

JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

Revision no.	Author	QA	Date Issued
1	SLR Consulting Ltd	SW	19/04/23

### 1 Introduction

This Odour Management Plan (OMP) has been prepared in accordance with the requirements of the Environment Agency (EA) H4 Guidance document.

The OMP outlines the methods by which the operator can systematically assess, reduce, and prevent potentially odorous emissions from the facility in order to meet the Environmental Permit odour conditions for the site.

### 1.1 Odour Regulation

Aerobic Digestion activities have the potential to emit odour at levels which could cause a nuisance. Therefore, JW Waste are committed to employing appropriate measures to prevent odour pollution or minimise it where prevention is not practicable. The measures that are appropriate depend on the activities undertaken, the site-specific circumstances of the facility and the costs and benefits associated with different methods for odour control.

### 1.2 OMP Objectives

The OMP is a working document with the specific objectives of ensuring:

- potential odour impact is considered as part of routine operations;
- odour is primarily controlled at source by good operational practices, the correct use and maintenance of plant;
- all 'appropriate measures' are taken to prevent or, where that is not reasonably practicable, to minimise odorous emissions to air from the installation; and

		<u> </u>
230419 ADV 1634 Odour	ADV-1634 v1	Page   <b>1</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

 minimisation of the risk of unplanned odour releasing incidents or accidents that could result in annoyance by anticipating and planning for them.

This OMP is intended to be used as a reference working document for operational staff on a day to day basis. It outlines the main potential odour sources associated with operation of the XO unit, the mitigation measures to be used to reduce the risk of odour nuisance and the monitoring and reporting methods to be used when the unit becomes operational. It will be reviewed regularly and revised as required.

This OMP will be transposed into the Site's Environmental Management System (EMS) following formal approval by the Environment Agency (EA).

### 1.3 OMP Approach and Structure

According to EA guidelines, an OMP should contain the following elements:

- an assessment of the risks of odour problems, from normal and abnormal situations, for example of weather, temperature, or breakdowns, as well as accident scenarios;
- the appropriate controls (both physical and management) needed to manage those risks;
- suitable monitoring;
- actions, contingencies and responsibilities when problems arise;
- regular review of the effectiveness of odour control measures; and
- emission limits (where appropriate).

The OMP is also required to include clear statements to demonstrate that JW Waste understands and accepts its responsibilities. In particular, it demonstrates:

- that JW Waste, either directly or through its contractors or subcontractors, ensures
  that equipment on site is operated and maintained such that it is effective in the
  control of odour at all times:
- that JW Waste is familiar with the characteristics of the processes and equipment on site and have identified the areas of risk of emissions from odour;

230419 ADV 1634 Odour	ADV-1634 v1	Page <b>  2</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

- how JW Waste reduce or cease operations if necessary to avoid serious odour pollution;
- how JW Waste engage with neighbours to minimise their concerns and complaints;
   and
- how JW Waste respond to complaints.



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

# 2 Sources, releases and impacts

### 2.1 Description of Operations

The JW Waste aerobic digester will only accept waste generated within the JW Waste's Waste Transfer Station namely residual municipal waste.

Initially, JW Waste propose to install one XO22 unit at the Site which will accept up to 13 tonnes of waste per day, approximately 4,745 tonnes per annum. Following digestion, an approximate mass reduction of 62.5% and volume reduction of 70% is expected, resulting in an approximate output of 4.87 tonnes per day of floc suitable for onwards recovery off-site as Solid Recovered Fuel (SRF).

Depending on the success of the XO22 unit, JW Waste may install another XO22 unit with the potential to accept a further 13 tonnes of waste per day. The Site would then accept up to 26 tonnes of waste per day across two Advetec units which equates to approximately 9,490 tonnes per annum.

This permit variation application seeks to allow the treatment of no more than 26 tonnes of non-hazardous waste per day, equating to 9,490 tonnes per annum.

The waste will be loaded into a hopper which connects to a shredder, both of which will be located externally to the building. The RS50 shredder will shred the waste into 80mm<sup>2</sup> particle size, the shredded waste is then augered into the digester, where bacteria and bio-stimulants are automatically dosed into the waste. The digester will be located internally.

The XO22 has four chambers, with an internal mass of 22m³ at any given point, through which the waste is moved for digestion. Movement is by a centralised shaft with engineered paddles that rotate according to pre-programmed algorithms. The paddles allow the system to stay aerobic while ensuring residence, and index mass throughout the process.

The only by-products of the aerobic digestion system are water vapour, carbon dioxide and a post-process residue (floc). The process uses exothermic aerobic respiration; therefore, it generates its own heat which is channelled internally back into the process, using a closed-loop heating system. The process does not use water.

230419 ADV 1634 Odour	ADV-1634 v1	P a g e <b>  4</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

The entire process takes approximately 72 hours to complete, after completion the post-process floc will be collected internally within the main building. It will be collected into a holding bay and dry stored until collection / haulage off site.

The XO22 is accessible via a regulated cloud-based portal. Data points are collected, logged and stored at programmable intervals, including temperature, humidity, rotational speeds, emissions monitoring, power consumption, maintenance schedules. Alert and alarm levels are programmed into the system to notify in the event of system errors or parameters moving out of range. There is also an in-line gas monitoring system which continuously monitors levels of methane (CH<sub>4</sub>), carbon monoxide (CO), volatile organic compound (VOCs) and sulphur dioxide (SO<sub>2</sub>), which in the event of detection of any of these parameters, an alarm is raised. To mitigate against any possible odours from the process, an odour abatement system is fitted within the XO22 whereby the by-products of water vapour and carbon dioxide are vented to the atmosphere through a passive drum scrubber.

### 2.2 Potential Odour Generation Sources

The sources of potential odour generation are identified in Table 1.

Table 1 - Odour sources			
Identification of all potential odour sources	Waste storage		
from operating the XO unit	Waste being stored prior to processing in the XO.     Waste processing		
	Odour emissions in the exhaust air.  Floc storage		
	Storage of the post processed floc prior to removal off site.		
Description of each source, including its	Waste storage		
location, type, and frequency of emissions	<ul> <li>Waste being stored prior to processing in the XO. The location of the storage is shown on Figure 1.</li> <li>Potential to cause odour whilst being stored prior to processing in the XO.</li> <li>Waste processing</li> </ul>		
	Odour in the air emission whilst XO is processing waste.  Floc storage		
	Storage of the post processed floc prior to removal as shown on Figure 1 'Shredded black bag waste'.		

230419 ADV 1634 Odour	ADV-1634 v1	Page <b>  5</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

Assessment of the potential impact of	• Low
each source on the surrounding	
community	

POP's Incombustible Shredded Car NOTE: Shed Demolition Black Bag Park **Black Bag** Material e.g. Waste Waste never Brick & Stone Lorry exceeds Park Site 40 m<sup>3</sup> Water Office Storage 50,000 Workshop litres **PVC Frames** Weighbridge **PVC Windows** Aerobic Digester Grade B Quarantine Incoming Grade A Waste **Bottles** Card Green Picking Line 10 20 30 40m

Figure 1- JW Waste Site Layout

### 2.3 Pathway

The pathway by which odours may impact upon receptor locations is a result of atmospheric dispersion. In general, high wind speeds lead to emitted odour being rapidly dispersed and diluted due to turbulence, and conversely low wind speeds inhibit the dilution of odours.

Prevailing wind directions are considered in assessing the likelihood and management of emission risks. Wind speed and direction data for the site location is presented in Figure 1. It

230419 ADV 1634 Odour	ADV-1634 v1	Page <b>  6</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit			
Odour Management Plan (OMP)			
Author SLR Consulting Ltd QA review SW			

shows the prevailing wind to be from the west south west. As a result, the potential impact of emissions is likely to be greater to the east north east of the site.

350° 10° 340° 20° 330 320° 310° 300 290° 70° 280° 270° 90° 100° 260° 250° 110° 240 120° 230 130° 140° 210 150° 180° 6 10 16 (knots) 3 1.5 3.1 5.1 8.2

Figure 2 Wind Rose from Bristol Airport Station (2018)

### 2.4 Sensitive Receptors

The likelihood and frequency of exposure to odour arising from the facility is determined by the magnitude of release, the prevailing meteorological conditions, and the distance and direction of receptors in relation to the facility.

Potentially sensitive receptor locations for odour are typically defined as locations where people spend time and expect a reasonable level of amenity. Therefore, residential properties are generally regarded as the most potentially sensitive locations and recreational areas being of medium sensitivity.

Receptor locations sensitive to odour tend to be locations where people are present for prolonged periods of time and expect a high level of amenity e.g. residential properties. The

		, ,	<u> </u>
230419 ADV 1634 Odour	ADV-1634 v	1	Page   <b>7</b>
Management Plan (OMP) JW			
Waste v1.0 Final			



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author	SLR Consulting Ltd	QA review	SW	

H4 guidance gives example that 'domestic residences, or a pub with a beer garden are more likely to be sensitive than an industrial complex or passers-by'. Those locations in the surrounding area where receptors are considered likely to be odour sensitive are indicated in Table 2 below.

	Table 2- Sensitive Human Receptor Locations				
ID	Receptor	Sensitivity to	NGR-X	NGR-Y	
DR1	Newbury Cottages	High	369351	149666	
DR2	Residential properties within	High	369464	149414	
	Highbury				
DR3	Page House Farm	High	370090	149721	
DR4	DR4 Luckington Manor Farm DR5 Residential properties within		369270	150130	
DR5			369903	150094	
	Newbury				

230419 ADV 1634 Odour	ADV-1634 v1	Page <b>  8</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit			
Odour Management Plan (OMP)			
Author	SLR Consulting Ltd	QA review	SW

### 3 Odour Control Measures

This section presents the principles of controlling odour generation and release at the facility at the specific control and management measures employed at the facility. This includes measures to control the generation and release of odorous chemicals from the above inventory of sources, abatement and dispersion of releases, and plans for mitigation of community impacts.

The overall aim in the operation is to apply Best Available Techniques (BAT). For this reason the facility will be operated and managed in accordance with the accepted hierarchy of preferred controls, that is:

- control odour at source to prevent the formation or emission of odorous compounds in the first place;
- where this is not practicable, to minimise the release of odour through containment:
- abate excessive emissions; then
- dilute any residual odour by effective dispersion in the atmosphere.

### 3.1 Waste Acceptance Procedures

Please refer to the JW Waste Environmental Management System for a description of waste acceptance procedures followed. The Advetec unit will only process residual municipal waste. This is generated from the tipping of black bag waste on to the floor of the Waste Transfer Unit, from where recyclables or materials to be quarantined are identified, sorted and removed.

### 3.2 Aerobic Digestion Process

Aerobic conditions are maintained within the XO to ensure there is active aeration. A CEMS System is in place for continual monitoring of CO2, VOCs, methane and H2S. The waste is also continually rotated during treatment to avoid stagnation.

2304	19 ADV 1634 Odour	ADV-1634 v1	Page   <b>9</b>
Mana	agement Plan (OMP) JW		
Wast	e v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author	SLR Consulting Ltd	QA review	SW	

### 3.3 Storage of Output Floc

The output floc is biostabilised during the aerobic digestion process, reducing the potentially odorous nature of the waste. The floc will be stored within the Waste Transfer Unit pending transfer off-site.

### 3.4 Odour Abatement System

To mitigate against any possible odours from the process, an odour abatement system is fitted within the XO22 whereby the by-products of water vapour and carbon dioxide are vented to the atmosphere through a passive drum scrubber.



JW Waste Environmental Permit			
Odour Management Plan (OMP)			
Author	SLR Consulting Ltd	QA review	SW

### 4 Monitoring and Maintenance

Monitoring of process controls, odour containment and abatement performance, odorous releases, and dispersion pathways are as described in the sections below.

### 4.1 Monitoring Ambient Odour

Monitoring ambient odour provides a broad indication of the effectiveness of the odour management as a whole, i.e. odour minimisation, containment, treatment and dispersion. This is a reactive process and should be considered as a final indicator of odour control effectiveness.

The assessment is "sensory" in that the human nose is used as the detector – a sound approach considering that no analytical instrument can give unified measure of a complex mixture of compounds in the same way that a human experiences odour.

Sniff testing is employed for the following reasons:

- as part of a survey at the site boundary during normal operations, to confirm the effective performance of odour control measures in place;
- at the site boundary during periods of adverse meteorological conditions, breakdowns or during other abnormal events to evaluate the effectiveness of the control measures in place and the likelihood that odour complaints will be received; and
- in the event that complaints are received, at the locations of sensitive receptors as part of the complaint investigation procedure outlined in Section 4.2.

'Sniff tests' will follow the procedure detailed within Appendix B and be undertaken weekly by trained site management with any issues recorded in the site log book.

### 4.2 Complaint Logging

Please refer to the JW Waste Complaints Procedure within JW Waste's Environmental Management System.

### 4.3 Recording of Results and Reporting

Records are maintained and include the following details (where applicable)

	<u> </u>	
230419 ADV 1634 Odour	ADV-1634 v1	Page   <b>11</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

- · results of inspections and any olfactory monitoring carried out by site personnel;
- operational problems including date, time, duration and cause of problem;
- complaints received including address (if available);
- details of corrective actions taken and any subsequent changes to operational procedures; and
- CEMS system will be in place and record data for CO2, VOCs, methane and H2S on a continuous basis to allow trends and accurate measurements be recorded and monitored 24 hours a day.

The weekly sniff tests undertaken will be made on the Odour Monitoring Form presented in Appendix C which will be filed and kept on site for inspection by the EA as and when required.

In the event that odour is detected at the site boundary, this will be noted in the site diary and the Site Supervisor will be informed to allow for appropriate steps to be taken to mitigate the odour. The results of the daily odour monitoring will not be reported to the EA unless required by the Permit.

### 4.4 Notifying the EA

In the event that an environmental accident or incident occurs that has the potential to cause odour, the Operator will notify the EA as soon as practicably possible. The Site Manager for the facility will also notify the Regulatory Officer should any complaints be received directly to the site, and advise what remedial measures have been undertaken. Copies of any complaints will be made available for the EA to review.



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

# 5 Contingency Measures for Incidents

In accordance with H4, contingency plans have been defined to react to situations where monitoring indicates that a potential odour source is not completely under control or observations indicate odour pollution may occur.

This section details the actions that would be undertaken in case of incidents which would result in the loss of control of odorous substances and could have an unacceptable short-term impact on the local community.

# 5.1 Detection of odour at the site boundary or off-site during routine odour surveys or response to complaints

The following actions will be taken on receipt of an odour complaint:

- 1. The Site Manager will be informed of the odour complaint as soon as possible, including the location, time and date (if reported) of the complaint being lodged;
- 2. The Site Manager (or any appointed representative) will undertake the following assessment process:
- Review of the site operations and control systems at the site prior to and at the time of the complaint to:
  - determine if waste was being received in the intake building at the time of the complaint;
  - determine if highly odorous waste was being treated at the time of the complaint;
  - o determine if any abnormal operating conditions occurring;
  - determine if any accidents or incidents requiring contingency actions were being undertaken (Section 5 of OMP);
  - o determine if any emergency situations existed at the time (Section 6 of OMP).
- Review of the meteorological conditions (wind speed) prior to and at the time of the complaint – to establish whether a pathway can be established between the site and the complainant; and
- Review the previous history of complaints at the location identified.

230419 ADV 1634 Odour	ADV-1634 v1	Page   <b>13</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

If an odour at a level which is likely to cause pollution is likely to leave the site boundary, or has already, the site manager or representative will be notified immediately. The EA will be informed in line with Permit requirements.

The olfactory survey will be repeated on consecutive days after initiation of corrective actions, until odour has reduced to an acceptable level.

The Site Manager (or appointed representative) will visit the complaint location as soon as is possible in order to subjectively determine odour presence/absence and, if present, odour characteristics and intensity in accordance with the procedure detailed in Appendix A and complete the complaint form (reproduced in Appendix C).

### 5.2 Receipt of Abnormally Odorous Wastes

It is considered unlikely that any waste received would be of sufficient magnitude to cause unacceptable odour impacts outside the installation boundary and any abnormally odorous waste would be passed for priority treatment.

Where unacceptable odour exposure is traced back to a particular waste delivery, acceptance of further consignments from that particular waste producer would be put on hold pending further investigations and identification of a solution.

### 5.3 Odour Abatement Proving Ineffective

In a situation where the odour abatement plant is not achieving the required level of abatement, identified through the odour control performance testing procedure and / or external monitoring ('sniff testing'), JW Waste will be responsible for re-establishing effective odour abatement.

The following contingency measures will be taken:

- the EA and neighbours will be notified of the investigations and actions being taken;
- review requirement for more odorous activities and suspend as appropriate to minimise odour; and
- minimise the presence of odorous materials e.g. processing existing waste or transfer waste to other areas of the site with unaffected odour control.

230419 ADV 1634 Odour	ADV-1634 v1	Page   <b>14</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

Odour surveys will be undertaken daily until an effective fix is implemented. If odour detected during surveys is considered likely to lead to unacceptable impacts then JW Waste will investigate the source of the odour and cease operation of the relevant process area until such a time that a resolution can be identified and implemented.

### 5.4 Waste Feedstock Build-Up

Breakdown of plant or maintenance to plant may lead to reductions in the rate of processing and consequently build-up of waste feedstock. Trained and experienced fitters are available under contract with Advetec to cope with standard equipment breakdowns and standard maintenance.

Each day a review is carried out of the stock. This determines the available capacity and the ability to receive waste.

In the event that the storage area is not considered to have sufficient capacity, the Site Manager will divert waste to prevent build-up of waste beyond capacity.



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

# 6 Emergency Plans

#### 6.1 Fire

Emergency Action Plans are detailed within the site's Environmental Management System and Fire Prevention Plan. These include procedures for handling fires.

With regard to management of odour impact, the key principals are prompt responses that contain the fire and attempt to distinguish it, minimise damage to containment and extraction infrastructure.

The EA are to be informed of any such an occurrence, information made available to local residents if requested by the EA with regard to the measures being taken and the timescale to completion.

### 6.2 Flooding

Please refer to the JW Waste's Procedure for Severe Weather Conditions and Other Similar Emergencies including within the site's Environmental Management System as this covers flooding and failure of electricity on the Site.

### 6.3 Plant Breakdown

JW Waste are provided with 24 hours, 7 days a week remote support by Advetec. In the event of a plant breakdown, Advetec can investigate the incident remotely and attend the Site within 24 hours if necessary to instigate repairs. If a repair cannot be made, the operations would be suspended. Contingency arrangements for diversion of the waste would be implemented.

### 6.4 Staff Absence

Short-term staff shortages (such as a few days illness) will not affect the ability of the site to operate effectively as other staff members can be reassigned to critical operations. In the event of prolonged absence of staff members, temporary staff will be recruited and appropriately trained to fulfil noncritical roles whilst other more experienced staff members are reassigned.

230419 ADV 1634 Odour	ADV-1634 v1	Page   <b>16</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

# 7 Document Updates and Reviews/ Management

The site has a well-defined and formally documented management structure for managing the impacts of odour from the Advetec unit. It is the responsibility of every manager, with the support of the environmental professionals, to identify environmental risks that are relevant to the site and determine if a particular activity or service is environmentally significant.

Once identified, it is the responsibility of the manager to highlight the significant aspects to all relevant employees and contractors. The manager is also responsible for monitoring and managing all activities under the Company's control to improve environmental performance.

Managers must complete the appropriate register to identify all activities or services that are relevant to site operations and provide an indication of potential impacts.

Work instructions, job descriptions and procedures exist for critical areas of the Company's activity and have been issued to or made available to personnel responsible for undertaking these tasks.

### 7.1 General Procedures for Training and Competency of Staff

The company identifies training requirements of its employees and provides suitable resources to ensure they have the required knowledge, skills and expertise to carry out their duties. This includes their roles and responsibilities in complying with the policy statements, the Management System and all relevant legislation. This is achieved through induction training for new employees, awareness training for all and specific training as required. Contractors and all persons performing tasks on behalf of the Company will be made aware of the policy and relevant Management System requirements and will be competent in the roles undertaken.

Staff competency and the need for training is continually assessed by site management and supervisors and formally recorded within the Management System.

# 7.2 Odour Management Plan Review

This OMP is a controlled document and a comprehensive record of the results of the monitoring and inspection programme contained within this OMP will be kept for inspection.

230419 ADV 1634 Odour	ADV-1634 v1	Page <b>  17</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

The specification for the periodic review and update of the OMP will, in line with the recommendations of the H4 Odour Guidance, take place on an annual basis, as a minimum.

However, the OMP is intended to be a live document which serves as a reference during daily operations, and as such should be updated should the following occur:

- significant changes are made to the plant or operational practices;
- there is a change to the management structure, designation of responsibility or training provision;
- the EA requests that the OMP is updated, in their role as regulator; or
- complaints are received, which on subsequent investigation result in the identification
  of further control measures or remedial action, in addition to those set out within this
  OMP.



JW Waste Environmental Permit					
Odour Management Plan (OMP)					
Author SLR Consulting Ltd QA review SW					

# 8 Closure

JW Waste are dedicated to the management of odours arising from the use of the XO unit and it is imperative the public are not affected by the implementation of any piece of technology or process from the Advetec range.

230419 ADV 1634 Odour	ADV-1634 v1	Page   <b>19</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

### **APPENDIX A - ODOUR SURVEY METHODOLOGY**

The exact locations for offsite monitoring are selected based on the prevailing wind direction and proximity to receptors.

The monitoring will be extended to the surrounding locality if odour likely to cause annoyance is detected at the site boundary.

At each location observations shall be made concerning odour intensity, persistence and character, time, date, weather conditions and any 'abnormal' site operating conditions at the time of the survey. Surveys shall be carried out in accordance with the monitoring protocol contained within the EA Technical Guidance Note H4.

The odour assessor should not be subject to significant site odour in the 30 minutes prior to the assessment. This is to ensure that monitors are not suffering from odour fatigue and will be sensitive to site odours. Furthermore the following exclusions shall apply:

- staff members that are regularly exposed to site odours for longer than 30 minutes;
   and
- any staff members known or suspected of having a very poor sense of smell should not be used for odour monitoring routinely.

The inspections shall be undertaken as follows:

- The person should walk slowly and breathe normally and begin their assessment at areas of expected low odour concentration, i.e. upwind of the site, and should move to areas of high odour concentration. If odour is detected while walking, the intensity should be recorded as at least 3 (distinct), or higher.
- 2. If an odour cannot be detected whilst walking, the person should periodically stand still and inhale deeply facing upwind. If odour is then detected, but can only be detected in this manner, the odour 'intensity' should be recorded as 2 (faint).
- 3. Following detection of any odour of intensity 3 or above at the site boundary during an odour inspection, the following measures will be taken:

230419 ADV 1634 Odour	ADV-1634 v1	Page <b>  20</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



JW Waste Environmental Permit				
Odour Management Plan (OMP)				
Author SLR Consulting Ltd QA review SW				

- the olfactory survey will deviate to determine the extent of plume downwind (at or above an intensity level 3) and at potential receptors affected. Contingency measures outlined in Section 5 will be followed; and
- an on-site inspection shall be carried out seeking to trace any observed odour back to source so that the appropriate corrective and/or preventative action can be taken (with regard to Contingency Measures detailed in Section 5).

On-site inspections would be undertaken by continuing the olfactory survey methodology onto the site to inspect all potential odour sources.

The Site Manager shall be notified immediately of any detected odours that are considered to have the potential to give rise to significant off-site odour impact (intensity 3 at a receptor location). The contingency measures detailed within Section 5 should be followed.



JW Waste Environmental Permit					
Odour Management Plan (OMP)					
Author SLR Consulting Ltd QA review SW					

# Appendix B – Odour Assessment Form

Background Information			
Person Undertaking Survey (&	Position)		
Date		Time	
Description of Wind Strength (i.e. strong, gusty)			
Wind Direction			
Weather (i.e. sunny, overcast)			
Temperature (degree Celsius)			

Survey Results			
Location	Intensity (1-5) (see below)	Persistence (A-E) (see below)	Characteristic (see below)
Northern boundary			
Eastern boundary			
Southern Boundary			
Western Boundary			
Closest Property			

If odour is strong / persistent additional information to be detailed below

Intensity	
1	No detectable odour
2	Faint odour (barely noticeable)
3	Moderate odour (odour easily detected)
4	Strong odour (bearable but offensive)
5	Very strong odour (instinct to walk way)

Persistence		
Α	Occasional	Less than 10% of the time
В	Intermittent	10-30% of the time
С	Frequent	30-50% of the time

230419 ADV 1634 Odour	ADV-1634 v1	Page <b>  22</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



# Author SLR Consulting Ltd QA review SW

D	Persistent	50-75% of the time
E	Constant	>75% of the time

10			
If during the survey the odour is strong or persistent at any location on the site boundary, the following information requires completion regarding plant operation.			
Waste Delivery	Has waste recently been delivered to site?		
	If yes, were the correct procedures followed?		
AD Batches	What waste was added to the Advetec unit in the last 12 hours?		
Digestate	Has output floc recently been removed from the site?		
	If yes, were the correct procedures followed?		



JW Waste Environmental Permit					
Odour Management Plan (OMP)					
Author	SLR Consulting Ltd	QA review	SW		

# Appendix C – Odour Complaints Reporting Form

Installation to which complaint relates:	Date recorded:	Ref No:
Name and address of caller:		
Tel No. of caller:		
Location of caller in relation to installation:		
Time and date of complaint:		
Date, time and duration of offending odour:		
Caller's description of odour, e.g. comparison with other odours, strong/weak, continuous, fluctuating:		
Has the caller any other comments about the offending odour?		
Weather conditions (e.g. dry, rain fog, snow):		
Wind strength and direction (e.g. light, steady, strong, gusting):		

230419 ADV 1634 Odour	ADV-1634 v1	Page   <b>24</b>
Management Plan (OMP) JW		
Waste v1.0 Final		



# Author SLR Consulting Ltd QA review SW

Any previous complaints relating to this odour?			
Any other relevant information	on:		
Potential odour sources the complaint:	nat could give rise to the		
_	ime offending odour occurred n housing, deliveries, feeding:		
Follow up			
Date and time caller contacted:			
Action taken:			
Amendment required to Odo	ur Management Plan:		
Form completed by:		Signed:	

230419 ADV 1634 Odour	ADV-1634 v1	Page <b>  25</b>
Management Plan (OMP) JW		
Waste v1.0 Final		