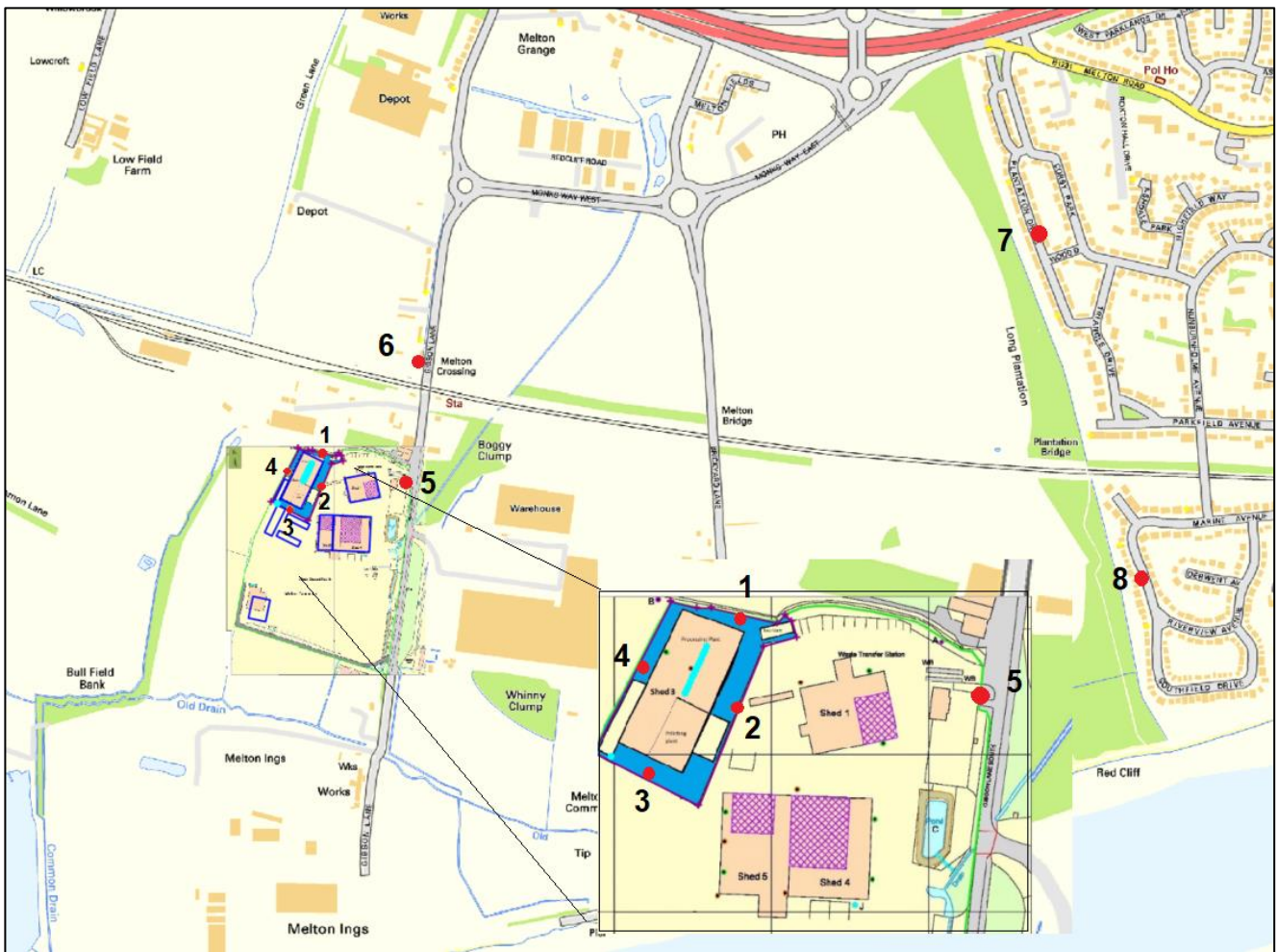
Staff normally exposed to the odours may not be able to detect or reasonably judge the intensity of odours off-site. It is better off using office staff or people who have not recently been working on the site to do this.

This will normally be undertaken first thing in the morning, on arriving on site before sensitisation to odours occurs and periodically during the day.

The sniffing testing will be undertaken at 8 locations shown in **Figure 4-2**.

The sniffing test should be undertaken at the 4 site boundary locations No. 1 to No4. If it is expected the odour has migrated outside of the boundary. Further sniffing testing will be undertaken. For example, if wind direction is westerly and southwesterly, sniffing test will be undertaken at Location 5 and Location 6. Furthermore, if the odour detected at those two locations (Locations 5 and 6) are most likely from the Eco-Power operations (other than the neighboring waste operations), sniffing test will be undertaken at Location 5 and Location 6, sniffing test needs to be undertaken at Location 7 and Location 8 at North Ferriby Area.

Figure 4-2 Odour Sniffing Test Locations



Weather Conditions and Monitoring

When the speed reaches 28 to 30 mph all outdoor shredding activities stop and the movement of waste around the site via shovels is also stopped.

First Site Trigger Point for Odour

Normal operating procedures daily inspections of the site. This is the first site trigger point for odour. If odour is detected during this inspection the Site Odour assessment form (Appendix B) will be completed, using the above locations identified both on and off site. Employees are also encourage to report smell/odours that may occur during the day to day operating of the site, starting at the weigh bridge when waste is received, on to the unloading operation in the sheds, through the treatment process and finally the loading of the waste.

External reports for Odour

On the report of a Smell/Odour (phone call, e-mail, letter) Eco-Power will investigate and undertake an odour assessment. This will be undertaken as soon as possible. If the report is verified the assessments will continue to be undertaken daily until the odour problem is rectified.

Please note if any information is reported from visitors, drivers, and members of the public this will be controlled via the complaints procedure.

4.5 CONTROL DURING MAINTENANCE AND ABNORMAL EVENTS

Control during maintenance and Abnormal Events

As part of the site insurance undertakings Eco-Power is insured for business interruption due to Abnormal Events this includes major fires and major breakdowns a comprehensive business continuity plan has being developed to cover these occurrences.

Breakdown of plant and equipment

The majority of the plant, shredding equipment can be replaced within the day of a major breakdown. The fixed plant is also covered via our maintenance team and all major components are kept on site.

Maintenance activities are normally planned events and take place at the weekends. These activities include cleaning of the plant and external areas.

Routine Cleaning

The cleaning of machinery is undertaken and recorded on the daily maintenance schedule sheets and this operation is essential for the smooth running of the plant in all sheds.

4.6 COMMUNITY LIAISON

Eco-Power is committed to achieving an open and transparent relationship with the local community. If required, site personnel will attend local community meetings in order to be informed of any concerns which community members may have and to outline the robust measures outlined in this OMP to address these concerns. This will help to prevent odour complaints in the first instance.

Contact details are provided on the company website for all Eco-Power sites including Gibson Lane Waste Treatment and Processing Centre, as well as an email address for general enquiries. Eco-Power welcome correspondence using these provided methods of communication.

4.7 RESPONSE TO COMPLAINTS

In the first instance, the complaint will be screened, taking into account the following information:

- the quality and source of the complaint (site workers, local residents);
- the number of complaints against the alleged odour;
- the frequency of complaints, e.g. is it a one-off event or a regular occurrence?
- a knowledge of potential sources within the site (cross - referenced with details of any abnormal operating conditions, the wind direction relative to where the complaint was received from, distance of the complaint to the site); and,
- a knowledge of potential sources other than the Installation (cross referenced with the wind direction of the Installation and where the complaint was received from, distance of the complaint to the site).

If an odour complaint is received at the Installation, the incident will be fully investigated which may include the following:

- undertaking a site inspection to establish whether any odorous emissions can be observed at the present time;
- reviewing the daily site monitoring check sheet to confirm checks have been completed and to note whether any abnormal activities or observations were recorded; and
- discussions with operators to establish any changes to normal operating conditions.

An odour complaint report form is presented in Appendix C.

Corrective and preventative measures will be implemented if the complaint is substantiated and followed up if deemed necessary. If required, Eco-Power will attend resident liaison meetings to ensure comments from the local community can be addressed and the corrective and preventative measures which have been implemented at the site are communicated to those concerned.

4.8 RECORDS

OMP records are kept in accordance with the procedures established as part of the EMS.

The type of information that will be recorded relates to:

- sensitive receptors in particular the type of receptors, location relative to the odour sources and an assessment of the impact of odorous emissions on the receptors;
- an overview of any complaints received, what they relate to (source/operation) and any remedial action taken;
- the types and source of odorous substances used or generated, release points and monitoring undertaken;
- a description of the indicative BAT requirements being considered; and
- identification of any circumstances or conditions, which compromise the ability to prevent or minimise odour annoyance, and a description of the actions that will be taken to minimise the impact.

Any external/internal non-conformances raised against the requirements of the Environmental Permit or other relevant legislation, are recorded and followed up by the Site Manager, as appropriate, to address the concern identified and to prevent occurrence or re-occurrence. These records are reviewed as part of Management Review meetings.

5.0 OMP REVIEW

The continuing effectiveness of the OMP will be reviewed annually by the Site Manager for the site.

The reviews will take into account compliance records, complaints history, site records and any recent sensitive developments on neighboring land. The plan will be amended as necessary, including any changes to the control measures.

Notice of request for more information

The Environmental Permitting (England & Wales) Regulations

2016

Company Director

Eco-Power Environmental (Hull) Limited

Bankwood Lane Industrial Estate

Bankwood Lane

Rossington Doncaster

South Yorkshire

DN11 0PS

Application number: EPR/MP3107PP/A001

The Environment Agency, in exercise of its powers under paragraph 4 of Part 1 of Schedule 5 of the above Regulations, requires you to provide the information detailed in the attached schedule. The information is required in order to determine your application for a permit duly made on 21st October 2020.

Send the information to either the email or postal address below by 19/03/2021. If we do not receive this information by the date specified then we may treat your application as having been withdrawn or it may be refused. If this happens you may lose your application fee.

Email address: psc@environment-agency.gov.uk.

Postal address:

Permitting and Support Centre
Quadrant 2
99 Parkway Avenue
Parkway Business Park
Sheffield
S9 4WF

Name	Date
Matthew Woollin	22/01/2021

Authorised on behalf of the Environment Agency

Notes

These notes do not form part of this notice.

Please note that we charge £1,200 where we have to send a third or subsequent information notice in relation to the same issue. We consider this to be the first notice on the issues covered in this notice.

Fire Prevention Plan

You must consider the 'Fire Prevention Plans: environmental permits' guidance (updated 09/01/2020) insert date of latest update on [GOV.UK](https://www.gov.uk), hereafter referred to as the guidance, and come to your own view as to what proposals you consider will meet the objectives to:

- minimise the likelihood of a fire happening;
- aim for a fire to be extinguished within 4 hours; and
- minimise the spread of fire within the site and to neighbouring sites.

You can follow the measures set out in the guidance and if you do so you will meet the objectives of the guidance and we are likely to approve your Fire Prevention Plan (FPP). If you do not include these measures you can propose alternative measures to meet the objectives. We will technically assess your alternative measures and, if we are satisfied that they meet the objectives, we can approve the FPP.

If your proposals do not meet the measures in the guidance, you should explain in detail the alternative measures you intend to take and how those measures can meet the objectives. This applies to each of the information requests in the attached schedule.

The notes in italics that appear after information requests in the attached schedule do not form part of the notice. The notes are intended to assist you in providing a full response

Schedule

Fire Prevention Plan

Adequate answers to the following are required for the FPP to pass assessment:

1. Provide details which show you have considered and mitigated for materials on site which are not covered by the guidance but still pose a fire risk (e.g. combustible liquids or hazardous materials). This includes any gas cylinders, fuel tanks, aerosols and chemicals on site. These materials should be shown on the site plan and confirmed to be adequately separated from combustible wastes.
2. Your FPP needs to ensure the fire prevention measures will be put in place and used on site. Provide details of regular training exercises on site to test how well your plan works and to ensure that staff understand all the requirements of it. This should include training in day-to-day operation (e.g. stockpile management), as well as incident response.
3. Your site plan is currently missing:
 - a. The location of fixed plant or where mobile plant is stored when not in use
4. Provide detail of security measures on site in relation to CCTV. The design, installation and maintenance must be covered by an appropriate [UKAS-accredited](#) third party certification scheme.
5. Confirm electrics on site will be fully certified by a qualified electrician and outline the written procedures in place that set out regular maintenance.
6. Confirm that a fire watch will monitor the site at regular intervals during the working day, to detect signs of a fire from hot exhausts or engines and outline the regularity of these intervals.
7. Confirm and provide details of a quarantine area for hot loads.
8. Provide details of how external heating during hot weather will be taken into account and confirm that waste will be shaded from direct sunlight if required and/or any other techniques that will be in place to enable heat generated within the pile to be released.
9. Provide details which show that fire walls and bays are designed to resist fire (both radiative heat and flaming) and have a fire resistance period of at least 120 minutes to allow waste to be isolated. Fire walls must show compliance with all factors outlined in Section 11.2 of the guidance.
10. Provide details of the quarantine area(s) on site. The quarantine area(s) must be within the boundary of the site for which the permit applies and be large enough to hold at least 50% of the volume of the largest pile. The quarantine calculation assumes $6 \times 10 \times 4 = 240$ cubic metres but waste would not be in a bay so more likely to be 120m, needs to be 224 cubic metres to meet the requirements. Confirm a separation distance of at least 6 metres around the quarantined waste will be in place.
11. Provide details of the detection system on site. The detection system should be proportionate to the nature and scale of waste management activities you carry out and the associated risks. For all automated systems the design, installation and maintenance should be covered by an appropriate UKAS-accredited third-party certification scheme. If the system is not accredited, provide details as to why not and outline how the system will work on site.

12. Provide details of the suppression system on site, ensuring the design, installation and maintenance of all automated suppression equipment is covered by an appropriate UKAS-accredited third-party certification scheme. If the system is not accredited, provide details as to why not and outline how the system will work on site.
13. Provide details of how you have designed your site to allow for active firefighting, outlining the procedures in place in the event of a fire.
14. Provide site specific calculations for water supply in accordance with the guidance. You need to account for a worst-case scenario, which is defined as your largest waste pile catching fire. As a guide, a water supply of at least 2,000 litres a minute for a minimum of 3 hours is needed to tackle a 300 cubic metre pile of combustible material (this equates to approximately 6.7 litres/minute for every 1m³ of material). Reference is made to 9000l/min of water being available from hydrants but no information provided to justify this. Previous fires at this site have shown the hydrants have limited flow capacity.
15. Provide details of how incoming wastes will be diverted to alternative sites during a fire. You need to show a plan is in place for how you will notify those who may be affected by a fire, such as nearby residents and businesses. Provide details of how you will clear and decontaminate the site following a fire and the steps you will take before the site can become operational again.

Odour management plan (OMP)/Environmental Permitting Technical Requirements (odour only)

16. Add North Ferriby to the list of sensitive receptors.
17. Explain the reasoning behind the assumption made about the odour emission value for emissions from the drying process used in modelling impact.
18. Modelling should be re-run with a higher odour emission value.
19. Re-run the model to account for reduced benchmark due to a sensitised population.
20. Consider alternate odour monitoring location points, especially in the North Ferriby area.
21. Confirm the location and purposes of the monitoring locations on figure 2 of the OMP that appear to be within or on top of the building.
22. The OMP needs to consider the risk of odour generated by the operation of the wood fuelled boilers.
23. Revise the OMP review triggers to account for information provided by complaint investigation and actual impact of the proposed activity (especially use of wood fuelled boilers and drying line).
24. Provide detail as to how public engagement will be initiated and encouraged.
25. Provide indicative examples for how odour from the boilers or drying could be reduced if determined to be the source of odour.
26. Define what represents a substantiated complaint.

27. This application seeks to add a drying activity using wood fuelled appliances to provide heat. Please revise your best available techniques assessment (BAT assessment) to ensure that all the necessary procedures and operating techniques are updated to include the wood fuelled appliances and drying activity of the SRF. Please ensure that it addresses all the requirements of the Waste Treatment BAT conclusions¹. Namely; please revise BAT 10, 12 and 13 to ensure you have adequate monitoring and management of odours on the site with regards to emissions from the wood fuelled appliances and the drying of SRF.

Notes on OMP review/review of BAT in relation to odour

The proposed activity seeks to replace part of an existing permitted operation, there is a history of odour complaints relating to the existing site. The assessment of risk in the odour management plan (OMP) should take account of the complaints history, this is important when seeking to understand and model risk.

The sensitive receptor boundary is set at 1km from the site, this does not take account of North Ferriby; a village with a history of odour complaints, especially important for the north western side of the village which is down wind of the proposed activity for a significant proportion of time using the wind rose submitted in the OMP.

The proposed drying activity involves subjecting waste to a range of processes that are normally minimised in an effort to reduce odour. Such as shredding, heating and increasing the rate of evaporation. By doing this the output will be a gaseous stream that could be odorous. The modelling relies on an assumption that the odour rate emissions of the drying activity will be the same as that from a Biofilter (212 Odour units/cubic metre).

When modelling odour it is assumed that the odour will be moderately offensive when determining the benchmark level, as there is an already sensitised population then this should be accounted for and the benchmark reduced.

Two of the primary potential sources of odour will be the emission stacks from the boilers and drying plant. The proposed odour monitoring locations (Figure 2 OMP) are unlikely to monitor any odour from these as the emissions may not have fully mixed or reached ground level.

There are 2 distinct potentially odorous point source emissions:

- *Emissions from wood fuelled appliances*
- *Emissions from drying of waste*

These have distinct and different natures and risks i.e. emissions from waste drying will be moisture rich. In Guidance for the Treatment and Transfer of Hazardous Waste and Non- Hazardous Waste S5.06, reference is made to the difficulty this raises with plume dispersion and recommends investigation of methods to reduce moisture content before discharge. Whereas emissions from the wood fuelled appliances will be dry, with the proposed fuelling arrangements in process controls of the appliances is hard to quantify in relation to minimising emissions (stop/start nature of fuelling and use). There is an inadequate investigation/explanation made in the OMP as to how odour from the 2 sources mentioned here could be reduced.

The OMP includes an assessment of predicted odour concentrations that includes the suggested contribution from the drying line. There is also predicted concentrations of certain emissions from

¹Waste Treatment BAT Conclusion. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018D1147&from=EN>

the wood fuelled boilers. This does not include a consideration of the odour from the heating appliances, given that combined thermal input for these are over 5MW of thermal capacity, fuelled by the manual loading of wood then there is a clear risk of the odour of smoke. This is supported by complaint history within the last few months which have shown a new pattern of complaints of a burning/wood smoke nature.

The plan of proposed monitoring locations includes 2 locations that appear to be either within the building or on top of the building.

The OMP includes a commitment to review after 12 months to ensure continued effectiveness. As the proposed activity includes a new process (wood fuelled boilers and drying line) then this is a long time to wait to review a plan.

Community liaison is described in a reactive manner depending on request to attend, given the complaint history active engagement is preferable.

Corrective measures are detailed in the report. No mention is made of measures that could be taken if emissions from use of wood fired boilers or the drying line are determined to be the source of the odour. Corrective measures are described as being considered following a substantiated complaint.

BAT requirements particularly of relevance being:

BAT 10; monitoring of odour in cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.

BAT 12; OMP to contain - an odour prevention and reduction programme designed to identify the source(s); to characterise the contributions of the sources; and to implement prevention and/or reduction measures.

BAT 13; In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques given.

APPENDIX B ODOUR REPORT FORM

Form 1 – Odour Sniffing Test Report

Date and Time	
Weather conditions	
Wind direction	
Assessor	

Location	Time		Odour				
	Start	Finish	Y/N	Intensity	Extent	Description	Source
1 – on the Northern boundary							
2 – on the Eastern boundary							
3 – on the Southern boundary							
4 – on the Western boundary							
5 – adjacent to Gibson Lane							
6 – adjacent to 100 Gibson Lane							
7 – North Ferriby Location 1							
8 - North Ferriby Location 2							

Where odour is present, classify the **intensity** as follows:

0: No Odour 1: Very faint odour 2: Faint Odour 3: Distinct Odour 4: Strong Odour
 5: Very Strong Odour 6: Extremely Strong Odour

Where odour is present, classify the **extent** of the odour:

I – Intermittent P – Persistent

APPENDIX C ODOUR COMPLAINT REPORT FORM

Odour Complaint Report Form

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

Intensity

- | | | |
|--------------------|------------------|--------------------------|
| 0 No odour | 3 Distinct odour | 5 Very strong odour |
| 1 Very faint odour | 4 Strong odour | 6 Extremely strong odour |
| 2 Faint odour | | |

APPENDIX D REPORT TERMS & CONDITIONS

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