



**ODOUR MANAGEMENT PLAN**

**MERIDEN WASTE TRANSFER STATION**  
**CORNETS END LANE**  
**MERIDEN**  
**COVENTRY**  
**CV7 7LG**

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**Project Quality Assurance  
Information Sheet**

**ENVIRONMENTAL PERMIT APPLICATION – ODOUR MANAGEMENT PLAN  
MERIDEN WASTE TRANSFER STATION, CORNETS END LANE, MERIDEN, COVENTRY, CV7  
7LG**

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**BIFFA WASTE SERVICES LTD  
MERIDEN WASTE TRANSFER STATION  
CORNETS END LANE,  
MERIDEN,  
COVENTRY,  
CV7 7LG**

**ENVIRONMENTAL PERMIT APPLICATION**

**ODOUR MANAGEMENT PLAN**

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## 1.0 INTRODUCTION

### 1.1 Scope & Background

1.1.1 Sirius Environmental Limited (Sirius) has been commissioned by Biffa Waste Services Limited (Biffa) to prepare an Environmental Permit Application for a Waste Transfer Station (WTS) at their proposed site located at Cornets End Lane, Meriden, Coventry, CV7 7LG. The site location is shown on **Drawing Reference No.: BF5066/12/01**.

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

- Environmental Permitting (England and Wales) Regulations 2016.
- Environmental Permitting Core Guidance (DEFRA, Updated March 2020).
- General Environment Agency Guidance
- Best Available Techniques (BAT) Reference Document (BREF) for Waste Treatment (August 2018);
- Environment Agency Document H4 – Odour Management.

1.1.1 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.

1.1.2 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.

1.1.3 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 Setting

1.2.1 The WTS will operate from a site located off Cornets End Lane, Meriden, CV7 7LG. The National Grid Reference (NGR) for the site is SP 23044 81103. The site location has been depicted in **Drawing No. BF5066/12/01**.

1.2.2 The site itself currently comprises two buildings; one of which will form the waste transfer station for the reception, storage and treatment of wastes, and another which will contain the site offices and welfare facilities. The WTS building also comprises a maintenance and repair workshop. The associated external areas

comprise the surface water attenuation pond, staff car and Refuse Collection Vehicles (RCVs) parking areas, staff welfare facilities, as well as rainwater tanks and sprinkler pumps for fire suppression. The area to the east of the environmental permit boundary will be used for the parking of RCVs associated with Biffa's Industrial and Commercial waste collection services fleet of vehicles (this activity is not required to be permitted and is within the lease area). Entrance and egress to and from the site for heavy good vehicles is via a junction off a private road that provides access to the adjacent quarry, which junctions with Cornets End Lane to the southwest of the site. The site entrances are gated and will be locked outside of operational hours. Palisade fencing surrounds the site perimeter.

- 1.2.3 The proposed permitted boundary area is depicted in **Drawing No.: BF5066/12/02**. The site is bounded to the north by Cornets End Lane, beyond which lies an operational quarry and the associated mineral processing and product manufacturing plants and buildings. To the east, beyond the RCV parking area, lies undeveloped land and 'Midland Mix Concrete', a ready-mixed concrete producer. Cornets End Lane is located along the site's southern boundary, beyond which lies an operational and partially restored Berkswell Quarry and Landfill facility. The land to the west of the site is occupied by undeveloped land and trees, beyond which lies Cornets End Lane, a road-side café within a storage container named 'Rachel's Café' and a Pet Boarding Service (In The Doghouse (Solihull) Limited).
- 1.2.4 The village of Meriden is located approximately 1.6km to the north-east of the site, the outskirts of Coventry lie ~7.8km to the east, Solihull is located ~7.8km to the west and the junction of Cornets End Lane and the A452 is ~ 1km north-west of the site. The site lies within an area subject to extensive sand and gravel extraction (and associated restoration), together with agricultural land and Golf Courses, namely North Warwickshire Golf Club which is ~ 370m to the north of the site, as well as Stonebridge Golf Club and Midlands Golf Stonebridge, which lie approximately 1.2km and 1.7km to the north-northwest of the site respectively.
- 1.2.5 The closest residential properties are Keepers Cottage at a distance of approximately 115m to the east-southeast of the site boundary, Cornets End Farm ~310m to the east and Hornbrook Farm c. 530m to the west. The remainder of the surrounding area is occupied predominantly by agricultural land.
- 1.2.6 The local topography is relatively flat with a gently undulating landscape.
- 1.2.7 The site does not lie within 2km of an Area of Outstanding Natural Beauty (AONB), Local Nature Reserve (LNR), National Nature Reserve (NNR), Ramsar site, Site of Special Scientific Interest (SSSI), Special Protected Area (SPA), Special Area of Conservation (SAC) or a Source Protection Zone (SPZ).
- 1.2.8 There are five ancient woodlands situated within 2km of the site. These include The Sommers woodland ~880m north-northwest of the site, The Bogs woodland ~1km south-east and ~1.2km south, Siden Hill Wood c. 1.6km west-southwest and Garden Wood c. 1.6km south-southeast. Deciduous woodland is also present within 2km in all directions, the closest of which lies approximately ~15m north-west of the site boundary at its closest point and extends west and north of the site. These deciduous woodlands are designated as priority habitats.
- 1.2.9 The site does lie within a Nitrate vulnerable Zone (NVZ). These are defined as areas designated as being at risk from agricultural nitrate pollution. The

designations are made in accordance with the Nitrate Pollution Prevention Regulations 2015.

### 1.3 Site Operations

1.3.1 Biffa propose to operate a non-hazardous Waste Transfer Station (WTS) which will principally accept industrial and commercial waste for sorting and bulking pending onward transfer. The proposed Environmental Permit boundary is shown in **Drawing No. BF5066/12/02**.

1.3.2 The maximum tonnage of permitted non-hazardous waste to be accepted and processed at the facility during any one year shall not exceed 50,000 tonnes. The site will receive wastes that fall within three broad categories:

- *General Waste*
- *Dry Mixed Recyclates (DMR)*
- *Construction & Demolition Wastes (CDW)*

1.3.3 Waste treatment will be limited to manual and plant assisted sorting and bulking only. All wastes will be handled within a fully enclosed building.

1.3.4 The proposed Waste Transfer Station (WTS) will operate according to Biffa's written Standard Operating Procedures (accredited to ISO14001).

1.3.5 All Standard Operating Procedures are regularly reviewed and updated (where required) to ensure Best Operational Practice. Copies of all Standard Operating Procedure documents are maintained electronically and can be accessed via the Biffa Waste Services Intranet system.

1.3.6 An overview of how the Standard Operating Procedures control odour emissions is presented in **Section 3**.

1.3.7 The site will operate under Biffa's own Environmental Management System which is externally certified under ISO14001. 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.

1.3.8 The EA will be informed of any proposed changes to the technical competence arrangements.

#### Operational Hours

1.3.9 Operations associated with the waste transfer station are proposed to take place within the building between the hours of 07:00 hrs and 23:00 hrs, 7 days per week.

1.3.10 Maintenance of plant and equipment will be undertaken during normal operational hours only, i.e. between 07:00 hrs and 19:00 hrs.

1.3.11 The operator will not undertake any activities associated with the proposed waste transfer activities outside of the agreed hours of operation (i.e. 07:00hrs – 23:00 hrs), 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

- 1.3.12 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.
- 1.3.13 The Site Operations Manager 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.
- 1.3.14 Should an off-site fugitive odour emissions complaint be received, it is the Site Operations Manager'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.
- 1.3.15 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.
- 1.3.16 A summary of odour control techniques is provided in **Section 3.0**.

## **1.4 Sensitive Receptors**

- 1.4.1 The village of Meriden is located approximately 1.6km to the north-east of the site, the outskirts of Coventry lie c.7.8km to the east, Solihull is located c.7.8km to the west and the junction with the A462 is c.1km north-west of the site. The site lies within an area subject to sand and gravel extraction, together with rural and agricultural land with scattered residential properties.
- 1.4.2 A full list of potential sensitive receptors to dust and other emissions (such as nitrogen dioxide from combustion sources including generators, road vehicles and mobile plant) within 1km of the facility are listed in **Table OMP1**. Their locations are illustrated in **Drawing No.: BF5066/12/05**.



**Table OMP1: Identified potential sensitive receptors to odour emissions within 1km of the proposed facility**

Receptor Name	Receptor Type	Approximate distance from the site boundary (m)	Direction from the facility	Potentially Sensitive Receptor to Potential Odour Emissions? (Y/N)
Secondary B Bedrock aquifer – Mercia Mudstone Group  Secondary A Superficial aquifer – Glaciofluvial deposits, mid Pleistocene – Sand & Gravel	Groundwater	0m	Underlies the site and surrounding areas	N
Industrial Premises	Commercial / Industrial	Adjacent– 1km	NE, E, SE, S, W & NNW.	Y
Local infrastructure e.g. Cornets End Lane, Hampton Lane (B4102), Kenilworth Road (A452) & Somers Road	Highways	Adjacent -1km	N, S & W	N
Rural	Agricultural, woodland, fields	Adjacent – 1km	All directions	N
Surface water features	Ponds, streams, drains	50m – 1km	All directions	N
Keepers Cottage	Residential Property	115m	ESE	Y
Cornets End Farm	Residential Property	310m	E	Y
Mercote Mill Farm	Residential Property	510m	SW	Y
Hornbrook Farm	Residential Property	530m	W	Y
Unnamed scattered residential properties	Residential Properties	515 – 590m	NW, NNW & SE	Y
Park Farm Cottage	Residential Property	700m	SE	Y
Park Farm House	Residential Property	695m	S	Y
Holloway Farm	Residential Property	1km	SE	Y
North Warwickshire Golf Course	Golf Course	370m	N	Y
The Sommers	Caravan Site	890m	N	Y
Priority Habitat	Deciduous Woodland	15m – 1km	N, E, SE, SE, W & NW	N
The Sommers	Protected Habitat -- Ancient Woodland	880m	N	N

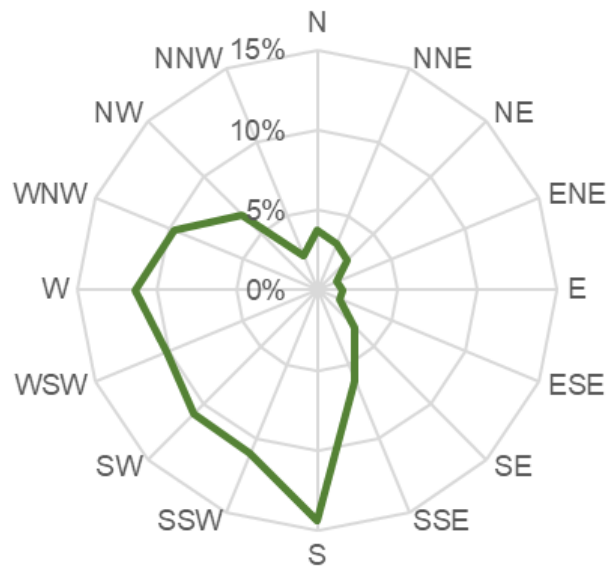
1.4.3 The site is situated approximately 3.2km west of the nearest designated Air Quality Management Area (AQMA) for Nitrogen Dioxide (NO<sub>2</sub>) and any potential emissions from the operation of the facility are considered unlikely to impact upon this AQMA. The site also does not lie within a Nitrate Vulnerable Zone (NVZ) as designated by DEFRA and the Environment Agency for Surface and Groundwater. The site is not within a Source Protection Zone (SPZ) for groundwater.

## 1.5 Meteorological Conditions

- 1.5.1 The Fugitive emissions of odour from the site could be affected by local weather conditions, in particular wind direction and rainfall.
- 1.5.2 The closest meteorological recording station to the site is Birmingham Airport, which lies 5.5 km north-west of the site (International Civil Aviation Organisation (ICAO) Airport Code: EGBB) The National Grid Reference NGR for Birmingham Airport is SP 17505 84071. This weather station is deemed the most appropriate for use in order to characterise the site due to its proximity to the site. Wind patterns at the Birmingham Airport Station are likely to be similar to those experienced at the site.
- 1.5.3 Data from the RenSMART wind data archive, for a 10-year period between 2000 and 2010 has been utilised for the Birmingham Airport Station in order to typify the meteorological conditions likely at the site. The wind rose, as shown by **Figure OMP1** shows the percentage of wind vector that could be generated in each of the 16 points of a compass.
- 1.5.4 The wind rose indicates that the predominant wind directions are from the south-western quadrant, which makes up ~46.5% of the winds. It can be observed from **Figure OMP1** that the wind will be blowing primarily from the south.

**Figure OMP1: Wind Rose for Birmingham Airport Meteorological Recording station between 2000 - 2010 inclusive (Source: RenSMART)**

Direction	Percentage
N	3.78%
NNE	3.15%
NE	2.61%
ENE	1.35%
E	1.60%
ESE	1.52%
SE	3.29%
SSE	6.12%
S	14.43%
SSW	10.99%
SW	10.88%
WSW	10.20%
W	11.41%
WNW	9.73%
NW	6.63%
NNW	2.31%



## 2.0 ODOUR SOURCE INVENTORY

### 2.1 Odour Sources

2.1.1 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.: BF5066/07*). 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.

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

2.1.3 **Table OMP2** identifies the potentially odorous waste codes proposed to be permitted at the site.

2.1.4 Details relating to the storage arrangements of potentially odorous wastes are summarised in **Table OMP3**. The characteristics of odours that could be generated at the site will be variable depending on the type, condition and age of the wastes.

2.1.5 The remaining wastes which are stored on site include non-biodegradable wastes which are considered to have negligible odour generating potential.

2.1.6 Due to the internalised operations at the site, the potential for odour emissions is significantly reduced. Despite this, activities where there is potential for odour release are listed in **Sections 2.2 – 2.4**.

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

### 2.2 Normal Activities Involving Odour Sources

2.2.1 The normal activities involving the sources of odour would include:

- Waste Acceptance & Delivery – Visual Inspection / Sampling & Vehicle Waiting
- Waste bulking/storage and sorting

2.2.2 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.

### 2.3 Maintenance Activities Involving Odour Sources

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

- Waste storage cleansing – this includes the internal processing/offloading areas or storage areas.

- Building Fabric Maintenance – this could include maintenance on building access and egress points (vehicle / plant and personnel doors) which results in pathways for fugitive emissions which are not normally present.
- Drainage Maintenance and Cleansing – clearing blocked channels, drains and ensuring the small sump on site is regularly emptied and cleansed to prevent additional point sources of odour.

## 2.4 Accidents / Incidents Involving Odour Sources

2.4.1 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.: BF5066/07*).

2.4.2 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.

2.4.3 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 and when necessary.

## 2.5 Location of Potentially Odorous On-Site Activities

2.5.1 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 areas on site that have the greatest potential to be the location of unacceptable emissions are the waste storage and processing areas within the WTS building.

2.5.2 Potential odour emissions from these areas will be mitigated by conducting these activities within an enclosed building with roller shutter doors and a 'closed door policy'. The buildings roller shutter doors will only be opened for access and egress of delivery and dispatch vehicles. During waste unloading and treatment in the form of manual and plant assisted sorting and bulking the doors will remain closed. Therefore, the risk of odour emissions that may cause a nuisance to nearby receptors emanating from the WTS building is low. In the event that an issue with fugitive odour emissions is experienced, the offending waste will be removed from the site as soon as reasonably practicable and stored in the quarantine container if practicable in the intervening period.

2.5.3 The WTS building is equipped with a central channel drain which directs any run-off generated in the storage bays or processing areas into a sealed sump which will be pumped to enable the contents to be tankered for transfer off-site to an appropriate facility. This will prevent any run-off generated from leaks and spills separate to the wider drainage system.

2.5.4 The locations of the internal storage and processing areas are illustrated on **Drawing No.: BF5066/12/03** and the drainage layout is presented in **Drawing No.: BF5066/12/04**.

## **2.6 Potentially Odorous Off-Site Sources**

- 2.6.1 The site is surrounded by industrial and commercial premises, as well as agricultural land. These include a quarry ~70m north-east of the site, concrete and building materials suppliers, a pet boarding service and a café. These are all highly unlikely to result in fugitive odour emissions. Similarly, the scattered residential properties and public and private roads are also unlikely to generate fugitive odour emissions.
- 2.6.2 However, there are land uses near to the site which may result in fugitive odour emissions. There is a quarry landfill operated by CEMEX which lies ~255m south-west of the site, two recycling centres ~345m and ~350m north-east and south-west of the site respectively and a sewage treatment works situated ~810m north-east of the site. Furthermore, the agricultural land may result in odour emissions during activities such as manure spreading.

**Table OMP2: Identified Potential Odour Sources**

Source Description				Likely Odorous Compounds	Containment/ Release Point	Odour Description	Intensity at/or Near Release Point	Pattern of Release	Potential
Source	Type of Emission	Type of Waste	Odour Risk						
Waste acceptance, sorting, storage/bulking and dispatch	Fugitive	<b>02</b> - Biodegradable / putrescible leafy vegetation and animal products: 02 01, 02 02, 02 03, 02 05, 02 06	High	Odours associated with the decay of organic materials contained in incoming waste.	Internal haul routes and waste storage and sorting areas with the waste transfer building.	Variable depending on the composition and age of waste	Odour is expected to be noticeable, but only in close proximity to the vehicle (<1m)	Intermittent release, near to ground level	Only if load received contains a large proportion of decaying organic material.
	Fugitive	<b>02</b> - Soils, woody vegetation and materials unsuitable for consumption: 02 04, 02 07	Low-Medium	Odours associated when received in wet condition or if contaminated.		Variable depending on the composition and age of waste	Dependent on proportion of putrescible components present.  Odour is expected to be noticeable, but only in close proximity to the vehicle (<1m)	Intermittent release, near to ground level	Only if load received contains a large proportion of decaying organic material.
	Fugitive	<b>04</b> – Waste from textile treatment with odour potential: 04 01, 04 02	Low-Medium	Odours associated with the treatment of textiles, e.g. materials soaked in dyes etc.		Variable depending on the composition and age of waste	Dependent on proportion of odorous components present.  Odour is expected to be noticeable, but only in close proximity to the vehicle (<1m)	Intermittent release, near to ground level	Only if load received contains a large proportion of decaying organic material.

Source Description				Likely Odorous Compounds	Containment/ Release Point	Odour Description	Intensity at/or Near Release Point	Pattern of Release	Potential
Source	Type of Emission	Type of Waste	Odour Risk						
	Fugitive	<b>15</b> – Waste packaging with potential contamination via putrescible products (e.g. food tins): 15 01, 15 02.	Medium	Odours associated with the decay of residual organic materials contained in incoming waste		Variable depending on the composition and age of waste	Dependent on proportion of putrescible components present.  Odour is expected to be noticeable, but only in close proximity to the vehicle (<1m)	Intermittent release, near to ground level	Only if load received contains a large proportion of decaying organic material.
	Fugitive	<b>20</b> – Highly biodegradable / putrescible e.g. leafy vegetation: 20 01, 20 02, 20 03	High	Odours associated with the decay of organic materials contained in incoming waste		Variable depending on the composition and age of waste	Odour is expected to be noticeable, but only in close proximity to the vehicle (<1m)	Intermittent release, near to ground level	Only if load received contains a large proportion of decaying organic material.

Source Description				Likely Odorous Compounds	Containment/ Release Point	Odour Description	Intensity at/or Near Release Point	Pattern of Release	Potential
Source	Type of Emission	Type of Waste	Odour Risk						
Water Drains / Sumps (run-off from storage or processing bays)	Fugitive	N/A	Low	Odours associated with effluent draining from incoming waste which is collected in the internal sealed drainage system.	Drainage covers	Odour should be marginal	Any odour detected will only be in close proximity to the drainage gratings / covers (<1m)	Intermittent release, near to ground level	<p>The WTS building will be fitted with a dedicated drainage system.</p> <p>No liquid waste will be accepted at the site.</p> <p>All drainage systems will be inspected regularly for integrity and liquid levels and emptied to an appropriately permitted facility.</p> <p>This approach means that water is unlikely to stagnate.</p>



**Table OMP3: Waste Type Storage Arrangements**

Type of Waste	How is the material stored?	Age of waste upon receipt	Maximum Storage Time	Management Arrangements
All waste	Stored within the appropriate internal storage bay (general waste, dry mixed recyclates or construction and demolition waste bays) over an impermeable surface with sealed drainage.	Waste will typically be up to 2 weeks old upon arrival at the site. Malodorous waste will be rejected.	Putrescible waste (general waste) will be typically stored for up to 2days, and up to a maximum of 3 days when over a bank holiday weekend. Dry mixed recyclables will typically be stored for 2 days, up to a maximum of 5 days. The maximum storage time for non-putrescible waste (construction and demolition waste) will be 6-months.	<ul style="list-style-type: none"> <li>• All loads will be inspected upon delivery, any malodorous wastes will be identified and rejected if required;</li> <li>• Daily visual and olfactory inspections carried out;</li> <li>• Waste is to be stored internally in storage areas at the site which will aid in controlling odour emissions.</li> <li>• Activities to be carried out by trained operatives;</li> <li>• Waste is to be unloaded and handled internally in the waste processing area which will aid in controlling odour emissions.</li> <li>• All storage bays will be managed to ensure full stock rotation is attained. This will be achieved by filling bays systematically, for example from left to right, to ensure that the older waste will always be on the same side. This will enable the emptying of the bay to commence with the older waste. This will also ensure that new waste is not placed on top of older waste. Incoming general waste and DMR will not be tipped over wastes that have already been on site for more than 2 days. The Site Operations Manager or nominated deputy will be responsible for managing the rotation of waste.</li> <li>• Good housekeeping standards (incl. spillage kits) will ensure that the site areas are kept clean to remove and waste spillages waste;</li> </ul>

### **3.0 ODOUR CONTROL MEASURES**

#### **3.1 Source-Pathway-Receptor Model**

3.1.1 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.: BF5066/07*) prepared for the site.

#### **3.2 Process Controls**

##### Pre-Acceptance

3.2.1 The Site operates according to the written Standard Operating Procedure (SOP) for the Pre-Acceptance of waste.

3.2.2 The purpose of this SOP 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.

3.2.3 Additionally, this SOP 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.

3.2.4 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

3.2.5 The Site operates according to the written Standard Operating Procedure for waste acceptance.

3.2.6 The purpose of this SOP 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.

3.2.7 The SOP for Waste Acceptance details the waste offloading, waste acceptance and reception area storage procedures utilised at the Site.

3.2.8 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 bay.

3.2.9 Waste will be delivered to the site within fully enclosed or sheeted Heavy Goods Vehicles (HGV's) which will be directed straight into the Waste Transfer Station (WTS) building for inspection and unloading. Therefore, any potential odour emissions will be contained either within the delivery vehicles or within the WTS Building.

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

3.2.11 The Site will implement the Standard Operating Procedure for Non-Conformance and Waste Rejection which details the assessment and action processes undertaken at the Site.

Malodorous Wastes

3.2.12 Visual and olfactory inspections of wastes will be carried out by trained site staff during the waste reception process. Any significantly malodorous wastes will be prevented from being offloaded and removed from site. A record of any such incidents will be made in the site diary.

3.2.13 If the carrier has left the site it will be stored within the most appropriate storage area and marked as quarantine pending offsite removal.

3.2.14 Materials that require quarantine but are suitable for site will be quarantined within a storage bay of the same waste category (i.e. general waste, construction and demolition waste or dry mixed recyclates. Materials in quarantine will be accepted or rejected within 2 working days in line with Biffa's Standard Operating Procedures.

Waste Storage & Treatment

3.2.15 Following the successful completion of the waste-acceptance checks, incoming non-hazardous waste will be directed to the storage areas within the WTS building. The wastes received will fall and be stored within three general categories; general waste, dry mixed recyclates (DMR) and construction and demolition waste (CDW). Waste may be storage and segregated in smaller piles/containers of varying material types if appropriate.

3.2.16 Waste will either be tipped directly into the waste bay or immediately in front of the bays pending treatment. Any materials tipped in front of the bays will be cleared before the end of the working day.

3.2.17 The internal tipping and storage areas comprise impermeable engineered surface and a sealed drainage system.

3.2.18 Waste may undergo manual and plant assisted ('totting') 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.

3.2.19 The maximum capacity of each of the storage bays as well as the maximum storage durations are summarised in **Table OMP2**, below.

**Table OMP4: Maximum Storage Bay Capacities and Storage Duration Periods**

Waste Description	Maximum Storage Capacity (m <sup>3</sup> )	Maximum Storage Capacity (tonnes)	Maximum Storage Period
General Waste	470	470	3 days
Dry Mixed Recyclates	300	150	3 days
Construction and Demolition Waste <sup>1</sup>			
• Combustible, or	290	290	6 months
• Non-Combustible	435	870	6 months

<sup>1</sup> – non-combustible CDW will be stored to full bay height of 3m. Combustible CDWs will be stored with a 1m freeboard level

3.2.20 The waste storage bays are shown on the site's indicative operational layout in **Drawing No.: BF5066/12/03**.

- 3.2.21 The waste storage procedures will accord with Biffa's Standard Operating Procedures for the storage of waste in transfer stations.
- 3.2.22 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 e.g. over-drumming / re-drumming taken to deal with leaks etc noted in the site diary.
- 3.2.23 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 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.
- 3.2.24 Olfactory odour assessments will also be undertaken as part of Daily Site Inspections. If an odour intensity of 3 or above is recorded (odour intensity scale is detailed in **Section 4.1.14**), then appropriate odour source investigation and remediation arrangements will be made.
- 3.2.25 The enclosed nature of the waste storage and the presence of an Air System (ProSonic or similar) for odour suppression combined with the adopted standard operating procedures are considered to significantly reduce the likelihood of odour emissions.
- 3.2.26 Waste Processing activities at the site are outlined in their Standard Operating Procedures. The purpose of the SOP's 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 (manual sorting and bulking only) and stored, the risk of incompatible mixed wastes resulting in a reaction which could produce odour is negligible.
- 3.2.27 Bulking will be undertaken in cognisance to the prior compatibility assessment undertaken during waste reception. Wastes of the same category, i.e. general waste, construction and demolition waste and dry mixed recyclates will be subsequently bulked together in the designated engineered bays.
- 3.2.28 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 kept.
- 3.2.29 All equipment used in the waste processing will be cleaned after use to remove any residual waste. Empty waste storage bays will also be cleaned thoroughly following waste dispatch, prior to the acceptance of more waste.
- 3.2.30 The waste processing operating procedures implemented at the Site will significantly reduce the potential for odour emissions.

### **3.3 Physical Controls**

- 3.3.1 All waste will be stored in bays within the enclosed WTS building with roller shutter doors which will operate under a 'closed door' policy whereby they will only be opened for access and egress of delivery vehicles. This will provide primary containment for any potential odour emissions.

### Roller Shutter Doors

- 3.3.2 The fast-acting roller shutter doors will be closed at all times, other than to allow access and egress to delivery and dispatch vehicles. This 'closed door' policy and the containment of the building will ensure the risk of fugitive odour emissions from the site is as low as possible.

### Building

- 3.3.3 An Air System (ProSonic or similar) will be implemented for odour suppression. This system will provide customised odour control by atomising a mixed solution of an odour and dust control agent with air and water to produce an ultra-fine almost dry mist with exceptionally small droplet sizes. The ultra-light mist will remain suspended in the atmosphere for an extended period of time ensuring maximum performance of odour control.
- 3.3.4 The storage of waste within a building will also 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 VOC's and SVOC's 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.

## **3.4 Management Controls**

### Engagement with Neighbours

- 3.4.1 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 Operations Manager will liaise with neighbouring residential properties every quarter for the first year of operation, and annually thereafter 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.
- 3.4.2 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 Operations Manager.
- 3.4.3 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

- 3.4.4 As outlined in **Section 3.2**, Standard Operating Procedures are in place for the Site and 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).
- 3.4.5 In the event that the Site is at full capacity or non-functional, no more waste loads would be accepted.
- 3.4.6 Biffa operate similar waste facilities across the country. If required, incoming wastes would be temporarily diverted to one of these facilities until storage capacity is liberated or activities restart.

Waste Acceptance Parameters

- 3.4.7 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.
- 3.4.8 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

- 3.4.9 The Waste acceptance procedures outlined in **Section 3.2** provide a robust framework to prevent the acceptance of unsuitable wastes at the Site.
- 3.4.10 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

- 3.4.11 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 will be provided in the form of storing waste within an enclosed building. Abatement of emissions will be provided in the form of the Air System which will atomise an odour control agent with water and air to produce an ultra-fine mist which will remain suspended in the atmosphere for an extended period of time, ensuring maximum performance of odour control.
- 3.4.12 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

- 3.4.13 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. The main emissions points will be situated at the WTS building entrance and exit points (i.e. the fast-acting roller shutter doors). The original building plans had the doors on the southern side of the building; however, Biffa do not intend to use these routinely and have added roller shutter doors on the eastern side of the building to improve the operational layout and reduce the risks of fugitive emissions. Therefore, particularly owing to the angle of the WTS building, the southern part of the building would shield the access/egress points on the eastern side of the building from the southerly prevailing wind. Furthermore, the nearest sensitive receptors are located cross wind of the prevailing wind and would be less likely to be adversely affected by potential odour emissions from the site. The odour monitoring points will be strategically located to ensure that the dispersion is sufficient in avoiding an odour nuisance.

Housekeeping and Routine Cleaning

- 3.4.14 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 weekly supervisor and monthly manager inspections.

- 3.4.15 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

- 3.4.16 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 maintenance team, so repairs can be scheduled.
- 3.4.17 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 into the company's Planned Preventative Maintenance (PPM) system which generates work orders for the up-coming maintenance and logs when maintenance has been completed.
- 3.4.18 Trained maintenance staff will carry out plant repairs quickly where required. Mobile plant repairs will be undertaken as soon as practicable, dependant on the availability of spares.

#### Responsible Reporting

- 3.4.19 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

- 3.5.1 The following scenarios have been identified in the Environmental and Accident Risk Assessment (*Doc. Ref.: BF5066/07*) prepared for facility that could affect odour control:
- Storage of waste during long periods of time due to plant shutdown;
  - Accidents resulting from leakage of any waste ;
  - Delivery of malodorous waste;
  - Plant and equipment malfunction/breakdown.
- 3.5.2 The risk assessment approach used for the assessment of potential odour impact during normal operations has also been employed in the assessment of odour control techniques during abnormal situations. The Environmental and Accidents Risk Assessment (*Doc Ref.: BF5066/07*) includes an appraisal of abnormal conditions where odour control may be compromised, the potential impact of consequences and how the conditions may be prevented and / or mitigated and controlled.
- 3.5.3 The control measures to be employed during abnormal operational situations are also presented in the Environmental and Accident Risk Assessment (*Doc.*

Ref.: BF5066/07) and consist of similar controls to those employed during normal operating situations. The controls involve:

- Identification of malodourous 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 malodourous during time stored on site and its removal by a licensed carrier within 24 hours.

#### Maintenance Periods

3.5.4 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.

3.5.5 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.

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



## 4.0 ODOUR MONITORING AND RECORDING

### 4.1 Odour Monitoring

4.1.1 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.

4.1.2 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 be carried out in cognisance of the prevailing weather conditions.

4.1.3 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 in the Site Diary.

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

#### Meteorological Conditions

4.1.5 Meteorological forecasts and weather conditions (including atmospheric pressure as well as wind speed and direction) will be monitored daily to enable potential odour problems to be predicted and necessary remedial actions to be implemented.

#### Regular Inspection / Olfactory Monitoring

4.1.6 Odour monitoring will be undertaken in order to assess how successful the operational management and mitigating control measures are at the Facility and to identify whether odour is causing a potential nuisance as well as to ensure that appropriate remediation measures are adopted early.

4.1.7 It is important to ensure that odours which may be attributable to the Site are the ones being monitored for.

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

4.1.9 The Technically Competent Person will ensure that olfactory odour monitoring is completed in accordance with the H4 guidance, as part of the Operation and Maintenance Daily Checks and that both operational areas and the site perimeter are inspected. This approach will enable the identification of any sources of odour and establish whether any odours are attributable to site operations are discernible from beyond the site perimeter.

4.1.10 Daily olfactory monitoring will be recorded on the 'Operation and Maintenance Daily Check Sheet' – a copy of which is included in **Appendix OMP1**.

- 4.1.11 Monitoring will be carried out by staff who 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 site will consist of the items outlined in **Table OMP4**, below.

**Table OMP5: Odour Monitoring Parameters, Techniques and Frequencies**

Parameter	Monitoring Technique	Frequency
Meteorological Monitoring	On site weather station or appropriately obtained meteorological data.	Continuous.
Olfactory Monitoring ('sniff' testing)	Site perimeter and off-site checks (towards the identified sensitive receptors).	Ad-Hoc (minimum of once per day).
Complaints Monitoring	Telephone or written representations direct from the public or via the regulatory authorities.	Ad-Hoc.

**Note:** The frequency will be reviewed monthly within the first 12 months of operation, subject to operational experience and complaints which may require more frequent monitoring.

- 4.1.12 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.
- 4.1.13 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, core 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.
- 4.1.14 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)

- 4.1.15 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 (**F**requency of detection, **I**ntensity, **D**uration, **O**ffensiveness and **R**eceptor sensitivity) principle such that, for

example, a long duration lower intensity odour or very offensive short duration event will both be assessed and investigated.

- 4.1.16 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**.

## **4.2 Odour Diaries and Community Surveys**

- 4.2.1 Full records will be kept with regards to a range of incidents that may occur in relation to the site activities.
- 4.2.2 The main diary 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 summarise the conclusion of that exercise.
- 4.2.3 On review of meteorological data and any complaints received, should a clear pattern emerge, if necessary, 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.

## **5.0 COMPLAINTS HANDLING**

### **5.1 Complaints Process**

5.1.1 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**

5.2.1 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.

5.2.2 Contact details will also be made available through the local community liaison groups.

5.2.3 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.

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

5.2.5 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 electronically on their central system 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.

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

### **5.3 Complaint Recording**

5.3.1 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.

5.3.2 Records of complaints received (i.e. completed electronic Complaint Forms) will be kept on Biffa's central 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**

5.4.1 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**

5.5.1 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.

5.5.2 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.

## **6.0 ACTIONS, CONTINGENCIES & RESPONSIBILITIES DURING PROBLEM EVENTS**

### **6.1 Default Procedures**

6.1.1 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.

6.1.2 It is the responsibility of the site management team (Site Operations Manager/TCM and associated supervisors) to ensure procedures as set out in the OMP are put into action.

### **6.2 Emergency Procedure**

6.2.1 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, processing of putrescible waste. Odour masking agents can be utilised if necessary and operations which may lead to increased odour release will be temporarily stopped.

6.2.2 Consideration will also be made as to the suspension of receipt of malodorous wastes and / or the removal of waste from the site that is held in storage areas (if necessary).

### **6.3 Event Reporting**

6.3.1 In the event of any significant environmental emergency / incident, a representative of Biffa Waste Services Limited ('Biffa') will notify the Environment Agency 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.

6.3.2 Details of any environmental incident will be confirmed to the Environment Agency in writing by 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 have been any emissions 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.

6.3.3 Any incident notified to the Environment Agency 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.

### **6.4 Problem Resolution**

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

- 6.4.2 This Odour Management Plan and the odour related assessments of risks presented in the Environmental and Accidents Risk Assessments (Doc. Ref.: BF5066/07) will also be reviewed if management practices require updating.
- 6.4.3 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 EA prior to their implementation.



## **7.0 REPORT CLOSURE**

- 7.1.1 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.
- 7.1.2 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.
- 7.1.3 It is considered that this document complies with the Environment Agency's H4 Guidance Document on Odour.



## APPENDICES



## APPENDIX OMP1

# Operations & Maintenance Daily Check Sheet



Operation and Maintenance Daily Check Sheet Biffa Waste Services Limited					
COTC		Date		Time	
Weather					

Site Wide Inspections	Condition		Comments and Corrective Action
	Last check	This check	
	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	
<p>Dust</p> <p>Visually inspect the site for evidence of dust accumulation (on surfaces/plant) and generation (from vehicle/waste movements)</p> <p>Is there any visible evidence of dust buildup on vehicle/hard standing surfaces?</p>			
<p>Odour</p> <p>Undertake olfactory monitoring (sniff test) for odour around the site boundary, at surface water discharge point and next to waste stockpiles.</p> <p>Record any identified odours, their intensity, their location on-site and their source</p> <p><b>Note: Odour monitoring procedure and Odour intensity scale are included overleaf for reference</b></p>			
<p>Litter</p> <p>Inspect the site for evidence of litter (operational areas and surrounding fence line)</p>			



Site Wide Inspections	Condition		Comments and Corrective Action
	Last check	This check	
	<input type="checkbox"/>	<input type="checkbox"/> /	
Noise  During site inspection listen for any elevated/unusual noises  Record any identified noises above background levels, their location on site and their source			
Scavengers, Insects and Other Pests  Inspect the site for signs of infestation or attracting scavengers			

**Odour Monitoring Procedure:**

1. The duration spent at each monitoring locations should be a minimum of 1 minute;
2. Continue to breathe normally during inspection;
3. During this time undertaken assessments for the other listed site wide inspection aspects (dust, litter, noise and scavenger, insects and other pests) and record any comments.

**Odour 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)



Area Inspected	Condition		Comments and Corrective Action
	Last check	This check	
	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	
Internal Access Routes Inspect access routes for wear and cracks. Also inspect for litter and dust.			
Weighbridge Check for wear.			
Concrete, Tarmac and Hardstanding Surfacing Inspect impermeable surfaces for wear and cracks.			
General Drainage Check for wear and blockages.			
Quarantine Area Check for wear and cracks.			
Materials Storage Areas (Pre and Post Treatment) Check bays for wear and damage. Check not overfilled.			
Container Storage (if appropriate)			
Waste Vehicle Parking Inspect impermeable surfaces for wear and cracks.			



Area Inspected	Condition		Comments and Corrective Action
	Last check	This check	
	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	
Mobile (Materials Handling) and Static Plant  Inspect for damage/leaks before and after use.			
Fuel Storage Tanks and Bunding Systems  Check for potential leaks, cracks and holes.			
Weighbridge Office  Check for defects.			
Staff Vehicle Parking  Inspect impermeable surfaces for wear and cracks.			
General Tools/Equipment  Inspect for defects before and after use			
Safety Equipment  Check for defects.			
Security – Fence line, CCTV and access gates  Check for damages			



## APPENDIX OMP2

# Odour Assessment Report Form





**ODOUR ASSESSMENT REPORT**

**1. FIELD LOG**

<b>Name</b>		<b>Start Time</b>	
<b>Date</b>		<b>Finish Time</b>	
<b>General Weather Comment</b>		<b>Wind Direction</b>	
<b>Temperature</b>		<b>Wind Strength</b>	

**2. COMPLAINT INFORMATION**

<b>Complaint received (Y/N)</b>		<b>Time</b>	
<b>Location/Name of complainant</b>		<b>Substantiated by site (Y/N)</b>	
<b>Details</b>		<b>Activity on site at time of complaint</b>	

If more than complaint on the day record on separate sheet

**3. ASSESSMENT RECORD**

<b>Test No</b>	<b>Location</b>	<b>Sensitivity (Low/Med/High)</b>	<b>Intensity (0-6)</b>	<b>Odour Description</b>	<b>Is odour attributable to site? (Y/N)</b>



## **PROCEDURE**

1. The duration spent at each monitoring locations should be a minimum of 1 minute
2. During this time the assessment record for the location should be completed.
3. The field log should be completed for each monitoring visit using observations and weather forecast information
4. Completed assessment sheets should be kept in the record folder.
5. It is important to record site specific information for the monitoring visit and any departures from normal operating conditions
6. It may be of benefit for an independent individual to accompany the regular assessor to periodically check the data quality.
7. The assessor should avoid strong food or drinks for at least half an hour before undertaking the assessment. Strongly scented toiletries should also be avoided and since colds/sore throats can affect the sense of smell it may be necessary for the assessment to be made by a separate individual.
8. Frequency of monitoring should be assessed at regular intervals, dependent on the potential for odour generation with the assessment times being varied to cover different on-site activities.

## **INFORMATION FOR COMPLETION OF ASSESSMENT FORM:**

### **1. FIELD LOG**

- **General Weather Comment** - Sunny, Raining, Overcast
- **Temperature** - Very warm, warm, mild, cold or °C (if known)
- **Wind Strength** - None, light, steady, strong, gusting
- **Wind Direction** - e.g. Blowing from North

### **2. COMPLAINT INFORMATION**

Where the assessment is being made in response to a complaint the starting point for the odour assessment will be the location from where the complaint has arisen and details specific to the complaint will be recorded on the form.

### **3. ASSESSMENT RECORD**

- **Intensity (Definitions from EA guidance, descriptions developed by Biffa Municipal Limited)**
  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 (odour detected while walking and breathing normally)
  4. Strong odour (odour easily detected while walking and breathing normally, possibly offensive)
  5. Very strong odour (bearable, but offensive odour)
  6. Extremely strong odour (not bearable)
- **Sensitivity of location**
  - Low – e.g. Footpath, Road
  - Medium – e.g. Industrial or Commercial Workplaces.
  - High – e.g. Housing, Pub/Hotel etc.
- **Odour Description** – this should record any relevant information about the odours detected including:
  - Does the odour originate from an agricultural/industrial source?
  - Is the odour persistent or intermittent?
  - What does the odour smell like?
- **Is the odour attributable to site? (Y/N)** – can the odour source be traced back to on-site activities? If "YES" identify on-site location. If "NO" identify direction of odour origin.