



Odour Management Plan

Acton Composting Site (35kt/yr)

Permit Reference: EB3007MG
Veolia ES Landfill Limited

Trentham Road, Acton, Newcastle under Lyme, Staffordshire, ST5 4EE
Grid reference: SJ 81597 41007

Date: June 2022
Version: 1.0

Version History

| Version | Revision date | Date submitted to Environment Agency | Reason for revision | Revision owner |
|---------|---------------|--------------------------------------|---------------------|----------------|
| V1.0 | June 2022 | - | Permit variation | P.Cockerton |
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1. Introduction

1.1. Site description

1.1.1. Type of site

Acton Composting Site 'the Facility' which is operated by Veolia ES Landfill Limited 'VES' uses open windrow techniques to generate soil improvement products from green waste inputs for use in agriculture.

The composting activity has been operating at the Acton site for nearly 15 years. The site currently produces peat free compost to the BS PAS 100 specification and is Quality Protocol certified. Green waste from kerbside collections and Civic Amenity 'CA' sites is accepted from Local Authorities including Newcastle-Under-Lyme and Dudley. The Facility will process up to 35,000 tonnes of green waste per annum.

The composting process carried out at Acton is configured in a way that minimises odour potential by maintaining input and oversized piles as in process, meaning that all waste received at the site during a day of operation is shredded and incorporated into an actively managed windrow virtually as it is received. Oversized material is recirculated back into the input waste stream on a daily basis.

1.1.2. Site setting and location

The facility is in a rural location (Grid Reference SJ 81597 41007) between the villages of Acton and Whitmore which are small settlements approximately 3km from the outskirts of Newcastle-under-Lyme. The Facility is accessed from a track off Acton Lane which links the site to Trentham Road (A5182) and subsequently Whitmore Road (A53). The Facility is remote with no human receptors closer than 320m. There is a protected habitat (deciduous woodland) which borders the Facility to the north. The site falls under the Local Authority Jurisdiction of Staffordshire County Council and Newcastle-under-Lyme District Council.

The site is ideally suited to composting activities and even without any abatement controls is at low risk of causing an adverse impact due to the small scale of the overall activity and remote location. The site is operated under a planning consent which contains some odour related conditions; these are specified and incorporated within the OMP. This odour management plan aims to set out the odour source potential from the activity and the controls in place during normal operations but including abnormal events.

1.1.3. Operational profile

According to the planning consent, the core hours of operation of the site are 0800 - 1800 Monday to Friday and 0800 - 1300 on Saturday. There is no screening or shredding on Saturdays, Sundays, Bank or Public Holidays.

1.2. Maintenance and review of the OMP

Table 1.2 - Training, document access and key review intervals

| Training / review aspect | Details |
|---|--|
| Post holder responsible for OMP related training | Carl Taylor |
| OMP storage location (physical copy) | Site management system folder (hard copy) |
| Review interval criteria | Annually (entire document) |
| | Following an incident which resulted in actual or potential odour pollution (relevant sections) |
| | Following instruction by the Environment Agency under the relevant condition of the environmental permit (as agreed with the regulator) |
| Training overview | <p>This Veolia location uses EU Skills Scheme, CMS certification to demonstrate technical competence.</p> <p>The Competence Management System, which is approved in England by the Department for Environment, Food & Rural Affairs (Defra) and the Environment Agency in Wales by the Welsh Government and Natural Resources Wales and in Scotland by the Scottish Environment Protection Agency (SEPA) is based on the principles a Management System e.g. ISO14001, ISO9001 . The system is accredited by UKAS (SO/IEC 17021-1: 2015 for the Competence Management Standard). The system is externally certified and audited by Lloyds Register (LRQA).</p> <p>As a result Veolia as a company, defined by activities are deemed as competent through implementation of management system competency requirements. Compliance to the scheme is met by having appropriately trained persons on site in line with our management system requirements.</p> <p>Each member of staff on site is competent in the job that they undertake, this is reflective of the complexity of the role and the level of responsibility.</p> <p>For those who are responsible for the site, there are additional E learning modules and follow up work that are completed as part of the process.</p> <p>A training matrix for all site personnel is in place and updated with all personnel trained according to the requirements of their role, Including CMS refreshers.</p> |
| Training interval | Management will maintain a statement of training requirements for each operational post and keep a record of the training received by each person whose actions may have an impact on the environment. |

1.3. Applicable sector guidance

Table 1.3 - Reference documents

| Guidance title | Source | Publication date / date accessed |
|---|---|----------------------------------|
| H4 Odour Management | https://www.gov.uk/government/publications/environmental-permitting-h4-odour-management | March 2011 |
| Develop a management system: environmental permits | https://www.gov.uk/guidance/develop-a-management-system-environmental-permits | June 2022 [accessed] |
| (BAT) conclusions for waste treatment, under Directive 2010/75/EU | https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2018.208.01.0038.01.ENG&toc=OJ%3AL%3A2018%3A208%3ATOC | August 2018 |

2. Receptors

2.1. Receptor List

Table 2.1. List of representative receptors

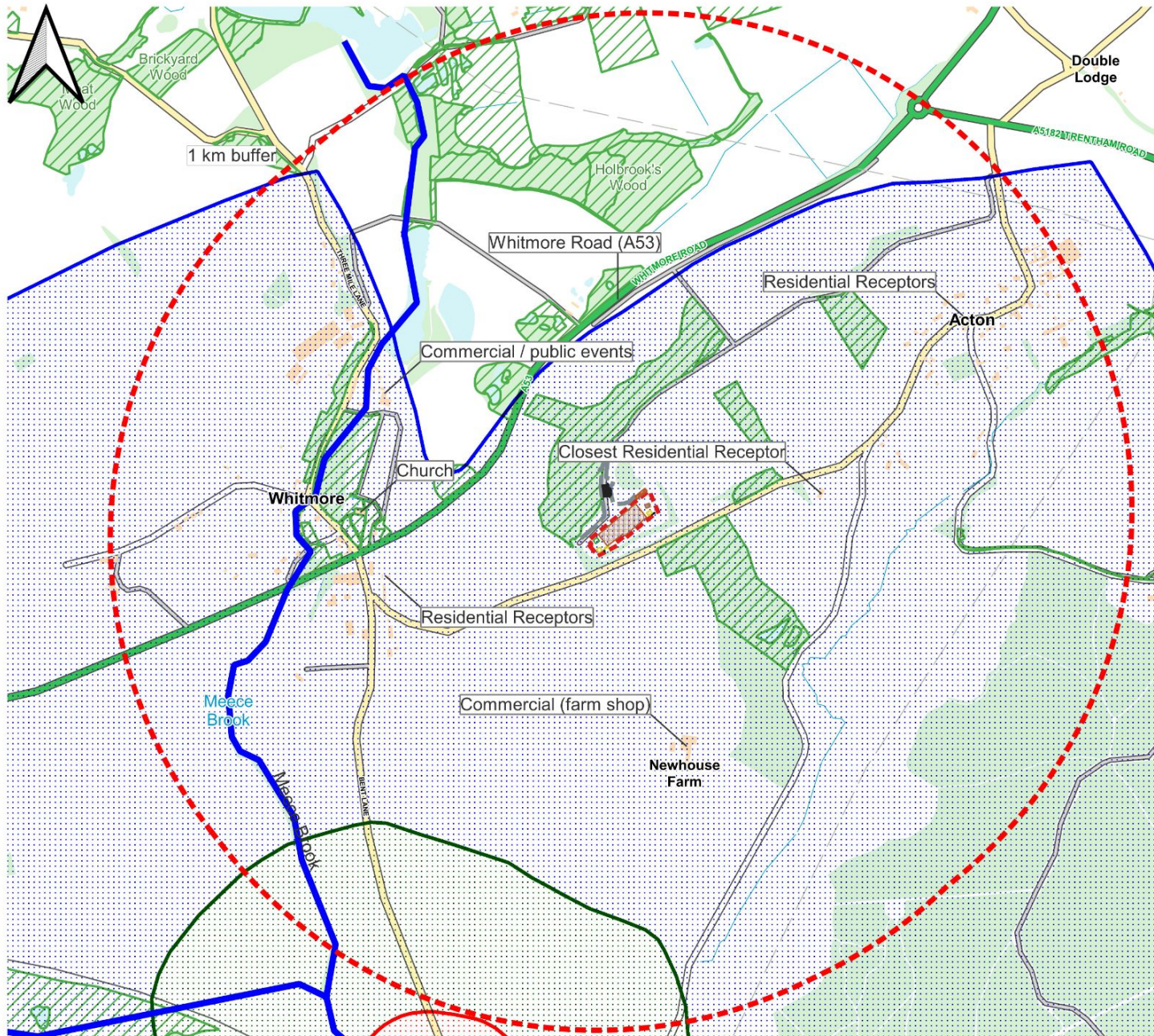
| Receptor reference | Intrinsic odour sensitivity risk factors | | | | | Uncontrolled risk of adverse impact as a combination of intrinsic risk factors | Reason |
|--------------------|--|---------------------|----------------------|---|-----------------------------------|--|---|
| | Land use e.g. house, school, hospital, commercial | Direction from site | Direction descriptor | Approximate distance to site boundary (m) | Sensitivity to odour ¹ | | |
| R1 | Residential (Acton) | East | Downwind | 320 | High | Low | Ineffective pathway (distance) |
| R2 | Commercial, site of historical interest inc public events / weddings | North west | Upwind | 500 | High | Low | Ineffective pathway (distance, prevailing wind) |
| R3 | Church | West | Upwind | 490 | Medium | Low | Ineffective pathway (distance, prevailing wind) |
| R4 | Commercial, tea rooms | West | Upwind | 510 | High | Low | Ineffective pathway (distance, prevailing wind) |
| R5 | Residential (Whitmore) | West | Upwind | 410 | High | Low | Ineffective pathway (distance, prevailing wind) |
| R6 | Commercial, farm shop | South | Upwind | 450 | Medium | Low | Ineffective pathway (distance, prevailing wind) |

1 - Low (e.g. footpath/road), Medium (e.g. industrial / commercial workplace), High (e.g. housing / pub / hotel etc.)

Table 2.2. Off site potential odour sources

| Site | Activity | Distance from Site | Direction from site |
|-------------------|---|---------------------------------------|------------------------|
| Adjacent farmland | Agricultural activity including spreading | Various locations within a 1km radius | All compass directions |

Map of site location and receptors



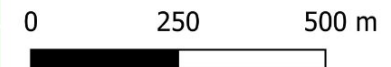
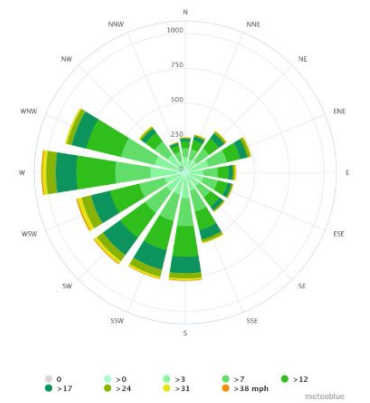
**Acton Composting Site
1km Receptor
Locations**

June 2022
Version 1

Key

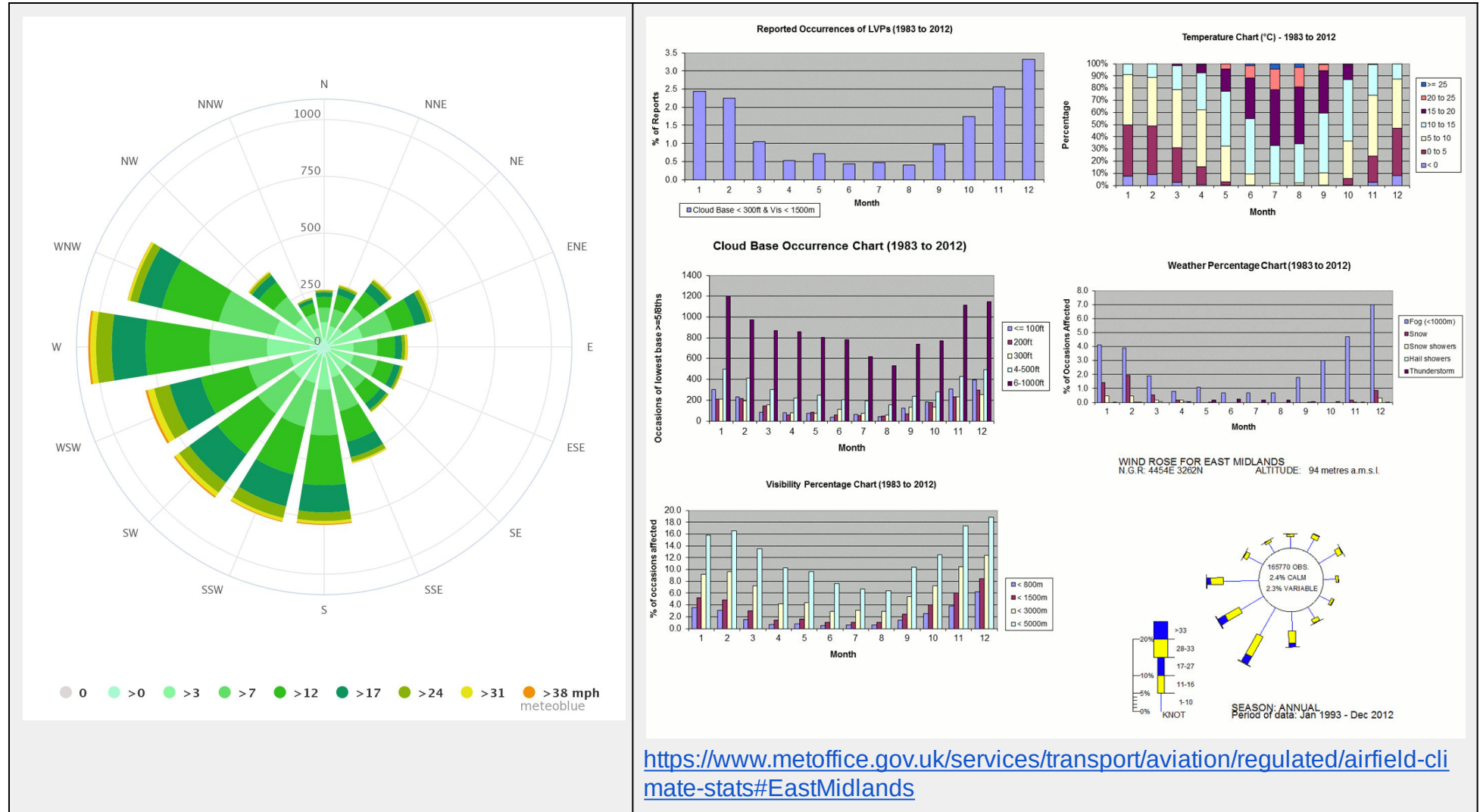
- Site Boundary
- Buffered
- Source Protection Zones**
- Number
- Zone I - Inner Protection Zone
- Zone II - Outer Protection Zone
- Zone III - Total Catchment
- Zone of Special Interest
- Deciduous woodland (protected)
- Controlled Waters

Wind Rose - Newcastle Under Lyme



2.2. Wind rose and source of weather data

Figure 2.2. - Wind rose



3. Sources of odour and site processes

3.1. Odorous materials entering and leaving site

3.1.1. Character of inputs and outputs

The site receives deliveries predominantly from the following sources:

- Green Waste is received from fortnightly collections by a Local Authority hence the wastes will be a mixture of ages between four weeks to one day and averaging around two weeks.
- Green Waste is received from a Civic Amenity site hence the majority of this waste will be less than one week.

3.1.2. Deliveries to the site

The site received approximately 16 deliveries per day (peak). Due to the seasonal nature of the activity this peaks during the spring, summer and autumn. All deliveries are by road vehicle in a loose form, these are usually general kerbside vehicles 'RCV' and walking floors (45t).

Vehicles bringing waste into the Facility will be enclosed or covered which will reduce fugitive emissions during transport. Vehicles removing waste from the Facility will be enclosed or covered (netted / sheeted)

3.1.3. Maintaining control of inputs

3.1.3.1. Contractual control

A major factor affecting the potential for odour emissions at the waste delivery and reception stage is the content and nature of the material. VES specifies the input quality required by suppliers and any inputs that are unacceptable along with the frequency of deliveries. VES will exercise rigorous contractual control of delivered waste. In any contractual agreement there is a clause which covers the delivery of malodorous material. It will be within the site supervisor's control to reject any material (e.g. contaminated or odorous wastes that have been stored too long) that will jeopardise the ability to manage the site and prevent the emission of unacceptable odours. As the principal inputs are of a municipal nature the content is generally predictable and consistent and linked to the based on cumulative experience at this and other composting facilities within the Veolia Group.

3.1.3.2. Waste Acceptance Procedures

On-site operatives will be trained as to the acceptability criteria for incoming loads. Waste will only be accepted if:

- It conforms to the type and maximum quantity that is specified in the Environmental Permit; and
- It conforms to the description in the documentation supplied by the producer and holder.

A waste acceptance procedure is followed to ensure that only suitable waste is accepted into the facility in accordance with the Environmental Permit.

3.1.3.3. Arrival of non conforming waste

Procedures are in place so that incoming waste considered to be malodorous will either be processed immediately or rejected from the site. If it is deemed necessary, inputs can be refused or diverted to alternative treatment facilities if odour pollution is considered likely. All waste contract documentation includes the requirement not to bring to the site any vehicle containing or which has recently contained highly malodorous material without first being cleaned. In addition a check will be made by the VEOLIA ES employee receiving the vehicle and if high malodour is detected or suspected the Operator must be contacted without delay. Vehicles received at the site which the operator consider too malodorous will not be accepted at the site.

The criterion for this judgement is: if the waste or vehicle or its operation would result in an intensity of malodour so strong that it would be likely to result in an offensive odour outside the site boundary.

3.1.3.4. Excessive Influx of Waste

If there is an excessive influx of waste into the facility, further loads will be diverted to one of our other waste facilities. Veolia has a network of composting facilities across the country capable of accepting diverted material, locally these include the nearby sites at Coven, Ling Hall and Telford. The site operates in accordance with a Business Continuity Plan 'BCP' which conforms to ISO 22301:2019 (Security and resilience — Business continuity management systems).

3.1.3.5. Waste Inventory Management

Inventory control ensures that materials which have the potential to become highly odorous are managed to prevent this becoming the case as follows:

1. Waste input must be matched well to waste throughput such that stocks of waste do not build up in the waste reception area and hence remain there for long periods and become odorous.
2. Green waste will be shredded weekly during peak periods and no less frequently than monthly during off peak periods when waste input volumes are low.
3. The stock level will be maintained up to date by means of the weighbridge system and an associated spreadsheet.

4. If odour control measures fail with the potential to cause significant persistent odour nuisance the Operations Director is responsible for putting into place an Emergency Site Stock Reduction Plan to minimise odour generation at the site. This will be determined by carrying out a one person (non adapted) odour assessment close to a downwind sensitive receptor and obtaining a score of 4 or 5 from either person.
5. The Emergency Stock Reduction Plan will be written specifically for the situation at the time taking into account the time until normal operations can be resumed and will be reviewed and maintained up to date and will be communicated to the EA on a daily basis. The plan will include arrangements to remove wastes to predetermined sites. The plan will also contain the ultimate odour reduction step of removing all sources of odour from the site which will include all wastes and disinfecting the waste storage areas and equipment.

3.2. Odorous materials

Inventory of Odorous materials

| Odorous and potentially odorous material (any solid, liquid or gas) | Odour potential High Risk / Medium Risk / Low Risk | Maximum quantity on site at any given day (m ³ unless otherwise stated) | Maximum time usually held on site (hours or days) | Location of odorous materials on site | Additional comments |
|---|---|--|---|---------------------------------------|---|
| INPUTS | | | | | |
| Green waste [kerbside] | Medium / High | 150m ³ | 1 day | Concrete pad | Green waste derived from collection of domestic gardening activities. Mixture of grass and wood plant material, 1 - 14 days old. Potential for waste to be older and more degraded if it has been stored by householders before disposal. Material could be wet and starting to turn anaerobic. |
| Green waste [CA / HWRC] | Medium / high | | | | Green waste deposited by members of the public at CA / HWRC sites, 1 - 14 days old. Potential for waste to be older and more degraded if it has been stored by householders before disposal. Storage in open RORO could mean the material is wet. Some seasonal variation occurs such as disposal of christmas trees. |
| Green waste [Commercial] | Medium | | | | Green waste deposited by commercial contractors or from Council parks and open spaces. Material tends to be much fresher comprising woody plant material and grass clipping. |
| PROCESSING | | | | | |
| Shredded inputs | Medium | 10m ³ | 1 day | Concrete pad | Shredded green waste plus recirculated oversized material. |

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| Active windrows | Medium (aerobic) High (anaerobic) | 900 - 1000m ³ X 10no. windrows | 45 days | Concrete pad | Green waste material in the actively managed composting phase. |
| Oversize fraction | Low | 10m ³ (in season) 450m ³ (off season) | 1 day 60 days | Concrete pad | Usually woody material usually > 30mm which is slow to compost due to size and lignin content. |
| Material unsuitable for composting - plastics | Low | 25 yd skip | 30 days | Concrete pad | Waste plastic material extracted from inputs or during screening / picking which is unsuitable for composting, mainly plastics |
| Material unsuitable for composting - municipal waste | Medium | 25 yd skip | 7 days | Concrete pad | Municipal waste sometimes arrives due to householders putting domestic waste in green waste collection bins. |
| Mixed rainwater and leachate in underground tanks | Medium High (anaerobic) | 82 m ³ | Seasonal | Underground tanks | Runoff from the composting area sealed drainage system |
| OUTPUTS (PROCESSED) | | | | | |
| PAS 100 product | Medium | 1000m ³ | 30 days | Concrete pad | Finished product which has ceased to be a waste |
| OTHER | | | | | |
| Diesel fuel | Low | 2500 L | N/A | South of pad | |

3.3. Overview of odorous processes and emissions

3.3.1. Site layout and buildings

Briefly the site comprises a concrete pad roughly rectangular in shape orientated south west to north east of approximately 0.75 ha in area. The pad includes storage for green waste inputs, actively managed windrows, oversized material and PAS 100 compliant product outputs. The pad falls generally from north west to south east to a kirbed area. There is a bay of 30 x 10 situated in the north eastern end of the pad. This area is used for the storage of composted product.

3.3.2. Building air ventilation system

Not applicable for this Facility.

3.3.3. Loading and unloading areas

Unloading of green waste is carried out at the western side of the concrete pad and will occur up to 16 times per day to a maximum of 45t per delivery. Odour from the activity is not dominant on site.

3.3.4. Storage areas

The site stores fresh green waste inputs which do not generally have a high odour potential, residence time is managed to 1 day which minimises the potential for further degradation outside the actively managed phase. While waste can be degraded by up to two weeks the site operates a very rapid transition from input to actively managed windrow.

3.3.5. Shredding

Screening and shredding activities take place on site. The location of screening and shredding activities may be variable depending on space availability at the time the activity is being carried out. Following waste acceptance at the green waste reception area a loading shovel is used to deposit the raw green only material into the low speed shredder. Material is batch shredded before being formed into windrows for sanitisation, so obtaining the right carbon:nitrogen ratio during the shredding process is an important factor in reducing odour potential during the shredding and composting process.

3.3.6. Windrows

There are up to 10 windrows on the site which are actively managed to prevent the formation of anaerobic conditions. Pile formation and turning have the highest potential for odour generation from the windrow processing phase.

3.3.7. Turning

3.3.8. Screening

Screening of matured material can result in increased emissions due to agitation. However, screening is typically not a significant odour source unless the material has become anaerobic or is still actively composting. The latter is prevented through robust monitoring and management as identified in the table below.

3.3.9. Fixed plant

There is a shredder and screening equipment including two trommels permanently located at the site.

Regular cleaning of the shredder, loader and operational areas such as reception area will minimise odour generation from unprocessed entrained residues. Any areas that have contained particularly odorous material will be washed down using a jet wash or high pressure hose as required and inspected on a daily basis.

Deep cleaning will take place twice per annum.

3.3.10. Mobile plant

Mobile plant associated with the activity will include haulage vehicles associated with waste inputs and outputs and loading equipment. The working area within the transfer station will be kept clean to ensure that vehicles and waste leaving the site do not transfer odorous material offsite. All mobile plants are included in the Planned Preventative Maintenance system which ensures that all routine maintenance and appropriate servicing of equipment takes place. Hired in mobile plant is also included in the system.

3.3.11. Odour emission points

There are no point source odour emissions at the Facility.

3.3.12. Types of emissions

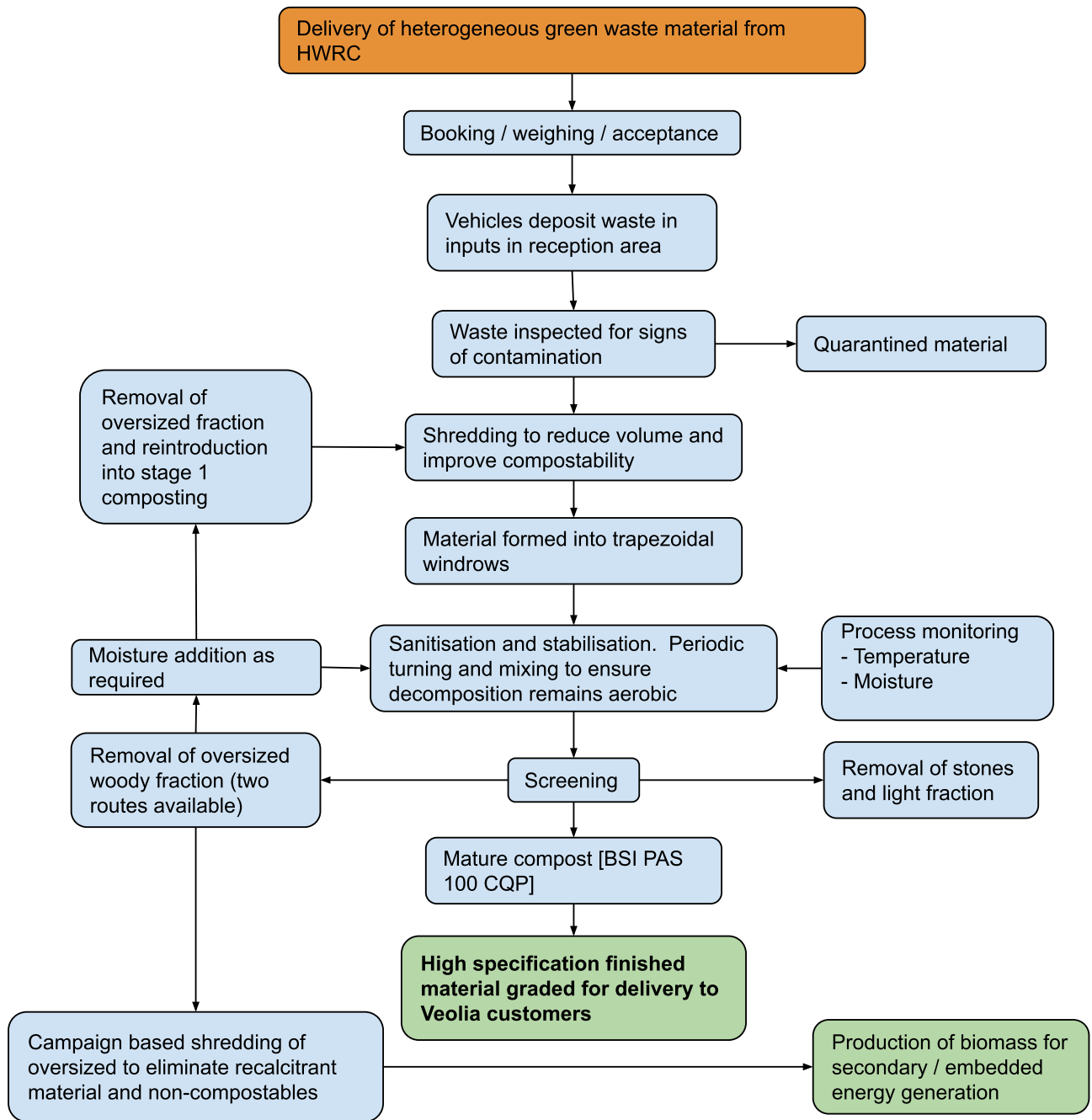
Odours produced through the normal aerobic composting process

Where an oxygen rich environment persists aerobic microorganisms dominate. During the early stages of composting fats, carbohydrates and proteins within the green waste are broken down into smaller molecules which form a nutrient source and are metabolised by the composting microorganisms. This process can result in the generation of odorous intermediate compounds such as amines, fatty acids, acetic acid, propanoic acid, hydrogen sulphide, ammonia and dimethyl disulphide. Under aerobic conditions sulphur compounds will eventually be oxidised to odourless sulphate.

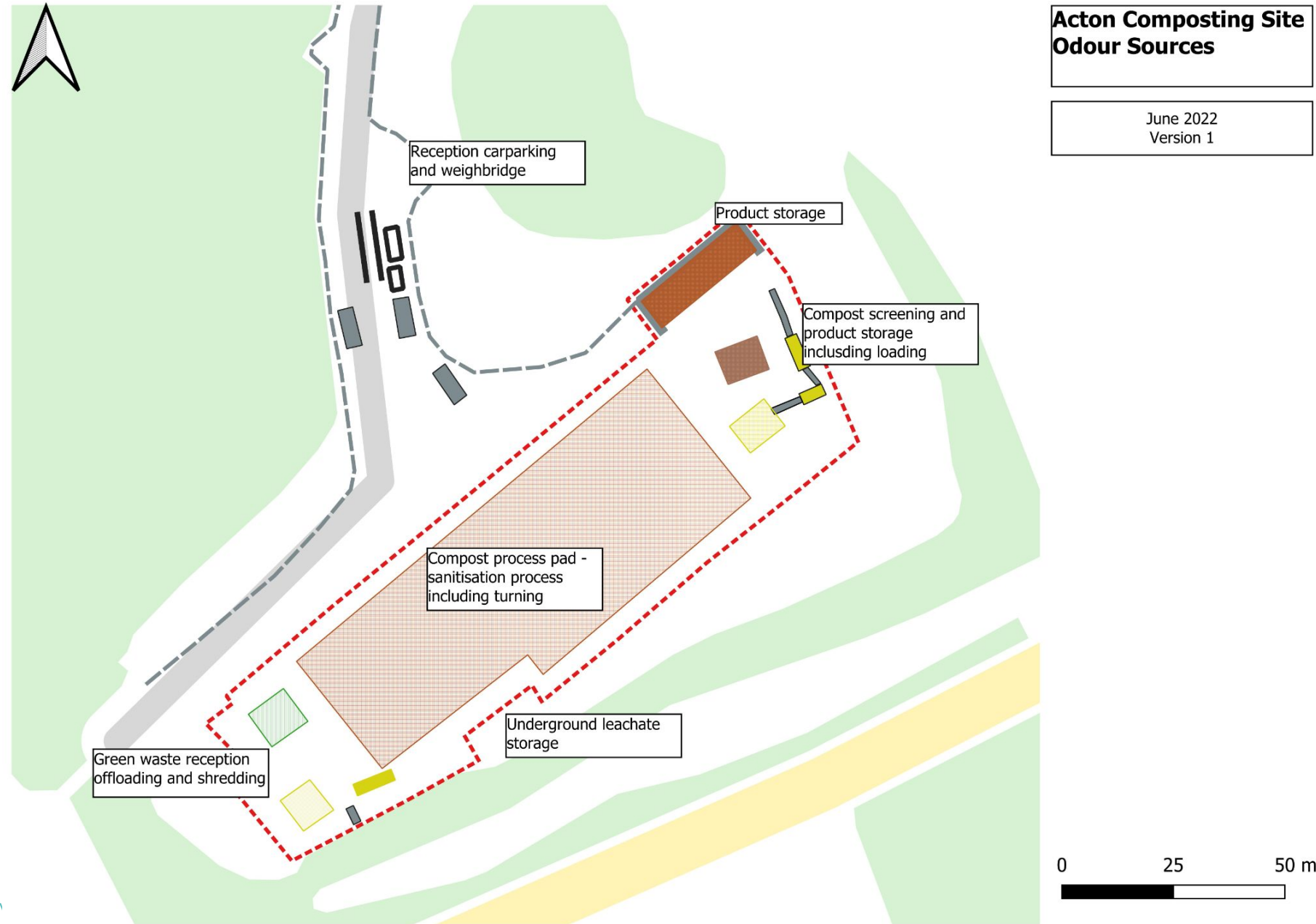
Odours produced under anaerobic conditions

In oxygen depleted conditions, anaerobic microorganisms dominate, resulting in alternative products of metabolism being released. Some anaerobic metabolites tend to be associated with more offensive odours such as butyric acid, acetic acid and sulphur-containing organic compounds (e.g. methyl mercaptan and hydrogen sulphide).

Simplified process flow diagram for composting activity



Site plan showing odorous process locations / odorous emissions / storage



4. Control measures and process monitoring

4.1. Appropriate measures / BAT

Monitoring procedures for appropriate measures / BAT

| Odorous and potentially odorous process / material {POTENTIAL] | Control measures (Appropriate Measure / BAT) | Monitoring frequency | Monitoring procedure and optimum process parameters | Trigger level | Action taken if outside optimum process parameters |
|--|---|--|--|--|--|
| Waste delivery and reception | <p>Pre-acceptance criteria / contractual control of quality.</p> <p>Speed restriction in place.</p> <p>Visual inspection of incoming waste is completed with clear and communicated acceptance criteria</p> <p>All members of the Technical and Operations teams are trained in Odour Assessment.</p> <p>Regular maintenance and cleaning of weighbridge is</p> | Every load of incoming waste / vehicle entry to site | <p>A copy of the European Waste Catalogue (EWC) codes as specified by the permit along with a simplified description of acceptable waste is available. Only waste on this list can be accepted and a procedure for dealing with non-conforming waste is in place.</p> <p>Optimal - pre-acceptance criteria ensures only suitable waste is brought to the facility.</p> | Identification of a non-conforming load. | <p>Load assessed on a case by case basis and either prioritised for processing or rejected / returned.</p> <p>A storage area is available for non-conforming materials including plastics and municipal waste.</p> <p>Feedback provided to waste producer / haulier, discontinuation of contract if necessary.</p> |

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| | completed and included on Planned Preventative Maintenance (PPM) system. | | | | |
| | Yard cleaning is completed | Daily | Visual inspection. Optimal - yard area is free from contamination. | Yard found to be contaminated. | Identify cause / increased cleaning |
| Offloading of inputs | Acceptance criteria / contractual control of quality. Visual inspection at the point of off loading. | Tipping of each load | Every load tipped has visual inspection with clearly defined acceptance criteria. Loader drivers are trained in waste acceptance. Processes are in place to safely manage contamination and non-conforming waste. Optimal - acceptance criteria ensures only suitable waste is accepted at the facility | Identification of a non-conforming load. | As per waste delivery and reception. |
| Storage of inputs (raw and shredded) | Minimisation of residence time reduces odour from biodegradation. Small in process pile sizes reduce odour source potential. Waste throughput maintained under site capacity. | Daily - batch record sheet / PAS100 records | Waste tracking procedures - recording undertaken using batch record sheet / PAS100 records | Degraded / wet input material. | Prioritise degraded material for shredding and optimisation of C:N ratios to control rate of biological reactions and associated emissions to atmosphere. |
| Shredding of inputs | Use of a low speed shredder reduces source potential of shredding. | Continuously in place | Optimum - efficient shredding of waste inputs | Breakdown of shredder. | Veolia has a standby shredder which can be brought to site. Request an on hire shredder. |

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|--------------------------------|--|--|---|---|---|
| | | | | | <p>Diversion of inputs in accordance with the BCP.</p> <p>Removal of inputs from the site to another composting facility.</p> |
| | Optimisation of C:N ratio | Continuous | Visual assessment, batch record sheet | Excessive (high N) green waste | <p>Excessive green: Blending of higher carbon woody material.</p> <p>Excessive wood: Blending of higher nitrogen grassy material.</p> |
| | PPM in place for shredder. | As per PPM schedule | <p>Documented PPM schedule</p> <p>Optimum - shredder operates as required with no unexpected breakdown.</p> | Diarised maintenance event. | Investigate missed PPM and prioritise. |
| Windrow storage / sanitisation | <p>Minimisation of residence time.</p> <p>Active monitoring and management of composting process.</p> <p>Turning prevents formation of anaerobic conditions and odours associated with a reducing chemistry.</p> <p>Waste throughput maintained under site capacity.</p> <p>The process naturally operates to a FIFO system.</p> | <p>Daily - visual assessment, squeeze tests.</p> <p>Batch record sheet / PAS100 records.</p> | <p>Daily monitoring and optimisation of process parameters, temperature, moisture, C:N ratio.</p> <p>Waste tracking procedures - recording undertaken using batch record sheet / PAS100 records</p> | <p>Process control limits / parameters.</p> | <p>Addition of moisture where required, management of the size of the windrow and feedstock.</p> <p>Adjust timing of turning if required.</p> |

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|-----------|---|--|---|---|--|
| | Ensure pad drains freely to prevent the lower pile horizon becoming anaerobic. | | | | |
| Turning | <p>Acceptance criteria / contractual control of quality.</p> <p>Process optimised to minimise turning.</p> <p>Meteorological conditions assessed before turning.</p> <p>Process operates to restricted hours [planning requirement]</p> | Weekly in accordance with PAS100 procedure | <p>Daily monitoring of process parameters.</p> <p>Waste tracking procedures - recording undertaken using batch record sheet / PAS100 records.</p> | <p>Adverse weather.</p> <p>Overheating.</p> | <p>Delay turning where site experience / judgement is that off site impacts will be unacceptable.</p> <p>Bring forward turning to increase oxygen content.</p> |
| Screening | <p>Minimise residence time to avoid formation of anaerobic conditions.</p> <p>Only carry out screening when active composting has finished and all critical limits have been achieved.</p> <p>Process operates to restricted hours [planning requirement]</p> | Daily | Waste tracking procedures - recording undertaken using batch record sheet / PAS100 records. | Breakdown of screener. | The Facility has two screeners to produce 30mm and 10mm grade compost. If one of the screeners broke down the process could be kept moving by producing more of the reciprocal grade. Breakdown of both is unlikely. |
| | PPM in place for screener. | As per PPM schedule | Documented PPM schedule. | Diarised maintenance event. | Investigate missed PPM and prioritise. |

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| | | | | | |
|------------------------------|---|---|---|---|--|
| | | | Optimum - shredder operates as required with no unexpected breakdown. | | |
| Storage of outputs | Minimise residence time to avoid formation of anaerobic conditions. | Daily | Waste tracking procedures - recording undertaken using batch record sheet / PAS100 records. | 6 - 12 month residence time | Product over 6 months old is reprocessed through the windrow system. Product over 12 months old is reclassified as a waste. |
| Storage of leachate in tanks | Minimise residence time to avoid formation of anaerobic conditions. | Daily level check Weather forecast | Recorded on daily check sheet Optimum - tank is emptied to ensure pad is always freely draining and tank contents do not become anaerobic. | Tank becomes anaerobic. Forecast shows prolonged heavy rain. | Schedule immediate emptying. Proactive scheduling of tank emptying |

5. Odour reporting

5.1. Complaints reporting

All feedback including complaints and non-conformances are recorded and reviewed with corrective and preventive actions put in place in accordance with Complaints and Non-Conformance Reporting procedures.

The management of complaints is controlled by the Veolia Management System 'VMS'. Managers shall ensure that all complaints have been investigated, adequately handled and that any measures necessary to prevent a recurrence have been put in place.

5.1.1. Complaint recording

The recommended minimum level of detail that needs to be collected when an odour potentially linked to on site activities is reported is as follows:

- the time and date when the offensive odour was observed;
- the location (within approx. 100 m) where the offensive odour was observed, e.g. postal address, grid reference)
- the sensitivity of the location;
- a description of odour including a subjective all factors necessary to make an assessment of the impact, including intensity, character (preferably on the basis of a choice from standardised descriptors given in Environment Agency Technical Guidance Note H4), offensiveness, frequency and duration;
- the identity and address of the reporter, if provided / consented, in order to understand the spread of complaints and the number of individuals impacted;
- any other information the reporter can offer on activities at the alleged odour source

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

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

Complaints are recorded on the standard AVA complaint form. This should then be recorded on AVA as an attachment to the AVA complaint entry.

5.2. Investigation of Odour Complaints

The aim of the investigative actions will be to establish:

- the source of the odour complaint; and
- the impact of the odour
- appropriate measures / actions required to prevent pollution if required

5.2.1. Complaint screening

The object of the initial screening is to quickly identify those odour complaints that are unlikely to be due to the facility.

Initial screening should consider the following:

- knowledge of potential sources on the facility (timing of the report cross referenced with work activities in progress, any plant problems, etc);
- knowledge of other potential sources in the locality other than the facility;
- wind direction at the time of the alleged odour episode relative to the location of the facility and the reporter;
- distance of the reporter from site; and
- concurrent odour monitoring data where available

VES will liaise with local stakeholders (including the complainant) and inform them on the outcome of the screening assessment of the complaint and whether or not any action is to be taken.

5.2.2. Further investigation / substantiation

If the initial screening does not discount the facility as a potential source of the odour reported further investigation will be carried out using:

- on and off-site odour monitoring techniques (sniff testing), using the 'Odour report form' included with this document.
- a review of activities being carried out on site using the inventory of odourous emissions to ensure a systematic, risk based review of potential emission sources
- records about process conditions, observations or inspections at the time of report

Note that on and off site odour monitoring is not appropriate where reports are made retrospectively but records can still be reviewed.

Where the odour is substantiated, VES will carry out a root cause analysis to identify the conditions which are leading to unacceptable odour emissions from the Facility and review containment and control measures as appropriate.

5.3. Community engagement

5.3.1. *Communicating with the Environment Agency*

In the event a report of odour is received from a member of the public the local Environment Agency officer / team will be informed by telephone or email and a 'Notification of Abnormal Emissions' form will be submitted if the report is substantiated.

5.3.2. *Communicating with complainants*

In the case of answerphone messages a return call will be made as soon as possible and within 48 hours. In the case of complaints submitted by email or by letter, a written response will be made within 15 working days of submission of the complaint for complaints made by members of the public, or 5 working days for complaints made by an MP or Councillor.

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

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

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

Members of the public are able to contact VES directly with any odour complaints about the Facility. Methods of contacting VES will be displayed at the site, shown on the company website and communicated through meetings, press releases, bulletins and other forms of advertisement in connection with the operation of the Facility.

Monthly site reviews are in place reviewing all aspects of site performance including performance against objectives, site improvement plan, customer feedback (Customer Feedback Procedure) and site actions.

Quarterly reviews with General Managers are in place. Reviews include objectives, customer feedback, site improvement plan, review of actions and performance (Management Review).

5.4. Pro-active odour monitoring

Routine checks are carried out in accordance with a procedure 'Acton Routine Checks' which is located at the end of this document. Briefly these include:

- **Daily Checks** - including boundary odour assessment
- **Weekly checks** - carried out by a site manager to check site hygiene
- **Monthly Check and Review** - odour checks carried out by a site manager

5.5. Reactive odour monitoring

Given the pre-acceptance controls in place and the short residence time the potential for unacceptable odour emissions off site is considered to be low. VES will therefore undertake sniff testing dynamically based on the following criteria:

- Observation by trained staff that odour pollution is or may be occurring
- Receipt of waste which is deemed to be borderline malodorous and has triggered a decision to reject the vehicle / load
- Receipt of waste which is deemed to be malodorous but a decision is made that offsite impact could be avoided or minimised by prioritising this material for processing
- Any abnormal operation where there is considered to be a risk of odour pollution
- If notified a complaint is received externally
- If instructed to undertake an off site check by the Environment Agency

Ensuring staff are trained to undertake sniff testing in this manner ensures that the reasons for making a decision to carry out monitoring are well understood.

5.6. Weather data

The site has an on site weather station (Skyview). The system records data to a 30 min resolution including temperature, wind direction, windspeed, pressure, cloudcover, rainfall. The system can be accessed remotely from off site and can be used in the complaints investigation process.

Example Weather Station Output

| Data for VEAJ between 2022-07-14 and 2022-07-15 | | | | | | | |
|---|--------------------|-----------|-------------|--------|------|---------|------|
| Units: Temp C | Wind mph | Rain mm | Pressure mb | | | | |
| stationid | timestamp | metardate | wspeed | w10min | wdir | wsector | tout |
| VEAJ | 2022-07-14 9:30:00 | 140930 | 8.95 | 2.91 | 270 | W | 15.9 |
| VEAJ | 2022-07-14 9:00:00 | 140900 | 12.08 | 2.91 | 315 | NW | 16.1 |
| VEAJ | 2022-07-14 8:30:00 | 140830 | 14.09 | 2.91 | 248 | WSW | 16.6 |
| VEAJ | 2022-07-14 8:00:00 | 140800 | 10.07 | 4.03 | 225 | SW | 16.2 |
| VEAJ | 2022-07-14 7:30:00 | 140730 | 12.08 | 2.91 | 293 | WNW | 15.3 |
| VEAJ | 2022-07-14 7:00:00 | 140700 | 6.04 | 2.01 | 225 | SW | 13.9 |
| VEAJ | 2022-07-14 6:30:00 | 140630 | 4.92 | 2.01 | 293 | WNW | 13.3 |
| VEAJ | 2022-07-14 6:00:00 | 140600 | 4.92 | 0.89 | 293 | WNW | 12.8 |
| VEAJ | 2022-07-14 5:30:00 | 140530 | 2.91 | 0 | 293 | WNW | 12.1 |
| VEAJ | 2022-07-14 5:00:00 | 140500 | 2.01 | 0 | 293 | WNW | 11.3 |
| VEAJ | 2022-07-14 4:30:00 | 140430 | 2.91 | 0.89 | 315 | NW | 11.6 |
| VEAJ | 2022-07-14 4:00:00 | 140400 | 2.01 | 0 | 315 | NW | 11.2 |
| VEAJ | 2022-07-14 3:30:00 | 140330 | 2.01 | 0 | 315 | NW | 11.2 |
| VEAJ | 2022-07-14 3:00:00 | 140300 | 2.91 | 0.89 | 315 | NW | 11.6 |
| VEAJ | 2022-07-14 2:30:00 | 140230 | 2.91 | 0.89 | 338 | NNW | 12.1 |
| VEAJ | 2022-07-14 2:00:00 | 140200 | 2.91 | 0.89 | 338 | NNW | 12.8 |
| VEAJ | 2022-07-14 1:30:00 | 140130 | 2.01 | 0 | 338 | NNW | 12.8 |
| VEAJ | 2022-07-14 1:00:00 | 140100 | 2.01 | 0 | 338 | NNW | 12.9 |
| VEAJ | 2022-07-14 0:30:00 | 140030 | 2.91 | 0.89 | 315 | NW | 12.8 |
| VEAJ | 2022-07-14 0:00:00 | 140000 | 2.91 | 0 | 45 | NE | 12.4 |

5.7. On site and off site monitoring (when required)

Trained staff will determine what combination of on and off site odour monitoring is appropriate based on the following principles.

- Where on site checks identify pollution is or may be occurring off site checks should be carried out.
- Where an external complaint has been received both on and off site checks should be carried out, in this case off site checks should ideally be carried out first to prevent desensitisation due to higher intensity odours closer to the source.

The sensory field odour (“sniff test”) assessments will be carried out based on the Environment Agency Sniff Test protocol in H4 guidance using the ‘Odour report form’ included in this document. The person carrying out the sniff test will be rotated on a regular basis to ensure reliability; where possible staff members who have been working within the composting facility for an extended period will not conduct odour monitoring to avoid the desensitising effect caused by prolonged exposure (note this may not always be

logistically possible). Where possible testing will be undertaken by non-operational staff and management.

6. Abnormal events

Abnormal events

| Abnormal event | Recovery steps |
|---------------------|---|
| Equipment Breakdown | <p>In the event of a shredder breakdown there are the following options:</p> <ul style="list-style-type: none"> ● Arrange for the contingency shredder owned by the business and based in the midlands to be brought to site ● Hire a shredder ● If required waste will be diverted in accordance with the alternative outlets identified in the business continuity plan. Veolia has a network of waste facilities across the country. Local sites include Coven and Telford. <p>In the event of a screener breakdown, the Facility has two screeners to produce 10mm and 30mm product. In the event of a breakdown of one screener the throughput of the remaining screener is sufficient to continue production of a single stream. The likelihood of both screeners failing is unlikely.</p> <p>Reason for failure will be investigated (in association with supplier/contractor) and maintenance plan revised if necessary.</p> <p>Depending on how quickly the equipment can be repaired, the Competent Person will decide if it is necessary to redirect delivery vehicles already on the facility (not having discharged their loads) and incoming vehicles to other licensed facilities.</p> <p>If required clients will be contacted at the earliest opportunity and the situation explained – temporary redirection of delivery vehicles to other facilities might be required.</p> |
| Fire | <p>The site operates in accordance with a Fire Prevention Plan. In the event of a fire impacting site infrastructure associated with odour control waste would be removed and waste acceptance would be suspended until appropriate controls are in place to resume operations.</p> |
| Spillage | <p>Competent Person to initiate accident response plan. Spill area then cleaned and hosed down.</p> |
| Staffing shortage | <p>Contingency measures for staff availability are included within the BCP. Veolia has sufficient resources to redeploy staff from other facilities should this be needed.</p> |

Odour reporting form

| | | | | |
|--|--|--|--|--|
| Odour report form | | Date: | | |
| Person carrying out test: | | Role: | | |
| IMPORTANT: START ALL ODOUR ASSESSMENTS UPWIND OF THE SOURCE (WHERE ACCESS IS POSSIBLE). RECORD ALL ODOURS INCLUDING OFF SITE SOURCES. | | | | |
| Reason for test (see section on proactive and reactive monitoring) | | | | |
| Time of test | | | | |
| Location of test Use ref in tab 6.1 | | | | |
| Weather conditions (dry, rain, fog, snow, etc) | | | | |
| Temperature (very warm, warm, mild, cold, or degrees if known) | | | | |
| Wind strength (none, light, steady, strong, gusting) | | | | |
| Wind direction (e.g. from NE) | | | | |
| Intensity (see below) | | | | |
| Duration (of test) | | | | |
| Constant or intermittent in this period or persistence | | | | |
| What does it smell like? | | | | |
| Receptor sensitivity (see below) | | | | |
| Is the source evident? | | | | |
| Any other comments or observations | | | | |
| 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 <i>Ref: German Standard VDI 3882, Part 14</i> | | Receptor sensitivity Low (e.g footpath, road) Medium (e.g. industrial or commercial workplaces) High (e.g. housing, pub/hotel etc) | | |

Acton routine checks

| |
|--|
| <p>Daily Checks shall be carried out whilst the site is in use or under Maintenance as follows:</p> <ol style="list-style-type: none"> 1. Boundary odour assessments should be routinely carried out by a member of site odour panel on a daily basis. The location of sniffing points will be determined with reference to wind direction at the time of the observations. Where possible observations should be carried out by personnel who have not been working close to composting materials on that day. 2. Observations must be recorded with reference to wind direction and also annotated with notes of activities being carried out on the site at the time. Time of day may be varied, but emphasis should be on early mornings or late afternoons. Observations should also be carried out at times when there are any activities being carried out which might cause increased odour emissions. 3. Actions: If moderate (intensity 3), strong (intensity 4) or very strong (intensity 5) or abnormal odours are detected downwind of the site, then the Operations Manager or his deputy should be notified immediately and the Odour Action Work Instruction must be followed. 4. All odour assessments must be recorded in the site diary. In addition any investigations of moderate, strong or abnormal odour and remedial actions must be recorded in the site diary – and be communicated to the Operations Director and Compliance Manager. |
| <p>Weekly Checks The Site Manager shall carry out routine checks on the effectiveness of all cleaning and site hygiene activities. These checks will be based on a walk- over inspection of the entire site and the results will be recorded in the site diary.</p> |
| <p>Monthly Check and Review A odour assessment shall be carried out every month. The Site Manager or Operator should conduct an odour assessment accompanied by an offsite member of the odour panel who has not been working at the site. The assessment will be carried out around site boundaries as well as at different points within the local area based on wind direction.</p> <p>The Operations Manager and Compliance Manager shall review odour monitoring records and any complaints.</p> |
| <p>Quarterly Reporting The Compliance Manager shall review daily odour checks on site, complaints and any other related issues that may have occurred and shall provide a report to the General.</p> |
| <p>Acton Odour Action Work Instruction</p> <ol style="list-style-type: none"> 1. The Site or Head Office receives a contact/complaint alleging potential odour from the site either from a member of the public or a regulator or a VEOLIA ES Odour Assessment. 2. The Operations Manager shall immediately be informed of the contact/complaint and shall commence an investigation which will include finding out in detail the circumstances of the contact/complaint. 3. The investigation shall include an assessment of weather, boundary odour and other activities in the area; all operations taking place; materials including wastes being stored, used or transported. 4. Where convenient or if deemed necessary by the Operations Manager's initial investigation a two man odour assessment should be carried out. 5. On identifying the cause of the contact/complaint the Operations Manager shall implement actions to reduce the odour to normal levels or prevent recurrence. 6. The complaint and investigation shall be recorded along with identification of any preventive and corrective actions. 7. At the conclusion of the investigation the Operations Manager is responsible for ensuring that feedback is provided to the complainant and that the Operations Director is made aware of the complaint. |