

OLD TIP MOUNTFIELD LANDFILL

Environmental Permit Variation Application

Odour Management Plan

Prepared for: Saint-Gobain Construction Products
UK Limited (Trading as British Gypsum)

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- Appendix 01: Odour Assessment Form
- Appendix 02: Odour Complaints Reporting Form
- Appendix 03: Odour Survey Methodology

1.0 Introduction

This Odour Management Plan (OMP) has been prepared to support the Environmental Permit variation application for the Old Tip Mountfield Landfill at Robertsbridge, East Sussex, TN32 5LA, hereafter referred to as 'the Site'. This variation application seeks to add a Passive Leachate treatment System (PTS) primarily within the footprint of the Site to treat sulphate rich leachate being generated by the two definitively closed adjacent Mountfield landfill sites; Old Tip and New Tip (EPR reference DP3099VK).

The Site is currently permitted to operate under an EP (Ref: EPR/DP3190VV), transferred to Saint-Gobain Construction Products UK Limited by the EA on 27th November 2009.

This variation does not seek to amend any activities related to the landfill nor its status as definitively closed. This EP variation seeks only to add the following listed installation activity to the existing Old Tip landfill EP;

- Installation of a PTS, comprising biochemical reactor (BCR) sequestering units to convert sulphate to sulphide, a scrubber to remove sulphide and an Aerobic Polishing Wetland (APW) to oxidise the water prior to discharge. It is proposed that the PTS will sit on top of the 'Old Tip'. The PTS would treat the leachate generated from both the Old Tip and the New Tip, before discharging into the nearby River Line.

The EP boundary will be increased to the east of the site to ensure all associated infrastructure related to the proposed PTS is encompassed.

EA guidance Note H4 Odour Management How to comply with your environmental permit (hereafter referred to as 'H4 Odour Guidance') issued by EA describes how the IPPC Directive includes odour in the definition of pollution and requires that "[...] *all the appropriate preventive measures are taken against pollution [...]*". This Directive has been transposed in the UK by the Environmental Permitting Regulations (EPR) and sites encompassed within these Regulations will have the following odour condition included within their permit:

Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in an approved odour management plan, to prevent or where that is not practicable to minimise the odour.

Saint-Gobain Construction Products UK Limited as the Operator must therefore employ the appropriate measures necessary to prevent odour pollution or minimise it when prevention is not practicable. The measures that are appropriate will depend on the industry sector and the site-specific circumstances of the PTS and will take costs and benefits into account.

1.1 OMP Objectives

As defined within the H4 Odour Guidance, the objectives of an OMP should be to:

- identify potentially significant odour sources at the site and any foreseeable situations which may compromise the operator's ability to prevent and / or minimise odour releases from the proposed site activities;
- identify and employ appropriate methods, including monitoring and contingencies, to control and minimise odour pollution;
- identify and employ appropriate control measures and actions that the operator will take to minimise the impact in the event that odour incidents occur;
- prevent unacceptable odour pollution at all times;
- reduce the risk of odour releasing accidents or incidents by anticipating them and planning accordingly; and
- provide a working document for on-site staff.

1.2 OMP Approach and Structure

The methodologies presented take full account of EA guidance documentation 'H4 Odour Management, how to comply with your environmental permit'. 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 the operator understands and accepts its responsibilities. In particular, it should show:

- that the Operator, 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 the Operator is familiar with the characteristics of the processes and equipment on site and have identified the areas of risk of emissions from odour;
- how the Operator will reduce or cease operations, if necessary, to avoid serious odour pollution;
- how the Operator will engage with neighbours to minimise their concerns and complaints; and
- how the Operator will respond to complaints.

2.0 Sources Releases and Impacts

This section provides an inventory of potential odour sources, release points, pathways and receptors relevant to the landfill site.

2.1 Description of Operations

This permit variation does not seek to amend any activities related to waste acceptance within the existing landfill. This EP variation seeks only to include a PTS, BCR sequestering units to convert sulphate to sulphide, a scrubber to remove sulphide and an APW to oxidise the water prior to discharge. It is proposed that the PTS will sit on top of the 'Old Tip'. The PTS would treat the leachate generated from both the Old Tip and the New Tip, before discharging into the nearby River Line.

The site will process approximately 73,000m³ of leachate per annum.

The site will operate continuously and is designed to run passively without a significant number of operatives on site.

The PTS comprises four biochemical reactors, fed from the existing underground feed tank via pipelines, which are buried for frost protection, where sulphate within the leachate will be converted to sulphide.

2.2 Potential Odour Sources

The application of good working practices and process control is of fundamental importance in eliminating and minimising the quantities of odours formed on Site and their subsequent release to atmosphere. This section provides an inventory of all potential odour sources under the full range of normal operating conditions.

The overall aim in the operation of the PTS is to apply Best Available Techniques (BAT) to remove sulphate from (and oxidise) the leachate from the landfills. The PTS is operated and managed in accordance with the accepted hierarchy of preferred odour controls, that is:

1. prevent the formation or emission of odorous compounds in the first place;
2. where this is not practicable, minimise the release of odour;
3. abate excessive emissions; then
4. dilute any residual odour by effective dispersion in the atmosphere.

There are three primary potential odour sources associated with the PTS:

- Raw leachate storage;
- Biochemical reactors; and
- Scrubber system.

The primary odour source is associated with the open-air treatment of the leachate within the BCRs. The storage of leachate within the underground feed tank and processing of treated leachate within the scrubber system is contained and therefore presents a much-reduced odour potential. Final treatment within the APW is not considered to be a significant source of odours and therefore has not been considered further. Other potential odour sources associated with site operational failures are considered further in Section 5.0.

2.3 Received Wastes

As detailed above, the facility will treat up to 73,000m³ of leachate per annum, sourced from the 'Old Tip' and 'New Tip' definitively closed landfills.

2.4 Stored Wastes

Leachate from the two landfills will be stored within the feed tank prior to transport to the BCRs through the over ground pipelines.

2.5 Exported Wastes

The treated leachate will be discharged into the nearby River Line.

2.6 Release Points/Potential Odour Generation Sources

The release points for the odour sources are detailed above in section 2.2. The release points consider all unintentional non-emergency releases that may occur. Release occurrences considered an emergency are addressed in Section 5.0.

2.7 Pathways

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. Herstmonceux West End meteorological station is located 11.2km south west of the Site and is considered to be representative of the Site location. Wind speed and direction data for the year 2016 is presented in Figure 2-1. It shows the prevailing wind to be from the south-western and north-eastern sectors. As a result, the potential impact of emissions is likely to be greater to the north-east and south-west of the Site.

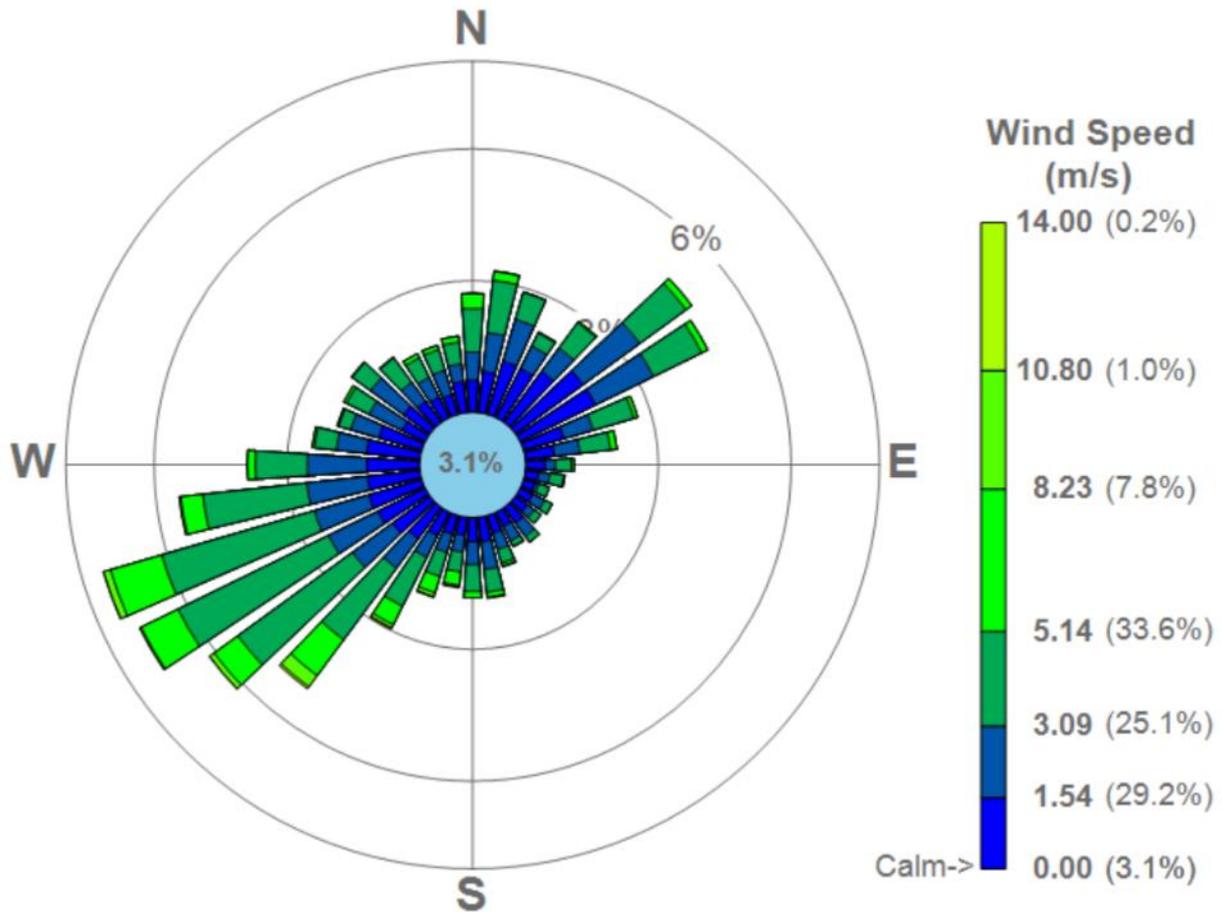


Figure 2-1
2019 Wind Rose for Herstmonceux West End Meteorological Station

2.8 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 receptors of high sensitivity.

The closest residential properties are residential properties (R1 and R2) located along Church Road, approximately 340m to the north-east of the permit boundary. A number of further sensitive residential receptors are located approximately 540m north-east of the permit boundary, and a singular farmhouse approximately 575m to the south of the permit boundary.

Reference should be made to Table 2-1 for presentation of odour sensitive receptors surrounding the site.

Table 2-1
Sensitive Receptors

Receptor	Receptor Type	Receptor Sensitivity	UK NGR (m)		Distance from Permit Boundary (m)
			X	Y	
R1	Residential Dwelling (Currently a vacant commercial/office building)	High	573269.0	119974.9	335
R2	Residential Dwelling	High	573349.6	119931.6	390
R3	Residential Dwelling	High	573271.4	120309.9	550
R4	Residential Dwelling	High	573300.1	120299.9	555
R5	Residential Dwelling	High	573337.3	120272.5	560
R6	Residential Dwelling	High	573370.4	120271.5	585
R7	Residential Dwelling	High	573392.0	120268.2	600
R8	Farm	Low	572854.7	119092.8	545

The discrete receptors presented within Table 2-1 is not an exhaustive list, the closest sensitive receptors in each direction surrounding the Site have been identified.

The receptor sensitivity has been determined in reference to the Institute of Air Quality Management (IAQM) Odour Guidance¹ in which residential dwellings are determined to be of a 'high' sensitivity to odours and farms as 'low sensitivity to odours'.

Reference should be made to Figure 2-2 for an illustration of the considered odour sensitive receptors relative to the Site boundary (red).

¹ Guidance on the assessment of odour for planning, Version 1.1, IAQM, July 2018.



Figure 2-2
Nearest Sensitive Receptors

3.0 Sources Releases and Impacts

The overall aim of the OMP is to ensure that *All Appropriate Measures* are applied; for this reason, the facility would be operated and managed in accordance with the accepted hierarchy of preferred controls, that is:

1. prevent the formation or emission of odorous compounds in the first place; and
2. where this is not practicable, minimise the release of odour.

3.1 Raw Leachate Storage

The raw leachate is currently stored in the 40,000 litre underground feed tank (referred to also as the 'MOD Tank'). Leachate from the 'New Tip' and 'Old Tip' currently flows under gravity to the feed tank. There are no proposed changes to the existing underground feed tank other than connection to the PTS, proposed under the variation to the existing EP. Leachate will be pumped through fully enclosed pipelines which are buried for frost protection. Considering this, the magnitude of odours resulting from the storage and distribution of raw is considered to be low-to-negligible. It is not anticipated that further odour control measures for these odour sources are required.

3.2 Biochemical Reactors

The four BCRs will contain raw leachate undergoing initial treatment; converting sulphate to sulphide. All four BCRs will be open-air (i.e. liquid is contained by the surface is exposed), reflecting a high odour potential. As a contingency for leakage, each biochemical reactor will be surrounded by a leakage containment bund capable of containing at least 110% of the volume of the largest tank within the bund. This would ensure that even in the case where the tanks are breached, the leachate would be contained within the bunded areas, reflecting no change to the associated odour potential.

There may be a risk of elevated odour impacts from the BCRs during periods of abnormal meteorological conditions (such as hot weather). As a first response measure in abnormal meteorological conditions, sniff testing should be undertaken to determine the extent of site odours downwind, beyond the permit boundary. If there is potential for the nearby sensitive receptor(s) to be affected (nearest is 335m north east of the Site), then temporary cessation of site operations should be considered.

It is noted that little detectable odour was observed onsite during the pilot phase.

3.3 Scrubber Units

Following treatment within the BCRs, partially treated leachate will be transported to the scrubber unit via a fully enclosed overground pipeline. The scrubber unit is fully enclosed, thus presenting a low risk for odour potential. In the case of a leakage, the scrubber unit will be surrounded by a leakage containment bund capable of containing at least 110% of the volume of the largest tank within the bund. This would ensure that even in the case where the tanks are breached, the scrubbed liquors and leachate would be contained within the bunded areas, however in such an occurrence the associated odour potential would be considered very high due to the breach of containment.

3.4 Aerobic Polishing Wetland

Following treatment within the scrubber units, treated leachate will be pumped via an enclosed pipeline to the APW. The APW comprises several open-air lagoons and is the final step of treating the leachate prior to its discharge into the River Line. Treated leachate will have a significantly lower sulphur-compound content than raw leachate, resulting in a much lower comparative odour potential. The odour character from such wetlands is likely to be similar to the agricultural odours of the surrounding area (rural agricultural setting). When

considering the low odour potential of this odour source, and the similarity in the character of the odour to the likely local odours (resulting from agriculture and wildlife) the overall odorous effect of the APW is considered negligible.

It is noted that little detectable odour was observed onsite during the pilot phase.

3.5 General Housekeeping

Where spillage of leachate might occur (such as broken pipes, overflow of tanks) operational areas should be cleaned as far as practicable to minimise odour generation from degrading residual materials on these surfaces.

3.6 Mitigation of Community Impacts

The following measures have been adopted to ensure a 'good neighbour' approach to local residents:

- engagement with local residents and stakeholders, methods of engagement with the wider public will consider use of newsletters or forums on a case by case basis;
- a telephone number will be made available for residents to contact the company;
- engagement with local residents should odour problems be anticipated to keep the public informed of progress, remedial measures and timescales;
- responding to odour complaints promptly and keeping complainant informed of outcome of investigation; and
- meetings to be held with local residents if required in discussion with EA.

3.7 Monitoring and Maintenance

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

3.7.1 Monitoring Potential Odour Sources

The PTS will be monitored by the Site Manager and operatives when on site to ensure it conforms to its permitted use and that no odour source is created due to damage or malfunction of any element of the PTS.

3.7.2 Monitoring of Ambient Odours

Monitoring of ambient odours from the Site provides a broad indication of the effectiveness of the odour management as a whole, i.e. odour minimisation and containment. 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 permit boundary during normal operations, to confirm the effective performance of odour management measures in place;
- at the permit boundary during periods of adverse meteorological conditions (i.e. hot, still days with winds blowing towards nearby receptors), breakdowns or during other abnormal events to evaluate the effectiveness of the control measures in place and the likelihood that odour complaints could 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 the complaints form in Appendix 02.

'Sniff tests' will follow the procedure detailed within Appendix 03 and will be undertaken:

- weekly by trained site management with any issues recorded in the site logbook; and
- on a monthly basis by a team member accompanying the Site Manager and results recorded.

3.7.3 Complaint Logging

A phone number for members of the public to contact the Site Manager with any complaints will be visible on the Site board at the entrance. Following the receipt of a complaint the Site Manager will endeavour to contact the complainant to provide feedback on actions taken to both assess the event and convey any remedial actions.

All complaints will be recorded on an Odour Complaint Form such as that presented in Appendix 02 and forwarded onto the Site's EA Officer. Information that will be recorded will include the following:

- date and time at which the odour complaint was received and detected;
- location / address of complainant (where provided); and
- a description of the odour observed by the complainant (where provided).

Following an odour complaint, a trained member of staff will undertake a sniff test, recording the results on an Odour Monitoring Form such as that presented in Appendix 01. If an odour (which can be attributed to the Site operations) is encountered during the sniff test, the source of the detected odours will be investigated by site management and the outcome recorded.

Investigations will include the likely source and cause of the odour and a review of the meteorological data. Suitable remedial action will be investigated, where required. The complainant will be informed of any action taken and all actions will be recorded.

Should no odours (which can be attributed to the Site operations) be observed, a record of the sniff test would be made, the meteorological conditions will be checked, a report would be provided to EA and suitable feedback provided to the complainant.

3.7.4 Monitoring Meteorological Conditions

The Site Manager or other designated responsible person will record daily weather conditions in the Site Diary, sourced either from the on-site weather station (where available) or from online weather data channels².

The recording of meteorological data is an effective management tool and can be used for the following reasons:

- during routine operations, (to assess odour impacts) to plan where boundary monitoring should be focussed;
- during abnormal events (i.e. spillage) to predict where odour impacts could occur; and
- in the investigation of odour complaints or to verify community observations.

3.7.5 Recording of Results and Reporting

Daily records will be maintained and include the following details (where applicable)

- results of inspections and any olfactory monitoring carried out by site personnel;
- weather conditions including wind direction (automatically recorded and stored electronically);
- operational problems including date, time, duration and cause of problem;
- complaints received including address (if available); and
- details of corrective actions taken and any subsequent changes to operational procedures.

² Such as <https://www.metoffice.gov.uk>

The weekly sniff tests undertaken will be made on the Odour Monitoring Form presented in Appendix 01 which will be filed and kept on site for inspection by EA as and when required.

In the event that odour is detected beyond the permit boundary, this will be noted in the site diary and the Site Manager will be informed to allow for appropriate steps to be taken to mitigate the odour (if this is resulting in adverse impact at a nearby resident). The results of the daily odour monitoring will not be reported to EA unless required by the Permit, however it will be commented on in the Annual Monitoring Report.

3.7.6 Notifying EA

In the event that an accident or incident occurs, the Site Manager or nominated representative will notify EA as soon as practicably possible using the emergency 24hr phone line (0800 80 70 60). The Site Manager 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 EA to review.

4.0 Contingencies

In accordance with EA's Guidance on OMPs, contingency plans have been defined to react to situations where monitoring indicates that a potential odour source is not completely under control, or that adverse impact has occurred.

This includes accidents (or incidents) which would result in the loss of control of odorous substances and have the potential to cause an unacceptable short-term impact on the local community but are not considered an emergency situation.

4.1 Particularly Odorous Liquids

It is considered unlikely that incoming leachate would be of sufficient magnitude to cause unacceptable odour impacts outside the site boundary. Considering the source of the leachate (from the two landfills), it is expected that the leachate quality would remain consistent.

4.2 Compromised Odour Containment

Odour containment may be compromised by damage to any part of the PTS.

If damaged is found to then the following contingency measures will be implemented:

- arrangements made to re-establish containment;
- requirement for more odorous activities reviewed and suspended as appropriate e.g. shut down of the PTS; and
- minimise the presence of odorous materials e.g. remove and contain spilled fluids where possible.

Bunded areas are in place around the BCRs and scrubber unit to contain any breach of containment, however remedial measures would still be required whilst the situation is resolved.

Odour surveys will be undertaken until an effective fix is implemented. If site odours detected during surveys are considered likely to lead to adverse impacts at sensitive receptors, then consideration will be given to ceasing operation of the PTS temporarily if this would alleviate the problem. EA and neighbours will be notified of the investigations and actions being taken.

4.3 Temporary Odorous Activities

No routine temporary odorous activities are anticipated to occur at the site under normal operating conditions. However, it is noted that temporary odorous activities could occur as a result of equipment malfunction or breakdown (i.e. loss of containment, or plant failure) as detailed in Section 4.2 above. Should any temporary odorous activities be undertaken at the Site, the Site Manager will contact EA and other interested parties (e.g. residents) before such actions are taken to advise them of the operation being undertaken and that any odour will be of a temporary nature.

4.4 Abnormal Meteorological Conditions

Extreme meteorological conditions that promote the generation of odour and inhibit its effective dispersion, specifically high temperatures and stable conditions, may result in increased risk of impact at receptor locations.

Contingency measures to minimise the risk of unacceptable odour exposure at receptor locations during these conditions, will include but not be limited to consideration of:

- more frequent sniff assessments to determine the extent of detectable odours from the site towards nearby sensitive receptors;

- where there is potential for sensitive receptor(s) to be adversely affected by odours, then temporary cessation of site operations should be considered.

4.5 Detection of Odour at the Site Boundary or Off-Site During Routine Odour Surveys or Response to Complaints

The olfactory survey methodology as detailed in Appendix 03 will be followed and the likely source(s) of the detected odour identified by determining the sources of greatest odour intensity, contingency actions will be implemented as identified above.

The first assessment of an odour at the site boundary will be whether the odour has or is likely to leave site (i.e. based on the intensity of the odour at the boundary, considering the distance to nearest sensitive receptor). Where odours are identified to be likely to cause an impact at sensitive receptors, the problem that caused the odour shall be investigated and remedied to prevent continuation of adverse odour exposure at sensitive receptors. All information regarding action taken will be recorded on the external odour assessment sheet (Appendix 02).

If an odour at a level which is likely to cause pollution (i.e. high intensity and/or offensiveness) is likely to leave the site boundary or has already left the site boundary, the Site Manager or representative will be notified immediately.

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

EA will be informed in line with Permit requirements.

4.6 Out of Hours Contact Details

An Emergency Duty Standby Number will be made available which will always be answered in the event of an emergency.

4.7 Receipt of an Odour Complaint

4.7.1 Complaint Logging

A phone number for members of the public to contact the Site Manager with any complaints will be visible on the Site board at the entrance. Following the receipt of a complaint the Site Manager will endeavour to contact the complainant to provide feedback on actions taken to both assess the event and convey any remedial actions.

All complaints will be recorded on an Odour Complaint Form such as that presented in Appendix 02 and forwarded onto the Site's EA Officer. Information that will be recorded will include the following:

- date and time at which the odour complaint was received and detected;
- location / address of complainant (where provided); and
- a description of the odour observed by the complainant (where provided).

Following an odour complaint, a trained member of staff will undertake a sniff test, recording the results on an Odour Monitoring Form such as that presented in Appendix 01. If an odour (which can be attributed to the Site operations) is encountered during the sniff test, the source of the detected odours will be investigated by site management and the outcome recorded.

Investigations will include the likely source and cause of the odour and a review of the meteorological data. Suitable remedial action will be investigated, where required. The complainant will be informed of any action taken and all actions will be recorded.

Should no odours (which can be attributed to the Site operations) be observed, a record of the sniff test would be made, the meteorological conditions will be checked, a report would be provided to EA and suitable feedback provided to the complainant.

4.7.2 Complaint Investigation

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 include;
 - determine if any abnormal operating conditions were occurring;
 - determine if any accidents or incidents requiring contingency actions were being undertaken;
 - determine if any emergency situations existed at the time.
 - 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 / or
 - review the previous history of complaints at the location identified.

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 03 and complete a complaint form such as the one presented in Appendix 02.

EA will be informed in line with Permit requirements.

5.0 Emergency Plans

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

The section considers the emergency scenarios, measures taken to minimise their occurrence and short-term measures to minimise impacts.

5.1 Plant Failure

The leachate treatment operations through the PTS are designed to be passive and low maintenance and consist of the following main infrastructure;

- feed tank (MOD Tank);
- raw leachate pumping;
- BCRs;
- scrubber; and
- APW.

Treated leachate will be discharged to the River Line in accordance with an EP.

If there is a failure within the PTS which prevents the treatment of leachate, the PTS will be safely shut down and operations will cease, and the relevant maintenance team will be deployed. While the PTS is non-operational, leachate will be taken by tanker to a suitably licensed disposal facility.

The PTS will undergo a programme of routine servicing and maintenance in line with manufacturer's recommendations as well as forming part of the regular on-site inspection regime. All maintenance issues will be dealt with immediately, to prevent downtime and the accumulation of leachate.

5.2 Fire

The risk of fire or explosion is considered to be extremely unlikely.

5.3 Spillage/Leak

Loss of containment could lead to spillage and leakage of potentially contaminating liquids and leachate.

To prevent loss of containment and minimise the risk and impact of releases the following measures will be implemented:

- storage vessels: storage tanks/vessels will be constructed to the appropriate British Standard (where applicable) or to an appropriate standard in line with industry practice;
- inspection: tanks/vessels will be inspected visually on a regular basis by the Site staff to ensure the continued integrity of the tanks/vessels, and identify the requirement for any remedial action;
- monitoring techniques: Site staff will undertake regular monitoring for evidence of spillage and leakage;
- redundancy: the BCRs and scrubber are surrounded by leakage containment bunds as detailed below; and

- where possible pipework will be placed above ground to facilitate easy maintenance, inspection, and replacement.

In the event of any potentially polluting leak or spillage occurring on Site, the following action will be taken:

- minor spillages will be cleaned up immediately, using sand or proprietary absorbent. The resultant materials will be placed into containers and will then be removed from Site and disposed of at a suitably permitted facility. The incident will be logged in the site diary.
- any dry wastes spilled on Site will be kept dry prior to being collected and transported to the appropriate area of the Site.
- in the event of a major spillage, which is causing or is likely to cause polluting emissions to the environment, immediate action will be taken to contain the spillage and prevent liquid from entering surface water or drains. The spillage will be cleared immediately and placed in containers for off Site disposal, and the EA will be informed.

The leachate treatment plant will be purpose built. All tanks associated with the plant will be sited within bunding. Bunding (with a capacity at least 110% of the largest vessel or 25% of the total tankage volume, whichever is the greater) will be provided to contain a spillage and prevent the uncontrolled release of leachate from the Site.

Should damage occur that could affect the integrity of the tank/vessel(s), then the plant will be shut down whilst immediate repairs are made. While the PTS is non-operational, leachate will be taken by tanker to a suitably licensed disposal facility.

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

5.4 Security

The Site will have a number of security measures in place to limit the likelihood of vandalism including:

- perimeter fencing around the Robertsbridge Complex with a 24-hour security;
- inspection and maintenance procedures; and
- a visitor sign in system.

In the event of a breach of security at the Site, the cause will be investigated, and appropriate mitigation measures implemented. This will be recorded in the Daily Site Log. Records maintained will include, breaches of security, investigations and actions taken.

6.0 Document Updates and Reviews/Management

6.1 Responsible Staff

The site has a well-defined and formally documented management structure for managing the impacts. It is the responsibility of every manager/supervisor, 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 Site Manager to highlight the significant aspects to all relevant employees and contractors. The Site Manager is also responsible for monitoring and managing all activities under the Company's control to improve environmental performance.

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.

6.2 General Procedures for Training and Competency of Staff

All staff employed at the facility will benefit from a training programme, which ensures their professional and technical development.

An assessment of training needs will be carried out to identify the posts for which specific environmental awareness training is needed, and the scope and level of such training relevant to their role. The assessment of training needs will be reviewed on an annual basis.

The training programme ensures that relevant staff will be fully aware of the following:

- regulatory implications of the EP for the facility and their specific work activity;
- all potential environmental effects from operations under normal and abnormal circumstances;
- the need to report deviations from the EP;
- prevention of accidental emissions and action to be taken should accidental emissions occur; and
- records of training needs and training received will be maintained.

6.3 Odour Management Plan Review

This OMP is a controlled document, and forms part of the EMS. A comprehensive record of the results of the monitoring and inspection programme contained within this OMP will also form part of the EMS.

The specification for the periodic review and update of the OMP will be set out within the EMS. In line with the recommendations of EA's H4 Odour Management guidance, this takes 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 would be updated on a more frequent basis 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;
- 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.

APPENDIX 01

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 (1-6) (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 away)		
6	Extremely strong odour highly likely to cause annoyance (May induce nausea)		
Persistence			
A	Occasional	Less than 10% of the time	
B	Intermittent	10-30% of the time	
C	Frequent	30-50% of the time	
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.			
Liquid Containment	Has any loss of containment occurred on site?		
	If yes, what procedures are being followed?		

APPENDIX 02

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):		
Any previous complaints relating to this odour?		
Any other relevant information:		
Potential odour sources that could give rise to the complaint:		
Operating conditions at the time offending odour occurred – e.g. any loss of containment, abnormal meteorological conditions, for example		
Follow up Date and time caller contacted:		
Action taken:		
Amendment required to Odour Management Plan (Y/N, if Y provide details)		
Form completed by:	Signed:	

APPENDIX 03

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 NRW's H4 Odour Guidance.

The odour assessor should not be subject to significant site odour in the 30-minutes prior to the assessment, or food, drink or cigarettes within the last hour. 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:

1. 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:
 - 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 5.0 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 5.0).

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 5.0 will be followed.

EUROPEAN OFFICES

United Kingdom

AYLESBURY

T: +44 (0)1844 337380

BELFAST

belfast@slrconsulting.com

BRADFORD-ON-AVON

T: +44 (0)1225 309400

BRISTOL

T: +44 (0)117 906 4280

CARDIFF

T: +44 (0)29 2049 1010

CHELMSFORD

T: +44 (0)1245 392170

EDINBURGH

T: +44 (0)131 335 6830

EXETER

T: + 44 (0)1392 490152

GLASGOW

glasgow@slrconsulting.com

GUILDFORD

guildford@slrconsulting.com

LONDON

T: +44 (0)203 805 6418

MAIDSTONE

T: +44 (0)1622 609242

MANCHESTER (Denton)

T: +44 (0)161 549 8410

MANCHESTER (Media City)

T: +44 (0)161 872 7564

NEWCASTLE UPON TYNE

T: +44 (0)191 261 1966

NOTTINGHAM

T: +44 (0)115 964 7280

SHEFFIELD

T: +44 (0)114 245 5153

SHREWSBURY

T: +44 (0)1743 23 9250

STIRLING

T: +44 (0)1786 239900

WORCESTER

T: +44 (0)1905 751310

Ireland

DUBLIN

T: + 353 (0)1 296 4667

France

GRENOBLE

T: +33 (0)6 23 37 14 14