

# Permit with introductory note

Pollution Prevention and Control Regulations 2000  
Landfill Regulations 2002

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Peckfield Landfill  
Caird Bardon Limited  
Ridge Road  
Micklefield  
Leeds  
LS25 4DW

Permit number

BU9726

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## Introductory note

### **2.10** *This introductory note does not form a part of the Permit*

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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 an installation carrying out activities covered by the description in Sections 5.2 A(1)(a) and 1.1 A(1)(b)iii in Part 1 to Schedule 1 of the PPC Regulations, to the extent authorised by the Permit:

- (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.
- (b) Burning of any of the following fuels in an appliance with a rated thermal input of 3 MW or more but less than 50 MW unless the activity is carried out as part of a Part A(2) or B activity -
  - i) waste oil;
  - ii) recovered oil;
  - iii) any fuel manufactured from, or comprising any other waste.

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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:

The main activities of the installation is the operation of an engineered containment landfill site with a maximum capacity of 7,000,000 cubic metres and the generation of electricity as defined respectively in Sections 5.2 A(1)(a) and 1.1 A(1)(b)iii in Part 1 to Schedule 1 of the PPC Regulations.

The permit authorises the disposal of a maximum of 800,000 tonnes per annum of: hazardous and non -hazardous waste until 16<sup>th</sup> July 2004 and thereafter non-hazardous waste only.

The permit application area covers approximately 38 hectares and is located at Ordnance Survey Grid Reference SE 434 325. The area lies to the south west of the village of Mickfield village bounded by Pit Lane to the west and agricultural land to the south and Peckfield plantation to the east.

The geology of the site comprises of fissured limestone overlain by overburden and mine waste. The natural groundwater levels are above the base of the liner. The application contains measures to control the level of groundwater that flows into the quarry by collecting and pumping it to a settlement pond before being discharged to Sheep Dyke. It is anticipated that without the active groundwater management controls the level of the groundwater would rebound to its natural levels and flow in an easterly direction towards the Mill Dyke.

The main releases from the site are:

- Surface water;
- Leachate;
- Landfill gas;

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- Noise;
- Litter;
- Dust; and
- Odour.

The Operator has proposed measures to mitigate the potential effects from these emissions and the Agency has imposed some improvement conditions within the permit setting out objectives and requirements for the Operator to meet revised emission standards within a realistic and achievable timescale where it believes that additional controls are required.

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		

Superseded Licences/Authorisations/Consents relating to this installation			
Holder	Reference Number	Date of Issue	Status
Waste Management Licence	961 (EAWML61354)	29/11/1991	
Consent to Discharge	Not applicable		

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. These activities include:

- Excavation of aggregate and associated activities.

## 2.10 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.

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## 2.10 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.

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## 2.10 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.

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## 2.10 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.

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## 2.10 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.

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## 2.10 Status Log

Detail	Date	Comment
<i>Application BU9726</i>	<i>Received 19/05/03</i>	
<i>Response to request for information</i>	<i>Request dated 03/06/03</i>	<i>Response dated 04/06/03</i>
<i>Response to request for information</i>	<i>Request dated 06/06/03</i>	<i>Response dated 03/07/03</i>
<i>Response to request for information</i>	<i>Request dated 29/07/03</i>	<i>Response dated 11/08/03</i>
<i>Response to request for information</i>	<i>Request dated 15/08/03</i>	<i>Response dated 22/08/03</i>
<i>Response to request for information</i>	<i>Request dated 09/09/03</i>	<i>Response dated 24/09/03</i>
<i>Request to extend determination</i>	<i>Request dated 16/09/03</i>	<i>Request accepted 18/09/03</i>
<i>Response to request for information</i>	<i>Request dated 16/09/03</i>	<i>Responses dated 23/09/03, 24/09/03 and 03/10/03</i>
<i>Response to request for information</i>	<i>Request dated 03/10/03</i>	<i>Responses dated 23/10/003 and 10/11/03</i>
<i>Response to request for information</i>	<i>Request dated 24/11/03</i>	<i>Response dated 24/11/03</i>
<i>Response to request for information</i>	<i>Request dated 28/11/03</i>	<i>Response dated 09/12/03</i>
<i>Response to request for information</i>	<i>Request dated 01/12/03</i>	<i>Response dated 02/12/03</i>
<i>Request to extend determination</i>	<i>Request dated 09/12/03</i>	<i>Request accepted 09/12/03</i>
<i>Response to request for information</i>	<i>Request dated 16/12/03</i>	<i>Response dated 23/12/03</i>
<i>Response to request for information</i>	<i>Request dated 23/12/03</i>	<i>Response dated 18/01/04</i>
<i>Response to request for information</i>	<i>Request dated 23/12/03</i>	<i>Response dated 18/01/04</i>
<i>Response to request for information</i>	<i>Request dated 25/01/04</i>	<i>Response dated 26/01/04</i>
<i>Request to extend determination</i>	<i>Request dated 09/02/04</i>	<i>Request accepted 12/02/04</i>
<i>Request to extend determination</i>	<i>Request dated 25/03/04</i>	<i>Request accepted 29/03/04</i>
<i>Permit determined</i>	<i>02/04/042</i>	

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End of introductory Note.

**Permit**

Pollution Prevention and Control  
Regulations 2000  
Landfill Regulations 2002

## Permit

Permit number

**BU9726**

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

**Caird Bardon Limited** ("the Operator"),

whose Registered Office (or principal place of business) is

**Bardon Hill**

**Coalville**

**Leicestershire**

**LE67 1TL**

**Company registration number 2433065**

to operate an installation at

**Peckfield Landfill**

**Ridge Road**

**Micklefield**

**Leeds, LS25 4DW**

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

The landfill authorised by this Permit is for the disposal of hazardous and non-hazardous waste until 16<sup>th</sup> July 2004. Thereafter, the landfill authorised by this permit is for the disposal of non-hazardous waste only.

Signed

Date

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Leigh Sayers

Authorised to sign on behalf of the Agency



# Conditions

## 1 General

### 2.401.1 Permitted Activities

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

**Table 1.1.1 Permitted activities**

Activity listed in Schedule 1 of the PPC Regulations / Associated Activity	Description of specified activity	Limits of specified activity
Section 5.2 A(1)(a) - The disposal of waste in a landfill.	Landfill for hazardous waste (landfill classification under the Landfill Regulations 2002)	Receipt, handling, storage and disposal of hazardous wastes and non-hazardous wastes, consisting of the types and quantities specified in condition 2.1.2, as an integral part of landfilling, until 16 July 2004.
Section 5.2 (A1)(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 waste, consisting of the types and quantities specified in condition 2.1.2, as an integral part of landfilling.
Section 1.1 A(1)(b)iii Burning of any of the following fuels in an appliance with a rated thermal input of 3 MW or more but less than 50 MW unless the combustion of waste activity is carried out as part of a Part A(2) or B activity – i) waste oil ii) recovered oil iii) any fuel manufactured from, or comprising, any other waste	Landfill Gas Utilisation	Landfill gas collected from the Permitted landfill
Leachate management	Storage, handling and treatment of leachate pre-discharge	Storage, handling and recirculation or disposal off site of leachate arising from the Permitted landfill
Landfill gas management	Control of landfill gas	Flaring of landfill gas
Water discharges to controlled waters	Storage and discharge of site drainage from surrounding land and restored areas of landfill	From surface and groundwater management systems to point of entry to controlled waters

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.

## 2.101.2 Site

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- 1.2.1 The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the land shown edged in **green-purple** 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	Provide to the Agency a report, in accordance with the Agency's H3 Noise Guidance, on the potential impact of noise on The Bungalow, The Crescent and properties along Pit Lane of above ground operations of Phase Seven. The report shall also include measures to mitigate the level of noise produced by site operations where they are likely to cause annoyance. The Operator shall submit a timetable, for approval, for the instigation of these measures to the Agency.	12 months from the date of issue of the permit.
2	Install one groundwater monitoring borehole up gradient of the landfill and colliery spoil storage area located in the North West corner of the site. Details of the installation and final location including drilling log and as built construction should be forwarded to the Agency upon completion. The monitoring of the borehole will be incorporated into a revised groundwater management plan (reference 2.3.40), that should be submitted to the Agency for approval. The approved procedures shall be incorporated in the site working procedures in the timescale indicated by the Agency in their approval.	4 months from the date of issue of the permit.
3	Provide to the Agency a report (including a plan) detailing all public utility services on the site and within 50 metres of the boundary of the installation.	3 months from the date of issue of the permit.
4	A revised landfill gas management plan (reference 2.3.46), for the site should be prepared and submitted to the Agency. The plan should include, but not be limited to, documented system (including procedures and work instructions) for the implementation of monitoring measures, frequencies, schedules, techniques, compliance action plans, data management and reporting procedures for monitoring of: <ul style="list-style-type: none"><li>• In waste and perimeter boreholes;</li><li>• Public utility services;</li><li>• Surface gas emissions; and</li><li>• Aerial emissions and off-site monitoring in event of migration.</li></ul> The approved procedures shall be incorporated in the site working procedures in the timescale indicated by the Agency in their approval.	6 months from the date of issue of the permit.
5	Provide the Agency with a site report on the phase 2 intrusive investigation works on the non-landfill areas of the site. The report shall include a site protection and monitoring plan to facilitate collection of reference data.	12 months from the date of issue of the permit.
6	Provide to the Agency a revised and updated GasSim model. This model must include input parameters to accurately reflect the various engineering designs used at the installation.	12 months from the date of issue of the permit.

**Table 1.4.1: Improvement programme requirements**

Reference	Requirement	Date
7	Provide to the Agency a stability assessment on the effect of the size of plant proposed for use in the capping and restoration of the installation such that the stability of the works will not compromise the cap.	3 months from the date of issue of the permit.
8	Provide the Agency with a report on the results of an investigative survey of soils in the landfill gas compound for oil contamination and where necessary details of any pollution remediation measures required to be undertaken with a schedule for completion on the works. The Operator shall undertake any pollution remediation measures approved by the Agency within a timescale indicated in the approval.	3 months from the date of issue of the permit.
9	Provide a report to be agreed with the Agency setting out proposals for soil and groundwater protection measures for potential contamination that may occur within the landfill gas compound and the area occupied by the leachate re-circulation tank. The report shall clearly set out the protection measures with a proposed schedule for the completion of the works. The Operator shall undertake any measures approved by the Agency within a timescale indicated in the approval.	3 months from the date of issue of the permit.
10	All headworks of monitoring boreholes shall be inspected and suitable repairs made to allow the boreholes to be sealed and locked with a suitable system to prevent unauthorised opening. Provide to the Agency confirmation that this work has been completed and that a maintenance inspection and repair programme has been agreed with the Agency.	3 months from the date of issue of the permit.

- 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.
- 1.4.3 Construction Quality Assurance reports shall be forwarded to the Agency in respect of any construction works required to establish monitoring locations. As built drawings shall be forwarded to the Agency with one month of the completion of the works.

## **2.101.5 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.

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## 1.6 Pre-Operational Conditions

- 1.6.1 No disposal of wastes shall take place in any proposed new disposal areas of the Permitted Installation 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 area the Operator has submitted to the Agency in writing the detailed design and the construction quality assurance (CQA) Plan 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:
- 1.6.1.1.1 the relevant specifications set out in section 2 of Part B of the Application; and
- 1.6.1.1.2 where a period of 12 months or greater have lapsed since the issue of this permit the Operator has also submitted:
- written justification that the relevant specifications set out in section 2 of Part B of the Application are still conformant with relevant guidance and any amending legislation; or
  - a revised design and CQA Plan for any proposed phase or cell that takes into account subsequent revisions to relevant guidance and any amending legislation; and
- 1.6.1.1.3 The CQA Plan for future cell engineering works shall in particular address the following points:
- Details of how the stability of the quarry sidewalls is to be assessed prior to engineering works commencing. This should include the method of assessment, suitability of the assessor and means of reporting;
  - Details of how the potential for solution features within the quarry base is to be investigated, and how any features identified are to be addressed;
  - Justification that the cell specific lining system design is sufficiently robust to ensure that basal heave will not cause loss of integrity;
  - Consideration of a composite sidewall liner design where receptors to potential landfill gas migration are present;
  - When specifically considering the design of cell 11, the CQA plan must include justified recommendations for a minimum distance between the identified mine shaft at the north east boundary of the installation and the edge of the cell; and
- 1.6.1.2 any and all changes to the Construction Quality Assurance Plan, third party independent quality assurance, and detailed method statements have been notified in writing to the Agency and have not been implemented unless the Agency has given its written consent to those changes; 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 Permit, and has confirmed in writing that it has no objection to that area becoming operational.

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## 1.7 Off-site Conditions

- 1.7.1 There are no off-site conditions that apply to this 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 2.1.1A, or as otherwise agreed in writing by the Agency in accordance with conditions 1.5.1 and 1.5.2 of this Permit.

Table 2.1.1A: Operating techniques		
Description	Parts	Date Received
Application	The response to questions 2.3 in part B of the Application Form and given in Hydrogeological Risk Assessment dated 29 April 2003, Landfill Gas Risk Assessment dated May 2003, Stability Risk Assessment dated May 2003 and Site Report dated 12 May 2003. Excluding the response to questions 2.3.50 and sections 6.3 of the Hydro risk assessment.	19/05/03
Response to letter dated 06/06/03	The response to letter dated 09/07/03 replaces Appendix 1A and 2 of the application.	09/07/03
Application	The response to questions 2.4 in part B of the Application Form.	19/05/03
Application	The response to questions 2.5 in part B of the Application Form.	19/05/03
Application	The response to questions 3.1 in part B of the Application Form and given in the Hydrogeological Risk Assessment dated 29 April 2003, Landfill Gas Risk Assessment dated May 2003 of the application. Excluding responses to questions 3.1.2 to 3.1.9 and 3.1.11 to 3.1.17 (inclusive).	19/05/03

1.4.22.1.2 Wastes shall only be accepted for disposal on the site if they are both as described in the application and in accordance with the restrictions in Table 2.1.1B and 2.1.1C below: and

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Table 2.1.1B : Wastes accepted for disposal		
Waste Category or Type	Before 16 <sup>th</sup> July 2004	On or After 16 <sup>th</sup> July 2004
Hazardous	Permitted As detailed in appendix A of letter dated 9 July 2003.	Not permitted
Non-hazardous	Permitted As detailed in appendix A of letter dated 9 July 2003. Excluding 18 01 01, 06, 07, 08, 09, and 10, 18 02 01, 05, 06, 07 and 08, 20 03 99 wastes	Permitted As detailed in appendix B of letter dated 9 July 2003. Excluding 17 08 02, 18 01 01, 07, and 09, 18 02 01, 06 and 08, 20 03 99 wastes
	As detailed in appendix D of letter dated 9 July 2003. Excluding capping and restoration material 01 01 01, 01 01 02, 17 05 06, 19 13 02, 19 13 04 and 1913 06 wastes	As detailed in appendix D of letter dated 9 July 2003. Excluding capping and restoration material 01 01 01, 01 01 02, 17 05 06, 19 13 02, 19 13 04 and 1913 06 wastes
Inert	Permitted	Permitted
Liquid wastes (including waste waters but excluding sludge).	Not permitted	Not permitted
Waste which in the conditions of landfill is explosive, corrosive, oxidising, highly flammable or flammable.	Not permitted	Not permitted
Hospital and other clinical infectious wastes from medical or veterinary establishments.	Not permitted	Not permitted

**Table 2.1.1B : Wastes accepted for disposal**

Waste Category or Type	Before 16 <sup>th</sup> July 2004	On or After 16 <sup>th</sup> July 2004
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	Not permitted
Whole used tyres (other than tyres used as engineering materials, bicycle tyres and tyres with an outside diameter of more than 1400mm.	Not permitted	Not permitted
Shredded used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm.	Permitted	Permitted until 16 <sup>th</sup> July 2006.
Any waste which does not fulfil the relevant waste acceptance criteria.	Not permitted	Not permitted
Waste which has been diluted or mixed solely to meet the relevant waste acceptance criteria.	Not permitted	Not permitted
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	Permitted until a date to be specified in Regulations, and if no date so specified, no later than 31 <sup>st</sup> March 2007.

**Table 2.1.1C : Waste acceptance criteria**

Waste Category or Type	Before 16 <sup>th</sup> July 2004	On or After 16 <sup>th</sup> July 2004
Hazardous	Subject to loading rate/limiting factors given in letter dated 9 July 2003	Not permitted
Non-hazardous	Subject to loading rate/limiting factors given in letter dated 9 July 2003	Subject to loading rate/limiting factors given in letter dated 9 July 2003

- 2.1.2.52.1.2.1 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; and
- 2.1.2.62.1.2.2 the Operator shall ensure that if representative samples are taken for analysis, the Operator shall reference and retain the samples and results of any analysis for at least one month; and
- 2.1.2.72.1.2.3 the Operator on accepting each delivery of waste shall provide a written receipt to the person delivering it; and
- 2.1.2.4 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.
- 2.1.3 The total quantity of waste that shall be deposited in the landfill shall not exceed 7,700,000 tonnes.
- 2.1.4 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in Table 2.1.2 below.

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Operating conditions

**Table 2.1.2 : Annual Waste Input Limits**

Category	Limit Tonnes/ Year	Comments
Hazardous Waste	800,000	Permitted until 16 <sup>th</sup> July 2004
Non Hazardous Waste	800,000	Permitted
Stable, non-reactive hazardous waste	800,000	Permitted until 16 <sup>th</sup> July 2004. <u>Are they taking asbestos wastes? Just confused over the asbestos monitoring.</u>
Inert Waste	800,000	Permitted
Total Quantity per annum	800,000	

- 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 together with the precise disposal location of hazardous waste.

## 2.2 Emissions

### 2.2.1 Emissions to Air (excluding Odour, Noise or Vibration) from specified points

- 2.2.1.1 This 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
A1 Flare stack	Landfill gas collection system	Engine and flare compound on plan S.2003/PF/PPC1 dated 11/03/2003
A2 to A4 Engine exhausts	Landfill gas collection system	Engine and flare compound on plan S.2003/PF/PPC1 dated 11/03/2003

#### *Air (point source) Monitoring*

- 4.1.1.32.2.1.3 The Operator shall carry out monitoring to air of the parameters listed in Table 2.2.2 at the specified emission points and at least at the frequencies specified in that Table.
- 2.2.1.4 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	Emission Limit <sup>1</sup>	Monitoring frequency	Monitoring method
A1 Flare stack Located in engine and flare compound shown on plan S.2003/PF/PPC1 dated 11/03/2003	Oxides of Nitrogen	150 mg/m <sup>3</sup>	Annual	ISO 10849
	Carbon Monoxide	100 mg/m <sup>3</sup> 50 mg/m <sup>3</sup> *	Annual	ISO 12039
	Total Volatile Organic Compounds	10 mg/m <sup>3</sup>	Annual	ISO 12619 * * ISO 13526 * * *
	Non-methane Volatile Organic Compounds	5 mg/m <sup>3</sup>	Annual	ISO 13649

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Operating conditions

	Trace gas Components		Annual	
A2 to A4 Engine ehausts	Oxides of Nitrogen	650 mg/m <sup>3</sup>	Annual	ISO 10849
	Carbon Monoxide	1500 mg/m <sup>3</sup>	Annual	ISO 12039
Located in engine and flare compound shown on plan S.2003/PF/PPC1 dated 11/03/2003	Total Volatile Organic Compounds	1750 mg/m <sup>3</sup>	Annual	ISO 12619 * * ISO 13526 * * *
	Non-methane Volatile Organic Compounds	150 mg/m <sup>3</sup>	Annual	ISO 13649
	Trace gas components		Annual	
Engines Commissioned after 1 November 2004	Oxides of Nitrogen	500 mg/m <sup>3</sup>	Annual	ISO 10849
	Carbon Monoxide	1400 mg/m <sup>3</sup>	Annual	ISO 12039
	Total Volatile Organic Compounds	1000 mg/m <sup>3</sup>	Annual	ISO 12619 * * ISO 13526 * * *
	Non-methane Volatile Organic Compounds	Should this be 75 mg/m <sup>3</sup> 2750 mg/m <sup>3</sup>	Annual	ISO 13649
	Trace Gas Components		Annual	

Note 1: See Section 6 for reference conditions.

\* For flares commissioned after November 2002.

\*\* At sites with low VOCs concentrations.

\*\*\* At sites with low to moderate VOCs concentrations.

1.1.1.52.2.1.5 In the event that any emission limit in Table 2.2.2 is exceeded the actions agreed in accordance with condition 2.2.1.10 shall be instigated.

2.2.1.6 Within three months of the issue date of the permit the landfill gas engines shall, where not already fitted, have installed emission sampling points to permit monitoring for the parameters required by Table 2.2.2.

2.2.1.7 Within three months of the issue date of the permit the landfill gas flare shall, where not already fitted, have installed emission sampling points to permit monitoring for the parameters required by Table 2.2.2.

2.2.1.8 Conduct and report, to the Agency, the annual emission monitoring required by Table 2.2.2 for landfill gas flares and engines within five months of the issue of the permit.

2.2.1.9 Modify and/or repair, within eight months of the issue of the permit, any landfill gas flares and engines such that the emissions do not exceed standards set out in Table 2.2.2.

2.2.1.10 Provide for approval to the Agency, within nine months of the issue of the permit, a copy of a revised operating procedure (reference PEC 2.3.46) for the implementation of monitoring measures, schedules, techniques, compliance action plans, data management and reporting procedures for monitoring of landfill gas flares and engines for the parameters stated in Table 2.2.2. The approved procedures shall be incorporated in the site working procedures in the timescale indicated by the Agency in their approval.

2.2.1.11 Provide, within nine months of the issue of the permit, the Agency with a revised impact assessment report incorporating detailed air dispersion modelling using new generation air dispersion models. The report shall evaluate the potential effect of the emissions against the UK Air Quality Strategy Objectives. Where the report indicates that the installation is contributing significantly to the exceedance of Air Quality Objectives a review of options including a cost benefit analysis conducted in accordance with Agency guidance and covering the followings:

- Engine design;
- Engine management systems;
- Stack height (s);
- Location;

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- Installation of continuous monitoring for NO<sub>2</sub>;
  - Clean up pre and post combustion; and
  - Alternative utilisation methods.
- shall also be submitted.

2.2.1.12 Submit to the Agency a programme of actions, within twelve months of the issue of the permit, with a timetable for achieving defined outcomes to reduce the impact of any exceedance, identified in the report submitted in accordance with condition 2.2.1.11 above, of the landfill gas flares and engines to below Air Quality Standards. The Operator shall undertake any measures approved by the Agency to the timescale indicated in their approval.

## 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 2.2.2.2 - 3 shall not apply to emissions to sewer.

2.2.2.3 Emissions to water from the emission point specified in Table 2.2.3 shall only arise from the source specified in that Table.

**Table 2.2.3: Emission point to water**

Emission Point Reference and/or location description	Source	Receiving Water
OBP located on the balancing pond shown on plan S.2003/PF/PPC6 dated 01/05/2003 and location identified in accordance with condition 2.10.2.4.	Groundwater extraction well and surface water collection system.	Sheep Dyke

### Emissions to Sewer

~~2.2.2.7~~2.2.2.4 There are no specific controls imposed on emissions to sewer in this Part of the Permit. Controls on such emissions are included in Part 2.2.5 of this Permit.

#### Water (emissions to sewer) monitoring

~~4.1.1.5~~2.2.2.5 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.

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- 2.2.3.4 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 the 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.
- 2.2.3.5 The Risk Assessment review shall include a review of the responses in Section 1.2.1 to 1.2.9 (inclusive) of Part B of that original application. The written review shall show that by the specified date, the level of risk to groundwater meets the terms of the Groundwater Regulations 1998.
- 2.2.3.6 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.
- 2.2.3.7 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.
- 2.2.3.8 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.

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

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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 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.

**Air (fugitive emissions) Monitoring**

2.2.4.3 The Operator shall carry out monitoring of the parameters listed in Table 2.2.4 from the monitoring and emission points and at least at the frequencies specified in that Table.

Table 2.2.4 : Emission monitoring frequency for air		
Parameters	Emission Points	Frequency of monitoring
	<b>G1 to G4, G9 to G31, G33 to G41</b>	
As detailed in the landfill gas management plan 2.3.46		Weekly *
Gas Temperature		Weekly *
Trace gas components		Annually
	<b>BH42 to BH58</b>	
As detailed in the landfill gas management plan 2.3.46		Weekly *
Gas Temperature		Weekly *
Trace gas components		6 monthly for two years from issue of permit and thereafter annually
	<b>Ambient air at site boundary</b>	
Methane		Monthly *
Atmospheric pressure		Monthly
Temperature		Monthly
Hydrogen Sulphide		Monthly **
Other chemicals		12 monthly
Particulate matter		Weekly
Suspended particulate PM <sub>10</sub>		Weekly
Particulate - Asbestos		Six monthly until 16 <sup>th</sup> July 2004.

\* In the event of the gas extraction system becoming inactive the frequency of monitoring shall increase to daily.

\*\* Monitoring shall only take place under calm conditions (< Beaufort force 3)

4.1.1.42.2.4.4 The trigger levels for emissions to air for the parameter(s) and monitoring point(s) set out in Table 2.2.5 shall not be exceeded.

Table 2.2.5 : Trigger levels for emissions into air			
Monitoring points	Parameters	Units/Accuracy	Trigger Level
External gas monitoring boreholes G2 to G4, G9 to G24, G26, G27, G30 and G33 to G41 inclusive	Methane	% v/v, 0.1%	> 1.0%
	Carbon Dioxide	% v/v, 0.1%	> 5.0%
	Oxygen	% v/v, 0.1%	< 10.0%
External gas monitoring boreholes G1, G25, G28, G29 and G31 inclusive	Methane	% v/v, 0.1%	> 1.0%
	Carbon Dioxide	% v/v, 0.1%	> 6.0%
	Oxygen	% v/v, 0.1%	< 10.0%
Ambient air at site boundary, locations to be agreed in accordance with condition 2.2.4.8	Methane	ppm	10
	Non-methane volatile organic compounds	ppm as total	10
	Hydrogen Sulphide	ppb	10
	Other chemicals *		

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\* The environmental trigger levels for other chemicals listed in EA guidance document H1 shall be not be exceeded at the site boundary.

4.1.1.62.2.4.5 In the event that any trigger level in Table 2.2.5 is exceeded the actions detailed in the Landfill Gas Action Plan shall be instigated.

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2.2.4.6 The Operator shall provide, within thirteen months of the issue of the permit, an environmental impact assessment based upon at least 12 months background monitoring data of the emission from boreholes 42 to 58 inclusive. The report shall also include, for approval by the Agency, a revised landfill gas action plan (reference PEC 2.3.46) incorporating details for control and trigger values and any changes to the monitoring procedure required by the impact assessment. The approved procedures shall be incorporated in the site working procedures in the timescale indicated by the Agency in their approval.

2.2.4.7 The Operator shall provide for approval of the Agency, within three months of the issue of the permit, a copy of a revised operating procedures (reference PEC 2.3.46) for the implementation of monitoring measures, schedules, techniques, compliance action plans, data management and reporting procedures for monitoring of Ambient Air Quality at site boundary locations for the parameters stated in Table 2.2.4. The approved procedures shall be incorporated in the site working procedures in the timescale indicated by the Agency in their approval.

2.2.4.8 The Operator shall agree with the Agency, within 4 months of the issue of the permit, suitable locations for the monitoring as required by 2.2.4.7 above.

**Aerial emissions of particulate matter**

4.1.1.62.2.4.9 The Operator shall carry out monitoring of the parameters listed in Table 2.2.6 below, at the specified monitoring points and at least at the frequencies specified in that Table.

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2.2.4.72.2.4.10 The limits for particulate matter emissions into air for the parameter(s) and monitoring point(s) set out in Table 2.2.6 shall not be exceeded.

**Table 2.2.6 : Particulate emission limits into air**

Parameters	Limits	Locations	Reference Period
Deposited dust	200 mg/m <sup>2</sup> day <sup>-1</sup>	To be agreed in accordance with condition 2.2.4.13	Weekly average
Suspended particulate PM10	Not to exceed 50 µg m <sup>-3</sup> more than 35 times per year; Not to exceed 40 µg m <sup>-3</sup>		24-h average
Asbestos	0.002 fibres/ml		Annual average 4-hour total

2.2.4.11 In the event that any trigger level in Table 2.2.6 is exceeded the actions detailed in the Particulate Monitoring Action Plan agreed in accordance with condition 2.2.4.12 shall be instigated.

2.2.4.12 The Operator shall provide for approval of the Agency, within three months of the issue of the permit, a copy of a revised operating procedures (reference PEC 2.3.70) for the implementation of monitoring measures, schedules, techniques, compliance action plans, data management and reporting procedures for monitoring of particulate at site boundary locations for the parameters stated in Table 2.2.6. The approved procedures shall be incorporated in the site working procedures in the timescale indicated by the Agency in their approval.

2.2.4.13 The Operator shall agree with the Agency, within 4 months of the issue of the permit, suitable locations for the monitoring as required by condition 2.2.4.12 above. The Operator shall install (within 1 month of the agreement of locations) appropriate particulate emission monitoring equipment at the proposed monitoring locations sufficient to monitor for the parameters stated in Table 2.2.6.

## 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.

2.2.5.3 The Operator shall notify the Agency in writing of any known or planned introduction of or material change in respect of emissions from the premises to the environment, that may increase or introduce into the effluent any "dangerous substance" (set out in Schedule 7, the 'List of dangerous substances' attached to this permit) or any other substance considered by the Operator as likely to have a significant effect on the receiving waters. ~~Cannot see a problem with this, seems that it's the only way to word it and include the List of Dangerous Substances at the back.~~

## 2.2.6 Odour **Check the font size on this condition, keeps changing!**

2.2.6.1 The Operator shall ensure that all appropriate measures are taken to prevent, or where that is not practicable, to reduce, odorous emissions from the Permitted Installation, in particular by:

- limiting the deposit and use of odorous materials
- restricting odorous activities (e.g. Excavation of deposited waste)
- controlling the storage conditions of odorous materials (e.g. Sheeting of vehicles, compaction and coverage of waste)
- controlling landfill gas processing parameters to minimise the generation of odour (e.g. optimising the performance of abatement systems, consider active extraction and/or scrubbing using carbon, peat etc.)
- timely monitoring, inspection and maintenance (e.g. increase planned maintenance, increase routine inspection by Operator)
- employing, where appropriate, an approved odour management plan (e.g. Effect repairs, upgrade system, regular reviews of management plan)

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

2.2.6.2 All emissions to air from the installation shall be free from offensive odour as perceived by an Authorised Officer of the Agency outside of 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 prevent or where this is not practical, 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.

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- 2.2.7.2 All pipework and tanks associated with:
- landfill gas engines, flares and equipment; and
  - leachate plant and equipment;
- shall be suitably banded to prevent ground contamination.

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All cleaning of such plant and equipment shall be undertaken on a suitably contained area or surface to prevent ground contamination.

~~4.1.1.32~~ 2.2.7.3 Further controls on such emissions are included in Parts 2.2.3 and 2.5 of this Permit

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- 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 for Specified Waste Management Activities (SWMAs).

- 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 that 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.

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### 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 events occur;

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- 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 PPC 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 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;
- 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 02/04/04 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:
- the costs of setting up and operating the landfill;
  - the costs of the financial provision required by condition 2.3.9.4; and
  - the estimated costs for the closure and after-care of the landfill site for a period of at least 60 30\_ should this be 60vrs? years from its closure.

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## **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:
- 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;
  - 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 Note H2; and

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- 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, generators 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 roads and building fabric.

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

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## 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 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.10.1, 2.10.2, 2.10.3, 2.10.4, 2.10.5, 2.10.7, 2.10.8, 2.10.9, 2.10.10 and 2.10.12 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.

### *Water (other than to sewer) monitoring*

2.10.2 The Operator shall carry out surface water monitoring of 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		
Monitoring point	Parameter	Monitoring frequency
OBP located on the balancing pond shown on plan S.2003/PF/PPC6 dated 01/05/2003	As detailed in Schedule 6	As detailed in the surface water management plan PEC 2.3.34
	Visible oil	Daily
	Suspended solids	Monthly
	Volume	Monthly
	Temperature	Monthly
	Manganese	Quarterly

**Table 2.10.1 : Surface Water Monitoring**

Monitoring point	Parameter	Monitoring frequency
Locations to be agreed in accordance with condition 2.10.2.4	As detailed in Schedule 6	As detailed in the surface water management plan PEC 2.3.34
	Visible oil	Daily
	Suspended solids	Monthly
	Volume	Monthly
	Temperature	Monthly
	Manganese	Quarterly

4.1.1.42.10.2.1 If the assessment criteria for emissions to surface water for the parameter(s) and monitoring point(s) set out in Table 2.10.2 are exceeded the actions detailed in the Surface Water Action Plan shall be instigated.

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**Table 2.10.2 : Assessment criteria or surface water quality**

Parameters	
Assessment limit:	Amm-N concentration 0.5 mg/l

2.10.2.2 The compliance limits for emissions to surface water for the parameter(s) and monitoring point(s) set out in Table 2.10.3 shall not be exceeded.

**Table 2.10.3 : Compliance limits to surface water**

Emission point	Parameter	Limit
OBP	Volume	400 cu.m day
	Amm-N	1.0 mg/l
	Iron	2,200 µg/l
	Tin	18 µg/l
	Cyanide	2.1 µg/l
	Suspended solids (measured after drying at 105 °C)	50 mg/l
	Visible oil	None
	pH - Max	9.5
	- Min	6

2.10.2.3 Where a substance is specified in Table 2.10.3 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.

2.10.2.4 The Operator shall provide the Agency, within 6 months of the issue of the permit, with an impact assessment report in regard to the underground surface water pipe to assess the risk of the underground surface water pipe providing a preferential pathway for contaminants through the colliery spoil towards sensitive receptors. Where the assessment indicates that there is a preferential pathway the report shall include an assessment of the emissions and set out a programme of actions with a timetable for achieving defined outcomes to mitigate any identified potential effect of the emissions. The Operator shall undertake any measures approved by the Agency to the timescale indicated in their approval.

2.10.2.5 The Operator shall within three months of the issue of the permit the Operator shall locate the end of pipe discharge of surface water emissions from the site. Once the location has been established monitoring shall be undertaken to monitor for the parameters required by Table 2.10.1.

2.10.2.6 The Operator shall within six months of the issue of the permit the Operator shall Install, operate and maintain a means of flow measuring to a specification agreed with the Agency at location OBP, to enable the daily volume of surface water to be recorded in accordance with the requirements of Table 2.10.1.

2.10.2.7 The Operator shall provide for approval by the Agency, within six months of the issue of the permit, a copy of a revised operating procedure (reference 2.3.34), for the installation (where necessary) of treatment measures, implementation of monitoring measures, schedules, techniques, compliance action plans, data management and reporting procedures to ensure that the discharge of surface water from the site meets the standards set out in Table 2.10.3. The Operator shall undertake any measures approved by the Agency and incorporate operating procedures in the site working procedures in the timescale indicated by the Agency in their approval.

**Groundwater monitoring**

4.1.4.2.10.3 The Operator shall carry out groundwater monitoring of the parameters listed in Table 2.10.4 at the specified monitoring points and at least at the frequencies specified in that Table.

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Table 2.10.4 : Groundwater Monitoring		
Emission point	Parameter	Monitoring frequency
W1 to W 7 inclusive as shown on plan S.2003/PF/PPC4 dated 01/05/2003 <i>This is referred to as IBP &amp; OBP on the previous draft, why the change?</i>	As detailed in Schedule 6	As detailed in the groundwater management plan PEC 2.3.40
	Manganese	Quarterly
	Mecoprop	Quarterly
Soakaway as shown on plan S.2003/PF/PPC5 dated 01/05/2003	As detailed in Schedule 6	As detailed in the groundwater management plan PEC 2.3.40
	Manganese	Quarterly
	Mecoprop	Quarterly
IBP located on the balancing pond shown on plan S.2003/PF/PPC6 dated 01/05/2003	As detailed in Schedule 6	As detailed in the groundwater management plan PEC 2.3.40
	Manganese	Quarterly
	Mecoprop	Quarterly
LDW1, LDW 3, LDW4, LDW6A, LDW6B2	As detailed in Schedule 6	As detailed in the groundwater management plan PEC 2.3.40
	Manganese	Quarterly
	Mecoprop	Quarterly
Leachate detection layer as shown on plan S.2003/PF/PPC4 dated 01/05/2003	As detailed in Schedule 6	As detailed in the groundwater management plan PEC 2.3.40
	Manganese	Quarterly
	Mecoprop	Quarterly

4.1.4.2.10.3.1 If the assessment criteria for emissions to groundwater for the parameter(s) and monitoring point(s) set out in Table 2.10.5 are exceeded the actions detailed in the Groundwater Action Plan shall be instigated.

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Table 2.10.5 : Assessment criteria for groundwater quality		
Monitoring location	Parameters	Assessment level
W3, W4 and W5 and IBP	Amm-N	0.5 mg/l
IBP only	Chloride	150 mg/l

4.1.4.2.10.3.2 The compliance limits for emissions to groundwater for the parameter(s) and monitoring point(s) set out in Table 2.10.6 shall not be exceeded.

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**Table 2.10.6 : Compliance criteria for groundwater quality**

Monitoring location	Parameters	Trigger level
W3, W4 and W5 and IBP	Mecoprop	0.00004 mg/l
	Cadmium	0.0001 mg/l
	Amm-N	3.0 mg/l
IBP only	Chloride	200 mg/l

4.1.1.32.10.3.3 Additional groundwater monitoring boreholes, locations of which shall to be agreed with the Agency, shall be constructed and monitored for the parameters listed in Table 2.10.4 to provide at least 12 months background monitoring data to be gathered prior to the cessation of groundwater pumping.

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2.10.3.4 The Operator shall implement a monitoring regime for the soakaway sufficient to monitor for the parameters required by Table 2.10.4 within 3 months of the issue of the permit.

2.10.3.5 The Operator shall provide the Agency, within 10 months of the issue of the permit, with an environmental impact assessment of the emissions from the soakaway based upon at least 6 months background monitoring data as required by condition 2.10.3.4 above. Where the assessment indicates that there is a detrimental effect on the environment the report shall include a programme of actions with a timetable for achieving defined outcomes to mitigate any identified potential effect of the emissions to ensure compliance with Groundwater Regulations. The Operator shall undertake any measures approved by the Agency to the timescale indicated in their approval.

**Landfill Gas Monitoring**

4.1.42.10.4 The Operator shall carry out monitoring of the parameters listed in Table 2.10.7, from the monitoring points and at least at the frequencies specified in that Table.

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**Table 2.10.7 : Landfill Gas Monitoring**

Parameters	Location	Frequency of monitoring
Oxygen Carbon Dioxide Methane Atmospheric pressure Gas Temperature	In waste monitoring points	Weekly
Trace gas components		12 monthly

4.1.1.42.10.4.1 The trigger levels limits for landfill gas monitoring for the parameter(s) and monitoring point(s) set out in Table 2.10.8 shall not be exceeded.

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**Table 2.10.8 : Trigger Levels for Landfill Gas Monitoring**

Monitoring points	Parameters	Units/Accuracy	Control level	Trigger Level
Internal gas monitoring boreholes	Oxygen	% v/v, 0.1%	> 2%	> 5.0%
Internal gas collection boreholes	Oxygen	% v/v, 0.1%	> 2%	> 5.0%

4.1.1.22.10.4.2 In the event that any trigger levels in Table 2.10.8 are exceeded the actions agreed in accordance with reference 4 of condition 1.4.1 shall be instigated.

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**Leachate Monitoring**

4.1.52.10.5 The Operator shall carry out leachate monitoring of the parameters listed in Table 2.10.9, at the specified monitoring points and at least at the frequencies specified in that Table.

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Table 2.10.9 : Leachate Monitoring			
Emission point	Parameter	Units	Monitoring frequency
Leachate extraction points	Volume removed for re-circulation	Cu.m per day	Monthly
	Volume added as a result of re-circulation As detailed in Schedule 6	Cu.m per day	Monthly As detailed in the leachate management plan 2.3.18
Leachate monitoring points	As detailed in Schedule 6		As detailed in the leachate management plan 2.3.18

4.1.1.42.10.5.1 If the assessment criteria for leachate for the parameter(s) and monitoring point(s) set out in Table 2.10.10 are exceeded the actions detailed in the Leachate Action Plan shall be instigated.

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Table 2.10.10 : Leachate assessment criteria for leachate levels		
Determinand	Parameters	Leachate boreholes
Assessment limit :	m AOD	1.4 metres above minimum cell base level

4.1.1.22.10.5.2 The compliance limit for leachate for the parameter(s) and monitoring point(s) set out in Table 2.10.11 shall not be exceeded.

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Table 2.10.11 : Leachate compliance limit for leachate levels		
Determinand	Parameters	Leachate boreholes
Compliance limit :	m AOD	1.5 metres above the minimum cell base level

4.1.1.32.10.5.3 The assessment limit for leachate for the parameter(s) and monitoring point(s) set out in Table 2.10.12.

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Table 2.10.12 : Assessment criteria for leachate quality			
Parameters	Units	Location	Assessment limit
Chloride	mg/l	All leachate boreholes	7,350
Amm-N	mg/l		3,500
Mecoprop	mg/l		0.210
Cadmium	mg/l		2.75

**List I Substances detected**

4.1.1.42.10.5.4 Where any List I assessment limit level is exceeded in the leachate, then the substance shall, before the next scheduled monitoring, be added to the quarterly monitoring suite of the groundwater monitoring boreholes.

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2.10.5.5 Leachate collected from phases 1 to 7 (inclusive) shall only be re-circulated within those cells.

2.10.5.6 Leachate within phases 8 to 11 shall only be re-circulated within the phase it is collected.

2.10.5.7 The Operator shall submit, within six months of the issue of the permit, for approval by the Agency a revised Leachate Management and Monitoring Procedure (reference 2.3.18), incorporating:

- The outcome of a geophysical survey to investigate areas where leachate is by-passing dry waste, during the re-circulation process;
- An action plan to be implemented when assessment levels for leachate quality as specified by condition 2.10.5.3 are exceeded: and
- A methodology for establishing when leachate will need to be removed from site.

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The approved procedures shall be incorporated in the site working procedures in the timescale indicated by the Agency in their approval.

**Noise Monitoring**

4.1.62.10.6 There are no specific noise monitoring condition contained in this permit.

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**General**

2-10-52.10.7 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.

2-10-62.10.8 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.

2-10-72.10.9 There shall be provided:

2-10-7-12.10.9.1 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

2-10-7-22.10.9.2 safe means of access to other sampling/monitoring points when required by the Agency.

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## 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.	19/05/03

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 (a or b) of Part 1 of Schedule 1 of the PPC Regulations, the Operator shall maintain and operate the Permitted activities so as to prevent or minimise any pollution risk, including the generation of waste, on closure and decommissioning in particular by:

2.11.3.1 attention to the design of new plant or equipment;

2.11.3.2 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

2.11.3.3 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 site closure plan shall be implemented on final cessation or decommissioning of the Permitted activities 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.

## **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.

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## 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 Part s 2.2 and 2.10 of the Permit, 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 or other agreed method of reporting;
  - 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 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 S4.2-3 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 The Operator shall submit an interpretative report of the monitoring results for landfill gas, leachate, surface and groundwater against the specified relevant emission limits, assessment limits, control and trigger levels on an 3 monthly basis and shall submit a summary report to the Agency within one month of the end of each period.
- 4.1.6 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.
- 4.1.7 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
- 4.1.8 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 A summary record of the waste types accepted and removed from the site shall be made for each quarter and shall be submitted to the Agency within 1 month following the end of the quarter. The summary record shall be in the format specified in Schedule 3.

## 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; and
  - 5.1.1.5 the refusal or rejection of incoming waste.
- 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 the 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.
- ~~4.1.35.1.3~~ 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 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:
    - a. any change in the Operator's trading name, registered name or registered office address;
    - b. 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);
    - c. 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:
    - a. any change in the Operator's name or address;
    - b. any steps taken with a view to the dissolution of the Operator.
  - 5.1.5.3 in any other case:
    - a. the death of any of the named Operators (where the Operator consists of more than one named individual);
    - b. any change in the Operator's name(s) or address(es);
    - c. 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.

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## 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. Note again, the possibility of excluding references to 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 and 2.2.2.5 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.*

*“ $L_{Aeq,T}$ ” 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*

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"*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.

"*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

"*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.

"*OBP*" means outlet of the balancing pond.

"*IBP*" means inlet of the balancing pond.

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.

6.1.26.1.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means;

6.1.2.16.1.3.1 in relation to gases from combustion processes, 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

6.1.2.26.1.3.2 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.

6.1.36.1.4 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.

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## Schedule 1 - Notification of abnormal emissions

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.

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.

### 2.10 Part A

2.10 Permit Number	2.10
2.10 Name of Operator	2.10
2.10 Location of Installation	2.10
2.10 Location of the emission	2.10
2.10 Time and date of the emission	2.10

### 2.10

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

Measures taken, or intended to be taken, to stop the emission	
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### 2.10 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 Caird Bardon Limited

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## Schedule 2 - Reporting of monitoring data

Parameters for which reports shall be made, in accordance with Part 4 of this Permit, are listed below.

**Table S2: Reporting of monitoring data**

Parameter	Emission point	Reporting period	Period begins
Leachate	All leachate extraction points	Every 3 months	02/02/04
Surface Water	IBP, OBP and the locations agreed in accordance with condition 2.10.2.4.	Every 3 months	02/02/04
Groundwater	IBP, W1 to W7, LDW1, LDW 3, LDW4, LDW6A and LDW6B2	Every 3 months	02/02/04
Landfill Gas (internal boreholes)	All gas monitoring and collection points	Every 3 months	02/02/04
Landfill Gas (ambient air at site boundary)	Locations to be Agreed in accordance with condition 2.2.4.8	Every 3 months	02/04/04
Landfill Gas (external boreholes)	G1 to G4, G9 to G31, G33 to G41 and BH42 to BH58	Every 3 months	02/02/04
Particulate	Locations agreed in accordance with condition 2.2.4.13	Every 3 months	02/02/04
Odour Boundary of the site up wind and down wind of the area of excavation and disposal	Monitoring points shown on Drawing S.2003 / PF / PPC / 7	Every 3 months	02/02/04
Waste		Every 3 months	02/02/04
Flare emissions	A1,	Every 12 months	02/02/04
Gas engine emissions	A2 to A4	Every 12 months	02/02/04
Noise	Locations agreed in accordance with condition 1.4.1 reference 1	Every 12 months	02/02/04
Topographical survey showing settling behaviour of landfill and calculations of remaining void capacity		Every 12 months	02/02/04
Interpretative report of the monitoring results for landfill gas, leachate, particulates, surface and groundwater against the specified relevant emission limits, assessment limits, control and trigger levels.		Every 3 months	02/02/04
Assessment of environmental impact of all emissions		Every 12 months	02/02/04
Assessment of environmental impact of surface water discharge on Sheep Dyke		Every 12 Months	02/02/04

## Schedule 3 - Forms to be used

Table S3: Reporting Forms		
Media/parameter	Form Number	Date of Form
Leachate	Format to be agreed	
Surface Water	Format to be agreed	
Groundwater	Format to be agreed	
Landfill Gas (internal boreholes)	Format to be agreed	
Landfill Gas (ambient air at site boundary)	Format to be agreed	
Landfill Gas (external boreholes)	Format to be agreed	
Particulates	Format to be agreed	
Odour	Format to be agreed	
Waste Return	Format to be agreed	
Flare emissions	Format to be agreed	
Gas engine emissions	Format to be agreed	
Noise	Format to be agreed	
Energy	Format to be agreed	
Interpretative report of the monitoring results for landfill gas, leachate, surface and groundwater against the specified relevant emission limits, assessment limits, control and trigger levels.	Format to be agreed	
Assessment of environmental impact of emissions	Format to be agreed	
Assessment of environmental impact on Sheep Dyke	Format to be agreed	
Minor Operational Changes	Format to be agreed	

## 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			
Fuel Oil			
Other			

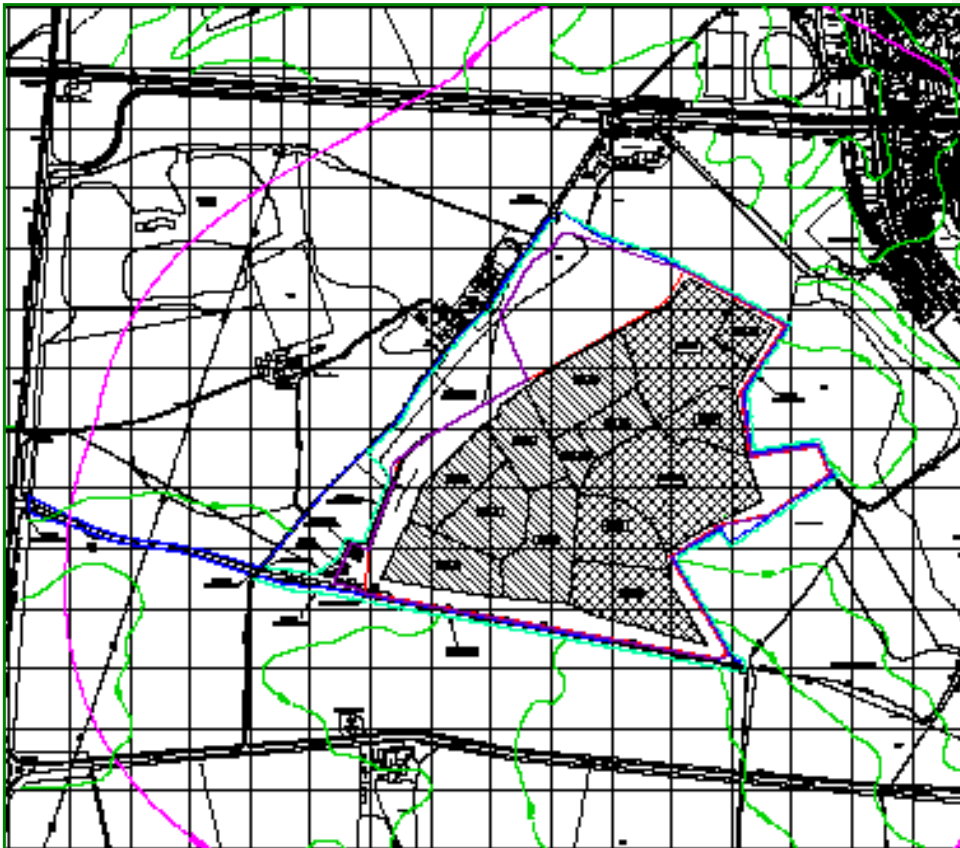
\*specify conversion factor of primary source to delivered energy

Data required to be recorded and reported by Condition 4.1.3. The data should be assessed on the frequency given and reported annually to the Agency.







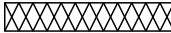
Table S4.2: Annual Production/Treatment	
	Tonnes/year
Leachate: Disposed of off site; Disposed of to onsite effluent treatment plant. Recirculated	
Surface water: Disposed of off site; Disposed of to onsite effluent treatment plant.	
Groundwater: Disposed of off site; Disposed of to onsite effluent treatment plant.	
Landfill gas: Disposed of by flare; Disposed of by gas utilisation plant.	

Table S4.3: Performance parameters			
	Frequency of assessment		
Potable water use	Annual		Cu m/tonne of waste disposed
Energy used	Annual		MW of electricity/tonne of biodegradable waste disposed
Non potable water use	Annual		Cu m/tonne of waste disposed
Energy generated	Annual		MW of electricity/tonne of biodegradable waste disposed

## Schedule 5 - Site Plan



### Key

	Freehold boundary
	EAWML 61354 Boundary
	Installation Boundary
	Distance from installation
	Security Fencing
	Existing Cell
	Proposed Cell Layout

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## Schedule 6

### Leachate, Groundwater and Surface Water monitoring suites

Monitoring suites for a non-hazardous biodegradable landfill site posing a moderate to high risk to water receptors				
Measurement	Leachate	Leachate Discharge	Groundwater	Surface Water
Water level	*		*	
Mon. point base	*		*	
Flow rate		(*)		(*)
Vol. removed	*			
Vol. added	*			
Vol. discharged		*		
Temp	*	*	*	*
DO			(*)	*
Eh)			(*)	
pH	*	*	*	*
EC	*	*	*	*
TSS				*
NH4-N	*		*	*
TON (oxidised-N)	*	*	*	*
TOC	*	*	*	*
BOD	*	*	*	*
COD	*	*	*	*
Ca	*	*	*	*
Mg	*	*	*	*
Na	*	*	*	*
K	*	*	*	*
Alk	*	*	*	*
SO4	*	*	*	*
Cl	*	*	*	*
Fe	*	*	*	*
Mn	*	*	*	*
Cd	*	*	*	*
Cr	*	*	*	*
Cu	*	*	*	*
Sn				*
Ni	*	*	*	*
Pb	*	*	*	*
Zn	*	*	*	*
Other inorganics	(*)	(*)	(*)	(*)
Phenols	*	*	(*)	(*)
Volatile fatty acids	(*)	(*)	(*)	(*)
Mineral oil/Hydrocarbons			(*)	(*)
Dissolved methane		(*)		
List I/List II	(*)	(*)	(*)	(*)
Biological measurements				(*)

Notes: Monitoring suites and frequency of monitoring will vary based on site specific conditions.  
 See Tables 6.4 to 6.7 for details of measurements and Table 6.8 (see Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water) for example monitoring frequencies.  
 Symbols: (\*) analysed if required by site specific conditions or for assessment purposes.  
 (\*) analysed if required by regulatory conditions (e.g. discharge consent or Regulation 15).

## Schedule 7

### List of dangerous substances

List of dangerous substances		
Mercury and its compounds	Cadmium and its compounds	Hexachlorocyclohexane (lindane and related compounds)
Carbon tetrachloride	DDT (the isomers of 1,1,1-trichloro-2,2-bis(p-chlorophenyl) ethane)	Pentachlorophenol (PCP)
Aldrin	Dieldrin	Endrin
Isodrin	Hexachlorobenzene (HCB)	Hexachlorobutadiene (HCBD)
Chloroform	Polychlorinated biphenyls	Dichlorvos
1,2-Dichloroethane	Trichlorobenzene	Atrazine
Simazine	Tributyltin compounds	Triphenyltin compounds
Trifluralin	Fenitrothion	Azinphos-methyl
Malathion	Endosulfan	Lead
Chromium	Zinc	Copper
Nickel	Arsenic	*Iron
*pH outside range 5.5 to 9.0	*Boron	Vanadium
PCSD'S	Cyfluthrin	Sulcofuron
Flucofuron	Permethrin	4-Chloro-3-methyl-phenol
2-Chlorophenol	2,4-Dichlorophenol	2,4-D (ester)
2,4-D (non ester)	1,1,1-Trichloroethane	1,1,2-Trichloroethane
Bentazone	Benzene	Biphenyl
Chloronitrotoluenes	Demeton	Dimethoate
Linuron	MCPA	Mecoprop
Mevinphos	Naphthalene	Omethoate
Toluene	Triazophos	Xylene
Cyanide	Azinphos-ethyl	Fenthion
Parathion	Parathion-methyl	Trichloroethylene
Tetrachloroethylene	Dioxins	PAHs
Nonyl phenol	Nonyl phenyl ethoxylate	Di-ethylhexyl phthalate
Bisphenol-A	Diazinon	Chlorfenvinphos
Chlorotoluron	Isoproturon	Diuron
Propetamphos	Flumethrin	Amitraz
High-Cis Cypermethrin	Cyromazine	Deltamethrin
Cypermethrin		

Formatted: Bullets and Numbering

## Schedule 8

### List 1 General Standards

Substance	Limit Total Concentration (ug/l)
Aldrin	0.02
Dieldrin	0.02
Endrin	0.01
Isodrin	0.01
Cadmium	10.0
Carbon tetrachloride	24.0
Chloroform	24.0
DDT (all isomers)	0.05
para-pare-DDT	0.02
Hexachlorobenzene	0.06
Hexachlorobutadiene	0.2
Hexachlorocyclohexane	0.2
Mercury	2.0
Pentachlorophenol	4.0
Trichlorobenzene	0.8
1,2-Dichloroethane	20.0
Trichloroethylene	20.0
Tetrachloroethylene	20.0

END OF PERMIT