



**BANKWOOD LANE WASTE TREATMENT
AND PROCESSING CENTRE**

**APPLICATION FOR ENVIRONMENTAL PERMIT
VARIATION UNDER THE ENVIRONMENTAL
PERMITTING (ENGLAND AND WALES)
REGULATIONS 2016
(AS AMENDED)**

ODOUR MANAGEMENT PLAN

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ODOUR MANAGEMENT PLAN



**BANKWOOD LANE INDUSTRIAL ESTATE,
BANKWOOD LANE, ROSSINGTON, DONCASTER**

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ACRONYMS / TERMS USED IN THIS REPORT

Attero	Attero Recycling Limited
BAT	Best Available Techniques
BREF	Best Available Techniques Reference Document
CCTV	Closed Circuit Television
EA	Environment Agency
ECL	Environmental Compliance Limited
EMS	Environmental Management System
EP	Environmental Permit
EWC	European Waste Code
OMP	Odour Management Plan
PPMR	Planned Preventative Maintenance Regime
SSSI	Site of Special Scientific Interest
WT	Waste Treatments

1. INTRODUCTION

1.1. REQUIREMENT FOR AN ODOUR MANAGEMENT PLAN

- 1.1.1. Environmental Compliance Limited (“ECL”) was commissioned by Attero Recycling Limited (“Attero”) to produce an Odour Management Plan (“OMP”) as part of the variation application for their site (Bankwood Processing Site) at Bankwood Industrial Estate, Rossington, Doncaster, DN11 0PS.
- 1.1.2. The purpose of this variation is to increase the maximum annual waste throughput from 200,000 tonnes to 400,000 tonnes. The daily capacity of the site would exceed 50 tonnes per day and as a result of this Environmental Permit variation the site would change its status from a waste facility to that of an Installation. To account for this increased waste acceptance, Attero propose to expand the Environmental Permit boundary as shown on the Site Layout Plan (ECL.041.01.01-002), which is submitted as part of this variation application. In addition, Attero wish to develop the waste recycling operations and focus on producing Refuse Derived Fuel (RDF) and Solid Refuse Fuel (SRF), in so doing wish to include a Directly Associated Activity in the form of air drying of the SRF fraction of waste treated at the site.
- 1.1.3. As part of this variation application, Attero wish to rename their site as Bankwood Lane Waste Processing and Treatment Centre, herein after to as the Installation.
- 1.1.4. As part of Attero’s application to vary the conditions of its existing Environmental Permit (EPR/EB3207LH, Issued 09/05/2016), an OMP has been prepared. The OMP will form part of Attero’s Environmental Management System (“EMS”).
- 1.1.5. 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.
- 1.1.6. 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.
- 1.1.7. 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.

- 1.1.8. The OMP also provides a management framework comprising of proactive and reactive measures to manage and control potentially 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.

- 1.1.9. WYG were commissioned by Attero to undertake an Air Quality Assessment related to the proposed redevelopment of the site, which is contained within Appendix I of this document and should be read in conjunction with this OMP.

2. DESCRIPTION OF THE SITE AND PROCESS

2.1. SITE LOCATION AND SETTING

- 2.1.1. Attero is located on Bankwood Lane, Rossington, Doncaster, DN11 0PS, and is centred on National Grid Reference 460526 399122. The exact location of the proposed Installation is indicated on Drawing ECL.041.01.01-01 Site Location Plan contained within Section 8 of this variation application submission.
- 2.1.2. The site is situated within Bankwood Lane Industrial Estate and the surrounding land uses are provided in Table 1 below. At present, the closest human receptors are residents in the New Rossington area.

Table 1: Summary of Surrounding Land Uses

Boundary	Description
North	Residential (Bessacarr), schools, places of worship, retail park, Potteric Carr Wetlands
East	Residential (Rossington), allotments, places of worship, The Warren Golf Course, River Torne, playing fields, agricultural farm
South	Bankwood Lane Industrial Estate, residential (New Rossington), schools, cemetery, River Torne, agricultural farm
West	Potteric Carr Wetlands, agricultural farm

2.2. DESCRIPTION OF THE PROCESSES UNDERTAKEN

- 2.2.1. As a result of the permit variation application, Attero will fall under the listed activities detailed in Table 2 under the Environmental Permitting (England and Wales) Regulations 2016 (“EP Regulations”) as amended.

Table 1: Proposed Schedule 1 Activities

Activity listed in Schedule 1 of the EP Regulations	Description of Specified Activity
Section 5.4 A(1) (a) (ii)	Disposal of non-hazardous waste with a capacity exceeding 50 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 concerning urban wastewater treatment(a)— (ii) physico-chemical treatment;
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.

- 2.2.2. Attero is also proposing to increase the annual throughput to 400,000 tonnes. This will enable approximately 350,000 tonnes of SRF/RDF, 45,000 tonnes of recycled material (wood, plastic, paper/cardboard, metals, soils and hardcore) and 5,000 tonnes of non-recyclable waste to landfill.
- 2.2.3. In addition, Attero wish to develop the waste recycling operations and focus on producing Refuse Derived Fuel (RDF) and Solid Refuse Fuel (SRF), in so doing wish to include a Directly Associated Activity in the form of air drying of the SRF fraction of waste treated at the site.
- 2.2.4. Waste treatment at the site consists of:
- sorting and separating waste types both mechanically and by hand;
 - recycling various waste types, including metals, wood, plastics and aggregates;
 - shredding non recyclable material to recover the waste as fuel products;
 - blending waste materials to produce useable products (e.g. soils or fuels);
 - drying waste to improve fuel quality reduce the moisture content of waste outputs. This would be carried out by passing warm air through/over waste materials; and
 - baling of waste materials for export as fuels.
- 2.2.5. 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);
 - **D14:** Repackaging prior to submission to any of the operations numbers D1 to D13.

3. POTENTIAL ODOUR SOURCES, MATERIALS AND PROCESSES

3.1. LEVELS OF ODOUR

- 3.1.1. 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.
- 3.1.2. For the purposes of this OMP, the three levels of odour as illustrated in Figure 2 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 3.

Table 3: 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.
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.

- 3.1.3. Table 4 provides an odour inventory for the Attero Installation detailing the waste types permitted to be stored on site which have the potential to give rise to odour.

Table 4: Potential Odour Sources

EWC Code	Description
02	WASTES FROM AGRICULTURE, HORTICULTURE, AGRICULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01	<i>Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing</i>
02 01 02	Shellfish shells from which soft tissue or flesh has been removed
02 01 03	Plant tissue waste
02 02	<i>Wastes from the preparation and processing of meat, fish and other foods of animal origin</i>
02 02 03	Materials unsuitable for consumption or processing
02 03	Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 01	Sludges from washing, cleaning, peeling, centrifuging and separation
02 03 04	Materials unsuitable for consumption or processing
02 04	<i>Wastes from sugar processing</i>
02 04 01	Soil from cleaning and washing beet
02 05	<i>Wastes from the dairy product industry</i>
02 05 01	Materials unsuitable for consumption or processing

Table 4: Potential Odour Sources (Cont.)

EWC Code	Description
<i>02 06</i>	<i>Wastes from the baking and confectionery industry</i>
<i>02 06 01</i>	<i>Materials unsuitable for consumption or processing</i>
<i>02 06 02</i>	<i>Wastes from preserving agents</i>
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
<i>16 03</i>	<i>Off specification batches and unused products</i>
<i>16 03 06</i>	<i>Organic waste other than those mentioned in 16 03 05</i>
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
<i>19 05</i>	<i>Wastes from aerobic treatment of solid waste</i>
<i>19 05 01</i>	<i>Non-composed fraction of municipal and similar wastes</i>
<i>19 05 02</i>	<i>Non-composted fraction of animal and vegetable waste</i>
<i>19 05 03</i>	<i>Off-specification compost</i>
<i>19 08</i>	<i>Wastes from waste water treatment plants not otherwise specified</i>
<i>19 08 02</i>	<i>Washed sewage grit</i>
<i>19 09</i>	<i>Wastes from the preparation of water intended for human consumption or water for industrial use</i>
<i>19 09 02</i>	<i>Sludges from water clarification</i>
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
<i>20 03</i>	<i>Other municipal wastes</i>
<i>20 03 01</i>	<i>Mixed municipal waste</i>
<i>20 03 02</i>	<i>Waste from markets</i>
<i>20 03 03</i>	<i>Street-cleaning residues</i>

4. POTENTIAL RECEPTORS

4.1. CONSIDERATIONS FOR IDENTIFYING SENSITIVE RECEPTORS

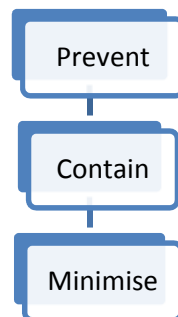
- 4.1.1. To determine the level of odour impact (see Table 3) which may arise from the Installation, the sensitivity of the receiving environment and potential receptors must be considered.
- 4.1.2. The degree of sensitivity in a particular location is based on the characteristics of the land use, including the time of day and the reason why people are at the particular location (e.g. for work, recreation or residence).
- 4.1.3. 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 effect a wider area than weaker sources.
- 4.1.4. A summary of the immediate environmental setting is provided in Table 1. Potential sensitive receptors within a 1km radius of the Environmental Permit (“EP”) boundary are shown on the Sensitive Receptors Plan (Drawing Reference ECL.041.01.01-03) contained within Section 8 of this variation application submission. It can be seen that the nearest receptors are local residents and also workers at the adjacent construction and industrial sites.

5. OPERATIONAL AND PROCESS CONTROLS

5.1. ODOUR MANAGEMENT STRATEGY

5.1.1. Attero’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 1 will be used at the Installation.

Figure 1: OMP Strategy



5.2. ODOUR CONTROL MEASURES

5.2.1. 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).

- 5.2.2. The following general management techniques are employed at the Installation:
- good housekeeping regimes will 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 to an appropriately permitted facility 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.

5.2.3. Table 5 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 to medium.

Table 5: 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 - wind-blown.	<p>Waste pre-acceptance and acceptance procedures are enforced and waste will only be accepted when there is sufficient treatment capacity within the Installation.</p> <p>All waste activities will be within the confines of the Installation. Where possible, waste will be stored within the site buildings and doors will be closed when not in use.</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 either by re-loading into the delivery vehicle or loading into sealable container. The area of the deposit will be swept, washed down and disinfected as appropriate.</p> <p>The storage of any putrescible wastes will be handled speedily and stored at the site for the minimum length of time and, in any case, not longer than 24 hours.</p> <p>Once a month, all parts of the waste reception and storage area utilised for putrescible wastes will be completely cleared of materials, swept and washed down with disinfectant solution.</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>	Medium to high. Control measures should prevent any fugitive odour releases from reaching the identified receptors.	Odour nuisance.	Low to medium.

Table 5: OMP Risk Assessment and Control Measures (Cont.)

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 - wind-blown.	Routine daily site inspections are undertaken which includes olfactory 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 I.	Medium to high. Control measures should prevent any fugitive odour releases from reaching the identified receptors.	Odour nuisance.	Low to medium.

6. COMPLAINTS

6.2. RESPONSE TO COMPLAINTS

- 6.2.1. In the first instance, the complaint will be screened, taking into account the following information:
- i. the quality and source of the complaint (site workers, local residents);
 - ii. the number of complaints against the alleged odour;
 - iii. the frequency of complaints, e.g. is it a one-off event or a regular occurrence?;
 - iv. 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
 - v. 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).
- 6.2.2. 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.
- 6.2.3. Corrective and preventative measures will be implemented if the complaint is substantiated and followed up if deemed necessary. If required, Attero 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.

6.3. RECORDS

- 6.3.1. OMP records are kept in accordance with the procedures established as part of the EMS.
- 6.3.2. 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.

- 6.3.3. 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.

7. OMP REVIEW

- 7.1 The continuing effectiveness of the OMP will be reviewed annually by the Site Manager for the site.
- 7.2 The reviews will take into account compliance records, complaints history, site records and any recent sensitive developments on neighbouring land. The plan will be amended as necessary, including any changes to the control measures.

APPENDIX I
DAILY SITE MONITORING CHECK SHEET

DAILY SITE MONITORING CHECK SHEET

ASPECT	COMMENTS	ACTION TAKEN	RESPONSIBLE PERSON
Meteorological Conditions			
Details of Operations			
Visual Observations			
Presence of Dust & Details of Suppression Systems In Place			
Presence of Odour			
Presence of Pests/Litter or Mud			
Presence of Noise and/or Vibration			
Any Other Comments:			

Name: _____

Signature: _____

Date: _____