



Permit with introductory note

Pollution Prevention and Control Regulations 2000
Landfill Regulations 2002

Ling Hall Landfill Site
Onyx Landfill Ltd
Coal Pit Lane
Lawford Heath
Rugby
Warwickshire
CV23 9HH

Permit number
BU2381IE

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Introductory note

This introductory note does not form a part of the Permit

The following Permit is issued under Regulation 6 of the Landfill (England and Wales) Regulations 2002 (S.I.2002 No.1559), as amended, (“the Landfill Regulations”) and Regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (S.I.2000 No.1973), as amended, (“the PPC Regulations”) to operate an installation carrying out activities covered by the description in Section 5.2 A(1)(a) in Part 1 to Schedule 1 of the PPC Regulations, to the extent authorised by the Permit:

The disposal of waste in a landfill receiving more than 10 tonnes of waste in any day or with a total capacity of more than 25,000 tonnes, excluding disposals in landfills taking only inert waste.

There may be some activities on the installation to which BAT applies because they are not Landfill activities. Therefore, in some sections of the Permit conditions require the Operator to use Best Available Techniques (BAT), in each of the aspects of the management of the installation, to prevent and where that is not practicable to reduce emissions. The conditions do not explain what is BAT. In determining BAT, the Operator should pay particular attention to the appropriate Horizontal guidance (H1 to H4) and other relevant guidance.

A non-technical description of the installation is given in the Application, but the main features of the installation are as follows;

Ling Hall Landfill site occupies land which was formerly Church Lawford Airfield. When the airfield ceased to operate it was restored to grade 3 agricultural use before becoming a sand, gravel, hoggin and aggregate quarry. Landfilling commenced in the quarry in 1993.

The installation will eventually comprise 14 engineered phases. Currently phases 1, 2, 3, 4 and 5 have been landfilled and permanently capped.

Leachate is currently recirculated within the site but consideration of other methods of leachate management that may result in removal of leachate from site will be instigated by the Permit.

Landfill gas is extracted from the area of the installation where waste has been deposited and either utilised or flared. The utilisation of landfill gas will be covered by a separate PPC Permit.

The landfill will be permitted to accept non-hazardous waste and asbestos in separately engineered cells.

Note that the Permit requires the submission of certain information to the Agency (see Sections 4 and 5). In addition, the Agency has the power to seek further information at any time under regulation 28 to the PPC Regulations provided that it acts reasonably.

Other PPC Permits relating to this installation

Permit holder	Permit Number	Date of Issue
Not Applicable		

Other existing Licences/Authorisations/Registrations relating to this installation

Holder	Reference Number	Date of issue
Not Applicable		

Superseded Licences/Authorisations/Consents relating to this installation

Holder	Reference Number	Date of Issue
Onyx Leigh Environmental Limited	475 (EAWML48116)	25 th November 1993
	The gas utilisation plant will continue to operate under waste management licence 475. The parts of the licence that relate to landfill gas utilisation are not superseded by this Permit.	

Other activities may take place on the site of this installation which are not regulated under this Permit or any other PPC Permit referred to in the Table above.

Public Registers

Considerable information relating to Permits including the Application is available on public registers in accordance with the requirements of the PPC Regulations. Certain information may be withheld from public registers where it is commercially confidential or contrary to national security.

Variations to the Permit

This Permit may be varied in the future (by the Agency serving a Variation Notice on the Operator). If the Operator itself wants any of the Conditions of the Permit to be changed, it must submit a formal Application. The Status Log within the Introductory Note to any such Variation Notice will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

Surrender of the Permit

Before this Permit can be wholly or partially surrendered, an Application to surrender the Permit has to be made by the Operator. For the application to be successful, the Operator must be able to demonstrate to the Agency that there is no pollution risk and that no further steps are required to return the site to a satisfactory state.

Transfer of the Permit or part of the Permit

Before the Permit can be wholly or partially transferred to another person, an Application to transfer the Permit has to be made jointly by the existing and proposed holders. A transfer will be allowed unless the Agency considers that the proposed holder will not be the person who will have control over the operation of the installation or will not comply with the conditions of the transferred Permit. As the Permit authorises the carrying out of a specified waste management activity, the transfer will only be allowed if the proposed holder is also considered to be "a fit and proper person" as required by the PPC Regulations.

Talking to us

Please quote the Permit Number if you contact the Agency about this Permit.

To give a Notification under condition 5.1.2, the Operator should use the Incident Hotline telephone number (0800 80 70 60) or any other number notified in writing to the Operator by the Agency for that purpose.

Status Log

Detail	Date	Comment
Application BU2381IE	Received 19 th September 2003	
Request for additional information	Request dated 18 th March 2004	Response dated 1 st April 2004
Response to Schedule 4 Notice	Notice dated 10 th May 2004	Response dated 3 rd June 2004
Request to extend determination	Request dated 9 th July 2004	Request accepted 13 th July 2004
Request to extend determination	Request dated 30 th July 2004	Request accepted 3 rd August 2004
Request to extend determination	Request dated 23 rd September 2004	Request accepted 27 th September 2004
Request to extend determination	Request dated 13 th December 2004	Request accepted 16 th December 2004
Request to extend determination	Request dated 17 th December 2004	Request accepted 17 th December 2004
Request to extend determination	Request dated 21 st January 2005	Request accepted 25 th January 2005
Request to extend determination	Request dated 18 th February 2005	Request accepted 21 st February 2005
Request to extend determination	Request dated 18 th March 2005	Request accepted 23 rd March 2005
Permit determined	30 th March 2005	

End of introductory Note.

Permit

Pollution Prevention and Control
Regulations 2000
Landfill Regulations 2002



**ENVIRONMENT
AGENCY**

Permit

Permit number

BU2381IE

The Environment Agency (the Agency) in exercise of its powers under Regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (SI 2000 No 1973), and Regulation 6 of the Landfill (England and Wales) Regulations 2002 (S.I.2002 No.1559) hereby authorises

Onyx Landfill Limited ("the Operator"),

Of / whose Registered Office is

**Onyx House
154A Pentonville Road
London
N1 9PE**

Company registration number 997695

to operate an installation at

**Ling Hall Landfill Site
Coal Pit Lane
Lawford Heath
Rugby
Warwickshire
CV23 9HH**

to the extent authorised by and subject to the conditions of this Permit.

The landfill authorised by this Permit is for the disposal of non-hazardous waste

Signed	Date

Martin Jenkins

Waste Permitting Team Leader

Warrington Strategic Permitting Group

Authorised to sign on behalf of the Agency

Conditions

1 General

1.1 Permitted Activities

- 1.1.1 The Operator is authorised to carry out the activities and the associated activities specified in Table 1.1.1.

Table 1.1.1

Activity listed in Schedule 1 of the PPC Regulations / Associated Activity	Description of specified activity	Limits of specified activity
Section 5.2 Part A(1) (a), the disposal of waste in a landfill.	Landfill for non-hazardous waste (landfill classification under the Landfill Regulations 2002)	Receipt handling, storage and disposal of non-hazardous and asbestos wastes, consisting of the types and quantities specified in condition 2.1.2, as an integral part of landfilling.
Associated Activities		
Leachate management	Storage of leachate	Leachate arising from the Permitted landfill
Landfill gas management	Flaring of landfill gas	Landfill gas arising from the Permitted landfill

- 1.1.2 Where waste on site is subjected to activities that are exempt from control under the Waste Management Licensing Regulations 1994, then the wastes controlled under condition 1.1.1, above, shall be clearly identified and kept separate from such exempt waste activities and a record shall be kept of where such exempt activities are conducted.

1.2 Site

- 1.2.1 The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the land shown edged in red on the Site Plan at Schedule 5 to this Permit.

1.3 Overarching Management Condition

- 1.3.1 Without prejudice to the other conditions of this Permit, the Operator shall implement and maintain a management system, organisational structure and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit.

1.4 Improvement Programme

- 1.4.1 The Operator shall complete the improvements specified in Table 1.4.1 by the date specified in that table, and shall send written notification of the date of completion of each requirement to the Agency within 14 days of the completion of each such requirement.

Table 1.4.1: Improvement programme requirements

Reference	Requirement	Date
1.4.1.1	<p>The Operator shall review monitoring data for methane and carbon dioxide for all existing perimeter landfill gas monitoring boreholes and submit to the Agency appropriate borehole specific baseline levels. The baseline levels must be derived from data gathered prior to the commencement of waste deposition in each cell.</p> <p>The Operator shall undertake any measures notified in writing by the Agency by the date indicated in the notification.</p>	Within 3 months of Permit issue.
1.4.1.2	<p>The Operator shall submit to the Agency for agreement proposals for the location, design and monitoring of additional perimeter landfill gas monitoring boreholes. The proposals must be in accordance with Agency guidance document 'Guidance on the management of landfill gas' (LFTGN03) – September 2004.</p> <p>The boreholes should be installed in the timescales specified in condition 2.10.2.10.</p>	Within 6 months of Permit issue.
1.4.1.3	<p>The Operator shall submit to the Agency proposals for the location, design, installation and monitoring of additional down-hydraulic gradient groundwater monitoring points to supplement existing network for both the Dunsmore Gravels and Thrussington Till. The proposals shall be in accordance with Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02).</p> <p>The Operator shall undertake any measures notified in writing by the Agency by the date indicated in the notification.</p>	Within 6 months of Permit issue.
1.4.1.4	<p>The Operator shall submit to the Agency borehole specific groundwater trigger and control levels using the first 12 months data obtained from the boreholes installed in accordance with improvement condition 1.4.1.3. Trigger and control levels shall be derived in accordance with Agency guidance document 'Hydrogeological Risk Assessments for Landfills' (LFTGN01).</p>	Within 15 months of installation of additional groundwater monitoring boreholes.
1.4.1.5	<p>The Operator shall submit to the Agency a revised surface water monitoring plan to include all monitoring points and taking the following points into consideration:</p> <ul style="list-style-type: none"> • All existing monitoring points (A&B) included in table 2.10.1. • Monitoring points proposed in the application (C, J, K, S & F) • A monitoring point located in the watercourse near Lawford Lodge Farm along the northern boundary. • Other areas of ponded water within the installation boundary which are agreed with the Agency to be at risk as a result of the activities carried out at the installation, as required in the Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02). 	Within 6 months of Permit issue.

Table 1.4.1: Improvement programme requirements

Reference	Requirement	Date
1.4.1.6	<p>The Operator shall submit an updated version of the nuisance and health risk assessment to include the types of asbestos waste, including EWC codes, intended to be accepted at the site.</p> <p>The Operator shall undertake any measures notified in writing by the Agency by the date indicated in the notification.</p>	Prior to the acceptance of asbestos wastes.
1.4.1.7	<p>The operator shall submit to the Agency proposals for the temporary storage, treatment and disposal of leachate. The proposals shall include full justification to demonstrate that the chosen technique for leachate management is the 'Best Available Technique'.</p> <p>The Operator shall undertake any measures notified in writing by the Agency by the date indicated in the notification.</p>	Within 6 months of Permit issue.

- 1.4.2 Where the Operator fails to comply with any requirement by the date specified in Table 1.4.1 it shall send written notification of such failure to the Agency within 14 days of such date.

1.5 Minor Operational Changes

- 1.5.1 The Operator shall seek the Agency's written agreement to any minor operational changes under condition 2.1.1 of this Permit by sending to the Agency: written notice of the details of the proposed change including an assessment of its possible effects (including waste production) on risks to the environment from the Permitted Installation; any relevant supporting assessments and drawings; and the proposed implementation date.
- 1.5.2 Any such change shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation in accordance with that change, and relevant provisions in the Application shall be deemed to be amended.
- 1.5.3 When the qualification "unless otherwise agreed in writing" is used elsewhere in this Permit, the Operator shall seek such agreement by sending to the Agency written notice of the details of the proposed method(s) or techniques.
- 1.5.4 Any such method(s) or techniques shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation using that method or technique, and relevant provisions in the Application shall be deemed to be amended.

1.6 Pre-Operational Conditions

- 1.6.1 No disposal of wastes shall take place in any area of the Permitted Installation where waste deposit commences after the issue of this Permit unless:
- 1.6.1.1 prior to the commencement of construction of that area the Operator has submitted to the Agency in writing the detailed design and the construction quality assurance (CQA) programme for the pre-operational engineering of the barriers, liners and leachate collection layer for that area and that it is confirmed in writing by the Agency that these are in conformance with the relevant specifications set out in section 2 of Part B of the Application; and

- 1.6.1.2 the Operator has notified the Agency in writing of any changes in the detailed design and the CQA programme that are made during the construction, and within 5 working days of those changes having been made and that the Agency has agreed in writing that these are in conformance with the relevant specifications set out in Part B of the Application; and
- 1.6.1.3 the pre-operational engineering and infrastructure of the barriers and liners and the leachate collection layer have been completed and validated in accordance with the documented CQA procedures, and
- 1.6.1.4 the Operator has submitted the validation report in writing to the Agency; and
- 1.6.1.5 the Agency has inspected the area to ensure that it complies with the relevant conditions of the landfill Permit, and has confirmed in writing that it has no objection to that area becoming operational.
- 1.6.1.6 the Operator has set the basal excavation depth in each cell on the basis of a cell-specific basal assessment. This shall be carried out using site obtained data on groundwater levels, density and thickness of the Thrussington Till. This shall demonstrate a factor a safety on worst case values of 1.3 for the failure of the subgrade and engineering system through basal heave.
- 1.6.1.7 prior to the commencement of construction, the Operator has submitted a lining system design which includes a low permeability sealing layer consisting of a 2-mm thick High Density Polyethylene flexible membrane liner, or such other basal engineering design which achieves similar hydraulic properties as agreed in writing with the Agency. The lining system shall be installed to the full extent of the base. The Operator shall choose an appropriate liner with properties to ensure the stability of the liner at the gradient proposed both under confined and unconfined conditions. The stability shall be demonstrated within the CQA programme required by condition 1.6.1 above.
- 1.6.1.8 Prior to the commencement of construction of the asbestos cells, the Operator has submitted to the Agency in writing the detailed design and the construction quality assurance (CQA) programme for the pre-operational engineering of the barriers, liners and leachate collection layer for that area and that it is confirmed in writing by the Agency that these are in conformance with the relevant specifications required by current Agency guidance.

1.7 Off-site Conditions

- 1.7.1 Off-site conditions apply to surface water monitoring and are included in improvement condition 1.4.1.5 and section 2.10 of the Permit.

2 Operating conditions

2.1 Landfilling Controls

- 2.1.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Table 2.1.1, or as otherwise agreed in writing by the Agency in accordance with conditions 1.5.1 and 1.5.2 of this Permit.

Table 2.1.1: Operating techniques

Description	Parts	Date Received
Application	The response to questions 1.2, 2.1, 2.2, 2.3, 2.4 and 2.5 in part B of the Application Form excluding the answers to the following questions: B2.3.32 B2.3.33 B2.3.43	Application: 19 th Sept 2003
Response to Schedule 4 Notice	Parts relating to asbestos waste only	Response dated 3 rd June 2004.

- 2.1.2 Wastes shall only be accepted for disposal on the site if :
- 2.1.2.1 they are as specified in table 2.1.2 below:

Table 2.1.2 : Wastes accepted for disposal

Waste Category or Type	Re-permitted Landfill
Hazardous	Not Permitted
Non-hazardous	Permitted Excluding wastes with a European Waste Catalogue code ending in '99' unless a written description of any proposed waste to be accepted under such a code has been submitted to and approved in writing by the Agency and the waste accords with that description.
Stable non-reactive hazardous	Not Permitted
Asbestos	Permitted
Inert	Permitted Excluding wastes with a European Waste Catalogue code ending in '99' unless a written description of any proposed waste to be accepted under such a code has been submitted to and approved in writing by the Agency and the waste accords with that description
Liquid wastes (including wastewaters but excluding sludge).	Permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007
Waste which in the conditions of landfill is explosive, corrosive, oxidising, highly flammable or flammable.	Not permitted unless non-hazardous when permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007

Table 2.1.2 : Wastes accepted for disposal

Hospital and other clinical infectious wastes from medical or veterinary establishments.	Not permitted unless non-hazardous when permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007
Chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown.	Not permitted unless non-hazardous when permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007
Whole used tyres (other than tyres used as engineering materials, bicycle tyres and tyres with an outside diameter of more than 1400mm.	Permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007
Shredded used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm.	Permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007
Any waste which does not fulfil the relevant waste acceptance criteria.	Permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007
Waste which has been diluted or mixed solely to meet the relevant waste acceptance criteria.	Permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007
Wastes which have not been treated, except for: Inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment.	Permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007

And

- 2.1.2.2 they are in accordance with the list of waste types and quantities, as described in the application.
- 2.1.2.3 The Operator of the landfill shall visually inspect the waste at the entrance to the landfill and at the point of the deposit and shall satisfy himself that it conforms to the description provided in the documentation submitted by the holder.
- 2.1.2.4 The Operator shall ensure that if representative samples are taken for analysis, the Operator shall retain the samples and results of any analysis for at least one month.
- 2.1.2.5 The Operator on accepting each delivery of waste shall provide a written receipt to the person delivering it.
- 2.1.2.6 The Operator shall ensure that the landfill is secured to prevent free access to the site and the gates of the landfill must be locked outside operating hours.

- 2.1.3 The total quantity of waste that shall be deposited in the landfill shall not exceed 9,773,000 tonnes.
- 2.1.4 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits and acceptance ratios in Table 2.1.3 below.

And in any case the total quantity deposited in any year shall not exceed 850,000 tonnes.

Table 2.1.3 Annual Waste Input Limits

Category	Limit Tonnes/ Year
Hazardous Waste	Not Permitted
Non-hazardous Waste	650,000
Stable, non-reactive hazardous waste	Not Permitted
Inert Waste	100,000
Asbestos	100,000
Total	850,000

- 2.1.5 The Operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, origin, date of delivery, the identity of the producer (or in the case of municipal waste, the collector) of any waste that is received for disposal or recovery at the Permitted Installation.
- 2.1.6 The Operator shall record the quantity of waste deposited within the landfill and the precise disposal location of any asbestos waste.

2.2 Emissions

2.2.1 Emissions to Air, (excluding Odour, Noise or Vibration) from Specified Points

- 2.2.1.1 Part 2.2.1 of this Permit shall not apply to releases of odour, noise or vibration.
- 2.2.1.2 Emissions to air from the emission point in Table 2.2.1 shall only arise from the source specified in that Table.

Table 2.2.1 : Emission points to air

Emission point reference or description	Source	Location of emission point
Landfill Gas Flare	Landfill gas collected from deposited wastes	As shown on drawing 33019/PPC/002

- 2.2.1.3 The limits for emissions to air for the parameters and emission points set out in Table 2.2.2 shall not be exceeded.

Table 2.2.2 : Emission limits to air and monitoring

Emission point reference	Parameter	Limit (mg/m ³)	Minimum monitoring frequency	Recommended sampling and analytical technique
Flare	Oxides of Nitrogen	150	Annually	Chemiluminescence
Flare	Carbon monoxide	50	Annually	Non- Dispersive Infra-Red analysis (NDIR)
Flare	Total Volatile Organic compounds (VOC's)	10	Annually	Extractive sampling and FID analysis
Flare	Non-methane Volatile Organic Compounds (NMVOC's)	5	Annually	Extractive sampling onto sorbent, extraction by CS ₂ , analysis by GC with appropriate detector

2.2.1.4 No condition applies.

2.2.2 Emissions to water (other than groundwater), from specified points

2.2.2.1 This Part 2.2.2 of this Permit shall not apply to releases of odour, noise or vibration or to releases to groundwater.

Emissions to Water (other than to Sewer)

2.2.2.2 Conditions 2.2.2.3 – 2.2.2.6 shall not apply to emissions to sewer.

2.2.2.3 There are no specific controls imposed on emissions to water in Part 2.2.2 of this Permit. Controls on such emissions are included in Parts 2.2.5 and 2.2.7.

2.2.2.4 No condition applies.

2.2.2.5 No condition applies.

2.2.2.6 No condition applies.

Emissions to sewer

2.2.2.7 There are no specific controls imposed on emissions to sewer in this part of the Permit. Controls on such emissions are included in Parts 2.2.5 and 2.2.7.

2.2.2.8 No condition applies.

2.2.2.9 No condition applies.

2.2.2.10 No condition applies.

2.2.3 Emissions to groundwater

- 2.2.3.1 No emission from the Permitted Installation shall give rise to the introduction into groundwater of any substance in List I (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).
- 2.2.3.2 No emission from within the Permitted Installation shall give rise to the introduction into groundwater of any substance in List II (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)) so as to cause pollution (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).
- 2.2.3.3 For substances other than those in List I or II (as defined in the Groundwater Regulations 1998 (SI 1998 No.2746)), the Operator shall ensure that all appropriate measures are taken to prevent or where that is not practicable to reduce emissions to groundwater from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.
- 2.2.3.4 The Operator shall carry out monitoring of the parameters listed in Table 2.2.9a, at the specified monitoring points and at least at the frequencies specified in that Table. Any substance detected in the annual List 1 screening of leachate required by condition 2.10.2.7 shall be incorporated into the quarterly monitoring regime for groundwater, unless otherwise agreed with the Agency.
- 2.2.3.5 The trigger levels for emissions into groundwater for the parameters and monitoring points set out in Table 2.2.9b shall not be exceeded.

Table 2.2.9a: Groundwater monitoring

Monitoring points	Parameters	Frequency
All groundwater monitoring points shown on drawing references:	Water Level	Monthly
	PH	Monthly
<ul style="list-style-type: none"> 33019/PPC/002 in the application ON/LI/04-03/10535revA in the Hydrogeological Risk Assessment 	Temperature	Monthly
	Electrical Conductivity	Monthly
	Dissolved Oxygen	Monthly
All future groundwater monitoring boreholes required by improvement condition 1.4.1.3	Ammoniacal Nitrogen (mg/l)	Monthly
	Chloride	Monthly
	Sulphate	Quarterly
	Alkalinity	Quarterly
	TON	Quarterly
	TOC	Quarterly
	Na	Quarterly
	K	Quarterly
	Ca	Quarterly
	Mg	Quarterly
	Fe	Quarterly
	Mn	Quarterly
	Cd	Quarterly
Cr	Quarterly	
Cu	Quarterly	

Table 2.2.9a: Groundwater monitoring

Monitoring points	Parameters	Frequency
	Ni	Quarterly
	Pb	Quarterly
	Zn	Quarterly
	B	Quarterly
	Phenol	Quarterly
	COD	Quarterly
	NO ₃	Quarterly
	Hg	Quarterly
	As	Annually

Table 2.2.9b: The trigger levels for emissions into groundwater

Monitoring Points	Parameters	Trigger Level
Down-gradient groundwater monitoring boreholes in the Dunsmore Gravel (DG2, DG4) as shown on drawing reference ON/LI/04-03/10535revA	Ammoniacal Nitrogen	0.5mg/l
	Chloride	250 mg/l
	Hg	0.01 µg/l
Down-gradient groundwater monitoring boreholes in the Thrussington Till (TT2, TT4) as shown on drawing reference ON/LI/04-03/10535revA	Cd	0.1 µg/l
	Ni	20 µg/l
	Phenol	0.5 µg/l
All future groundwater monitoring boreholes required by improvement condition 1.4.1.3 shall be assessed against the control and trigger levels established and agreed under improvement condition 1.4.1.4.		

2.2.3.6 Subject to the terms of this condition, the activities of disposal, or tipping for the purpose of disposal, of waste, that are authorised by this landfill Permit shall cease 3½ years from date of issue of this Permit, unless by that date the Operator has submitted to the Agency a written review of the Hydrogeological Risk Assessment submitted as part of the original Application for the Permit.

The Risk Assessment review shall include a review of the responses in Section 1.2.1 to 1.2.10 of Part B of that original application. The written review shall show whether at the specified date, the level of risk to groundwater meets the terms of the Groundwater Regulations 1998.

Within six months of receipt of the written review the Agency shall reply in writing to the Operator either confirming that the above requirements have been met and authorising continuation of disposal activities or that activities of disposal or tipping for the purpose of disposal of waste authorised by this Permit shall cease until the Operator can show that, the level of risk to groundwater meets the terms of the Groundwater Regulations 1998.

In the event that the continuation of activities is authorised in accordance with this condition beyond 4 years following the date of granting of this Permit, they shall cease on every fourth anniversary thereafter, unless, by each of those dates, the Operator has submitted to the Agency a further written review of the Hydrogeological Risk Assessment which shows that, at the specified dates, the level of risk to groundwater meets the terms of the Groundwater Regulations.

The reviews submitted to the Agency shall include the results of any investigations and reviews carried out, and, in particular, reviews of the following aspects of the Hydrogeological Risk Assessment:

Recommendations of the essential technical precautions which must be taken, paying particular attention to the nature and concentration of the substances present in the matter being disposed of or tipped, the characteristics of the receiving environment and the proximity of the water catchment areas, in particular those for drinking, thermal and mineral water;

Recommendations of the technical precautions necessary:

- i In the case where groundwater is considered to be permanently unsuitable for other uses, to ensure that no substance in list I can reach other aquatic ecosystems or harm other ecosystems, to ensure that the presence of any list I substance once discharged into the groundwater will not impede exploitation of ground resources and to prevent pollution of groundwater by list II substances; and
- ii in the case where groundwater is not considered to be permanently unsuitable for other uses, to prevent any discharges into groundwater of substances in list I and to prevent any pollution of groundwater by substances in list II.

2.2.4 Fugitive emissions of substances to air

2.2.4.1 The Operator shall ensure that all appropriate measures are taken to prevent or where that is not practicable to reduce fugitive emissions of substances to air from the Permitted Installation in particular from:

- open surfaces, unfilled, operational and filled landfill surfaces
- storage areas
- buildings
- pipes, valves and other transfer systems

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.4.2 The Operator shall use all appropriate measures so as to prevent or where that is not practicable to reduce emissions of litter and dust from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.4.3 No condition applies.

Aerial emissions of particulate matter

2.2.4.4 The Operator shall carry out monitoring of the parameters listed in Table 2.2.11 below, at the specified monitoring points and at least at the frequencies specified in that Table.

2.2.4.5 The limits for particulate matter emissions into air for the parameters and monitoring points set out in Table 2.2.11 shall not be exceeded.

Table 2.2.11 Particulate matter emission limits into air

Parameters	Frequency	Emission Limit	Monitoring Points
Dust (diameter <75µm)	Monthly – unless otherwise agreed in writing with the Agency.	10 mg/m ³	To be determined through Fibres and Particulates Management Plan
Asbestos fibres	Monthly - unless otherwise agreed in writing with the Agency.	0.002 fibres/ml of air measured as a 4 hour total	To be determined through Fibres and Particulates Management Plan.

2.2.5 Fugitive emissions of substances to water and sewer

2.2.5.1 Subject to condition 2.2.5.2 below, the Operator shall ensure that all appropriate measures are taken to prevent or where that is not practicable to reduce fugitive emissions of substances to water (other than Groundwater) and sewer from the Permitted Installation in particular from:

- all structures under or over ground
- surfacing
- bunding
- storage areas

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.5.2 There shall be no release to water that would cause a breach of an EQS established by the UK Government to implement the Dangerous Substances Directive 76/464/EEC.

2.2.6 Odour

2.2.6.1 No condition applies

2.2.6.2 No condition applies

2.2.6.3 All emissions to air from the installation shall be free from offensive odour as perceived by an Authorised Officer of the Agency outside the installation boundary except that the Operator shall not be taken to have breached this condition if the Operator has ensured that all appropriate measures are taken or where that is not practicable, to reduce, such odorous emissions.

2.2.7 Emissions to Land

2.2.7.1 This Part 2.2.7 of this Permit shall not apply to emissions to groundwater.

2.2.7.2 No emission from the Permitted installation shall be made to land.

2.2.7.3 No condition applies.

2.2.7.4 The Operator shall notify the Agency, as soon as reasonably practicable, of any information concerning the state of the Site which affects or updates that provided to the Agency as part of the Site Report submitted with the application for this Permit.

2.3 Management and Fit and Proper Person

- 2.3.1 A copy of this Permit and those parts of the application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.

Training

- 2.3.2 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.
- 2.3.3 All staff shall be fully conversant with those aspects of the Permit conditions which are relevant to their duties and shall be provided with adequate professional technical development and training and written operating instructions to enable them to carry out their duties.
- 2.3.4 The Operator shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and shall keep records of all relevant training.

Maintenance

- 2.3.5 All plant and equipment used in operating the Permitted Installation, the failure of which could lead to an adverse impact on the environment, shall be maintained in good operating condition.
- 2.3.6 The Operator shall maintain a record of relevant plant and equipment covered by condition 2.3.5 and for such plant and equipment:
- 2.3.6.1 a written or electronic maintenance programme; and
- 2.3.6.2 records of its maintenance.

Incidents and Complaints

- 2.3.7 The Operator shall maintain and implement written procedures for:
- 2.3.7.1 taking prompt remedial action, investigating and reporting actual or potential non-compliance with operating procedures or emission limits and if such event occur;
- 2.3.7.2 investigating incidents, (including any malfunction, breakdown or failure of plant, equipment or techniques, down time, any short term and long term remedial measures and near misses) and prompt implementation of appropriate actions; and
- 2.3.7.3 ensuring that detailed records are made of all such actions and investigations.
- 2.3.8 The Operator shall record and investigate complaints concerning the Permitted Installation's effects or alleged effects on the environment. The record shall give the date and nature of complaint, time of complaint, name of complainant (if given), a summary of any investigation and the results of such investigation and any actions taken.

2.3.9 *Fit and Proper Person*

- 2.3.9.1 Any changes in technically competent management and the name of any incoming person together with evidence that such person has the required technical competence shall be submitted to the Agency in writing within 5 working days of the change in management. Technically competent management and technical competence shall be as prescribed under Section 74 of the Environmental Protection Act 1990.

- 2.3.9.2 In the event of the Operator and/or any relevant person being convicted of any relevant offence and which is in addition to any already notified to the Agency, then full details shall be provided to the Agency within 14 days of conviction, whether or not the conviction is subsequently appealed. Such details shall include , in respect of each relevant person (as defined in section 74(7) of the Environmental Protection Act 1990 or any subsequent amendments to that section), the nature of the offence, the place and date of conviction, any sentence, and any fine or other penalty imposed; and
- 2.3.9.3 In the event that the Operator and/or any relevant person lodges an appeal against any such conviction, the Operator shall notify the Agency of this within 14 days of the lodging. The Operator shall notify the Agency of the results of that appeal, within 14 days of the appeal being decided; and
- 2.3.9.4 The financial provision for meeting the obligations under this Permit set out in the Agreement made between the Operator and the Agency dated 30th March 2005 shall be maintained by the Operator throughout the subsistence of this Permit and the Operator shall produce evidence of such provision whenever required by the Agency.
- 2.3.9.5 The Operator shall ensure that the charges it makes for the disposal of waste in the landfill covers all of the following
- (a) the costs of setting up and operating the landfill;
 - (b) the costs of the financial provision required by condition 2.3.9.4; and
 - (c) the estimated costs for the closure and after-care of the landfill site for a period of at least 30 years from its closure.

2.4 Efficient use of raw materials

- 2.4.1 The Operator shall:
- 2.4.1.1 maintain the raw materials table or description submitted in response to Section 2.4 of the Application and in particular consider on a periodic basis whether there are suitable alternative materials to reduce environmental impact;
 - 2.4.1.2 carry out periodic waste minimisation audits and water use efficiency audits. If such an audit has not been carried out in the 2 years prior to the issue of this Permit, then the first such audit shall take place within 2 years of its issue. The methodology used and an action plan for increasing the efficiency of the use of raw materials or water shall be submitted to the Agency within 2 months of completion of each such audit and a review of the audit and a description of progress made against the action plan shall be submitted to the Agency at least every 4 years thereafter; and
 - 2.4.1.3 ensure that incoming water use is directly measured and recorded.

2.5 Waste Storage and Handling

- 2.5.1 No condition applies except as covered by the requirements in 2.1.1.

2.6 Waste recovery or disposal

- 2.6.1 Waste produced at the Permitted Installation shall be recycled or recovered unless technically and/or economically impossible.

2.6.2 The Operator shall maintain and implement a system which ensures that a record is made of the quantity, composition, origin, destination (including whether this is a recovery or disposal operation) and where relevant removal date of any waste that is produced at the Permitted Installation.

2.7 Energy Efficiency

2.7.1 The Operator shall produce a report on the energy consumed at the Permitted Installation over the previous calendar year, by 31 January each year, providing the information listed in Table S4.1 at Schedule 4.

2.7.2 The Operator shall maintain and update annually an energy management system which shall include, in particular, the monitoring of energy flows and targeting of areas for improving energy efficiency.

2.7.3 The Operator shall design, maintain and operate the Permitted Installation so as to secure energy efficiency, taking into account relevant guidance including the Agency's Energy Efficiency Horizontal Guidance Note H2 as from time to time amended. Energy efficiency shall be secured in particular by:

2.7.3.1 ensuring that the appropriate operating and maintenance systems are in place;

2.7.3.2 ensuring that all plant is adequately insulated to minimise energy loss or gain;

2.7.3.3 ensuring that all appropriate containment methods, (e.g. seals and self-closing doors) are employed and maintained to minimise energy loss;

2.7.3.4 ensuring employing appropriate basic controls, such as simple sensors and timers, to avoid unnecessary discharge of heated water or air;

2.7.3.5 where building services constitute more than 5% of the total energy consumption of the installation, identifying and employing the appropriate energy efficiency techniques for building services, having regard in particular to the Building services part of the Agency's Energy Efficiency Horizontal Guidance Note H2; and

2.7.3.6 maintaining and implementing an energy efficiency plan which identifies energy saving techniques that are applicable to the activities and their associated environmental benefit and prioritises them, having regard to the appraisal method in the Agency's Energy Efficiency Horizontal Guidance Note H2.

2.8 Accident prevention and control

2.8.1 The Operator shall maintain and implement when necessary the accident management plan submitted or described in response to Section 2.4.4 of the Application. The plan shall be reviewed at least every 2 years or as soon as practicable after an accident, whichever is the earlier, and the Agency notified of the results of the review within 2 months of its completion.

2.9 Noise and Vibration

2.9.1 The Permitted Installation shall be designed, operated and maintained so as to avoid reasonable cause for annoyance from noise or vibration, in particular by:

- equipment maintenance e.g. fans, pumps, motors, conveyors and mobile plant;
- use and maintenance of appropriate attenuation e.g. silencers, barriers, enclosures;
- timing and location of noisy activities and vehicle movements;
- periodic checking of noise emissions, either qualitatively or quantitatively; and
- maintenance of building fabric.

Provided always that the techniques used by the Operator shall be no less effective than those described in the application, where relevant.

2.10 On Site Monitoring

- 2.10.1 The Operator shall maintain and implement an emissions monitoring programme which ensures that emissions are monitored from the specified points, for the parameters listed in and to the frequencies and methods described in Tables 1.4.1, 2.2.1, 2.2.2, 2.2.9a, 2.2.9b, 2.2.11, 2.10.1, 2.10.2a, 2.10.2b and 2.10.3 or unless otherwise agreed in writing, and that the results of such monitoring are assessed. The programme shall ensure that monitoring is carried out under an appropriate range of operating conditions.
- 2.10.2 The Operator shall carry out environmental monitoring to the frequencies and methods described in the following conditions 2.10.2.1 to 2.10.2.10.
- 2.10.2.1 The Operator shall carry out surface water monitoring for the parameters listed in table 2.10.1, at the specified monitoring points and at least at the frequencies specified in that table.

Table 2.10.1: Surface water

Monitoring Points	Parameters	Frequency	Monitoring Method
Existing sample points A & B shown on plan 33019/PPC/002	pH	Six – Monthly	Monitoring to be carried out in accordance with Environment Agency Document "Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water" unless otherwise agreed in writing with the Agency.
	Temperature	Six – Monthly	
Any new surface water monitoring points detailed in the revised monitoring plan submitted in accordance with improvement condition 1.4.1.5	Electrical Conductivity	Six – Monthly	
	Dissolved Oxygen (mg/l)	Six – Monthly	
	Ammoniacal Nitrogen (mg/l)	Six – Monthly	
	Chloride (mg/l)	Six – Monthly	
	Sulphate (mg/l)	Six – Monthly	
	Alkalinity (mg/l)	Six – Monthly	
	TON (mg/l)	Six – Monthly	
	TOC (mg/l)	Six – Monthly	
	Na (mg/l)	Six – Monthly	
	K (mg/l)	Six – Monthly	
	Ca (mg/l)	Six – Monthly	
	Mg (mg/l)	Six – Monthly	
	Fe	Six – Monthly	
	Mn	Six – Monthly	
	Cd	Six – Monthly	
	Cr	Six – Monthly	
	Cu	Six – Monthly	
	Ni	Six – Monthly	
Pb	Six – Monthly		
Zn	Six – Monthly		
B	Six – Monthly		
Phenol	Six – Monthly		
COD	Six – Monthly		
NO ₃	Six – Monthly		
Hg	Six – Monthly		
As	Annually		
Pentachlorophenol (PCP)	Annually		
Organotin compounds	Annually		

2.10.2.2 Any substances detected in the annual List 1 screening of leachate required by condition 2.10.2.7 shall be incorporated into the monitoring regime for surface water, unless otherwise agreed with the Agency.

- 2.10.2.3 The Operator shall assess the surface water quality monitoring results, obtained from meeting the requirements of conditions 2.10.2.1, 2.10.2.2 and table 2.10.1, in accordance with table 10 in the Hydrogeological Risk Assessment (document reference ON/LIJRA/2309/01).
- 2.10.2.4 The Operator shall monitor leachate levels (in metres) from date of issue of this Permit at monthly intervals at the leachate wells shown on drawing number 33019/PPC/002 and at the abstraction point and two additional monitoring points within each new cell. The head of leachate shall not be permitted to exceed 1.0 metre above the base of each existing and future cell.
- 2.10.2.5 The Operator shall carry out leachate quality monitoring for the parameters listed in table 2.10.2a at the specified monitoring points and at least at the frequencies specified in that table.

Table 2.10.2a: Leachate Monitoring

Monitoring Points	Parameters	Frequency
All leachate wells as shown on drawing number 33019/PPC/002, and in all new cells from cell 6 onwards.	pH	Monthly
	Temperature	Monthly
	Electrical Conductivity	Monthly
	Ammoniacal Nitrogen	Quarterly
	Chloride	Quarterly
	Sulphate	Quarterly
	Alkalinity	Quarterly
	COD	Quarterly
	BOD	Quarterly
	TON	Quarterly
	TOC	Quarterly
	Na	Quarterly
	K	Quarterly
	Ca	Quarterly
	Mg	Quarterly
	Fe	Six Monthly
	Mn	Six Monthly
	Cd	Six Monthly
	Cr	Six Monthly
	Cu	Six Monthly
Ni	Six Monthly	
Pb	Six Monthly	
Zn	Six Monthly	
B	Six Monthly	
Phenol	Six Monthly	
Hg	Annually	
As	Annually	

Table 2.10.2a: Leachate Monitoring

Monitoring Points	Parameters	Frequency
	Total petroleum hydrocarbons (TPH)	Annually
	Speciated Poly Aromatic Hydrocarbons (PAHs)	Annually
	Benzene	Annually
	Toluene	Annually
	Ethylbenzene	Annually
	Xylene	Annually
	Pentachlorophenol (PCP)	Annually
	Organotin	Annually

2.10.2.6 The Operator shall assess leachate quality monitoring results in accordance with table 2.10.2b. Following any exceedences of the Assessment Levels specified in table 2.10.2b, the Operator shall instigate the contingency action plans in table 11 (leachate level) and table 12 (leachate quality) of the Hydrogeological Risk Assessment (document reference ON/LIJRA/2309/01) submitted with the application.

Table 2.10.2b: Leachate Assessment limits

Monitoring Points	All Leachate Monitoring Points as shown in 33019/PPC/002 and new cells from cell 6 onwards.	
Parameters	Frequency	Trigger Level
Leachate Level	Monthly	1-m above the base of each cell
Parameters	Frequency	Assessment Level (mg/l)
Ammoniacal Nitrogen (mg/l)	Quarterly	1070
Chloride	Quarterly	33,058
Cd	Six Monthly	0.60
Ni	Six Monthly	0.9
Phenol	Six Monthly	4.59
Hg	Annually	0.00051
Pentachlorophenol (PCP)	Annually	0.01
Organotin compounds	Annually	0.01

2.10.2.7 The Operator shall carry out leachate screening annually on leachate sampled from each hydraulically separate cell in accordance with Appendix 6 of the Environment Agency's guidance document LFTGN01, 'Hydrogeological risk assessment for landfills and the derivation of groundwater control and trigger levels'.

2.10.2.8 Any substances detected in the annual List 1 screening of leachate required by condition 2.10.2.7 above shall be incorporated into the quarterly monitoring regime for leachate, unless otherwise agreed in writing with the Agency.

- 2.10.2.9 Subsurface landfill gas emissions shall be controlled and monitored monthly at the peripheral locations specified in table 2.10.3.
- 2.10.2.10 The additional perimeter landfill gas monitoring boreholes installed under improvement condition 1.4.1.2 which are adjacent to future phases 7 to 14 shall be installed prior to the first deposit of waste in those cells. Monitoring of all additional landfill gas perimeter monitoring boreholes shall commence within one week of installation of the boreholes. Background conditions will be derived from 12 data sets representative of a 12-month period, in accordance with current Agency guidance. No waste shall be deposited in future phases 7 to 14 until background conditions for each individual borehole has been agreed in writing with the Agency.

Table 2.10.3 Landfill gas trigger levels

Emission point reference / description	Parameter	Trigger
All peripheral Landfill gas monitoring boreholes as shown on Drawing Ref: 33019/PPC/002	Methane	1.0% v/v above background conditions agreed in accordance with improvement condition 1.4.1.1 and condition 2.10.2.10.
All future boreholes installed in accordance with condition 2.10.2.10.		
All peripheral Landfill gas monitoring boreholes as shown on Drawing Ref: 33019/PPC/002	Carbon Dioxide	1.5% v/v above background conditions agreed in accordance with improvement condition 1.4.1.1 and condition 2.10.2.10.
All future boreholes installed in accordance with condition 2.10.2.10.		

2.10.3 No condition applies.

2.10.4 No condition applies.

2.10.5 The Operator shall notify the Agency at least 14 days in advance of undertaking monitoring and/or spot sampling, where such notification has been requested in writing by the Agency.

2.10.6 The Operator shall maintain records of all monitoring taken or carried out (this includes records of the taking and analysis of samples instrument measurements (periodic and continual), calibrations, examinations, tests and surveys) and any assessment or evaluation made on the basis of such data.

2.10.7 There shall be provided:

2.10.7.1 safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2 to this Permit, unless otherwise specified in that Schedule; and

2.10.7.2 safe means of access to other sampling/monitoring points when required by the Agency.

2.11 Closure, Aftercare and Decommissioning

- 2.11.1 The Permitted Installation shall, subject to the conditions of this Permit, be managed and controlled as described in the documentation specified in Table 2.11.1, or as otherwise agreed in writing by the Agency.

Table 2.11.1: Closure, Aftercare and Decommissioning techniques

Description	Parts	Date Received
Application	The response to questions 2.5 In Part B of the application form	19 th September 2003

- 2.11.2 Where the above Table refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the later document(s) shall prevail to the extent of such conflict.
- 2.11.3 No condition applies.
- 2.11.4 Notwithstanding condition 2.11.1 of this Permit, the Operator shall carry out a full review of the Site Closure Plan at least every 4 years.
- 2.11.5 The Operator shall implement the site closure plan on receipt of a notice from the Agency approving definitive closure of the landfill or part thereof.
- 2.11.6 The Operator shall give at least 30 days written notice to the Agency before implementing the site closure plan in respect of any non-landfill activities.

2.12 Multiple Operator installations

- 2.12.1 This is not a multi-Operator installation

2.13 Transfer to effluent treatment plant

- 2.13.1 No transfers to effluent treatment plant are controlled under this part of this Permit. Emissions to water are controlled under 2.2.2, 2.2.3 and 2.2.5.

3 Records

- 3.1.1 The Operator shall ensure that all records required to be made by this Permit and any other records made by it in relation to the operation of the Permitted Installation shall:-
 - 3.1.1.1 be made available for inspection by the Agency at any reasonable time
 - 3.1.1.2 be supplied to the Agency on demand and without charge
 - 3.1.1.3 be legible
 - 3.1.1.4 be made as soon as reasonably practicable
 - 3.1.1.5 indicate any amendments which have been made and shall include the original record wherever possible; and
 - 3.1.1.6 be retained at the Permitted Installation, or other location agreed by the Agency in writing, for a minimum period of 4 years from the date when the records were made, unless otherwise agreed in writing.

4 Reporting

- 4.1.1 All reports and written and or oral notifications required by this Permit and notifications required by Regulation 16 of the PPC Regulations shall be made or sent to the Agency using the contact details notified in writing to the Operator by the Agency.
- 4.1.2 The Operator shall, unless otherwise agreed in writing, submit reports of the monitoring and assessment carried out under condition 2.10, as follows:
- 4.1.2.1 in respect of the parameters and emission points specified in Table S2 to Schedule 2.
- 4.1.2.2 for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;
- 4.1.2.3 giving the information from such results and assessments as may be required by the forms specified in those Tables; and
- 4.1.2.4 to the Agency within 28 days of the end of the reporting period.
- 4.1.3 No condition applies.
- 4.1.4 The Operator shall review fugitive emissions, having regard to the application of the most appropriate measures to prevent pollution, on an annual basis, or such other period as shall be agreed in writing by the Agency, and a summary report on this review shall be sent to the Agency detailing such releases and the measures taken to reduce them within 3 months of the end of such period.
- 4.1.5 Where the Operator has a formal environmental management system applying to the Permitted Installation which encompasses annual improvement targets the Operator shall, not later than 31 January in each year, provide a summary report of the previous year's progress against such targets.
- 4.1.6 The Operator shall, within 6 months of receipt of written notice from the Agency, submit to the Agency a report assessing whether all appropriate preventive measures continue to be taken against pollution at the installation. The report shall consider any relevant published technical guidance current at the time of the notice which is either supplied with or referred to in the notice, and shall assess the costs and benefits of applying techniques described in that guidance, or otherwise identified by the Operator, that may provide environmental improvement.
- 4.1.7 The Operator shall submit to the Agency an interpretation report of the monitoring results for landfill gas, leachate, surface and groundwater against the relevant emission limits, assessment limits, control and trigger levels specified in the Permit on a three monthly basis, and shall submit a summary report of these interpretations to the Agency within one month of the end of each three month period.
- 4.1.8 The Operator shall review all monitoring data required by this Permit on an annual basis and shall submit a summary report to the Agency within three months of the end of each year.
- 4.1.9 The Operator shall submit to the Agency a report setting out the types and quantities of waste disposed of at the landfill on a three monthly basis i.e. for the periods 1 April - 30 June; 1 July - 30 September; 1 October - 31 December and 1 January - 31 March, such report to be received within 1 month from the end of each period.

5 Notifications

- 5.1.1 The Operator shall notify the Agency **without delay** of:-
- 5.1.1.1 the detection of an emission of any substance which exceeds any limit or criterion in this Permit specified in relation to the substance;
- 5.1.1.2 the detection of any fugitive emission which has caused, is causing or may cause significant adverse environmental effect; unless the quantity emitted is so trivial that it would be incapable of causing significant adverse environmental effect;
- 5.1.1.3 the detection of any malfunction, breakdown or failure of plant or techniques which has caused, is causing or has the potential to cause significant pollution;
- 5.1.1.4 any accident which has caused, is causing or has the potential to cause significant pollution;
- 5.1.1.5 the refusal to accept or rejection of incoming waste at the landfill, and
- 5.1.1.6 the detection of any significant adverse environmental effects
- 5.1.2 The Operator shall submit written confirmation to the Agency of any notification under condition 5.1.1, by sending:-
- 5.1.2.1 information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and
- 5.1.2.2 the more detailed information listed in Part B of that Schedule as soon as practicable thereafter; and such information shall be in accordance with that Schedule.
- 5.1.3 The Operator shall give prior written notification to the Agency of the following events and in the specified timescales:
- 5.1.3.1 as soon as practicable prior to the permanent cessation of the landfill disposal operations,
- 5.1.3.2 as soon as practicable prior to the cessation of the operation of the landfill disposal operations, for a period likely to exceed 1 month
- 5.1.3.3 at least 14 days prior to the resumption of the landfill disposal operations after a cessation
- 5.1.4 The Operator shall notify the Agency, as soon as practicable, of any information concerning the state of the site which affects or updates that provided to the Agency as part of the Site Report submitted with the application for this Permit.
- 5.1.5 The Operator shall notify the following matters to the Agency in writing within 14 days of their occurrence:
- 5.1.5.1 where the Operator is a registered company:
- any change in the Operator's trading name, registered name or registered office address;
 - any change to particulars of the Operator's ultimate holding company (including details of an ultimate holding company where an Operator has become a subsidiary)
 - any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up;
- 5.1.5.2 where the Operator is a corporate body other than a registered company:
- any change in the Operator's name or address;
 - any steps taken with a view to the dissolution of the Operator.
- 5.1.5.3 In any other case:
- the death of any of the named Operators (where the Operator consists of more than one named individual);
 - any change in the Operator's name(s) or address(es);

- any steps taken with a view to the Operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case them being in a partnership, dissolving the partnership;
- 5.1.6 Where the Operator has entered into a Climate Change Agreement with the Government, the Operator shall notify the Agency within one month of:
- 5.1.6.2 a decision by the Secretary of State not to re-certify that Agreement
 - 5.1.6.3 a decision by either the Operator or the Secretary of State to terminate that agreement
 - 5.1.6.4 any subsequent decision by the Secretary of State to re-certify such an Agreement
- 5.1.7 Where the Operator has entered into a Direct Participant Agreement in the Emissions Trading Scheme which covers emissions relating to the energy consumption of the activities, the Operator shall notify the Agency within one month of:
- 5.1.7.1 a decision by the Operator to withdraw from or the Secretary of State to terminate that agreement
 - 5.1.7.2 a failure to comply with an annual target under that Agreement at the end of the trading compliance period

6 Interpretation

6.1.1 In this Permit, the following expressions shall have the following meanings:

“*Application*” means the application for this Permit, together with any response to a notice served under Schedule 4 to the PPC Regulations and any operational change agreed under the conditions of this Permit.

“*Authorised Officer*” means any person authorised by the Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in Section 108(4) of that Act.

“*background concentration*” means such concentration of that substance as is present in:

- water supplied to the site; or
- where more than 50% of the water used at the site is directly abstracted from ground or surface water on site, the abstracted water; or
- where the Permitted Installation uses no significant amount of supplied or abstracted water, the precipitation onto the site.

“*BAT*” means *best available techniques* means the most effective and advanced stage of development of activities and their methods of operation which indicates the practical suitability of particular techniques to prevent and where that is not practicable to reduce emissions and the impact on the environment as a whole. For these purposes: “*available techniques*” means “those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced inside the United Kingdom, as long as they are reasonably accessible to the operator”; “*best*” means “in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole” and “*techniques*” “includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.”. In addition, Schedule 2 of the PPC Regulations has effect in relation to the determination of BAT.

“*Fugitive emission*” means an emission to air or water (including sewer) from the Permitted Installation which is not controlled by an emission or background concentration limit under conditions 2.2.1.3, 2.2.2.4, 2.2.2.5, 2.2.2.8 or 2.2.2.9 of this Permit”

“*Groundwater*” means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“*Interim Hazardous*” means a landfill classified as hazardous until 16th July 2004

“*L_{Aeq,T}*” means the equivalent continuous A-weighted sound pressure level in dB determined over time period, T

“*L_{A90,T}*” means the A weighted sound pressure level in dB exceeded for 90% of the time period, T

“*L_{AFmax}*” means the maximum A weighted sound level measurement in dB measured with a fast time weighting

“*The Landfill Regulations*” means the Landfill (England and Wales) Regulations SI 2002 No. 1559 and words and expressions defined in the Landfill Regulations shall have the same meanings when used in this Permit, save to the extent that they are specifically defined in this Permit. It shall include future amendments or superseding legislation

“*Monitoring*” includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

“*Permitted Installation*” means the activities and the limits to those activities described in Table 1.1.1 of this Permit.

“*PPC Regulations*” means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 (as amended) and words and expressions defined in the PPC Regulations shall have the same

meanings when used in this Permit save to the extent they are specifically defined in this Permit. It shall include any future amendments or superseding legislation

“Sewer” means sewer within the meaning of section 219(1) of the Water Industry Act 1991.

“Staff” includes employees, directors or other officers of the Operator, and any other person under the Operator’s direct or indirect control, including contractors.

“Year” means calendar year ending 31 December.

- 6.1.2 Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.
- 6.1.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means;
 - 6.1.3.1 in relation to gases from landfill gas flares, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
 - 6.1.3.2 in relation to gases from landfill gas engines, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 5% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
 - 6.1.3.3 in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.
- 6.1.4 Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such conflict.

Schedule 1 - Notification of abnormal emissions and significant adverse environmental effects

This page outlines the information that the Operator must provide to satisfy conditions 5.1.1 and 5.1.2 of this Permit.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part C refers specifically to the requirement to notify the Agency of any significant environmental effect as required by the Landfill Regulations and should be used instead of Part B to report such to the Agency.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the PPC Regulations.

Part A

Permit Number	
Name of Operator	
Location of Installation	
Location of the emission	
Time and date of the emission	

Substance[s] emitted	Media	Best estimate of the quantity or the rate of emission	time during which the emission took place
	e.g. air		
	e.g. groundwater		

Measures taken, or intended to be taken, to stop the emission	
--	--

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment or harm which has been or may be caused by the emission	
The dates of any unauthorised emissions from the installation in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of Onyx Landfill Limited

PART C

Nature of significant adverse environmental effect (e.g. Groundwater Pollution, LFG escape)	
Immediate measures taken to prevent further effects from this source	
Further measures taken , or intended to be taken, to rectify, limit or prevent any pollution of the environment or harm which has been or may be caused by the significant adverse environmental effect	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of Onyx Landfill Limited

Schedule 2 - Reporting of monitoring data

Parameters, for which reports shall be made, in accordance with conditions 4.1.2 and 4.1.3 of this Permit, are listed below.

Table S2: Reporting of monitoring data

Parameter	Monitoring point	Reporting period	Period begins
Surface water			
Parameters specified by condition 2.10.2.1, 2.10.2.2, 2.10.2.3 and table 2.10.1	Monitoring points specified by condition 2.10.2.1 and table 2.10.1	Six monthly for all parameters monitored at a six monthly frequency.	Date of Permit issue
		Annually for all parameters monitored at an annual frequency.	
Groundwater			
Parameters specified by conditions 2.2.3.4, 2.2.3.5 and tables 2.2.9a, 2.2.9b	Monitoring points specified by Parameters specified by conditions 2.2.3.4, 2.2.3.5 and tables 2.2.9a, 2.2.9b	Quarterly for all parameters monitored at a monthly or quarterly frequency.	Date of issue of Permit
		Annually for all parameters monitored at an annual frequency.	
Leachate			
Parameters specified by conditions 2.10.2.4, 2.10.2.5, 2.10.2.6, 2.10.2.7, 2.10.2.8 and table 2.10.2a and 2.10.2b	Monitoring points specified by conditions 2.10.2.4, 2.10.2.5, 2.10.2.6, 2.10.2.7, 2.10.2.8 and table 2.10.2a and 2.10.2b	Quarterly for all parameters monitored at a monthly or quarterly frequency.	Date of issue of Permit
		Six monthly for all parameters monitored at a six monthly frequency.	
		Annually for all parameters monitored at an annual frequency	
Landfill Gas (perimeter boreholes)			
Parameters specified by condition 2.10.2.9, 2.10.2.10 and table 2.10.3	Monitoring points specified by condition 2.10.2.9, 2.10.2.10 and table 2.10.3	Monthly	Date of issue of Permit
Landfill Gas (flare)			
Parameters specified by condition 2.2.1.3 and table 2.2.2	Monitoring points specified by conditions 2.2.1.2 and 2.2.1.3 and tables 2.2.1 and 2.2.2	Annually	Date of issue of Permit
Landfill gas (trace components)			
Parameters specified in Agency guidance	Response to question B2.3.50 in the application form and in accordance with Agency guidance	Annually	Date of issue of Permit

Table S2: Reporting of monitoring data

Parameter	Monitoring point	Reporting period	Period begins
Landfill Gas (surface emissions) Parameters specified in Agency guidance	Response to question B2.3.54 in the application form and in accordance with Agency guidance	Annually	Date of issue of Permit
Asbestos fibres Parameters specified by conditions 2.2.4.4, 2.2.4.5 and table 2.2.11	Monitoring points specified by conditions 2.2.4.4, 2.2.4.5 and table 2.2.11	Monthly	Date of issue of Permit
Landfill Body	Whole site	Annually	Date of issue of Permit
Quantity of waste deposited	Whole site	Annually	Date of issue of Permit

Schedule 3 - Forms to be used

Table S3: Reporting Forms		
Media/parameter	Form Number	Date of Form
Landfill Gas	Non provided. Reporting format to be agreed in writing with the Agency.	
Surface Water	Non provided. Reporting format to be agreed in writing with the Agency.	
Groundwater	Non provided. Reporting format to be agreed in writing with the Agency.	
Leachate	Non provided. Reporting format to be agreed in writing with the Agency.	
Waste Summary	Non provided. Reporting format to be agreed in writing with the Agency.	
Landfill Body	Non provided. Reporting format to be agreed in writing with the Agency.	

Schedule 4 - Reporting of performance data

Data required to be recorded and reported by Condition 2.7.1.

Table S4.1: Energy consumption			
	Delivered, MWh	Primary, MWh	% of total
Electricity*			
Gas			
Oil			
Other			

*specify conversion factor of primary source to delivered energy

Schedule 5 - Site Plan

NOT TO SCALE

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END OF PERMIT