



ENVIRONMENT
AGENCY

Permit with introductory note

Pollution Prevention and Control (England and Wales) Regulations 2000
Landfill (England and Wales) Regulations 2002

Silent Valley Landfill Site
Silent Valley Waste Services Limited
Beechwood House
Cwm
Ebbw Vale
County Borough of Blaenau Gwent
NP23 6PZ

Permit number

MP3835SV

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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) ("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 *part of* 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: i.e.

- (a) 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 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:-

Disposal of non-hazardous waste continues on this site following on from historic disposal of industrial wastes (predominantly blast furnace slag, vegetable based oils) dating back to the 1930s. The site has been used for disposal of municipal and industrial wastes since the early 1980s, following activities involving excavation and recovery of materials within the tip which occurred from the 1960s. The current waste disposal activities cover approximately 14 Hectares of previous deposits of waste. The landfill is situated in the Merddog valley above the village of Waunlwyd. The Nant Merddog stream has previously been piped around the site, along the landfill's Eastern boundary. Cwm Merddog beechwood is adjacent to the landfill on its Southern and Eastern boundaries, and is designated a Site of Special Scientific Interest. The landfill, located at the head of a steep-sided valley, has no artificial lining system, but is underlain by a discontinuous layer of natural boulder clay which overlies the weathered bedrock horizon (alternating bands of mudstone and sandstone).

A system is in place for active extraction of landfill gas generated within the landfill. Landfill gas is utilised for energy production (separate operator – see below), and a landfill gas flare is also operational on site. There is existing leachate drainage infrastructure present which is used to collect leachate at the Southern extent, or 'toe' of the landfill. Leachate is transferred into a storage/settlement lagoon prior to discharge to foul sewer (separate operator – see below).

The operator of the landfill has proposed robust mitigation measures for collecting and containing fugitive emissions of leachate from the landfill. Evidence of pollution in the groundwater is not surprising given the absence of an engineered lining system at this landfill. A series of groundwater pumping wells will be constructed at the toe of the landfill to intercept any such fugitive emissions and transfer the liquid to the leachate treatment/settlement lagoon for onward disposal from site to foul sewer. These mitigation measures have been designed by the operator with the intention of minimising the risk of fugitive emissions causing an adverse impact on the surrounding groundwater (and surface water) environment.

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
Blaenau Gwent County Borough Council	UP3335SN	08/11/2005
Novera Energy Generation No. 2 Limited	ZP3535SQ	03/05/2005

Superseded Licences/Authorisations/Consents relating to this installation

Holder	Reference Number	Date of Issue
Silent Valley Waste Services Limited	CPA22	22/02/1994

Other non-PPC activities may take place on the site of this installation which are not regulated under this Permit or any other PPC Permit. These are listed in the Table below. These activities include:

Other existing Licences/Authorisations/Registrations relating to this site

Holder	Reference Number	Date of issue
Silent Valley Waste Services Limited	SEW/224 (relating to waste transfer station and treatment plant)	10/09/1998
Silent Valley Waste Services Limited	CPA27 (Alternative Ref 30142) (relating to civic amenity site)	05/08/1994

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 5.1.1, 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	Dates	
Application MP3535SV	Received 09/11/2004	
Response to Schedule 4 Notice	Notice dated 25/02/2005	Response dated 22/04/2005
Application determined	Permit issued 08/11/2005	

End of Introductory Note.

Permit

Pollution Prevention and Control
(England and Wales) Regulations 2000
Landfill (England and Wales) Regulations 2002



**ENVIRONMENT
AGENCY**

Permit

Permit number

MP3835SV

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 (SI 2002 No.1559) hereby authorises

Silent Valley Waste Services Limited ("the Operator"),

Of/ whose Registered Office (or principal place of business) is

Beechwood House

Cwm

Ebbw Vale

County Borough of Blaenau Gwent

NP23 6PZ

Company registration number 2674212

to operate *part of an installation* at

Silent Valley Landfill Site

Beechwood House

Cwm

Ebbw Vale

County Borough of Blaenau Gwent

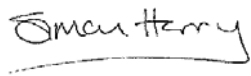
NP23 6PZ

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

	08 November 2005
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Simon Harry, Team Leader, Strategic Permitting Group - Aust

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 directly associated activities specified in Table 1.1.1.

Table 1.1.1

Activity listed in Schedule 1 of the PPC Regulations	Description of specified activity	Limits of specified activity
Section 5.2Part 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 wastes, consisting of the types and quantities specified in condition 2.1.2, as an integral part of landfilling.
Associated Activity		
Landfill gas management	Flaring of landfill gas	Landfill gas arising from the Permitted landfill
Leachate management, and fugitive emission mitigation measures	Transfer of leachate and collected groundwater to adjacent leachate treatment and disposal facility	Leachate arising from the Permitted landfill
Collection by pumping from boreholes the shallow groundwater from the down hydraulic gradient edge of the site	Transfer of collected groundwater to adjacent leachate treatment and disposal facility	
Water discharges to controlled waters	Discharge of site drainage from the landfill.	From surface water management system to point of entry to controlled waters
Fuel Storage	Storage of fuel for operation of plant and equipment	From fuel storage tank/ bowser to point of discharge/ disposal off site.

- 1.1.2. Where waste on site is subjected to activities that are not subject to the permit but are controlled under the Waste Management Licensing Regulations 1994 then the area of the installation on which these activities take place shall be clearly identified and such waste shall be kept separate from the waste activities authorised by this permit. A record shall be kept of where such 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 as indicated and 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 written management system and 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 on submission or within 14 days of the completion of each such requirement.

Table 1.4.1: Improvement programme requirements

Reference	Requirement	Date
1a	The operator shall fully implement the engineered mitigation measures set out in section 16, and Appendix F, of 'Silent Valley Landfill; IPPC Application Responses to Schedule 4 Notice' dated 22/04/2005.	31 May 2006 or as otherwise agreed in writing by the Agency
1b	During implementation of the mitigation measures the operator shall provide a monthly written progress report to the Environment Agency reviewing the results of tests/monitoring in trial wells established under section F4 of the above Appendix. The progress report shall include borehole logs for each trial well constructed.	Monitoring reports to be provided within 2 weeks of receipt of data by the operator.
1c	The operator shall report the final proposed design details for agreement in writing by the Agency of the mitigation measures to the Environment Agency, following interpretation of the results of the tests/monitoring undertaken in the initial trial wells.	31 December 2005 or as otherwise agreed in writing by the Agency
2a	The operator shall construct additional groundwater monitoring points in accordance with proposals submitted in section 16, and Appendix F of 'Silent Valley Landfill; IPPC Application Responses to Schedule 4 Notice' dated 22/04/2005.	31 December 2005 or as otherwise agreed in writing by the Agency
2b	The operator shall incorporate the additional groundwater monitoring points referred to above into the routine groundwater monitoring programme set out in the application (Application form Ref B 2.2.39). Construction of groundwater monitoring points and monitoring of groundwater shall be undertaken in accordance with relevant guidance contained within Environment Agency publication 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02).	31 December 2005 or as otherwise agreed in writing by the Agency
2c	The operator shall review groundwater monitoring data and submit to the Environment Agency proposed control and trigger levels for key determinands for groundwater	31 January 2007 or as otherwise agreed in writing by the Agency

Table 1.4.1: Improvement programme requirements

Reference	Requirement	Date
	<p>quality on an individual monitoring point basis.</p> <p>The review and setting of control and trigger levels shall consider both the leachate and background groundwater quality to determine if existing substances are appropriate and whether control and trigger levels also need to be established for other substances.</p> <p>Derivation of control and trigger levels shall be undertaken in accordance with Environment Agency publication "Hydrogeological Risk Assessments for Landfills and the derivation of groundwater control and trigger levels" (LFTGN01) and good statistical practice and shall include assessment for and removal of outliers in the data sets and the use of graphical time / concentration charts.</p>	
2d	Control and Trigger levels for groundwater quality proposed under 2a above, if approved in writing by the Environment Agency, shall be incorporated into normal operating procedures specified in the application (Application Ref B 2.2.42).	Immediately, on receipt of written approval from the Environment Agency
3a	<p>The operator shall construct additional leachate monitoring points within the waste body in accordance with proposals submitted in section 14 of 'Silent Valley Landfill; IPPC Application Responses to Schedule 4 Notice' dated 22/04/2005.</p> <p>New leachate monitoring points designated LC1, LC2, LC4 and LC5 shall be constructed within the timescale set by this condition.</p> <p>Construction of leachate monitoring points shall be undertaken in accordance with relevant guidance contained within Environment Agency publication 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02).</p>	31 December 2005 or as otherwise agreed in writing by the Agency.
3b	<p>The operator shall commence monitoring of leachate quality in all available leachate monitoring points at the frequency, and for the expanded determinand suites, and for the duration of time, set out in sections 14 and 15 of 'Silent Valley Landfill; IPPC Application Responses to Schedule 4 Notice' dated 22/04/2005.</p> <p>Monitoring of leachate shall be undertaken in accordance with relevant guidance contained within Environment Agency publication 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02).</p>	31 December 2005 or as otherwise agreed in writing by the Agency
3c	Review the groundwater monitoring suite for up- and down gradient monitoring wells against the results of the detailed leachate monitoring undertaken in improvement condition 1.4.1 ref 3b, to ensure that it remains valid and appropriate. Submit a report detailing the conclusions of the review to the Environment Agency, including any proposed changes to the groundwater chemical	31 March 2007

Table 1.4.1: Improvement programme requirements

Reference	Requirement	Date
	analysis suite. Implement any proposed changes to the monitoring suite as agreed in writing by the Agency.	
4a	<p>The operator shall prepare and submit to the Environment Agency for approval in writing a management scheme for maintaining maximum efficiency of the landfill gas extraction system with the aim of minimising fugitive emissions, and optimising the utilisation or flaring of the gas.</p> <p>The management scheme shall be designed to ensure that:</p> <ul style="list-style-type: none"> • All landfill gas extracted from the landfill shall be treated, and to the extent possible, used. • Landfill gas which cannot be used to produce energy shall be flared. <p>The management scheme shall also incorporate a planned preventative maintenance programme for all parts of the landfill gas management system authorised and controlled by this Permit.</p> <p>In preparing the management scheme, the operator shall review existing landfill gas extraction arrangements, particularly in connection with the specification, depth and distribution of collection wells within the waste (including in current operational waste disposal areas), against standards contained in relevant Environment Agency guidance documents. The operator shall submit written details of proposed improvements to the landfill gas extraction scheme along with a timetable for implementation.</p> <p>This exercise shall be undertaken in accordance with relevant standards specified in Agency Guidance Publication "Guidance on the management of landfill gas" (Ref LFTGN03), or its most up-to-date replacement.</p>	28 February 2006
4b	The landfill gas management scheme referred to above, if approved in writing by the Environment Agency, shall be implemented by the operator, and shall form part of the normal operating procedures for the authorised activity (Application Ref B2.2.46)	As notified in writing by the Environment Agency
5a	<p>The operator shall review perimeter landfill gas monitoring arrangements and submit written proposals, for agreement in writing by the Environment Agency, setting out details of, and a timetable for, additional perimeter landfill gas monitoring points to be constructed.</p> <p>This exercise shall be undertaken in accordance with relevant standards (particularly for monitoring point design, and spacing) specified in Agency Guidance Publication "Guidance on the management of landfill gas" (Ref LFTGN03), or its most up-to-date replacement</p>	28 February 2006

Table 1.4.1: Improvement programme requirements		
Reference	Requirement	Date
5b	Proposals for additional perimeter landfill gas monitoring points referred to in 5a above, if approved in writing by the Environment Agency, shall be implemented by the operator.	As notified in writing by the Environment Agency
6	The operator shall review fuel storage and containment arrangements at the landfill and implement improvements to infrastructure or management measures where necessary to ensure that all appropriate measures are taken to avoid pollution by accidental discharges. The operator shall submit a brief written report to the Environment Agency including the results of the review, improvements identified as necessary, and confirmation of implementation of those improvements.	30 April 2006

- 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 and the Site Protection and Monitoring Programme, as the case may be shall be deemed to be amended.

1.6 Pre-Operational Conditions

- 1.6.1 No disposal of wastes shall take place in any part of the Permitted Installation
- *identified for non hazardous waste, or*
- where waste deposit commences after the issue of this Permit unless:

1.6.1.1 at least 4 weeks prior to the commencement of construction of that part the operator has submitted to the Agency in writing the detailed design, material specifications, *stability assessment* and the construction quality assurance (CQA) programme for the pre-operational engineering of the:

- *groundwater under-drainage system,*
- *permanent geophysical leak location system*
- *leak detection layer,*
- *barriers,*
- *liners*
- *leachate collection layer*
- *leachate abstraction system*
- *landfill gas extraction and management systems*
- *separation bund/ layer*
- *pipework*
- *surface water drainage system*

for that part 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, any other specification agreed in writing by the Agency and any subsequent agreed change to the specification(s); and

1.6.1.2 the operator has notified the Agency in writing of any changes in the detailed design, material specifications, *stability assessment* and the CQA programme that are to be made during the construction and in advance of those changes being made the Agency has agreed in writing that these are acceptable in relation to the relevant specifications set out in Part B of the Application any other specification agreed in writing by the Agency and any subsequent agreed changes under 1.6.1.1; and

1.6.1.3 the pre-operational engineering and infrastructure as listed in 1.6.1.1, 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 relevant part 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 part becoming operational.

1.7 Off-site Conditions

1.7.1 There are no off-site conditions

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, 2.1, 2.2, 2.3, 2.4 and 2.5 in part B of the Application Form And the techniques and manner described in sections 14, 15, and 16 of 'Silent Valley Landfill; IPPC Application Responses to Schedule 4 Notice' dated 22/04/2005 (provided in response to the Notice served on the operator by the Environment Agency dated 25/02/2005).	

- 2.1.2 The non-landfill activities of the Permitted Installation shall, subject to the other conditions of this Permit, be operated using the techniques and in the manner described in the Site Protection and Monitoring Programme submitted under condition 4.1.7 of this Permit (as amended from time to time), or as otherwise agreed in writing by the Agency.
- 2.1.3 Wastes shall only be accepted for disposal on the site if they are listed in Schedule 6, all relevant waste acceptance procedures have been completed and the waste is in the 'category or type' permitted in table 2.1.2 below;

Table 2.1.2 : Wastes accepted for disposal	
Waste Category or Type	Re-permitted Landfill
	Permitted or not Permitted
Hazardous	Not Permitted
Non-hazardous	Permitted Excluding waste classified as 20 01 32 – medicines; and Excluding all wastes classified with a six digit code ending in '99'
Stable non-reactive hazardous	Not Permitted
Asbestos and construction materials containing asbestos	Not Permitted
Gypsum (and other high sulphate bearing waste)	Not Permitted
Inert	Permitted Excluding all wastes classified with a six digit code ending in '99'
Liquid wastes (including waste waters 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
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

Table 2.1.2 : Wastes accepted for disposal	
Waste Category or Type	Re-permitted Landfill
	Permitted or not Permitted
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

- 2.1.2.1 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. Any waste which does not conform with the description provided, shall be refused and the Agency notified in accordance with condition 5.1.1
- 2.1.2.2 All waste approved under condition 2.1.2 shall be characterised in accordance with Regulations to meet Waste Acceptance Criteria and Procedures. The operator shall provide written confirmation to the Agency, in the quarterly report required by condition 4.1.8, that such characterisation has been undertaken. Any information provided under this condition shall be included within the annual report required by condition 4.1.3.
- 2.1.2.3 The operator shall ensure that where representative samples are taken for analysis they are taken in accordance with Regulations, to meet Waste Acceptance Criteria and Procedures. The samples taken shall be retained for at least one month and results of any analysis for at least one year.

- 2.1.3 The operator on accepting each delivery of waste shall provide a written receipt to the person delivering it.
- 2.1.4 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.
- 2.1.5 The total quantity of waste that shall be deposited in the landfill shall not exceed 5,000,000 tonnes.
- 2.1.6 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.

Table 2.1.3 Annual Waste Input Limits	
Category	Limit Tonnes/ Year
Non-hazardous Waste	195,000
Inert Waste	5,000

- 2.1.7 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 (as defined by the Landfill Regulations), the collector) of any waste that is received for disposal or recovery at the Permitted Installation.

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 points in Table 2.2.1 shall only arise from the source(s) specified in that Table.

Table 2.2.1 : Emission points to air

Emission point reference or description	Source	Location of emission point
Flare	Landfill gas generated at the permitted landfill	Gas compound Location shown on drawing ESID8 in the Application

2.2.1.3 The limits for emissions to air for the parameter(s) and emission point(s) 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 (including Reference Period) ¹ mg/m ³	Monitoring frequency	Monitoring method
Flare	Nitrogen Oxides (NO _x)	150	Annually	Chemiluminescence
Flare	Carbon Monoxide (CO)	100 if flare commissioned before 31 Dec 2003; 50 if afterwards,	Annually	Non-Dispersive Infra red analysis
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

¹ See condition 6.1.3 with regard to reference conditions

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 - 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 Part 2.2.5.

Emissions to sewer

- 2.2.2.7 There are no specific controls imposed on emissions to sewer in this Part of the Permit.
- 2.2.2.8 No condition applies
- 2.2.2.9 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.
- 2.2.3.4 The trigger levels for emissions into groundwater for the parameter(s) and monitoring point(s) set out in Table 2.2.8 shall not be exceeded. Once the trigger levels established under improvement condition 1.4.1, Table 1.4.1 Reference 2c of this Permit have been agreed in writing with the Environment Agency, Table 2.2.8 shall be read as if it contained those agreed trigger levels.

Table 2.2.8: The trigger levels for emissions into groundwater

Emission point reference	Substance	Limit	Monitoring frequency	Monitoring method
GW6, GW7	Ammoniacal nitrogen	1.0 mg/l	Monthly, unless otherwise agreed in writing with the Environment Agency	Unless otherwise agreed in writing with the Environment Agency, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02).
	Chloride	250 mg/l		
	Mercury	Not above background level, to be established on an agreed statistical basis, under improvement condition 1.4.1, Table 1.4.1 Ref 2c		
	Nickel	0.05 mg/l		
	Sulphate	400 mg/l		
	Zinc	0.008 mg/l		
Additional monitoring points constructed under improvement condition 1.4.1 Ref. 2a	Ammoniacal nitrogen	As agreed under improvement condition 1.4.1 Ref 2c		
	Chloride	As agreed under improvement condition 1.4.1 Ref 2c		
	Mercury	As agreed under improvement condition 1.4.1 Ref 2c		
	Nickel	As agreed under improvement condition 1.4.1 Ref 2c		
	Sulphate	As agreed under improvement condition 1.4.1 Ref 2c		
	Zinc	As agreed under improvement condition 1.4.1 Ref 2c		

2.2.3.5 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 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 landfill gas, litter and particulate matter 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.

2.2.5 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 The Operator shall ensure that all appropriate measures, including BAT, are taken to prevent or where that is not practicable to reduce odorous emissions from the Permitted Installation, in particular by:
- controlling operational activities to minimise the generation of odour
 - limiting the use of odorous materials
 - restricting odorous activities
 - controlling the storage conditions of odorous materials
 - optimising the performance of abatement systems
 - timely monitoring, inspection and maintenance
 - employing, where appropriate, an approved odour management plan
- provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

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 There are no specific controls imposed on emissions to land in Part 2.2.7 of this Permit. Controls on such emissions are included in Parts 2.2.3 and 2.2.5.
- 2.2.7.3 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.

Fit and Proper Person

- 2.3.9 Where Regulation 4 of the Regulations applies to a relevant activity/ associated activity carried on at the Permitted Installation, as authorised under condition 1.1.1:
- 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 08 November 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.
- 2.3.10 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 60 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 for the landfill part of the permitted installation
- 2.5.2 The Operator shall design, maintain and operate all facilities for the storage and handling of waste within the non-landfill parts of the permitted installation such that there are no releases to water or land during normal operation and that emissions to air and the risk of accidental release to water or land are minimised.

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 No condition applies
- 2.6.3 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 S4.2 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 Notes as from time to time amended. Energy efficiency shall be secured in particular by:
- ensuring that the appropriate operating and maintenance systems are in place;
 - ensuring that all plant is adequately insulated to minimise energy loss or gain;
 - ensuring that all appropriate containment methods, (e.g. seals and self-closing doors) are employed and maintained to minimise energy loss;
 - ensuring employing appropriate basic controls, such as simple sensors and timers, to avoid unnecessary discharge of heated water or air;
 - 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 Notes; and
 - 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 Notes.

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 2.3.4 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 using BAT for the non-landfill parts of the installation, 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 2.2.2 (air), 2.2.8 (groundwater), 2.10.11 (sub-surface landfill gas), 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 conditions.
- 2.10.2 The operator shall carry out monitoring of surface water in accordance with the programme specified in the Application (Section 3.1.3 of Hydrogeological Risk Assessment supplied with Application), and shall undertake contingency actions described in the programme in the circumstances and to the timescales identified in the programme.

- 2.10.3 No condition.

Noise

- 2.10.4 No condition

Monitoring - General

- 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 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme in condition 2.10.1 of this Permit and the environmental or other monitoring specified in condition 2.10.2 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing.
- 2.10.8 There shall be provided:
- 2.10.8.1 safe means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2 to this Permit, when required by the Agency unless otherwise specified in that Schedule; and
- 2.10.8.2 safe means of access to other sampling/monitoring points when required by the Agency.
- 2.10.9 The Operator shall carry out the on-going monitoring identified in the Site Protection and Monitoring Programme submitted under condition 4.1.7, unless otherwise agreed in writing by the Agency.
- 2.10.10 The Operator shall, within 6 months of the issue of this Permit, in accordance with and using the format given in the Land Protection Guidance:
- 2.10.10.1 collect the site reference data identified in the Site Protection and Monitoring Programme submitted under condition 4.1.7, and
- 2.10.10.2 report that site reference data to the Agency unless otherwise agreed in writing by the Agency.

Landfill Gas

- 2.10.11 The Operator shall carry out monitoring of the parameters listed in Table 2.10.11 at the specified monitoring points and at least at the frequencies specified in that table. Trigger levels where not set in Table 2.10.11 shall be submitted in writing to the Agency within the timescale specified in that Table for approval. Once approved, Table 2.10.11 shall be read as if it contained the trigger levels approved under this condition.

Table 2.10.11 Landfill gas trigger levels

Monitoring point reference/description	Parameter	Trigger	Frequency
GMW1	Methane	Trigger level shall be	Unless otherwise
GMW2	Carbon dioxide	submitted to the	agreed in writing
GMW3		Environment Agency by	with the
GMW4		31 May 2006 in	Environment
GMW5		accordance with	Agency,
GMW6A		condition 2.10.11 of this	monthly
GMW6B		Permit.	
GMW7			
GMW8			
GMW9			
GMW10			
Additional monitoring points constructed under improvement condition 1.4.1 ref 5a/b		Trigger level shall be submitted to the Environment Agency by 31 November 2006 in accordance with condition 2.10.11 of this Permit.	

Leachate

- 2.10.12 The leachate levels within the installation shall be monitored from the date of the monitoring point installation at monthly intervals at the relevant locations identified in Table 2.10.12 (subject to prior compliance with improvement condition 1.4.1 ref 3a, where appropriate). The head of leachate shall not be permitted to exceed 3 metres above the base of the landfill.
- 2.10.12 The Operator shall carry out monitoring of leachate quality at the monitoring points and for the parameters listed in Table 2.10.12 to the frequencies and methods described in that Table.

Table 2.10.12 Leachate monitoring

Monitoring point reference/description	Parameter	Frequency	Test method
L1A L1B	Determinand suite in accordance with Table 12, Section 3.1.1 of the Hydrogeological Risk Assessment dated 05/11/2004 submitted with the Application (application form ref B1.4.1)	Quarterly, unless otherwise agreed in writing with the Environment Agency	Unless otherwise agreed in writing with the Environment Agency, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02).
LP3A LP4	Determinand suite in accordance with Table 12, Section 3.1.1 of the Hydrogeological Risk Assessment dated 05/11/2004 submitted with the Application (application form ref B1.4.1); and Flow rate	Quarterly, unless otherwise agreed in writing with the Environment Agency	
L1 L1A L1B L2A	Leachate level (metres Above Ordnance Datum)	Monthly	
LC1 LC2 LC4 LC5	Determinand suite in accordance with Table 12, Section 3.1.1 of the Hydrogeological Risk Assessment dated 05/11/2004 submitted with the Application (application form ref B1.4.1)	Monthly, for first six months following construction of these monitoring points, then Quarterly, unless otherwise agreed in writing with the Environment Agency	

Table 2.10.12 Leachate monitoring

Monitoring point reference/description	Parameter	Frequency	Test method
LC1	Leachate level	Monthly	
LC2	(metres above		
LC4	Ordinance Datum)		
LC5			
L1A	Expanded	Subject to prior	
L1B	determinand	compliance with	
	suites, set out in	improvement condition	
And	sections 14 and	1.4.1 Ref 3b; the	
LC1	15 of 'Silent	frequency of monitoring	
LC2	Valley Landfill;	for these expanded	
LC4	IPPC Application	determinand suites	
LC5	Responses to	required under condition	
	Schedule 4	2.10.12 of this Permit	
	Notice' dated	shall be Annually, unless	
	22/04/2005.	otherwise agreed in	
		writing with the	
		Environment 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 responses to questions 2-5 2.11.1 to 2.11.5 inclusive In Part B of the application form	

- 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 In respect of activities on the installation which are not Listed in Section 5.2 Part 1 A(1)(a) or (b) of Schedule 1 of the PPC Regulations, the Operator shall maintain and operate these activities so as to prevent or minimise any pollution risk, including the generation of waste, on closure and decommissioning in particular by:
- attention to the design of new plant or equipment;
 - the maintenance of a record of any events which have, or might have, impacted on the condition of the site along with any further investigation or remediation work carried out.; and
 - the maintenance of a site closure plan to demonstrate that the installation can be decommissioned avoiding any pollution risk and returning the site of operation to a satisfactory state.

- 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 There are no conditions as a result of the interactions of the Permits covering this installation.

2.13 Transfer to effluent treatment plant

- 2.13.1 Transfers to effluent treatment plant(s) shall occur only from the point(s) specified in Table 2.13.1 and transfers from those points shall arise only from the source(s) and shall be released only to the treatment plant(s) specified in that Table.

Table 2.13.1 Transfer point(s) to effluent treatment plant(s)		
Transfer point description/identifier	Source	Effluent Treatment Plant
LP1 LP2A LP3A All at location marked 'SUMP' on drawing ESID7 submitted with the application	Leachate arising from the landfill at this installation, and Associated contaminated water arising from the landfill at this installation	Leachate treatment and disposal facility at this installation authorised and controlled under PPC permit reference UP3335SN
LP4 At location marked 'LP4' on drawing ESID7 submitted with the application	Leachate arising from the landfill at this installation, and Associated contaminated water arising from the landfill at this installation	Leachate treatment and disposal facility at this installation authorised and controlled under PPC permit reference UP3335SN
Discharge point to be determined (in connection with mitigation measures under improvement condition 1.4.1 Ref 1a/b/c)	Pumping wells To be established and operated in connection with mitigation measures under improvement condition 1.4.1 ref 1a/b/c	Leachate treatment and disposal facility at this installation authorised and controlled under PPC permit reference UP3335SN

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:
- be made available for inspection by the Agency at any reasonable time
 - be supplied to the Agency on demand and without charge
 - be legible
 - be made as soon as reasonably practicable
 - indicate any amendments which have been made and shall include the original record wherever possible; and
 - 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, as follows:
- in respect of the parameters and emission and monitoring points specified in Schedule 2.
 - for the reporting periods specified in Schedule 2 and using the forms specified in Table S3 to Schedule 3;
 - giving the information from such results and assessments as may be required by the forms specified in those Tables; and
 - to the Agency within 28 days of the end of the reporting period.
- 4.1.3 The Operator shall submit to the Agency a report on the performance of the Permitted Installation over the previous year, by 31 January each year, providing the information listed in Tables S4.1-2 of Schedule 4, assessed at any frequency specified therein.
- 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, within two months of the date of this permit, submit a detailed Site Protection and Monitoring Programme, in accordance with and using the appropriate template format given in the Land Protection Guidance. The Operator shall implement and maintain the Site Protection and Monitoring Programme (SPMP) submitted under this condition, and shall carry out regular reviews of it at a minimum frequency of every 2 years. The results of such reviews and any changes made to the SPMP shall be reported to the Agency within 1 month of the review or change.
- 4.1.8 The Operator shall review the monitoring results for waste characterisation, 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 this review, to the Agency within one month of the end of each three month period.
- 4.1.9. 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.

- 4.1.10 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 pollutant which exceeds any limit or criterion in this Permit specified in relation to the pollutant;
 - 5.1.1.2 the detection of any fugitive emission which has caused, is causing or may cause significant pollution; 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 or Part C 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;

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.

“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, or
- groundwater quality up-gradient of the installation
- surface water quality up-gradient of 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.

“Characterisation” as set out in Schedule 1 para 5(5) of the of the Landfill (E&W) Regulations 2002 (SI:2002, No 1559) (as amended) and means gathering all necessary information for the safe disposal of the waste in the long term. The information required is at least that given in Schedule 1 para 5(1) and 5(2) of the 2002 Regulations. Samples of waste to be characterised must be obtained using a sampling plan in accordance with PrEN 14899 and Agency Guidance on the Sampling and Testing of Wastes to meet Waste Acceptance Procedures

“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

–“The Landfill Regulations” means the Landfill (England and Wales) Regulations SI 2002 No. 1559, as amended by SI 2004 No 1375 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

“Range of conditions” refers to environmental conditions, such that monitoring for example, for landfill gas is undertaken at a variety of atmospheric pressures (including when it is falling), water monitoring is undertaken in low and high flow conditions and at different times of the year, etc...

“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; the standards included in Environment Agency Guidance for Monitoring Enclosed Landfill Gas Flares or Guidance for Monitoring Landfill Gas Engine Emissions
- 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/ significant adverse environmental effect	
Time and date of the emission/ significant adverse environmental effect	

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	
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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 SILENT VALLEY WASTE SERVICES 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 SILENT VALLEY WASTE SERVICES 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	Emission point	Reporting period	Period begins
<i>Monitored parameters for emissions to air as specified in Table 2.2.2 of this Permit</i>	<i>Emission points as specified in Table 2.2.2 of this Permit</i>	<i>Annually</i>	<i>On issue of Permit (unless otherwise agreed in writing with the Environment Agency)</i>
<i>Monitored parameters for emissions to groundwater as specified in Table 2.2.8 of this Permit</i>	<i>Emission points as specified in Table 2.2.8 of this Permit</i>	<i>Quarterly</i>	<i>On issue of Permit (unless otherwise agreed in writing with the Environment Agency)</i>
<i>Plus any other parameters resulting from review of determinand suites under improvement condition 1.4.1 Ref 2c, as appropriate</i>	<i>Plus other monitoring points forming part of routine groundwater quality monitoring scheme as specified in the Application</i>		
<i>Plus any other parameters forming part of routine groundwater quality monitoring scheme as specified in the Application</i>			
<i>Monitored parameters for sub-surface emissions of landfill gas as specified in Table 2.10.11 of this Permit</i>	<i>Monitoring points as specified in Table 2.2.8 of this Permit</i>	<i>Quarterly</i>	<i>On issue of Permit (unless otherwise agreed in writing with the Environment Agency)</i>
<i>Plus any other parameters forming part of the routine landfill gas monitoring scheme as specified in the Application</i>	<i>Plus any other monitoring points forming part of the routine landfill gas monitoring scheme as specified in the Application</i>		

Table S2: Reporting of monitoring data

Parameter	Emission point	Reporting period	Period begins
<i>Parameters for leachate quality (and level, flow) as specified in Table 2.10.12 of this Permit</i>	<i>Monitoring points as specified in Table 2.10.12 of this Permit</i>	<i>Quarterly</i>	<i>On issue of Permit (unless otherwise agreed in writing with the Environment Agency)</i>
<i>Plus any other parameters forming part of the routine leachate quality (and level, flow) monitoring scheme as specified in the Application</i>	<i>Plus any other monitoring points forming part of the routine leachate quality (and level, flow) monitoring scheme as specified in the Application</i>		
<i>Parameters forming part of the routine surface water quality monitoring scheme as specified in the Application (Section 3.1.3 of Hydrogeological Risk Assessment supplied with Application)</i>	<i>Monitoring points forming part of the routine surface water quality monitoring scheme as specified in the Application</i>	<i>Quarterly</i>	<i>On issue of Permit (unless otherwise agreed in writing with the Environment Agency)</i>

Annually

Calculation of remaining capacity in cubic metres accounting for settlement

Record of the structure and composition of the landfill body

Surveying of the settling behaviour of the landfill during the operating and after care phases

Volume and composition of waste deposited in the previous 12 months

Quarterly

Quantity of waste deposited

Ambient air monitoring

Monthly

Leachate levels as mAOD

Basal elevation as mAOD

Waste volume

1. Stable, permanent survey control stations shall be established and maintained for the control of all survey work around the site. The stations shall be referenced to Ordnance Survey National Grid co-ordinates, the grid alignment to be within +/-1 metre and levels referenced to Ordnance Datum. The accuracy of horizontal control shall not be less than 1:20 000. The level values of adjacent stations shall agree to less than or equal to 0.005 metres. No waste shall be accepted at the site until a schedule of descriptions, co-ordinates and level values of all control stations, together with details of Bench Marks used, has been submitted in writing to the Agency.

2. A topographic survey shall be carried out immediately before the start of filling of each phase or cell, at annual intervals (unless otherwise agreed in writing by the Agency), and at the completion of restoration. The scale shall adequately show surveyed features and be at least 1:1250. The surveys shall be sufficient to produce plans that include all roads, structures, boundaries, monitoring points and all other relevant site features. The results of the survey shall be presented as a plan, including the immediate neighbouring landform or an indication of that landform. Plan positions of ground features to be shown to within 1 metre. Spot levels to 0.01m shall be shown at significant landform changes to a density to adequately indicate the true landform, no greater than 50 metre interval in open areas of even gradient, closer when indicating embankments, stockpiles, etc.

Schedule 3 - Forms to be used

Table S3:Reporting Forms		
Media/parameter	Form Number	Date of Form
Controlled Water	W1	25/04/03
Surface Water	None Provided. Reporting format to be agreed in writing with the Agency	
Groundwater	None Provided. Reporting format to be agreed in writing with the Agency.	
Landfill Gas	None Provided. Reporting format to be agreed in writing with the Agency.	
Waste/Raw Material Return	WPPCS1	
Waste Summary	None provided. Reporting format to be agreed in writing with the Agency.	
Landfill Body	None provided. Reporting format to be agreed in writing with the Agency.	

Schedule 4 - Reporting of performance data

Table S4.1: Annual Production/Treatment	
Leachate: Disposed of off site; Disposed of to any onsite effluent treatment plant.	Tonnes/year
Surface water and/ or groundwater: Disposed of off site; Disposed of to any onsite effluent treatment plant.	
Landfill gas: Disposed of by flare; Burnt in gas engine;	

Table S4.2: Performance parameters			
	Frequency of assessment	Annual average	
Potable water use	Annually		Cu m/tonne of waste disposed
Energy used	Annually		MW of electricity/tonne of biodegradable waste disposed
Non potable water use	Annually		Cu m/tonne of waste disposed
Energy generated	Annually		MW of electricity/tonne of biodegradable waste disposed
Waste Hazard Score (from H1)	Annually		
Waste Disposal Score (from H1)	Annually		

Schedule 5 - Site Plan

Drawing Ref ESID2 Rev A

Schedule 6 - List of Permitted Wastes

END OF PERMIT