Odour Management Plan

Plastics to Oil Facility

December 2025

Project No.: SOL_25_P050_PYR

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Odour Management Plan

Plastics to Oil Facility

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1. INTRODUCTION

This document has been prepared by Sol Environment Ltd on the behalf Endolys Ltd ("Endolys" hereafter) for the operation of a chemical recycling facility that converts waste plastics to oil utilising a proprietary advanced thermal treatment (pyrolysis) technology.

The document provides a structured framework and approach in effectively managing potential odour releases associated with the operations at the site.

This Odour Management Plan (referred hereafter as the 'OMP) has been produced in accordance with the Environment Agency's H4 Odour Management – how to comply with your environmental permit guidance, published March 2011, *Develop a management system: environmental permits*, Environment Agency, April 2023 and *Control and monitor emissions for your environmental permit*, Environment Agency, June 2025

This OMP has been produced as part of a permit application to develop the former Cleveland Bridge Premises (Yarm Road, Darlington, DL1 4DE) into a waste plastics thermal treatment pyrolysis facility which will import and process an estimated 120,000 tonnes of waste plastic film per annum.

The purpose of this document is to outline the management control measures that have been established to prevent and control odour emissions and associated impacts from the site.

1.1 Structure of the Odour Management Plan

The OMP has been structured in accordance with the EA H4 Odour Management Plan Guidance.

This OMP has been developed to clearly define which measures will be implemented on site and which are not, and to what extent odour is controlled and/or prevented. The potential measures considered are in-line with the EA H4 Odour Management Plan Guidance and include the following:

- Receipt and Management of Odorous Materials;
- Transfer of Chemicals to Air;
- Containment of Contaminated Air;
- End of Pipe Treatment;
- Engaging your Neighbours;
- Response to Complaints;
- Ceasing or Reducing Operations; and
- Accident Management Plan.

The OMP considers the following aspects of the facility:

- Activities that have the potential to produce odour and sources of release;
- Actions to mitigate the effect of odour release (during normal and abnormal operations);
- Details of the sites monitoring regime;
- Details of responsible persons at the installation; and
- Potential outcomes of each failure scenario in respect to odour impact.

1.2 Status of the Odour Management Plan

The OMP is a “live” document and will form part of the key environmental management document for the facility. All monitoring procedures, responsibilities and compliance actions will be updated as and when required.

2. SITE DETAILS

2.1 Site Location

The proposed Installation is located at the Endolys Ltd, Yarm Road, Darlington, DL1 4DE (National Grid Reference: NZ 32060 13554).

2.2 Infrastructure and Design

2.2.1 Site Installation Boundary

The proposed Installation boundary can be seen below in **Figure 2.1.**

2.2.2 Site Layout and Design

The proposed Installation layout plan can be found below in **Figure 2.2.**

2.2.3 Drainage

There will be no direct process emissions to controlled water arising from the installation.

All wastewater produced by the process cooling, steam generation and gas scrubbing systems will be collected within an onsite wastewater tank and tankered offsite for disposal.

Uncontaminated clean surface water runoff captured from roof drainage and external roadways / car parking areas will be discharged to the existing surface water drainage system.

Domestic foul flows will be directed to the existing sewer network.

Pyoil produced by the process will be stored within a bunded Tank Farm, designed in accordance with CIRIA 736.

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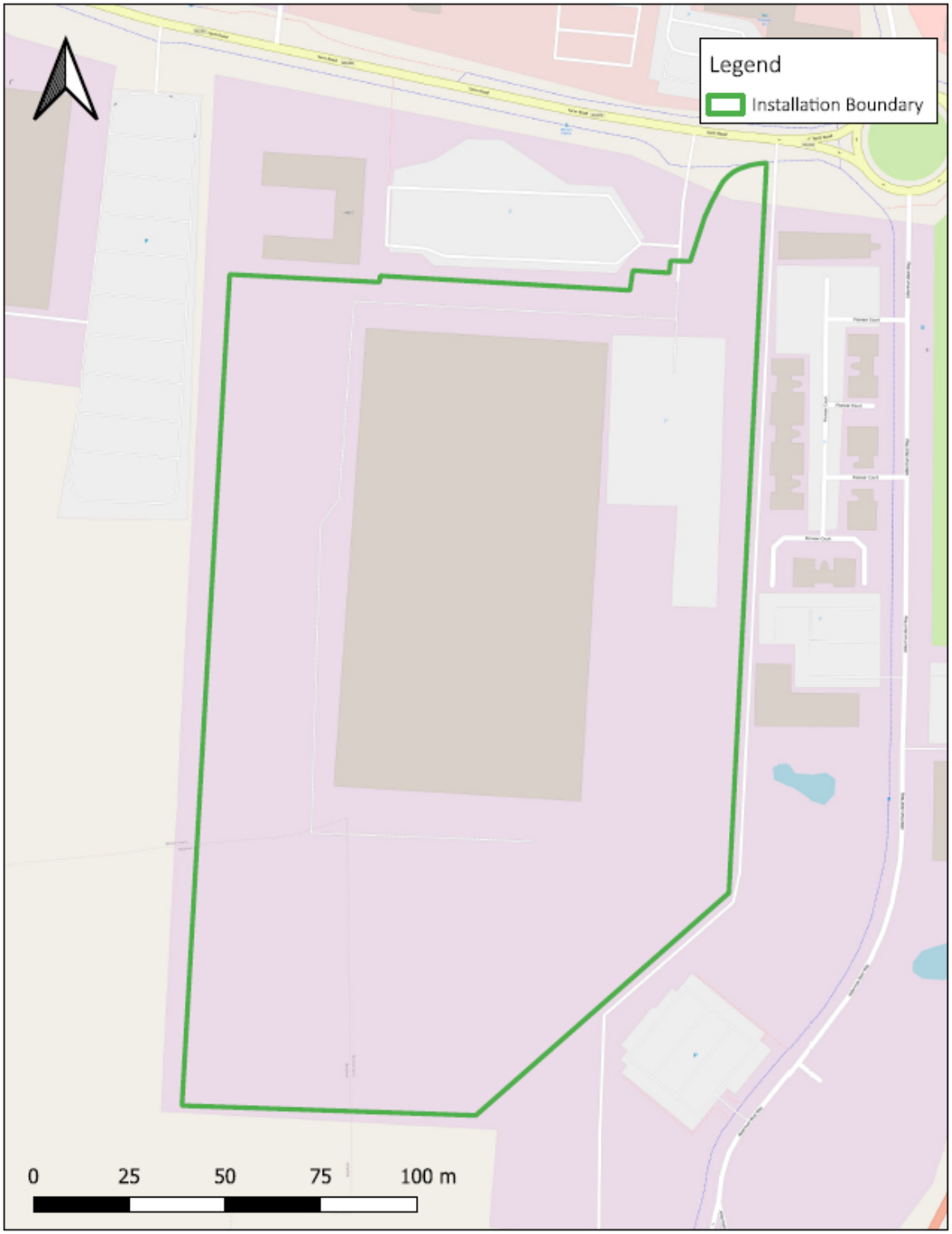


Project Number: SOL_25_P050_PYR Map Title: Installation Boundary Date: 13/11/2025 Drawn by: RM Checked by: EH	Site Address: Endolys Ltd Yarm Road, Darlington, DL1 4DE	1. Do not scale off this drawing 2. All dimensions to be confirmed on site 3. This drawing is copyright of Sol Environment Ltd 4. This drawing is to be read in conjunction with relevant consultant drawings and specifications 5. QMS Reference: QMS_7.5.39_TEM - Template - GIS Drawing - Horizontal v1

Figure 2.1 - Proposed Installation Boundary

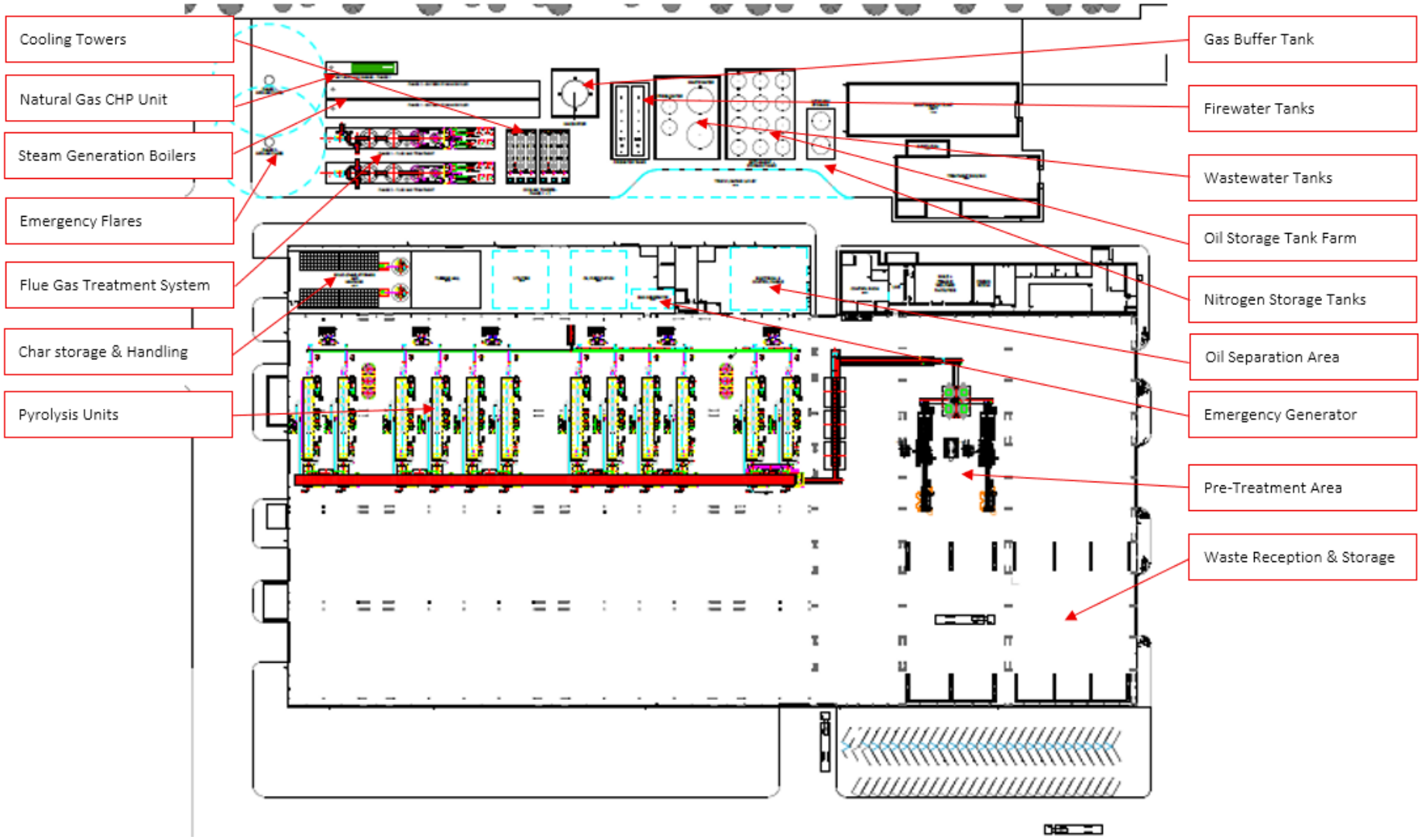


Figure 2.2 - Proposed Installation Layout

2.3 Site Context

The following sections outline the site context, including the proposed boundary and layout, surrounding site setting and any nearby sensitive receptors.

2.3.1 Site Setting

The site is located on the southeastern edge of Darlington in a predominantly agricultural and industrial/commercial setting. To the north lies Morton Park shopping centre surrounded by other commercial units including a Premier Inn. Industrial units lie to the west whilst the south and east are predominantly agricultural in nature.

Table 2.1 outlines the surrounding site setting in greater detail, including features in the immediate vicinity, within 500m and beyond 500m of the proposed site.

Table 2.1 – Surrounding Site Setting

Direction	Description
North	Immediate Vicinity: Quick Self Storage, Yarm Road Within 500m: Premier Inn Darlington, ZIGUP Car Rental, Woodlands Hospital Taylor's Cafe, Roarsome Soft Play, Total Recycling Services Beyond 500m: Commercial units (Stan Robinson, Vertu Vehicle Solutions, Auxillis Services
East	Immediate Vicinity: Business Park (Tribe Recruitment, Dash Media Productions, Baxtor Personnel, Darlington Association on Disability) Within 500m: Whessoe Engineering Limited, A66, Agricultural Land Beyond 500m: Agricultural Land, Walton H & Sons Farm, The Beeches Caravan and Camping
South	Immediate Vicinity: Alderman Best Way Car Park, Farm Within 500m: Railway Line, A66, Agricultural Land Beyond 500m: Agricultural Land, Farm
West	Immediate Vicinity: Darlington Driving Test Centre, Cummins Centenary House Within 500m: Amenity/agricultural land, Cummins Engine Plant Beyond 500m: Maidendale Nature Reserve, Residential Housing (Firthmoor), Firthmoor Primary School

2.3.2 Nearby Sensitive Receptors

The table below details the sensitive human receptors relevant to the site:

Table 2.2 - Sensitive Human Receptors within 1km of the site

Receptor Name	Distance	Direction
Yarm Road	60m	North
Premier Inn Darlington East (Morton Park)	150m	North
Woodlands Hospital	270m	North
Commercial Units	450-1000m	North
Mortin Retail Park	260m	North-east
A66 Road	350m	North-east

Aeolian House Dog Training and Boarding	635m	North-east
Amazon MME1	935m	North-east
Farm	1000m	North-east
Business Park	Adjacent	East
A66 Road	225m	East
Walton H & Sons	690m	East
Alderman Best Car Park	30m	South-east
A66 Road	210m	South-east
The Beeches Caravan and Camping	1000m	South-east
Farm	50m	South
Railway Line	210m	South
A66 Road	300m	South
Farm	970m	South-west
Farm	1000m	South-west
Darlington Driving Test Centre	30m	West
Cummins House/Headoffice	110m	West
Cummins Engine Plant	330m	West
Maidendale Nature Reserve	650m	West
Firthmoor Primary School	285m	West
Travelodge Darlington	330m	North-west
Residential Housing	780m-1000m+	North-west
Darlington Retail Park	640m-1000m+	North-west
Residential Housing (Earl Carlson Grove)	930m	North-west
Commercial units	220m-1000m+	North-west

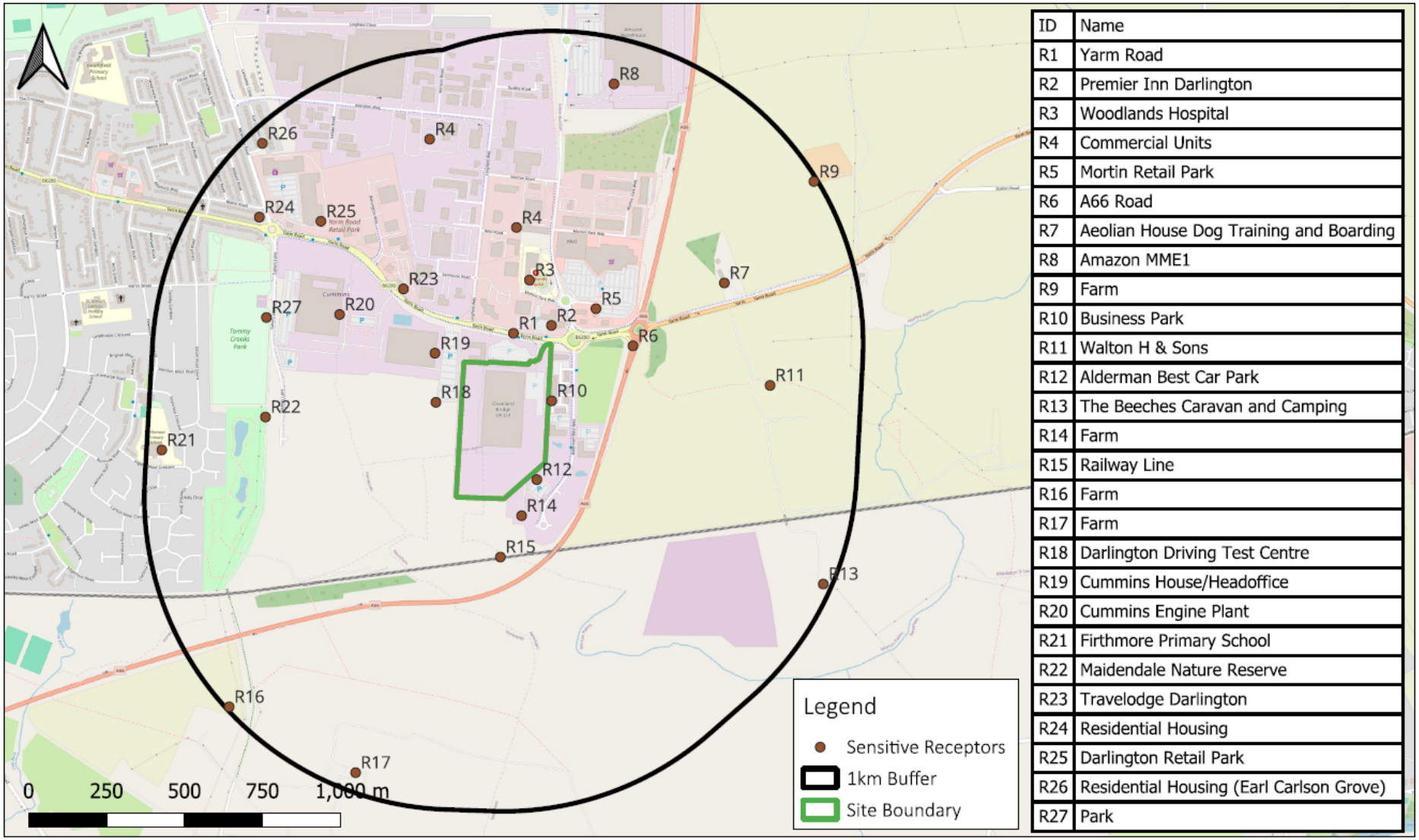
The nearest ecological receptor to the site is Maidendale Fishing and Nature Rserve (LNR), located approximately 623m west of the site. There are no European designated sites within 10km of the site.

Table 2.3 – UK Ecological Designated Sites within 2km of the Site

Designated Site	Designation Status	Distance from Site
Neasham Fen	SSSI	1936m SE
Brankin Moor	LNR	1694m SW
Maidendale Fishing and Nature Reserve	LNR	623m W

Due to the proximity of the site to human and ecological receptors, the site is considered to be in a low sensitivity area in relation to potential emissions, such as odour. Nonetheless, numerous operational measures for the control and mitigation of emissions have been applied to site to ensure that all potential releases are prevented or mitigated to reduce the risk of amenity issues.

The figure below identifies the designated receptors tabulated above.



ID	Name
R1	Yarm Road
R2	Premier Inn Darlington
R3	Woodlands Hospital
R4	Commercial Units
R5	Mortin Retail Park
R6	A66 Road
R7	Aeolian House Dog Training and Boarding
R8	Amazon MME1
R9	Farm
R10	Business Park
R11	Walton H & Sons
R12	Alderman Best Car Park
R13	The Beeches Caravan and Camping
R14	Farm
R15	Railway Line
R16	Farm
R17	Farm
R18	Darlington Driving Test Centre
R19	Cummins House/Headoffice
R20	Cummins Engine Plant
R21	Firthmore Primary School
R22	Maidendale Nature Reserve
R23	Travelodge Darlington
R24	Residential Housing
R25	Darlington Retail Park
R26	Residential Housing (Earl Carlson Grove)
R27	Park

Figure 2.3 Sensitive Receptor Plan

2.3.3 Wind Direction

The estimated wind direction for the proposed site comes from a predominantly south-south westerly direction, based on historic wind direction recordings taken from Teesside International Airport located 4.75km east of the site.

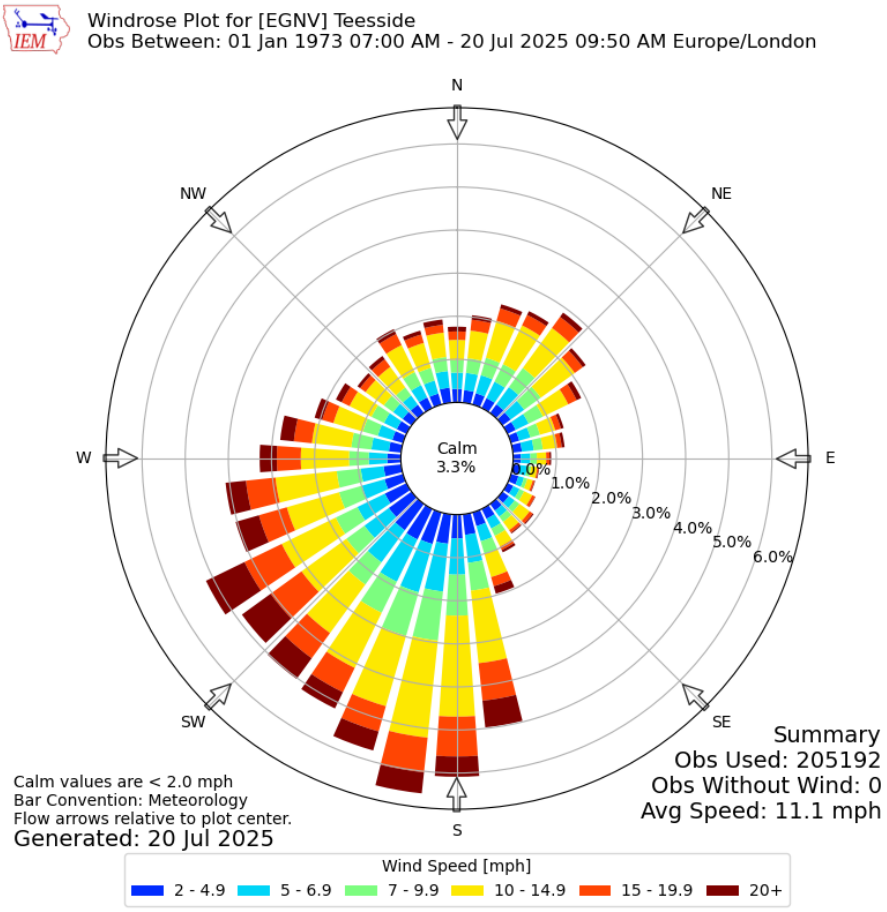


Figure 2.4 - Wind Rose for Teesside (1973-2025)

3. PROCESS DESCRIPTION

The proposed development will treat waste plastic film through an advanced thermal treatment facility utilising pyrolysis technology. Following conversion within the pyrolysis reactor, oil vapours are condensed, the solid residues (char) discharged off site and the syngas produced will be utilised within the pyrolysis systems and onsite boiler to produce steam. Oil vapours will be condensed into Pyoil (Grade 3 Intermediate), which will be transported offsite to an established offtaker for further refinement.

The proposed facility comprises the following stages:

- *Waste Reception* – Pre-accepted bales of plastic film will be delivered into bays within the Feedstock Reception Hall under supervision from a suitably trained operative. Wastes will typically be stored for up to two weeks prior to processing;
- *Pre-treatment system* – This system will include shredding, NIR, metals removal, agglomeration and densification to produce a bead which will be transferred to intermediate storage prior to use as a feedstock for the pyrolysis reactors;
- *Pyrolysis* – Each pyrolysis reactor has the capacity to process 33tpd of waste plastic, producing a yield of 60 – 75% pyrolysis oil (approximately 81,000 tpa), non-condensable combustible gas (aka syngas) and a solid waste char;
- *Oil storage* – The proposed facility will utilise oil storage tanks, typically each with the capacity of approximately 100m^3 (12 in total) for Pyoil storage prior to export;
- *Char storage* – char will be stored internally prior to removal offsite;
- *Syngas Use* – The produced syngas will be utilised as fuel for the pyrolysis process under normal operation. Additionally, syngas will be utilised within an onsite boiler for steam generation for use within the heating system onsite; and
- *Electricity Generation* – The sites power requirement will be met by an onsite CHP unit, which will utilise natural gas during Phase 1, switching to syngas in Phase 2.

4. ODOUR SOURCES

4.1 On-site Odour Sources

4.1.1 Source Materials

The site has been designed to accept, store and treat a maximum of 120,000 tonnes per annum of non-hazardous plastic film waste from a variety of industrial and municipal sources.

The majority of these waste inputs have a low potential for odour releases, given they are largely non-biodegradable plastic wastes.

The greatest odour source on site comes from the production of oils using pyrolysis, which have a potential for distinctive and characteristic odours arising from VOC compounds within the oils.

The table below details all potentially odorous materials accepted on site:

Table 4.1 - On-site Source Materials

Odour Source Type	EWC Code	Odour Potential	Quantities and Storage Time
Agriculture, horticulture, aquaculture, forestry, hunting and fishing waste – waste plastics except packaging	02 01 04	Low	Storage within bales internally within Reception Hall Reception Hall has a capacity of 3,340m^3 Storage times maximum 3 months, typically 1 week
Shaping, physical and mechanical surface treatment of metals and plastic – plastic shavings and turnings	12 01 05	Low	
Plastics and packaging, including municipal – plastic packaging and municipal plastic	15 01 02 20 01 39	Moderate	
End-of-Life vehicle and wastes from dismantling end-of-life vehicles - plastics	16 01 19	Low	
Construction and demolition wastes, including plastics	17 02 03	Low	
Wastes from the mechanical treatment of waste at waste management facilities – plastic and rubber	19 12 04	Moderate	
Grade 3 Pyrolysis Oil	N/A	High	Storage within 12 x 100m^3 tanks externally for up to X months prior to export.

4.1.2 Releases

There is limited potential for release of odour from the storage of wastes onsite. All waste handling, storage and processing is undertaken internally within the building.

There is potential for odour releases to arise from the production and storage of oils onsite. Processing of oils is undertaken internally within the building which is fitted with an extraction system. Storage of oils is undertaken within the external tank farm. There is the potential for odour release from breather vents on the tanks and from oil loading activities.

4.2 Off-site Odour Sources

Below is a list of identified off-site odour sources that may be relevant within 1km of the site. These odour sources predominantly relate to nearby farms and a single recycling facility, which may result in increased odour particularly during warm or windy weather.

Table 4.2 - Off-site Odour Sources

Off-site Odour Source	Distance	Direction
Total Recycling Services	450m	North
Farm	1000m	North-east
Farm	50m	South
Farm	970m	South-west
Farm	1000m	South-west

5. CONTROL MEASURES

The site has several measures in place to control odour; all of these are considered in relation with the operations that are undertaken on site on a daily basis.

The site has aligned its environmental management system and operational procedures in accordance with the site environmental permit.

Environmental Management System procedures ensure that good operational practices are employed. Effective management and control of the process minimise odour generation.

The following sections detail management techniques, procedures, and odour control measures to minimise the potential for odour generation from the process.

5.1 Responsibility for the Implementation of Odour Management Plan

Responsibility for the implementation of this Odour Management Plan falls to the competent Site Operations Manager. The Site Operations Manager is responsible for ensuring all staff are trained in the contents of this management plan and that operational procedures align with the objectives of this management plan.

5.2 Receipt and Management of Potentially Odorous Materials

All waste will be delivered to site baled and within curtain sided vehicles. Upon ensuring all wastes have been pre-accepted and in accordance with the sites waste acceptance and rejection procedures, vehicles will be directed to the Reception Hall of the main building for unloading.

The building is fitted with fast acting roller shutter doors which remain closed at all times except for vehicle entrance and egress. Visual inspection of the material is undertaken during unloading, should any waste be determined to be particularly malodorous upon receipt, this will be quarantined prior to immediate processing or rejected and returned to supplier.

Storage of wastes is internal within dedicated bays in the Reception Hall. Wastes are processed on a 'first in – first out' principle with a typical turnaround time of 1 week. Wastes are stored for a maximum of 3 months upon abnormal operation.

Pre-treatment of wastes is also undertaken internally within the dedicated pre-treatment area. There is no external storage, handling or processing of wastes.

Processing of oils produced by the process takes place internally.

Pyrolysis oil is stored externally within 12 x 100m^3 tanks in the dedicated bunded tank farm. Emissions of VOCs from the storage of oil have the potential to cause odorous emissions, this is minimised through carbon filters on breather vents. Oil is stored for XXX prior to export.

5.3 Transfer of Odours to Air

Limited transfer of odour to air will take place during several of the normal operating activities undertaken on site. This will include during

- Waste unloading and storage;
- Waste pre-treatment including shredding ;
- Syngas condensation to form pyrolysis oil;

- Displacement of air during filling of oil storage tanks;
- Loading of tankers with pyrolysis oil for collection.

To minimise to potential of odour to transfer to air, the following control measures will be in place:

- Stringent waste pre-acceptance, acceptance and rejection procedures;
- Ensuring all waste is received, unloaded and stored internally within the Building;
- Minimising drop heights during unloading activities;
- Good housekeeping measures;
- Ensuring all roller shutter doors and windows are closed except for vehicle access and egress;
- Extraction fitted in the pre-treatment area;
- Ensuring oil storage tanks are suitably designed such as painted so as to prevent heating through exposure to sunlight and fitted with carbon filters on breather vents; and
- Utilising breather lines during loading of oil to tankers to capture VOC emissions.

5.4 Containment of Contaminated Air

All waste storage, handling and processing is undertaken internally within the main building.

Site management procedures will include a requirement for roller shutter doors and windows to remain closed at all times excepting vehicle access and egress. No unloading activities will take place with roller shutter doors open.

5.5 End of Pipe Treatment

The pyrolysis process itself is not considered to have the potential for the release of odorous compounds, due to the thermal destruction of any considered potentially present prior to release from the stack.

Carbon filters will be fitted to the breather vents of the oil storage tanks to reduce potentially odorous VOC emissions.

Deodorising misters will be deployed if deemed to be required.

5.6 Transport and Dispersion

Transport of potential odour sources around site, namely incoming wastes and product oil, will be kept to a minimum.

5.7 Engaging your Neighbour

If an action is being considered that has the potential to cause temporary odour impacts outside of the normal operational procedures, then the local Environment Agency area team will be informed in advance. Neighbours who may be affected will be contacted to advise them of the operation being undertaken, and that any increase in odour will be of a temporary nature.

In addition, the site will engage with the local community as often as possible in order to alleviate against negative site perception. The site management shall operate a publicly accessible website, whereby contact

information is published such that the public remain informed and are provided with a means of contacting the site if necessary.

In the event of a complaint received from a nearby receptor or stakeholder, Endolys will operate in accordance with the complaint's procedure (see **Section 5.8** below).

5.8 Response to Complaints

Receipt of an odour complaint during normal operations is treated as an exceedance of control levels. The primary response will be as detailed in accordance with the site's complaints procedure.

A Complaint Report Form will be completed as soon as the complaint is received, as described in **Appendix B.**

An investigation shall be initiated into the cause of the complaint; this will involve as necessary.

- An olfactory survey following the procedure detailed in Section 6.2. The results of the survey will be recorded electronically; a list of information that is recorded electronically is provided within Appendix C at the end of this document;
- An examination of the site activities at the time of the complaint;
- An examination of the meteorological conditions at the time of the complaint; and
- A review of the effectiveness of operational and odour control procedures.

If the complaint is validated, it will be treated as an exceedance of the control level. The outcome of the investigation will determine the corrective actions to be implemented (see Section 7).

5.9 Ceasing or Reducing Operations

Following investigations carried out as a result of an odour complaint, consideration will be given to waste acceptance until appropriate measures can be put in place to mitigate any odour impacts.

5.10 Unacceptable Loads and Rejection of Waste

In the highly unlikely event that the site receives an unacceptable load, which may be contaminated with non-plastic material or a material not suitable for pyrolysis that cannot be easily removed, the waste will be rejected from site. If waste is deemed to be excessively odorous, it will also be deemed as an unacceptable load.

If the waste has entered the site, it will be stored appropriately in the site's designated quarantine area for as minimal amount of time as possible before it can be returned to its site of origin.

If the waste has been identified as unacceptable at the point of entry, the delivery is not permitted to unload and will be rejected immediately from site.

5.11 Accident Management Plan

The site will maintain a fully functional accident management plan as required by the Environmental Permitting Regulations.

The accident management plan sets out the actions to be taken, and measures required to prevent incidents and where an incident occurs the appropriate mitigation action to be taken.

The plan considers the following scenarios:

- Any spillage or leaks;
- Any vandalism;
- Flooding;
- Fire;
- Receiving incompatible waste on site;
- Failure of main services; and
- Failure of major plant and equipment.

Please refer to Section 8 which provides more information on how the site will address any events which could cause odour emissions from site.

6. MONITORING

6.1 Meteorological Conditions

Meteorological forecasts and conditions shall be monitored to ensure that any potential odour complaints can be fully investigated, and that effective monitoring can be carried out. Meteorological data will be recorded as per Table 6-1 below.

Table 6.1 – Meteorological Monitoring

Monitoring Requirements	Frequency
Observed and recorded description of condition	Recorded daily
Precipitation	
Wind speed and direction	
Temperature	

6.2 Olfactory Monitoring

Given the low risk of odour impact, odour shall be monitored at a frequency of once per day, as directed by the Site Operations. Observations shall be noted electronically and a list of information that is recorded electronically is provided within Annex C at the end of this document. A minimum of 1 survey will be conducted per day, with additional surveys conducted as required and directed by the Site Operations Manager.

Surveys shall be carried out in accordance with the monitoring protocol contained within the Environment Agency's *Technical Guidance Note H4*.

Four locations will be selected to carry out the "sniff test" and these locations will be downwind of the site sources but within the site boundary. Tests carried out at these locations are to confirm that malodour is not detectable at the site boundary.

If odour is detectable at the site boundary, an offsite investigation will be required in the direction of the prevailing wind and closest sensitive receptor. This will also be recorded electronically, a list of information that is recorded electronically is provided within Annex C at the end of this document.

The odour assessor must not be subject to significant odour in the 30 minutes prior to the assessment. This survey will be carried out in accordance with the guidance laid out in the *H4 Odour Management Guidance*. This is to ensure that monitors are not suffering from odour fatigue and will be sensitive to site odours.

If any detectable odour is identified at the site boundary and is judged to be moderate (Odour Intensity Rank 3) then the Site Operations Manager will be notified immediately and the olfactory survey will continue to attempt to determine the scope and extent of the odour plume, as follows:

- A suitable location downwind of the site and potentially sensitive receptor at which the odour plume is unlikely to extend will be selected for assessment;
- Survey will continue toward the facility until a site-related odour is perceived; and
- Assessment points perpendicular to the plume axis and equidistant from the site will then be monitored, subject to access requirements.

Monitoring frequencies shall be as detailed in Table 6.2 below.

Table 6.2 Monitoring Frequencies

Parameter	Monitoring Technique	Frequency
Meteorology	See **Table 6.1** for details	
Odour	Olfactory Monitoring	Minimum of once per day, with additional surveys conducted as required. Increased frequency in response to complaints
	Complaints Monitoring	Continuous
Complaints	Corrective Action Monitoring	Post-implementation of a corrective action

The following scales will be used:

Table 6.3 Odour Intensity Scale

Score	Intensity
0	No Odour
1	Very Faint Odour
2	Faint Odour
3	Distinct Odour
4	Strong Odour
5	Very Strong Odour
6	Extremely Strong Odour

Table 6.4 Hedonic Tone Scale

Score	Intensity
+4	Very Pleasant
+3	Pleasant
+2	Moderately Pleasant
+1	Mildly Pleasant
0	Neutral Odour/No Odour
-1	Mildly Unpleasant
-2	Moderately Unpleasant
-3	Unpleasant
-4	Very Unpleasant

6.3 Internal Odour Monitoring

Odour monitoring is conducted at frequencies detailed in **Table 6.2** by a competent person.

The main aim of monitoring will be to test if any odours emitted from the site will be causing the nearest receptors nuisance. In scenarios where nuisance is being caused then operations can be suspended until the conditions improve, also the site operations manager may deem it necessary to find the precise source of the odour and attempt to eliminate it or neutralise it immediately.

6.4 Records

Appropriate records shall be maintained and include the following details:

- Results of inspections and olfactory monitoring carried out by site personnel;
- Weather conditions including wind speed and wind direction;
- Operational problems including date, time, duration, prevailing weather conditions and cause of problem;
- Notification to the EA of abnormal/odorous activities on site;
- Complaints received including address of complainant (if available);
- Details of corrective action taken, and any subsequent changes to operational procedures; and
- An evaluation of the effectiveness of control and abatement techniques used.

7. COMPLIANCE ACTION PLANS

7.1 Control and Trigger Levels

Control trigger levels are presented below in **Table 7-1**.

Table 7.1 - Control and Trigger Levels

Parameter	Monitoring Technique	Control Levels
Odour	Routine Olfactory Monitoring	Odour Intensity ⩾3 recorded at any monitoring location (persistent / transient nature noted and considered)
	Complaint Monitoring	Receipt of complaint

7.2 Compliance Actions

A recording of Odour Intensity ≥3 during routine olfactory monitoring or the receipt of a complaint will necessitate further investigation into the causes and indicate whether further monitoring is required. Actions to be taken in the event of an exceedance will be dictated by the nature and extent of the exceedance(s) (e.g., by considering the magnitude of exceedance and whether it was event driven or on-going).

7.3 Detection of Moderate Odour During Olfactory Surveys

Detection of a moderate odour, (i.e., 'odour easily detected while walking and breathing normally, possibly malodorous), will initiate a more extensive olfactory survey to determine the extent of the odour plume (as described above). An investigation will be initiated into the cause of the odour. This shall involve as necessary:

- A review of the site activities at the time of the olfactory survey;
- A review of the meteorological conditions at the time of the olfactory survey; and
- A review of the effectiveness of process operations and odour control procedures.

7.4 Corrective Actions

The outcome of an investigation will determine the corrective actions to be implemented. The following corrective actions will be considered, but not be limited to:

- Alteration to waste reception procedures and odour control measures employed;
- Review of all processes on site;
- Review of abatement on oil storage tanks; and
- Update of OMP if new procedures are created.

Extent of the corrective actions undertaken will be decided by the competent site operations manager, as per their responsibility of implementing this odour management plan.

7.5 Reporting

Exceedance of a control level will be investigated (as described above) and recorded. This includes recording the following:

- Nature of the incident;
- Date of occurrence(s);
- Results of the investigation;
- Details of responses / action plans implemented;
- The event will be marked within the site's incident log; and
- The report of any exceedance will be made available to the Environment Agency on a quarterly basis.

8. INCIDENTS AND EMERGENCIES

Consideration has been given to the types of failure or abnormal events that have the potential to result in an odour impact. Abnormal events include the following:

- Power outage or electrical supply fault;
- Breakdown of plant resulting in potential backlog of waste;
- Fire and Explosion; and
- Abnormal weather conditions.

Failure and abnormal event scenarios are summarised below.

Power Outage or electrical supply outage

Power to the site is provided by onsite CHP units. In the event of a power outage, an emergency diesel generator is available to provide power to critical systems until CHP unit power is restored.

In the unlikely event this were to occur, short-term odour impacts may be experienced through build up of waste onsite.

Breakdown of plant resulting in potential backlog of waste

A supply of critical spares will be maintained onsite. The site will employ skilled fitters / contractors to promptly repair any faults.

All plant and equipment will be maintained and regularly serviced in accordance with the manufacturer's recommendations and planned maintenance procedures to minimise breakdowns.

In the event that repairs cannot be promptly carried out relevant activities will be suspended where there is an increased risk of odour emissions or offsite impact.

If necessary, the facility will remain closed to further deliveries of waste until the plant is restored and any backlog cleared.

Fire and Explosion

Fire and explosion risk procedures will be adopted onsite. If required following a fire or explosion, operations will cease in the affected area until all plant and infrastructure are restored.

The site will operate a full evacuation plan in the event of a fire or explosion, and the relevant authorities and will be informed at the earliest opportunity.

Following a fire, all plant would be inspected, replaced and repairs implemented as necessary. Further waste receipt would be suspended until normal operation is restored.

Abnormal Meteorological Conditions

Although it is accepted that a number of meteorological conditions can exist that promote the generation of odour and may inhibit its effective dispersion (i.e. high temperatures and still conditions) such scenarios are not considered to have the potential to impact the facility and surrounding receptors.

The facility will monitor and record all meteorological conditions and make suitable planning arrangements to ensure that any major maintenance activities (e.g. maintenance on oil storage tanks) are carried out in favourable meteorological conditions to reduce the potential for impact.

APPENDIX A ODOUR COMPLAINTS 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 (e.g. from NE):	
Complainant's description of odour: What does it smell like?	
Intensity (see Reference Table 1):	
Duration (time):	
Constant or intermittent in this period:	
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 (e.g. flow rate, pressure at inlet and pressure at outlet):	

Actions taken:

Form completed by:	Date:	Signed;

Odour Intensity	Description
1	No detectable odour
2	Faint odour (barely detectable, need to stand still and inhale facing into wind.
3	Moderate odour (odour easily detectable while walking and breathing normally, possibly offensive)
4	Strong odour (bearable, but offensive odour – will my clothes hair/smell?)
5	Very strong odour (malodorous)

APPENDIX B ODOUR REPORTING FORM

ODOUR REPORTING FORM					
Name of Assessor:					
Confirm Compliance with Reference Table 1:					
Survey Timings	Date				
	Start Time				
	Finish				
Location of Sniff Test :					
Weather Conditions (dry, rain, fog, snow etc)					
Wind Direction (e.g from the SW)					
Wind Strength (none, light, steady, strong, gusting)					
Cloud Cover (%)					
Temperature (°C)					
Precipitation					
Location [1]	Odour Intensity [2]	Odour Extent [3]	Odour Description [4]	Receptor Sensitivity [5]	

<u>Sketch</u>
Provide a sketch of test and source locations

[1]What site boundary points / sensitive receptor?
[2]Refer to Reference Table 2
[3]Refer to Reference Table 3
[4]Describe the character of the odour (e.g. rotten eggs, musty, earthy, drains etc)
[5]Refer to Reference Table 5

Notes;
If odour intensity is judged as 3 or above at any external location within the site boundary the Site Manager must be immediately notified
The extent of the plume should be investigated as follows:
Four suitable locations downwind of the oil storage tanks but internal to the site boundary will be chosen to clarify that the impact is not detectable at the site boundary and able to create an offsite impact.
In the event that the odour is detectable at the site boundary, an offsite investigation will be required in the direction of the prevailing wind and closest sensitive receptor. Continue toward the site until a faint odour is detectable.
Select further assessment points at right angles to the plume axis and equidistant from the facility to determine extent of plume.

REFERENCE TABLE 1
Requirements for Assessor
Assessor has not been exposed to waste related odours for previous 30 minutes
Assessor has not smoked or consumed strongly flavoured food or drink in previous 30 minutes
Scented toiletries should not be applied immediately before or during assessment.
Vehicle used for assessment should not contain deodoriser and care should be taken concerning odour in windscreen wash.

Reference Table 2	
Odour Intensity	Description
1	No detectable odour
2	Faint odour (barely detectable, need to stand still and inhale facing into wind.
3	Moderate odour (odour easily detectable while walking and breathing normally, possibly offensive)
4	Strong odour (bearable, but offensive odour – will my clothes hair/smell?)
5	Very strong odour (malodorous)

Reference Table 3	
Odour Extent	Description
1	Local and transient (only detected during brief periods when wind drops or blows)
2	Transient as above, but detected away from site boundary
3	Persistent but fairly localised
4	Persistent and pervasive up to 50m from site boundary
5	Persistent and widespread (odour detected > 50m from site boundary

Reference Table 4	
Receptor Sensitivity	Description
1	Low (e.g. footpath, road)
2	Medium (e.g. industrial or commercial workplaces)
3	High (e.g. housing, pub/hotel etc)

APPENDIX C RESPONSIBLE PERSONS

Control Measure	Responsible Persons	
	Implementation on-site	Overall Manager
Receipt and Management of Odourous Materials In accordance with Section 3.1.		
Engaging your Neighbours In accordance with Section 3.6.		
Response to Complaints In accordance with Section 3.7.		
Meteorological Conditions In accordance with Section 4.2		
Olfactory Monitoring In accordance with Section 4.3		
Internal Odour Monitoring In accordance with Section 4.4		
Further Monitoring In accordance with Section 4.5.		
Record Keeping In accordance with Section 4.6.		
Complaint and Corrective Action Monitoring In accordance with Section 5.		