



Biffa Waste Services Limited

**Environmental Permit Application
Odour Management Plan**

Middlesbrough Transfer Station

December 2023 (revision 1 - May 2024)

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1. INTRODUCTION

1.1. Background

Biffa Waste Services Limited have prepared an Environmental Permit Variation Application to support proposed operational changes to the Middlesbrough Transfer Station. The changes mean that the site will now require a bespoke permit in order to carry out the intended operations. The site location is shown on Drawing M8030100.

This Odour Management Plan (OMP) will seek to outline measures to be employed, as required, to prevent any odour problems emanating from the site. It will also include identification of potential sources of risk, mitigation measures employed and how Biffa will respond to complaints.

This Odour Management Plan has been prepared in accordance with guidance on best practice, and in particular the following specific regulations and guidance (where applicable) contained in:

- Environmental Permitting (England and Wales) Regulations 2016.
- Environmental Permitting Core Guidance (DEFRA, Updated March 2020).
- Environment Agency Guidance “Control and monitor emissions for your environmental permit” (17th February 2020).
- Environment Agency Guidance ‘Non-hazardous Waste and inert waste: appropriate measures for permitted facilities’
- Environment Agency Document H4 – Odour Management.

This Odour Management Plan is a live document and as such will be subject to regular review and revision. In all circumstances, revisions will be submitted to the Environment Agency (EA) for review and approval.

The objectives of this Odour Management Plan are as follows:

- Employ appropriate methods, including monitoring and contingencies, to control and minimise odour pollution;
- Prevent unacceptable odour pollution at all times; and
- Reduce the risk of odour releasing incidents or accidents by anticipating them and planning accordingly.

The following aspects have been considered during the preparation of this Odour Management Plan:

- The activity which produced the odour and the point(s) of odour release (both intentional and unintentional);
- Possible process or control failures or abnormal situations which could lead to an increased level of exposure;
- The potential outcome of each failure scenario in respect of the likely odour impact on local sensitive receptors; and
- The actions which are to be taken to mitigate the effect of the odour release, and details of the persons responsible for the actions on the Regulated Facility.

1.2. Site Location

This document presents an assessment of the risks to the environment and amenity posed by the operation of Middlesbrough Waste Transfer Station, Brunel Road, Skippers Lane Industrial Estate, Middlesbrough, TS6 6JA.

The site extends over an area of ~10,600m² and is centred on National Grid Reference (NGR) NZ 52792 20225. Since the site is situated on the Skippers Lane Industrial Estate, the immediate surrounding land use is primarily industrial. The site is located 3km east of Middlesbrough, and 8.5km southwest of Redcar.

1.3. Site Operations

Biffa is applying for a change to a bespoke permit and although there will be no changes to the permitted R and D code activities already covered by the existing Standard Rules permit, the bespoke permit variation application will look to allow wider storage of material in the external bays and externally in containers. The site intends to utilise the three external bays for storage of glass, mixed C&D, and scrap metal. In addition to this, storage of wood, plasterboard and bonded asbestos in containers stored externally.

Biffa is proposing to accept non-hazardous industrial and commercial waste streams for bulking and manual (including plant assisted) sorting for subsequent transfer off site to other Biffa permitted treatment facilities for recovery. In addition to non-hazardous wastes, bonded asbestos will be accepted for transfer off site for disposal. The waste storage areas will comprise impermeable surfacing with a sealed drainage system. The maximum annual throughput will be 75,000 tonnes.

The site will operate under Biffa's own overarching Management System (Biffa Group Integrated Management System) which is externally certified under ISO14001, and supported by a site specific Environmental Management System (previously termed a Working Plan). In order to comply with the regulatory requirements as stated in the Environmental Permitting Regulations, Biffa will ensure that the site is supervised by a technically competent person with the appropriate qualifications to manage the Site. The technically competent person will be responsible for ensuring the OMP is enforced and followed at the site.

All procedures that form part of the Management System are regularly reviewed and updated (where required) to ensure Best Operational Practice.

Operational Hours

Operations associated with the WTS take place between the hours of 07:00 hrs and 17:00 hrs Monday to Friday (excluding Public Holidays). Operational hours during Saturdays, Sundays and Public Holidays are between 07:00 hrs and 13:00 hrs.

No activities associated with the waste transfer and recycling activities outside of the agreed hours of operation, unless in an emergency. In such instances, the Environment Agency will be notified within 24 hours and the details/activities recorded in the site diary.

Site Management

There will be a trained and responsible manager, with the appropriate technical competence qualification to manage the facility. The relevant qualified person or appointed representative will be on site for an appropriate duration of time during working hours to maintain the site logbook and carry out regular daily visual and olfactory inspections of fugitive emissions from the facility.

The Site manager or nominated deputy will ensure that this Odour Management Plan is enforced on site, and its contents are communicated to all employees, visitors and contractors working at the site as part of the induction process.

Should an off-site fugitive odour emissions complaint be received, it is the Site manager, or nominated deputy's responsibility to investigate the cause and take corrective action where necessary. In summary, these individuals will:

- Assume responsibility for the management of the site;
- Ensure personnel and operatives are advised of their roles to minimise the generation of odour;
- Conduct olfactory monitoring at the downwind site boundary daily or immediately following a complaint (this may be carried out by an appointed person);
- Deploy suitable odour mitigation measures based on olfactory observation and weather conditions (e.g. warm weather with little to no wind which may aid in dispersion);
- Review the performance of the operatives and efficiency of odour reduction measures;
- Ensure that records are maintained; and
- Ensure that equipment is maintained.

A written programme of maintenance will be developed and implemented for all aspects of site operations. Maintenance will include:

- Routine scheduled inspections;
- Preventative maintenance activities;
- Reactive maintenance activities in the event of any plant breakdown – this will be minimised at all times.

A summary of odour control techniques is provided in Section 3.0.

1.4. Sensitive Receptors

Sensitive receptors within 1km of the Environmental Permit boundary have been identified and checked using the approved Multi Agency Governmental Information for the Countryside (MAGIC) interactive mapping tool.

MAGIC provides geographic information about the natural environment from across government departments. This information which is available includes those rural, urban, coastal, and marine environments across Great Britain.

The searches confirmed that there are none of the following ecological, cultural and heritage receptors within 1km of the site's boundary:

- Ramsar's;
- Sites of Special Scientific Interest (SSSI's);
- Special Areas of Conservation;
- Special Protection Area's (SPA);
- Ancient Woodland;
- Areas of Outstanding Natural Beauty;
- National Nature Reserves; and
- National Parks;
- World Heritage Sites;
- Scheduled Monuments;
- Registered Battlefields; and
- Registered Parks and Gardens.

Table 1 identifies the potential sensitive receptors that have been identified through a desktop study of the locality of Middlesbrough Transfer Station, and are therefore considered to be potentially sensitive and could reasonably be affected by the activities occurring on site.

Table 1: Identified Sensitive Receptors within 1km of Middlesbrough Transfer Station

Receptor Name	Receptor Type	Direction from Site	Approximate distance from Site boundary at closest point (m)
Public Greenspace	Fields	North	180m
Residential properties in South Bank	Residential Properties	West	1000m
Industrial premises on Skippers Lane Industrial Estate	Commercial / Industrial	Adjacent / Surrounding the site	0 - 100m
Brunel Road	Highways	West	100m
Webb Road	Highways	South	60m
Owens Road	Highways	East	40m
Middlesbrough Road	Highways	North	200m
Cleveland Retail Park	Retail	Southeast	480m
Residential properties at Brambles Farm	Residential	Southwest	500 - 1000m
A66	Major Roadway	North	485m

AVG Biogas plant	Industrial	North	851m
Railway line	Transport link	North	945m
St. Peter’s Catholic College	School	East	1000m
Spencer Beck	Woodland	South	480m
Church of Saint Peter	Listed Building	Northeast	785m
War memorial circa 5m SW of Church of Saint Peter	Listed Building	Northeast	773m
War memorial	Listed Building	Northeast	925m
1 Millbank Street	Listed Building	Northeast	825m
Church of St John the Evangelist	Listed Building	Northeast	987m

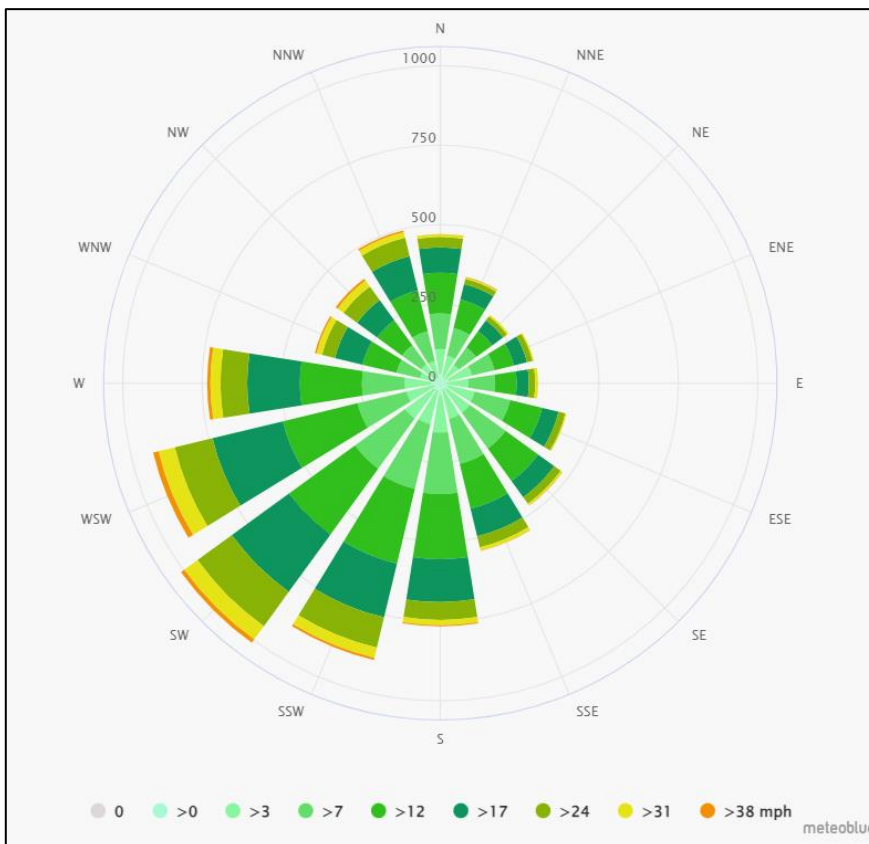
1.5. Meteorological Conditions

The local wind speed and direction data has been obtained for Middlesbrough. This dataset is deemed the most appropriate for use in order to characterise the site due to its proximity to the site, approximately 3km east of the facility. Therefore, wind patterns in Middlesbrough are likely to be similar to those experienced at the Middlesbrough transfer station.

Simulated historical wind data has been utilised from the Meteoblue archive. This information is based on 30 years of hourly weather model simulations in order to typify the meteorological conditions likely at the site. The wind rose, as shown by Figure 1 shows how many hours per year the wind blows from any given direction on each of the 16 points of a compass.

The wind rose indicates that the predominant wind directions are from the southwest quadrant, and the prevailing wind is from the southwest.

Figure 1: Middlesbrough Wind Rose



2. ODOUR SOURCE INVENTORY

2.1. Odour Sources

To aid with risk identification and magnitude justification an Odour Risk Assessment has been carried out as part of the Environmental and Accident Risk Assessment (Doc. Ref.: Middlesbrough_EARA_A001_December 2023). The Odour Risk Assessment has been completed by considering each of the odour sources identified in the following sections in terms of:

- Frequency of occurrence;
- Intensity of odour released;
- Pathways and receptors involved;
- Environmental consequences of the event;
- Overall risk and its significance to the environment; and
- Control and mitigation measures needed to prevent or reduce the risks.

The Odour Risk Assessment also considers the potential odour sources that may be encountered during maintenance and abnormal conditions or situations.

Details relating to the storage arrangements of wastes are summarised in Table 2. The characteristics of odours that could be generated at the site will be variable depending on the type, condition and age of the wastes. The majority of wastes which are stored on site include non-biodegradable wastes which are considered to have negligible odour generating potential.

Due to the internalised storage of loose general waste, the potential for odour emissions is significantly reduced. Despite this, there will be storage of glass, mixed C&D, and scrap metal, as well as wood, plasterboard and bonded asbestos in containers, however these wastes have a low odour generation potential.

Identified off-site sources with odour generating potential are presented in **Section 2.6**.

2.2. Normal Activities Involving Odour Sources

The normal activities involving the sources of odour would include:

- Waste Acceptance & Delivery – Visual Inspection & Vehicle Waiting.
- Waste bulking/storage (on-site).
- Waste Transfer (off-site).

As discussed above, whilst the potential for odour emissions is more associated with specific elements of the activities e.g. delivery, storage and processing of potentially odour generating wastes, it is not exclusively the case.

Waste storage and consequent ageing of the waste material is considered the activity likely to represent the biggest risk in terms of odour generation, however the wastes are to be stored in low tonnages and will have a quick turnaround time following the First In, First Out (FIFO) principle to ensure the storage time is minimised as much as possible.

2.3. Maintenance Activities Involving Odour Sources

Operational interaction between odour sources and maintenance activities could include the following:

- Waste Storage Cleaning – this could include containers associated with materials transport or internal processing / offloading areas.
- Drainage Maintenance / Cleaning – activities such as clearing the sealed drainage system may cause point sources of odour.

2.4. Accidents/Incidents Involving Odour Sources

Accidents and their consequences have been considered for a range of potential risks from the overall operation in the Environmental and Accident Risk Assessment which has been submitted as part of this Environmental Permit Application (Doc. Ref.: Middlesbrough_EARA_A001_December 2023).

Notwithstanding the existing information, with regards to accident / incident events involving sources of odour, these could be related to:

- Spillages and loss of containment.
- Damage / faults with buildings or environmental control infrastructure.
- Faults with processing equipment or storage areas.

All vehicles delivering and dispatching wastes to and from the site will be fully enclosed or covered and daily visual inspections will be carried out as part of the daily operation and management checks.

Absorbent materials will be kept on site and used in the event of a spillage or leak. Litter picking will also be carried out as necessary.

2.5. Location of Potentially Odorous On-Site Activities

It can be considered that the processing and storage of putrescible waste streams has the potential to be the cause of unacceptable fugitive malodorous emissions. The locations of the internal and external storage areas are illustrated on Drawing No.: M8030200 and M8030401 and the drainage layout is presented in Drawing No.: M8030501.

3. ODOUR CONTROL MEASURES

3.1. Source-Pathway-Receptor Model

The potential sources, pathways and receptors to odour emissions originating at the site as well as the associated mitigation and odour control measures to be taken at the site have been summarised in Environmental and Accidents Risk Assessment (Doc Ref.: Middlesbrough_EARA_A001_December 2023) prepared for the site.

3.2. Process Controls

Pre-Acceptance

The Site operates according to written waste acceptance procedures contained in the EMS (Appendix EMS2).

The purpose of the waste acceptance procedures is to prevent the acceptance of unsuitable wastes, all waste streams destined for the Site are subject to a pre-acceptance process involving the producer, Sales, Operations, Customer Services and Technical personnel. These pre-acceptance criteria extend to potentially malodorous wastes.

Additionally, the waste acceptance procedures ensures that incoming waste is correctly identified, classified, labelled, priced and the onward fate of the waste is determined prior to acceptance at the site. Waste should not be accepted without a clear method of treatment or disposal route being determined.

With the stringent procedures to be carried out at the site, it is unlikely that a form of particularly malodorous waste would be delivered or accepted at the site.

Waste Reception and Malodorous Waste

The Site operates according to the written waste acceptance procedures.

The purpose of the waste acceptance procedure is to ensure that all waste arriving on site is correctly identified, that it conforms to the Pre-Acceptance Technical Assessment and to verify the arrangements in place for compliant storage, processing and onward transfer of the waste.

Waste acceptance checks seek to ensure the waste arriving at the site is as expected and conforms to the pre-acceptance characterisation. Visual inspections and sampling (where necessary) will be undertaken to ensure the waste is compliant and can be directed to the most appropriate storage area.

Waste will be delivered to the site within fully enclosed or sheeted Heavy Goods Vehicles (HGV's). Wastes entering the site are assessed for odour by olfactory testing. At the weighbridge, the weighbridge operator makes an initial assessment of the load for odour. Where offensive odour is apparent, the vehicle is refused entry. Any rejections are documented in the site diary.

Accepted loads are assessed by the site staff once tipped with the use of an intensity scale in line with the Environment Agency's H4 Odour Management Guidance. This intensity scale rates the odour of the waste, ranging from 0 (no odour) to 6 (extremely strong odour). If a load is rated as a level 4 (strong odour), then it will be re-loaded onto the vehicle if possible. If it is not possible to re-load the waste onto the vehicle, then it will take priority over the existing stock. It will be shredded as quickly as possible, with the quickest route away from the site devised by operational staff. Alternatively, bulk haulage will be utilised to send material out loose and disposed of at a landfill facility.

Records of odorous loads and the way they have been dealt with are recorded in the site diary.

Customers that visit the site on a routine basis that are found to supply waste that is likely to cause odour issues will be managed by restricting/refusing entry to ensure it does not cause issues. New customers will be asked to provide a sample prior to tipping which will be subject to olfactory testing methods.

The waste reception procedures significantly reduce the risk of odour emissions during the reception of waste.

Waste Storage and Treatment

Following the successful completion of the waste-acceptance checks, incoming non-hazardous waste will be directed to the appropriate storage areas. The wastes received will fall and be stored within the following general categories; general waste, glass, mixed construction & demolition waste (CDW), wood, plasterboard, and bonded asbestos. Waste may be stored and segregated in smaller piles/containers of varying material types if appropriate.

Waste will either be tipped directly into the waste bay, area or container. Loose general waste will be stored within the main transfer station building. The internal tipping and storage areas comprise impermeable engineered surface. The main transfer station building consists of steel cladding fixed across part of the front of the building. This reduces the air flow into and specifically across the corner of the building which ensures the potential for odour release is reduced. The enclosed nature of the waste treatment and much of the storage, and the presence of odour suppression units combined with the adopted standard operating procedures are considered to significantly reduce the likelihood of odour emissions.

Waste may undergo sorting/segregation after tipping prior to being bulked and stored in these bays until such a time as they are to be loaded onto a vehicle for transfer off-site to an appropriate facility for recovery.

Waste that is stored externally will include glass, mixed C&D, and scrap metal, as well as wood, plasterboard and bonded asbestos in containers. The nature of these materials means that they are unlikely to cause any significant odour. This is further helped by the fact that the prevailing wind direction on the site is south westerly, and so the nearest residential receptor is located upwind from the storage areas. The external yard area comprises of an impermeable concrete surface.

All wastes are managed by regular stock rotation on site. Waste storage areas are managed to ensure waste residence time is kept to a minimum, and each waste storage area is cleared at least quarterly to

ensure that a full clean of the bay/building can be undertaken as part of the site's on-going housekeeping.

The maximum capacity of each of the storage bays as well as the maximum storage durations are summarised in Table 2, below.

Table 2: Waste Storage details

Waste Stream	Storage Location / Containment	Dimensions (m) (L) X (W) X (H)	Storage Volume	Max storage time
General waste	Internal Bay (Waste transfer shed)	10 x 8 x 4	320m ³	72 hours
General waste	Internal Bay (Waste transfer shed)	10 x 6 x 4	240m ³	72 hours
Glass	External Bay	9 x 12 x 4	432m ³	1 week
Mixed C&D	External Bay	9 x 9 x 4	324m ³	72 hours
Scrap metal	External Bay	9 x 9 x 4	324m ³	1 week
Mattresses	Enclosed container	-	40-yard container	10 days
Wood	Enclosed container	-	35-yard container	1 month
Plasterboard	Enclosed container	-	25-yard container	1 month
Bonded Asbestos	Enclosed container	-	40-yard container	3 months

The waste storage areas are shown on the site's indicative operational layout in Drawing No.: M8030200 and M8030401.

The waste storage procedures will accord with guidance issued as part of Biffa's Management System Group Standards - MOG12 (see Appendix OMP3).

Daily inspections of the conditions of the processing areas, storage bays and drainage collection systems will take place to identify, in particular, signs of damage, deterioration and leakage. Records must be kept of these inspections and any remedial actions taken noted in the site diary.

In the event of a spillage or the identification of damaged waste containers, the container will be fixed or replaced as soon as practicable and spill kits will be immediately deployed to mitigate any spillages if required. If deemed necessary, the area should be washed with water and/or detergent. Such instances will be recorded in the Site Diary and kept on file.

Olfactory odour assessments will also be undertaken as part of Daily Site Inspections. If an odour intensity of 3 or above is recorded (distinct odour), then appropriate odour source investigation and remediation arrangements will be made.

Waste Processing activities at the site are also outlined in guidance issued as part of Biffa's Management System Group Standards - MOG12 (see Appendix OMP3). The purpose of this guidance is to ensure that all appropriate safety measures are observed when processing wastes in order to prevent the mixing of incompatible wastes which may lead to an adverse reaction; which could include odour emissions. However, it should be noted that owing to the nature of the wastes to be accepted, treated, and stored, the risk of incompatible mixed wastes resulting in a reaction which could produce odour is negligible.

Wastes of the same category, i.e. general waste and construction and demolition waste will be stored separately in the designated engineered bays.

Spill kits will immediately be deployed should any spillages occur. If deemed necessary, the area should be washed with water and/or detergent. Records of such instances will be recorded in the site diary.

All equipment used in the waste processing and waste storage bays will be subject to a planned cleaning regime as part of the site maintenance programme to remove any residual waste.

The waste processing operating procedures implemented at the site will significantly reduce the potential for odour emissions.

3.3. Physical Controls

Loose general waste will be stored internally. The storage of these wastes within a building will limit the amount of heating experienced as a result of the waste being stored out of direct sunlight. Heating of potentially odorous waste and waste containing organic compounds is a key factor in odour generation. Thereby, the storage and processing arrangements severely reduce the likelihood for the heating of waste by direct sunlight.

Whilst the buildings do not operate with a closed-door policy, the entrances and openings face away from the nearest receptors on the industrial estate. Furthermore, the transfer station shed has steel cladding fixed across part of the front of the building in order to reduce the airflow into it and any odour release.

An odour suppression system is provided at the site, it comprises a fixed rotary atomiser in the waste transfer shed, and a pacific nozzle line system that covers the waste transfer shed and external storage bays. The system disperses mist water vapour with deodoriser for control of odour. The system is fed by the mains water supply and is operated manually. This system will be used when odorous wastes have been received and/or are being processed, or where the results of site odour surveys have indicated that it may be necessary to control potential emissions. The mist will remain suspended in the atmosphere for an extended period of time ensuring maximum performance of odour control. This system is run in conjunction with water mixed with a neutralising chemical that is sprayed around the facility as a fine mist over designated areas. The diluted neutralising chemical is stored in a 1000 litre storage tank which is refilled when required.

3.4. Management Controls

Engagement with Neighbours

As required by Biffa's ISO 14001 Environmental Management System, an open communication channel with the local community and receptors who may be affected by the Site's operations will be maintained. The Site manager will liaise with neighbouring community liaison officer for the residential properties annually to determine if the Site is resulting in any level of annoyance. Appropriate contact information (e.g. telephone number and e-mail) will also be displayed at the site.

The Site will be a reliable source of information to the community and readily available to answer any questions or queries. Active participation in the community will ensure that communication channels such as emails and phone calls are welcomed, and an appropriate response is formed by the Site manager.

The Site will also operate a comprehensive complaint reporting and resolution procedure which can be utilised by members of the public and neighbours. This process is presented in Section 5.0.

Reception and Storage Operational Procedure

As outlined in Section 3.2, waste acceptance and handling procedures for the Site provide robust practices for the receipt, storage, and processing of incoming waste streams. These procedures ensure that waste arrives, is stored, and departs the site in a safe manner and reduces the likelihood for abnormal operating circumstances and related emissions (including odour).

In the event that the Site is at full capacity or non-functional, no more waste loads would be accepted.

Biffa operate similar waste facilities across the country. If required, incoming wastes would be temporally diverted to one of these facilities until storage capacity is available or activities restart.

Waste Acceptance Parameters

The waste acceptance procedures outlined in Section 3.2 provide a robust framework to prevent the acceptance of unsuitable wastes at the site. There will also be emphasis on the Duty of Care requirements undertaken as part of the overall site operation.

Should waste be malodorous upon delivery to the site, the waste will be rejected, a note will be made within the site diary and the Environment Agency will be informed at the appropriate juncture.

Minimising Evaporation of Odorous Materials

The Waste acceptance procedures outlined in Section 3.2 provide a robust framework to prevent the acceptance of unsuitable wastes at the Site.

Malodorous waste will not be accepted at the site and the site staff will prevent the offloading of such waste from delivery vehicles. The EA will be informed at the appropriate juncture should any malodorous wastes be rejected from the Site.

Containment and Abatement

It is considered that the wastes to be accepted at the site will not produce significant levels of odour, particularly with the management and pollution control methods outlined above. Primary containment of loose biodegradable waste will be provided in the form of storing waste in the main transfer station building.

Abatement of emissions will be provided in the form of the odour suppressant system which is provided at the site, it comprises a fixed rotary atomiser in the waste transfer shed, and pacific nozzle line system that covers the waste transfer shed and external storage bays. The system disperses mist water vapour with deodoriser for control of odour. The system is fed by the mains water supply and is operated manually. This system will be used when odorous wastes have been received and/or are being processed, or where the results of site odour surveys have indicated that it may be necessary to control potential emissions.

The significant majority of containment and abatement measures employed at the site are independent of power supplies (e.g. electricity). Accordingly, should there be a power failure at the site this will not impact upon the integrity of the containment and abatement systems.

Dispersion

As the wastes to be accepted at the site are not considered likely to produce significant odour emissions, it will not be necessary to conduct dispersion modelling.

Housekeeping and Routine Cleaning

The site will be subjected to a strict housekeeping regime which assists with the aim of proactive management and associated environmental compliance. Daily inspections of the site will be undertaken as part of the management procedures. Daily checks are reinforced and supported by monthly site inspections.

Routine cleaning of the relevant areas of the site, such as the reception area and storage areas will be undertaken at appropriate frequencies. The routine cleaning will be arranged to ensure there is no disruption to the continuity of operations.

Plant and Equipment

Site infrastructure and plant will be inspected daily for damage and wear by site personnel as part of daily operation and management inspections. Any defects noted during these daily inspections will be logged and reported to the site management, so repairs can be scheduled.

Records of inspections will be maintained in a site log. All plant items and equipment will be serviced and maintained according to manufacturer's schedules and recommendations to minimise the risk of breakdown. All maintenance on the plant is programmed in accordance with the manufacturer's guidelines.

Depending on the severity of the breakdown, mobile plant repairs will be undertaken by site staff or third party as soon as practicable, dependent on the availability of spares.

Responsible Reporting

As part of the operator's overall management system, reporting of relevant issues will be undertaken in accordance with the conditions of the Environmental Permit. The operator will be tasked with ensuring a level of 'self-policing' and will therefore be responsible to ensure that any matters that warrant it are brought to the Environment Agency's attention within the required timescales.

3.5. Odour Control During Abnormal Events and Maintenance Periods

Abnormal Operational Situations

The control measures to be employed during abnormal operational situations consist of similar controls to those employed during normal operating situations. The controls involve:

- Identification of malodorous waste during waste acceptance checks;
- The rejection of malodorous incoming waste loads from site;
- Agreeing waste delivery schedules prior during pre-acceptance checks;
- Identification of contingency facilities to which incoming waste could be temporarily diverted;
- The quarantine (if practicable within a container) of accepted waste which has become malodorous during time stored on site and its removal by a licensed carrier within 24 hours.

Maintenance Periods

Where planned or emergency maintenance of plant or equipment is required, and it is considered that there is a high likelihood of odour generation from specific on-site waste / processed materials during the maintenance period which could affect off site receptors, then the technically competent manager or nominated deputy will arrange for the collection and removal for the identified waste/materials from the site.

However, to reduce the likelihood of equipment breakdowns and mitigate the potential impact the following control measures will be in place:

- A preventative maintenance schedule will be employed to reduce the risk of plant breakdown;
- All maintenance undertaken will be in accordance with plant equipment manufactures recommendations;
- A list of suppliers or contractors for critical equipment and/or standby equipment will be maintained.

Biffa maintenance personnel or approved contractors can be called to the site within 24 hours in the event of any breakdown of critical plant.

4. ODOUR MONITORING AND RECORDING

4.1. Odour Monitoring

Biffa's accredited Integrated Management System includes details relating to odour monitoring procedures that have been developed and accords with accepted guidance and standards, including the

EA's document 'H4 Odour Management - How to Comply with your Environmental Permit. Due to the nature of the facility, olfactory monitoring techniques will be principally employed within the curtilage of the site and completed as part of Operational and Maintenance Daily Checks.

Additional monitoring beyond the site boundary will be completed in response to the identification of potential significant odours within the site or the receipt of complaints. All monitoring will consider the prevailing weather conditions.

Monitoring will comprise olfactory monitoring (i.e. 'Sniff' tests) with monitoring record sheets completed and filed accordingly. These tests will be carried out around the site boundary. Any odour emissions noted will result in the implementation of the Odour Management Plan protocols detailed herein. Any complaints received in relation to odour will be fully investigated as detailed in the following sections. The resultant actions will be recorded ON SD03-03 I&C Daily Site Inspection sheet (Appendix OMP1).

Further details of the proposed odour monitoring to be undertaken are provided within the following paragraphs.

Meteorological Conditions

Meteorological forecasts and weather conditions (including atmospheric pressure, wind speed and wind direction) are monitored and recorded daily to enable potential odour problems to be predicted and necessary remedial actions to be implemented.

Regular Inspection / Olfactory Monitoring

Odour monitoring will be undertaken to assess how successful the operational management and mitigating control measures are at the facility and to identify, if necessary, whether odour is causing a potential nuisance to ensure that appropriate remediation measures are adopted early.

It is important to ensure that those odours that may be attributable to the permitted facility are those ones being monitored for.

All site personnel will be responsible for reporting any odour problems as soon as reasonably possible to the Site Manager / TCM or the next level of management if the Site Manager is not available.

The Site Manager / TCM will ensure that daily inspections are made of the Facility and its perimeter in order to identify any sources of odour and to establish whether any odours that are attributed to site operations are discernible at the perimeter of the Facility.

Monitoring will be carried out by staff whom have had limited exposure to operational areas of the site to minimise the risk of inspection being carried out by staff that may be suffering from odour fatigue.

Odour Monitoring at the Facility will consist of the items outlined in Table 2 below.

Table 2: Odour Monitoring Proposals

Parameter	Monitoring Technique	Frequency
Meteorological Monitoring	Appropriately obtained meteorological data	Continuous
Olfactory Monitoring ('sniff' test)	Site perimeter and offsite checks (towards the identified sensitive receptors)	Minimum of 1 per day
Complaints Monitoring	Telephone or written representations direct from the public or via the regulatory authorities	Ad-Hoc

Should operational experience / complaints show that odour is becoming increasingly problematic, monitoring frequencies should be reviewed and revised as appropriate.

4.2. Olfactory Monitoring

If significant odours are identified around the periphery of the site, olfactory monitoring will be extended beyond that boundary to determine the extent of any impact and in consideration of the presence of a sensitive receptor and wind direction. The location of monitoring will also depend on the location of any complaints received at the Site with the monitoring results recorded in the site diary.

Olfactory monitoring or 'sniff' testing will be conducted in accordance with the recommendations detailed in the Environment Agency's H4 Guidance, which includes the avoidance of strongly scented foods, drinks and deodorisers or toiletries etc for at least half an hour prior to the monitoring. In addition, individuals suffering from a cold, sore throat or sinus problems that may impair their ability to detect odours will not undertake the monitoring. Likewise, the olfactory monitoring will be undertaken by employees that have not been desensitised by exposure to malodours during their normal job practices. The designated person will exit their vehicle and remain in the locality for a minimum of 1 minute whilst breathing normally. Any external activities that may contribute to odour generation in the surrounding area will also be noted together with weather conditions (including wind direction and speed) and then an assessment of the intensity of the odour will be made using the guide below:

Intensity Scale

0 - No detectable odour

1 - Very faint odour (only just detectable)

2 - Faint odour (barely detectable, need to stand still and inhale facing into the wind)

3 - Distinct odour (detected while walking and breathing normally)

4 - Strong odour (easily detected while walking and breathing normally, possibly offensive)

5 - Very strong odour (bearable, but offensive)

6 - Extremely strong odour (not bearable)

In the event odour is detected above an intensity scale of 3 (Distinct Odour), the site management will be informed immediately, and the approximate location and extent of the odour plume will be assessed, and site operations reviewed / suspended. However, it is not simply the intensity that is being assessed, as consideration will also be given to the FIDOR (Frequency of detection, Intensity, Duration, Offensiveness and Receptor sensitivity) principle such that, for example, a long duration lower intensity odour or very offensive short duration event will both be assessed and investigated.

Unlike the olfactory odour assessment completed as part of the Operation and Maintenance Daily Checks, any odour assessments undertaken in response to the detection of an odour intensity ranking of 3 (Distinct Odour) or above OR as a result of an external complaint will be completed using the Odour Assessment Report presented in Appendix OMP2.

4.3. Odour Diaries and Community Surveys

Full records will be kept with regards to a range of incidents that may occur in relation to the site activities.

The main SD03-03 I&C Daily Site Inspection sheet (Appendix OMP1) will be used to record the status of the operation and its emissions in relation to odour. This will act as a site-wide document confirmation that odour monitoring has been undertaken and summarises the conclusion of that exercise.

On review of meteorological data and any complaints received, should a clear pattern emerge, community surveys will be undertaken at set intervals with frequency proportionate to the risk from said emissions posed. These surveys will be a more detailed assessment of specific locations within the receptor areas identified. These surveys will be made available as required as part of on-going community liaison commitments.

5. COMPLAINTS HANDLING

5.1. Complaints Process

Any complaints received at the Facility or via the Regulatory bodies (including the Environment Agency and Local Authority) will be recorded and will instigate further olfactory monitoring at the location of

the complaint and onsite to determine the extent and location of the plume and the odour causing materials and/or process will be identified.

Where possible, as much information and detail about the complaint will be recorded, whether this be from the relevant authority or complaint direct to the site. This information will assist in the investigation and determining the source of the odour.

5.2. Means of Contact

The facility will be readily contactable to outside organisations and to members of the public. The site signage board (placed in a visible location) will contain the necessary details for both the site operations and the Environment Agency, including contact details and the site permit number.

As part of the facility operation and development, a community engagement plan will be developed if found to be necessary, the purpose of which would be to identify all sensitive receptors and formulate a communications plan. The community engagement plan will detail the complaints management and reporting procedures, this will include, but will not be limited to:

- Information provided to the local neighbours (via the Environment agency) regarding the point and method of contact for the Facility in the event an odour has been detected or they want to discuss any activities etc at the facility;
- Advice provided to the neighbours that any complaints / concerns will be addressed immediately following identification / notification and contingency action implemented; and
- The neighbours will be informed of any corrective action and a follow up call will be carried out if necessary.

Any complaints received directly to the site will be notified to the Regulator as soon as possible.

Therefore, should an off-site issue arise, the complainant has a means of getting in touch with the operator. Biffa will complete a Complaint Form to ensure that there is a record of details, including but not limited to the following:

- The complainant's name and contact information;
- The date and time of the complaint;
- The weather conditions at the time of the complaint (including the temperature and wind strength and direction at that time);
- The complainant's description of the odour;
- The results of the latest olfactory monitoring;
- The operating conditions at the time of the complaint; and
- Any other relevant information.

Biffa's electronic complaints system facilitates reporting, tracking, follow up and identification of trends.

5.3. Complaint Recording

Should a complaint be received, the following information will be gathered and recorded:

- Complaint details (including the address of the complainant where possible) and the location where odour is perceived;
- Weather conditions including atmospheric pressure, wind speed and wind direction;
- Results of the latest olfactory monitoring carried out by the site personnel;
- Operational status of the facility (noting any abnormal conditions that may have caused the complaint); and
- Details of the proposed corrective action if required.
- Subsequent follow up to the complaint detailing whether the corrective action, if required, was successful. If not, a new strategy will be implemented until the issue is resolved.

Records of complaints received (i.e. completed electronic Complaint Forms) will be kept on Biffa's internal computer system and can, therefore, be accessed in the site office for inspection and reviewed by both internal and external personnel.

5.4. Complaint Screening

As part of each odour complaint received, these will be objectively assessed against the wider environment to ensure that the source of the emission is traced back to the correct source. As discussed earlier in this OMP, it is essential that the source is correctly identified in order that mitigating measures can be applied effectively and correctly. The complaint will also be assessed against previous records to place the nature of the complaint into context.

5.5. Complaint Investigation

In the event that odour is found to be causing a problem at the site, as determined and confirmed by investigation into off site complaints or during routine monitoring, measures will be taken to determine the source, and the following courses of action shall be taken:

- Additional olfactory monitoring as detailed above to identify the extent of the plume and potential cause of the odour i.e. waste material and / or process activity;
- Examination of the operational activities at the site at the time of the odour complaint or odour identification;
- Examination of the meteorological conditions at the time of the complaint or odour identification;
- Examination of the process conditions via the plant operational records / telemetry;
- A review of the operational procedure and process controls and the instigation of any control measures immediately following identification of the problem; and
- Further olfactory monitoring will be carried out to ensure the issue has been addressed and to monitor the effectiveness of any control measures undertaken.

It is the operator's experience that complaints submitted to regulatory authorities can be made long after the actual odour event or delayed in their relay to the Permit holder for actioning thereby making some investigations difficult due to the often-transient nature of odour or changing meteorological conditions. All complaints will be investigated, however, direct calls to site from complainants will allow for an immediate response and review.

6. ACTIONS, CONTINGENCIES & RESPONSIBILITIES DURING PROBLEM EVENTS

6.1. Default Procedures

In the event that an emission of odour is identified during the normal course of operations, either through daily routine monitoring, or in response to off-site complaints, the default procedure will be to investigate the emission in line with Section 5.5 above which is an appropriate response to both off site complaints as well as on site investigations following on from routine inspections.

It is the responsibility of the site management team (Site Manager / TCM) to ensure procedures of the Odour Management Plan as set out are put into action.

6.2. Emergency Procedure

Monitoring for odorous emissions will be undertaken during a time in which extreme release of odour is experienced e.g. delivery of material to site, transfer and removal off site of wastes. Odour masking agents can be utilised if necessary and operations which may lead to increased odour release will be temporarily stopped.

Consideration will also be made as to suspension of receipt of potentially odorous wastes and/or the removal of waste from the site (if required).

6.3. Event Reporting

In the event of any significant environmental emergency / incident, a representative of Biffa will notify the EA by telephone immediately but first having due regard for the incident at hand and any remediation actions required to ensure the safety of site personnel and the immediate environment.

Details of any environmental incident will be confirmed to the EA via telephone and in writing by email, on the next working day after identification of the incident. This confirmation will include: the time and duration of the incident, the receiving environmental medium or media where there has been any emission as a result of the incident, an initial estimate of the quantity and composition of any emission, the measures taken to prevent or minimise any further emission and a preliminary assessment of the cause of the incident.

Any incident notified to the EA will be investigated, and a report of the investigation sent to the EA. The report will detail, as a minimum, the circumstances of the incident, an assessment of any harm to the environment and the steps taken to bring the incident to an end. The report will also set out proposals for remediation (if appropriate) and for preventing a repetition of the incident.

All incidents in relation to odour will be subsequently recorded on Biffa's Company Compliance Database.

6.4. Problem Resolution

Once the identified problem has been rectified, a report will be prepared assessing the nature of the incident, the actions taken to resolve, and what changes could be made to the operational practises that would ensure, wherever possible, that the issue had less of a chance of arising in future.

This information will be provided to the Environment Agency in accordance with the Event Report procedures discussed in Section 6.3 above. Any improvements or amendments to operational practices will be discussed with the Environment Agency prior to their implementation.

7. CONCLUSION

This document will be subject to on-going review and revision where necessary. This review will be undertaken in response to events which may occur on site, and also to ensure that it accords with the latest regulations and associated guidance documents. The review of the OMP for the site will occur at least once per annum.

All revisions to the document will be recorded and details of said revisions will be described as part of the required record relating to document review. This is a requirement in any event as part of Biffa's Quality and Environmental Management Systems and procedures.

It is considered that this document complies with the Environment Agency's H4 Guidance Document on Odour.