



Standard Permit for the Landfill Sector

Permit with introductory note

Pollution Prevention and Control Regulations 2000
Landfill Regulations 2002

Calvert Landfill
Brackley Lane
Calvert
Buckinghamshire
MK18 2HF

Permit number

BS8605IQ

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Introductory note

This introductory note does not form a part of the Permit

The following Permit is issued under Regulation 6 of the Landfill (England and Wales) Regulations 2002 (S.I.2002 No.1559) ("the Landfill Regulations") and Regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (S.I.2000 No.1973), as amended, ("the PPC Regulations") to operate an installation carrying out activities covered by the description in Section 5.2 A(1)(a) and 1.1 A1(b) in Part 1 to Schedule 1 of the PPC Regulations, to the extent authorised by the Permit:

Section 5.2 A(1)(a):

- (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.

Section 1.1 A(1)(b)(iii):

(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 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.

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 landfill is within a former clay pit and consists of Pit 4 and Pit 5. Pit 6 is included within the installation boundary however there are no listed activities permitted within Pit 6.

The site is located at grid reference SP 695 235. It is approximately 10km east north east of Bicester and 17km north west of Aylesbury. The site abuts a railway to the north eastern boundary, Sheephouse Wood SSSI to the east and to the north western boundary is a recent residential development known as Calvert Green. The other boundaries are adjacent to farmland. The village of Calvert is immediately to the north west of the site entrance.

The site is permitted to accept a total of 24,100,000 tonnes of waste. The permit is for a non-hazardous landfill with a stable non-reactive hazardous waste cell. As part of the permit, Cells 5H and 5J are permitted either as non-hazardous cells or as stable non-reactive hazardous waste cells (shown as Design Option 2 – 'A' Bund - in the document entitled 'Cell 5 Monocell Design Proposals Calvert Landfill Buckinghamshire' dated June 2004.)

The permit also authorises the utilisation and flaring of landfill gas. There are 7 gas engines and 7 flares included within this permit.

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

Other PPC Permits relating to this installation

Permit holder	Permit Number	Date of Issue
Not applicable		

Other existing Licences/Authorisations/Registrations relating to this installation

Holder	Reference Number	Date of issue
Not applicable		

Superseded Licences/Authorisations/Consents relating to this installation

Holder	Reference Number	Date of Issue
Shanks & McEwan (Southern) Limited	Waste Management Licence Reference WDA/166M (EAWML/75026)	28/03/1980
Shanks & McEwan (Southern) Limited	Waste Management Licence Reference WDA/351 (EAWML/75029)	04/06/1992

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

Public Registers

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

Variations to the Permit

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

Surrender of the Permit

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

Transfer of the Permit or part of the Permit

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

Talking to us

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

To give a Notification under condition 5.1.1, the Operator should use the Incident Hotline telephone number (0800 80 70 60) or any other number notified in writing to the Operator by the Agency for that purpose.

Status Log

Detail	Date	Comment
Application BS8605IQ	Received 03/10/2003	
Response to request for information	Request dated 07/05/2004	Response received 28/06/2004
Response to Schedule 4 Notice	Request dated 26/11/2004	Response (by email) dated 23/12/2004
Response to letter	Request dated 24/01/2005	Response received in three parts: on 08/02/2005, 14/02/2005 and 24/02/2005
Response to email request for information	Request dated 16/02/2005	Response received 28/02/2005
Requests to extend determination	Requests dated 09/02/2004, 25/03/2004, 09/08/2004, 07/10/2004, 07/01/2005, 09/02/2005 and 07/04/2005	Request accepted 12/02/2004, 30/03/2004, 12/10/2004, 13/01/2005 and 17/02/2005
Permit determined	19 th April 2005	

End of introductory Note.

Permit

Pollution Prevention and Control
Regulations 2000
Landfill Regulations 2002



**ENVIRONMENT
AGENCY**

Permit

Permit number

BS8605IQ

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

Whose Registered Office (or principal place of business) is

**Ground Floor West
900 Pavilion Drive
Northampton Business Park
Northampton
NN4 7RG**

Company registration number 988844

to operate an installation at

**Calvert Landfill
Brackley Lane
Calvert
Buckinghamshire
MK18 2HF**

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

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

Signed

Date

	19 th April 2005
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Thomas Ruffell

Authorised to sign on behalf of the Agency

Conditions

1 General

1.1 Permitted Activities

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

Table 1.1.1		
Activity listed in Schedule 1 of the PPC Regulations / Associated Activity	Description of specified activity	Limits of specified activity
Section 5.2 Part A(1)(a) The disposal of waste in a landfill.	Landfill for non-hazardous waste (landfill classification under the Landfill Regulations 2002)	Receipt, handling, storage and disposal of stable non-reactive hazardous, non-hazardous and inert wastes, consisting of the types and quantities specified in condition 2.1.2, as an integral part of landfilling. Note this excludes any overtipping, except in accordance with the application as submitted.
Section 1.1 Part A(1)(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 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	Utilisation of landfill gas for energy recovery	Landfill gas arising from the Permitted landfill 7 landfill gas engines identified in the Letter dated 23 December 2004 from Golder Associates to John Weetman entitled 'Response to Schedule 4 Calvert Landfill Site'
Leachate management	Storage and handling of leachate pre-removal	Storage, handling and recirculation of leachate arising from the Permitted landfill
Landfill gas management	- Flaring of landfill gas	Landfill gas arising from the Permitted landfill 7 landfill gas flares identified in the Letter dated 23 December 2004 from Golder Associates to John Weetman entitled 'Response to Schedule 4 Calvert Landfill Site'
Water discharges to controlled waters	Discharge of site drainage from the landfill.	From surface water management system 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.

1.2 Site

- 1.2.1 The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the land shown edged in pink 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
1a	The Operator shall provide 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, taking into account background concentration, against the UK Air Quality Strategy Objectives. It shall assess the significance of the emissions in accordance with Agency Guidance H1.	Within 3 months of date of issue of permit
1b	Following submission of the review required by Improvement Condition 1a above, the Operator shall undertake any measures approved by the Agency to the timescale indicated in their approval.	To a date to be specified by the Agency
1c	Where the report required by improvement condition 1a indicates that the installation is contributing significantly to the exceedance of Air Quality Objectives, a review of options shall be undertaken and submitted, including a cost benefit analysis conducted in accordance with Agency guidance and covering the following: <ul style="list-style-type: none"> • Engine/flare design • Engine management systems • Stack heights • Location • Installation of continuous monitoring for NO₂ (Nitrogen Dioxide) • Clean up pre and post combustion; and • Alternative utilisation methods 	Within 9 months of date of issue of permit
1d	Following submission of the review required by Improvement Condition 1c above, the Operator shall undertake any measures approved by the Agency to the timescale indicated in their approval.	To a date to be specified by the Agency
1e	Submit to the Agency an Action Plan with a timetable for achieving defined outcomes to reduce the impact of any exceedance (identified in the report submitted in accordance with Improvement Condition 1a above) of the landfill gas flares and engines to below National Air Quality Standards.	Within 12 months of date of issue of permit

1f	Following submission of the action plan required by Improvement Condition 1e above, the Operator shall undertake any measures approved by the Agency to the timescale indicated in their approval.	To a date to be specified by the Agency
2a	<p>The operator shall submit to the Agency a comprehensive noise assessment undertaken by an experienced and suitably qualified person (i.e. a noise consultant with an appropriate qualification accredited by the Institute of Acoustics,) in accordance with the procedures given in BS4142: 1997 and BS7445: 2003.</p> <p>Note: BS4142 is not suitable for use in situations where background noise levels are <30dB and the rating levels are ~35dB. In such circumstances the operator should consider BS5228: 1997 with the proviso that this method does not specifically take into consideration any tonal elements that may be associated with certain noise source(s). Any noise source(s) identified as exhibiting tonal contributions shall be quantified by means of frequency analysis.</p> <p>The assessment shall also:</p> <ul style="list-style-type: none"> • quantify any assumptions made in the application predicting the likelihood of decay of sound associated with increased distance from the installation boundary; • quantify the predicted noise attenuation attributed to the intervention of a suitable barrier; • quantify the cumulative effect of different items of plant and equipment working concurrently; • draw comparisons with the background levels in the locality and any potential impact that the installation is likely to have upon sensitive receptors. <p>On completion of the assessment a copy shall be submitted to the Agency in the form of a report with an interpretation of the results, conclusions drawn and recommendations.</p>	Within 4 months of date of issue of the permit
2b	Where specific recommendations are made in the report required by improvement condition 2a to provide improved noise attenuation measures and associated management/inspection/maintenance regimes, a suitable time-scale for implementation and review of the report shall be included. Such improved noise attenuation measures and regimes shall be agreed with the Agency, prior to adoption.	Within 2 months of date of issue of the permit
3a	Submit to the Agency an odour management plan, including a monitoring plan and action plan. This shall be written in accordance with the Agency Guidance Document 'Internal Guidance for the Regulation of Odour at Waste Management Facilities.'	Within 1 month of the date of issue of permit
3b	Following submission of the odour management plan required by Improvement Condition 3a above, the Operator shall undertake any measures approved by the Agency to the timescale indicated in their approval.	To a date to be specified by the Agency
3c	<p>The odour monitoring plan required by improvement condition 3a above shall include, but need not be limited to:</p> <ul style="list-style-type: none"> • the method of assessment to be employed, including the subjective monitoring of odours as detailed in Appendix B of the Agency Guidance Document 'Internal Guidance for the Regulation of Odour at Waste Management Facilities' • identification of personnel specified to carry out monitoring (paying particular attention to the possibility that site staff may 	Within 1 month of the date of issue of permit

	<p>suffer from odour fatigue)</p> <ul style="list-style-type: none"> • details of guidance, training and instruction given to specified personnel • minimum frequency of monitoring • liaison with the Environment Agency • monitoring points • record keeping 	
3d	<p>The odour action plan required by improvement Condition 3a above shall include, but need not be limited to: the identification of actions that will be taken in the event of either a breach of a trigger level or the receipt of an odour complaint (including monitoring in accordance with the odour monitoring regime above) and a record of the actual actions taken.</p>	<p>Within 1 month of the date of issue of permit</p>
4a	<p>Produce an action plan for dust monitoring, which identifies the actions to be taken on receipt of a complaint relating to dust emissions from the installation.</p>	<p>Within 3 months of the date of issue of permit</p>
4b	<p>Following submission of the action plan required by Improvement Condition 4a above, the Operator shall undertake any measures approved by the Agency to the timescale indicated in their approval.</p>	<p>To a date to be specified by the Agency</p>
5a	<p>Undertake an investigation into the existing groundwater monitoring boreholes and subsequent improvement works in accordance with Section 6.3.3 of the Hydrogeological Risk Assessment (dated 11 August 2003.)</p> <p>Submit to the Agency the results from checking the performance and condition of all monitoring boreholes for blockages, surface water ingress and for declining performance during pumping.</p> <p>Undertake the necessary improvement works in accordance with the findings of the investigation.</p>	<p>31/01/2006</p>
5b	<p>The groundwater monitoring boreholes detailed in Section 6.3.4 of the Hydrogeological Risk Assessment (dated 11 August 2003) shall be installed, in accordance with a CQA plan which has been agreed in writing by the Agency.</p> <p>Submit a revised groundwater management and monitoring plan, which shall include:</p> <ul style="list-style-type: none"> • details of monitoring methodology; • annual maintenance plan including inspection of borehole performance and condition; and • revision of monitoring schedule to include all new and existing operational monitoring boreholes; and • identification of boreholes to be used for compliance monitoring against criteria in Table 2.2.9a. 	<p>31/01/2006</p>
6a	<p>A Leachate Contingency Action Plan shall be submitted to the Agency detailing the procedures to be implemented upon breach of the assessment levels given in Tables 2.10.2 and 2.10.4.</p>	<p>Within 3 months of the date of issue of permit</p>

6b	Following submission of the action plan required by Improvement Condition 6a above, the Operator shall undertake any measures approved by the Agency to the timescale indicated in their approval.	To a date to be specified by the Agency
7	<p>The monitoring schedule (Attachment CAL B2.3.32 dated 02nd February 2005 of the application) shall be revised to include:</p> <ul style="list-style-type: none"> List I screening of leachate on separate samples from individual cells. An increased monitoring frequency to six-monthly of all parameters currently only monitored on an annual basis (other than the full List I suite) within leachate. <p>The proposed revision shall be submitted to the Agency for approval.</p>	Within 1 month of the date of issue of permit
8a	<p>The Operator shall submit to the Agency a site-specific risk assessment setting the:</p> <ul style="list-style-type: none"> parameters to be monitored; reference method; sampling and analytical technique; minimum testing frequency; and emission limits <p>for the landfill gas engine given in Table 2.2.1 (and shown as 'Landfill Gas Power Station' on plan S.2003/CV/PPC4.) These shall have regard to the emission standards specified in Table A, page 1 of the Environment Agency 'LFTGN 08 Guidance for monitoring landfill gas engines.'</p>	Within 12 months of the date of issue of the permit
8b	Following submission of the risk assessment required by Improvement Condition 8a above, the Operator shall undertake any measures approved by the Agency to the timescale indicated in their approval.	To a date to be specified by the Agency

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

1.5 Minor Operational Changes

1.5.1 The Operator shall seek the Agency's written agreement to any minor operational changes under condition 2.1.1 of this Permit by sending to the Agency: written notice of the details of the proposed change including an assessment of its possible effects (including waste production) on risks to the environment from the Permitted Installation; any relevant supporting assessments and drawings; and the proposed implementation date.

1.5.2 Any such change shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation in accordance with that change, and relevant provisions in the Application shall be deemed to be amended.

- 1.5.3 When the qualification “unless otherwise agreed in writing” is used elsewhere in this Permit, the Operator shall seek such agreement by sending to the Agency written notice of the details of the proposed method(s) or techniques.
- 1.5.4 Any such method(s) or techniques shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation using that method or technique, and relevant provisions in the Application shall be deemed to be amended.

1.6 Pre-Operational Conditions

1.6.1 No disposal of wastes shall take place in any part of the Permitted Installation

- identified for non hazardous waste, or
- identified for stable non-reactive hazardous waste

where waste deposit commences after the issue of this Permit unless:

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

- groundwater under-drainage system,
- barriers,
- liners
- capping
- leachate collection layer
- leachate abstraction system
- landfill gas extraction and management systems
- separation bund
- inert waste buttress of the side slope liner
- pipework, and
- surface water drainage system

for that part and that it is confirmed in writing by the Agency that these are in conformance with the relevant specifications set out in section 2 of Part B of the Application, any other specification agreed in writing by the Agency and any subsequent agreed change to the specification(s); and

- 1.6.1.2 the operator has notified the Agency in writing of any changes in the detailed design, material specifications, stability assessment and the CQA programme that are to be made during the construction and in advance of those changes being made the Agency has agreed in writing that these are acceptable in relation to the relevant specifications set out in Part B of the Application any other specification agreed in writing by the Agency and any subsequent agreed changes under 1.6.1.1; and
- 1.6.1.3 the pre-operational engineering and infrastructure as listed in 1.6.1.1, have been completed and validated in accordance with the documented CQA procedures, and
- 1.6.1.4 the operator has submitted the validation report in writing to the Agency; and
- 1.6.1.5 the Agency has inspected the relevant part to ensure that it complies with the relevant conditions of the landfill permit, and has confirmed in writing that it has no objection to that part becoming operational.
- 1.6.2 The cap shall be surveyed every 6 months to assess its' integrity. Where desiccation cracks or ponded water are evident remediation of the cap shall be undertaken in accordance with the approved CQA plan for the cap.

1.6.3 The minimum undrained shear strength of the clay cap shall be 50kPa.

1.6.4 For the stable non-reactive hazardous waste cell, the following condition applies:

- the level of the stable non-reactive hazardous waste shall not be lower nor greater than 10m higher than the non-hazardous waste level in adjacent cells, and
- each freestanding face of the separation barrier must not exceed 10m in height.

1.6.5 If waste placement within the stable non-reactive hazardous waste cell or adjacent cells is to cease for a period longer than 3 months, the waste must be placed to the same level on either side of the separation bund.

1.6.6 The leachate drainage layer in all future cells shall have a minimum thickness of 500mm, unless otherwise agreed in writing by the Agency.

1.7 Off-site Conditions

1.7.1 There are no off-site conditions

2 Operating conditions

2.1 Landfilling Controls

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

Table 2.1.1: Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.1, 2.2, 2.3, 2.4 and 2.5 in part B of the Application Form excluding: <ul style="list-style-type: none"> • The answer to Question 2.3.9 • The answers to Question 2.3.32 • The answer to Question 2.3.51 • The answer to Question 2.3.52 • The answer to Question 2.3.53 • The answer to Question 2.3.54 • The answer to Question 2.3.55 • The answer to Question 2.4.9 • Attachment B2.3.32 (dated October 2003) 	03/10/2003
	Hydrogeological Risk Assessment dated 11 August 2003, Sections 6.3.3 and 6.3.4 only	
Letter dated 24 th June 2004 and associated documentation	Letter dated 24 th June 2004 Document entitled 'Cell 5 Monocell Design Proposals Calvert Landfill Buckinghamshire' dated June 2004', references to Design Option 2 – 'A' Bund only Document entitled 'Calvert landfill – Risks to Groundwater from Proposed Stable, No Reactive Hazardous Waste Sub Cell' dated 25 June 2004	28/06/2004
Schedule 4 Response	All documents, excluding: Draft Leachate Management Plan, Attachment B2.3.32 (dated 23 December 2004), Odour Action Plan, Entec Technical Note (answers to NQ5, NQ6, Table 7 of NQ10, NQ12 and NQ13 only) and CAL B2.3.32 Calvert Monitoring Schedule	24/12/2004 via email
Document and Drawings	Entec Technical Note entitled 'Calvert Landfill PPC Permit Application – Response to Agency Letter of 24 Jan 2005' including all drawings but excluding Section 3 – the response to Question 7.	08/02/2005 via email
Document	Attachment B2.3.32 excluding the groundwater and surface water compliance limits and the leachate control and compliance levels	14/02/2005
Letter and Document	Letter dated 23 February 2005 Entec Technical Note entitled 'Calvert Landfill PPC Permit Application – Leachate Management Strategy' dated 23 February 2005	24/02/2005
Letter dated 24 February 2005 and attached documents	Entitled 'Calvert Landfill'	28/02/2005

2.1.2 Wastes shall only be accepted for disposal on the site if they are:

- in a 'category or type' permitted in Table 2.1.2 below, and
- for Stable Non Reactive Hazardous Waste, listed in the document entitled 'Waste Lists for Stable Non-Reactive Hazardous Waste' received via email on 24/12/04 as part of the application, and
- all relevant waste acceptance procedures have been completed.

Table 2.1.2 : Wastes accepted for disposal	
Waste Category or Type	Re-permitted Landfill
	Permitted or not Permitted
Hazardous	Not Permitted
Non-hazardous	Permitted Excluding 18 01 09, 18 02 08, 20 01 32 07 05 12 and 07 05 14 are allowed only if they do not include waste medicinal products
Stable non-reactive hazardous	Permitted
Inert	Permitted
Liquid wastes (including waste waters but excluding sludge).	Not Permitted
Waste which in the conditions of landfill is explosive, corrosive, oxidising, highly flammable or flammable.	Not permitted unless non-hazardous when permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007.
Hospital and other clinical infectious wastes from medical or veterinary establishments.	Not permitted unless non-hazardous when permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007.
Chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown.	Not permitted unless non-hazardous when permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007.
Whole used tyres (other than tyres used as engineering materials, bicycle tyres and tyres with an outside diameter of more than 1400mm).	Permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007.
Shredded used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm).	Permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007.
Any waste which does not fulfil the relevant waste acceptance criteria.	Permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007.
Waste which has been diluted or mixed solely to meet the relevant waste acceptance criteria.	Permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007.
Wastes which have not been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment.	Permitted until a date to be specified in Regulations and if no date so specified no later than 31 st March 2007.

And

2.1.2.1 they are in accordance with the list of waste types and quantities, as described in Attachment B2.2 of the application.

2.1.2.2 The operator of the landfill shall visually inspect the waste at the entrance to the landfill and at the point of the deposit and shall satisfy himself that it conforms to the description provided in the documentation submitted by the holder. Any waste which does not conform with the description provided, shall be refused and the Agency notified in accordance with condition 5.1.1.

2.1.2.3 From the date of issue of the permit until the 16th July 2005:

2.1.2.3.1 All stable non-reactive hazardous waste approved under condition 2.1.2 shall be characterised in accordance with the Waste Acceptance Criteria listed in Table 2.1.2a and 2.1.2b below; and

Table 2.1.2a: Interim waste acceptance criteria for stable non-reactive hazardous waste		
Component	Symbol	Limit values at a liquid/solid ratio of 10 l/kg.
		Mg/kg dry substance
Arsenic	As	2
Barium	Ba	100
Cadmium	Cd	1
Total Chromium	Cr _{Total}	10
Copper	Cu	50
Mercury	Hg	0.2
Molybdenum	Mo	10
Nickel	Ni	10
Lead	Pb	10
Antimony	Sb	0.7
Selenium	Se	0.5
Zinc	Zn	50
Chloride	Cl	15,000
Fluoride	F	150
Sulphate	SO ₄	20,000
Dissolved Organic Carbon*	DOC	800
Total Dissolved Solids**	TDS	60,000

* If the waste does not meet these values for dissolved organic carbon (DOC) at its own pH, it may be tested at L/S = 10 l/kg and pH of 7.5 to 8.0. If the result of this determination does not exceed 800mg/kg, the waste may be considered as complying with the acceptance criteria for DOC.

** The values for total dissolved solids can be used as an alternative criterion to the individual values for chloride and sulphate.

Table 2.1.2b: Additional criteria for interim waste acceptance criteria for stable non-reactive hazardous waste	
Parameter	Value
Total Organic Carbon (TOC)	5%*
pH	Minimum 6
Acid Neutralisation Capacity (ANC)	Must be evaluated

* If this value is not achieved, a higher value may be admitted by the Agency, provided that the dissolved organic carbon (DOC) value of 800mg/kg is achieved at L/S (liquid/solid) of 10 at its own pH or at a pH of 7.5 to 8.0.

- 2.1.2.3.2 All waste approved under condition 2.1.2 shall be characterised in accordance with Regulations to meet Waste Acceptance Criteria and Procedures. The operator shall provide written confirmation to the Agency, in the quarterly report required by condition 4.1.9, that such characterisation has been undertaken. Any information provided under this condition shall be included within the annual report required by condition 4.1.3.
- 2.1.2.3.3 The operator shall ensure that where representative samples are taken for analysis they are taken in accordance with Regulations, to meet Waste Acceptance Criteria and Procedures. The samples taken shall be retained for at least one month and results of any analysis for at least one year.
- 2.1.3 The operator on accepting each delivery of waste shall provide a written receipt to the person delivering it.
- 2.1.4 The operator shall ensure that the landfill is secured to prevent free access to the site and the gates of the landfill must be locked outside operating hours.
- 2.1.5 The total quantity of waste that shall be deposited in the landfill shall not exceed 24,100,000 tonnes.
- 2.1.6 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in Table 2.1.3 below. And in any case the total quantity deposited in any year shall not exceed 4,000,000 tonnes.

Category	Limit Tonnes/ Year
Hazardous Waste	0
Non-hazardous Waste	2,500,000
Stable, non-reactive hazardous waste	500,000
Inert Waste	1,000,000
Total	4,000,000

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

2.2 Emissions

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

2.2.1.1 Part 2.2.1 of this Permit shall not apply to releases of odour, noise or vibration.

2.2.1.2 Emissions to air from the emission points in Table 2.2.1 shall only arise from the sources specified in that Table.

Table 2.2.1 : Emission points to air

Emission point reference or description	Source	Location of emission point
1 Engine Exhaust (shown as 'Landfill Gas Power Station' on plan S.2003/CV/PPC4)	1 Landfill gas engine	Landfill Gas Power Station on plan S.2003/CV/PPC4
6 Engine Exhausts (located in 'Environmental Compound and Power Station' on plan S.2003/CV/PPC4)	6 Landfill gas engines	Environmental Compound and Power Station on plan S.2003/CV/PPC4
1 Flare Stack (located in 'Landfill Gas Compound No.1' on plan S.2003/CV/PPC4)	Landfill gas flare	Landfill Gas Compound No.1 on plan S.2003/CV/PPC4
2 Flare Stacks (located in 'Landfill Gas Compound No.2' on plan S.2003/CV/PPC4)	2 Landfill gas flares	Landfill Gas Compound No.2 on plan S.2003/CV/PPC4
2 Flare Stacks (located in 'Environmental Compound and Power Station' on plan S.2003/CV/PPC4)	2 Landfill gas flares	Environmental Compound and Power Station on plan S.2003/CV/PPC4
2 Flare Stacks (located within installation boundary)	2 mobile landfill gas flares	2 mobile gas flares located within installation boundary

2.2.1.3 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 parameters and emission points set out in Table 2.2.2 shall not be exceeded.

Table 2.2.2: Emission limits to air and monitoring

Emission point reference	Parameter	Emission Limit	Monitoring frequency	Monitoring method
1 Flare Stack (located in 'Landfill Gas Compound No.1' on plan S.2003/CV/PPC4)	Oxides of Nitrogen	150 mg/m ³	Annual	ISO 10849
	Carbon Monoxide	50 mg/m ³	Annual	ISO 12039
2 Flare Stacks (located in 'Landfill Gas Compound No.2' on plan S.2003/CV/PPC4)	Total Volatile Organic Compounds	10 mg/m ³	Annual	BS EN 12619* BS EN 13526**
	Non-methane Volatile Organic Compounds	5 mg/m ³	Annual	BS EN 13649
2 Flare Stacks (located in 'Environmental Compound and Power Station' on plan S.2003/CV/PPC4)				
2 Flare Stacks (located within installation boundary)				
1 Engine Exhaust (shown as 'Landfill Gas Power Station' on plan S.2003/CV/PPC4)	To be agreed under Improvement Condition 8a	To be agreed under Improvement Condition 8a	To be agreed under Improvement Condition 8a	To be agreed under Improvement Condition 8a
6 Engine Exhausts (located in 'Environmental Compound and Power Station' on plan S.2003/CV/PPC4)	Oxides of Nitrogen	650 mg/m ³	Annual	ISO 10849
	Carbon Monoxide	1500 mg/m ³	Annual	ISO 12039
	Total Volatile Organic Compounds	1750 mg/m ³	Annual	BS EN 12619* BS EN 13526**
	Non-methane Volatile Organic Compounds	150 mg/m ³	Annual	BS EN 13649

* At sites with low total VOCs concentrations

** At sites with low to moderate total VOCs concentrations

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

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

Emissions to Water (other than to Sewer)

2.2.2.2 Conditions 2.2.2.3-6 shall not apply to emissions to sewer.

2.2.2.3 Emissions to water from the emission points specified in Table 2.2.4 shall only arise from the sources specified in that Table.

Table 2.2.4: Emission point to water

Emission Point Reference and/or location description	Source	Receiving Water
WP1 (shown on S.2003/CV/PPC6) Grid Reference SP69152401	Leachate and surface water from site	Claydon Brook
At Grid Reference SP69282286 (shown on S.2003/CV/PPC6)	Surface Water Collection system	River Ray

2.2.2.3 The limits for the emissions to water for the parameters and emission points set out in Table 2.2.5 shall not be exceeded.

Table 2.2.5 : Emission limits to water and monitoring

Emission point reference	Parameter	Limit	Monitoring frequency
WP1	SO ₄	2500mg/l	Monthly
	Suspended Solids	50mg/l	Monthly
	Cadmium	5µg/l	Monthly
	Chromium	16µg/l	Monthly
	Copper	50µg/l	Monthly
	Nickel	40µg/l	Monthly
	Lead	60µg/l	Monthly
	Zinc	120µg/l	Monthly
	Phenols	0.5mg/l	Monthly
	Chloride	314mg/l	Monthly
	BOD	20mg/l	Monthly
Ammonia	8mg/l	Monthly	
At Grid Reference SP69282286	SO ₄	500mg/l	Monthly
	Suspended Solids	25mg/l	Monthly
	BOD	10mg/l	Monthly
	Ammonia	1mg/l	Monthly
	Chloride	200mg/l	Monthly
	Cadmium	5 µg/l	Monthly
	Total Copper	10 µg/l	Monthly
	Total Zinc	250 µg/l	Monthly
	Total Chromium	5 µg/l	Monthly
	Total Nickel	150 µg/l	Monthly
	Total Lead	5 µg/l	Monthly
	Phenols	2 µg/l	Monthly
	Oil/grease	20mg/l	Monthly

2.2.2.4 Where a substance is specified in Table 2.2.5 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.

2.2.2.5 No condition applies.

Emissions to sewer

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

2.2.3 Emissions to groundwater

- 2.2.3.1 No emission from the Permitted Installation shall give rise to the introduction into groundwater of any substance in List I (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).
- 2.2.3.2 No emission from within the Permitted Installation shall give rise to the introduction into groundwater of any substance in List II (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)) so as to cause pollution (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).
- 2.2.3.3 For substances other than those in List I or II (as defined in the Groundwater Regulations 1998 (SI 1998 No.2746)), the Operator shall ensure that all appropriate measures are taken to prevent or where that is not practicable to reduce emissions to groundwater from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.
- 2.2.3.4 The trigger levels for emissions into groundwater for the parameters and monitoring points set out in Table 2.2.9a shall not be exceeded.

Table 2.2.9a: The trigger levels for emissions into groundwater

Parameters	Trigger Level	Control Level	Monitoring Frequency	Emission Point
Ammonia (mg/l N)	4	2.5	Quarterly	To be confirmed under Improvement Condition 5b
Potassium (mg/l)			Quarterly	To be confirmed under Improvement Condition 5b
in Kellaways Sand	70	60		
in Blisworth Limestone	100	80		
Total Organic Carbon (mg/l)			Quarterly	To be confirmed under Improvement Condition 5b
in Kellaways Sand	60	30		
in Blisworth Limestone	60	50		
Mecoprop (µg/l)	0.04	N/A	Quarterly	To be confirmed under Improvement Condition 5b
Toluene (µg/l)	4	N/A	Quarterly	To be confirmed under Improvement Condition 5b
Phthalates (µg/l)	8	N/A	Quarterly	To be confirmed under Improvement Condition 5b

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

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

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

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

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

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

Recommendations of the technical precautions necessary:

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

2.2.4 Fugitive emissions of substances to air

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

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

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

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

2.2.4.3 The Operator shall carry out monitoring of the parameters listed in Table 2.2.12, from the specified monitoring and emission points and at least at the frequencies specified in that Table.

Table 2.2.12: Emission monitoring frequency to air

Monitoring points	Parameters	Frequency of monitoring	Monitoring equipment type
Ambient air along the entire site boundary	Methane (assumed to be 98% of FID reading)	Monthly and after a substantiated odour complaint*	Flame ionisation detector, portable (ppm range)
Permanently capped areas (grid as per LFTGN 07**)	Methane (assumed to be 98% of FID reading)	Annually*	Flame ionisation detector (with flux trap,) flux box or as otherwise agreed in writing by the Agency
Temporarily capped areas (grid as per LFTGN 07**)	Methane (assumed to be 98% of FID reading)	Annually*	Flame ionisation detector (with flux trap,) flux box or as otherwise agreed in writing by the Agency

* Monitoring shall only take place under calm conditions (< Beaufort force 2) unless after a substantiated odour complaint

** LFTGN 07 "Guidance for monitoring landfill gas surface emissions", EA 2004

2.2.4.4 The trigger limits for emissions into the atmosphere for the parameters and monitoring points set out in Table 2.2.13 shall not be exceeded.

Table 2.2.13: Trigger limits for emissions into air

Monitoring points	Parameters	Units/Accuracy	Trigger Level
Ambient air at site boundary	Methane (assumed to be 98% of FID reading)	ppm	10
	Hydrogen Sulphide	ppb	10
	Speciated VOCs	ppb	*
Permanently capped areas	Methane (assumed to be 98% of FID reading)	mgm ⁻² s ⁻¹	1x10 ⁻³
Temporarily capped areas	Methane (assumed to be 98% of FID reading)	mgm ⁻² s ⁻¹	1x10 ⁻¹

* H1 EAL or species odour threshold, whichever is the lower

2.2.4.5 If the methane trigger level in Table 2.2.13 (for ambient air at site boundary) is exceeded or a substantiated odour complaint is received, monitoring of the parameters listed in Table 2.2.14 shall be carried out as soon as practicable, from the specified monitoring and emission points and at least at the frequencies specified in that Table.

Table 2.2.14: Emission monitoring frequency to air

Monitoring points	Parameters	Frequency of monitoring	Monitoring equipment type
At maximum ambient methane exceedance location (determined by monitoring in Table 2.2.12)	Speciated VOCs	when methane trigger level exceeded and after a substantiated odour complaint	24 hour auto-thermal desorption tube (at least 1 metre above ground level)
	Hydrogen Sulphide	when methane trigger level exceeded and after a substantiated odour complaint	Portable (ppb range)

2.2.5 Fugitive emissions of substances to water and sewer

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

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

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

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

2.2.6 Odour

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

2.2.7 Emissions to Land

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

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

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

2.3 Management and Fit and Proper Person

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

Training

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

Maintenance

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

Incidents and Complaints

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

2.3.9 *Fit and Proper Person*

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

- 2.3.9.2 In the event of the Operator and/or any relevant person being convicted of any relevant offence and which is in addition to any already notified to the Agency, then full details shall be provided to the Agency within 14 days of conviction, whether or not the conviction is subsequently appealed. Such details shall include, in respect of each relevant person (as defined in section 74(7) of the Environmental Protection Act 1990 or any subsequent amendments to that section), the nature of the offence, the place and date of conviction, any sentence, and any fine or other penalty imposed; and
- 2.3.9.3 In the event that the Operator and/or any relevant person lodges an appeal against any such conviction, the Operator shall notify the Agency of this within 14 days of the lodging. The Operator shall notify the Agency of the results of that appeal, within 14 days of the appeal being decided; and
- 2.3.9.4 The financial provision for meeting the obligations under this Permit shall be as set out in the Deed of Performance dated 5 October 2004 between the Waste Recycling Group Limited and the Agency. The operator shall accordingly ensure that the permit is and remains throughout its subsistence listed under Schedule 2 of that Deed as being a permit to which the Deed relates.
- 2.3.9.5 The operator shall ensure that the charges it makes for the disposal of waste in the landfill covers all of the following
- (a) the costs of setting up and operating the landfill;
 - (b) the costs of the financial provision required by condition 2.3.9.4; and
 - (c) the estimated costs for the closure and after-care of the landfill site for a period of at least 60 years from its closure.

2.4 Efficient use of raw materials

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

2.5 Waste Storage and Handling

No condition applies except as covered by the requirements in 2.1.1

2.6 Waste recovery or disposal

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

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

2.7 Energy Efficiency

- 2.7.1 The Operator shall produce a report on the energy consumed at the Permitted Installation over the previous calendar year, by 31 January each year, providing the information listed in Table S4.1 at Schedule 4.
- 2.7.2 The Operator shall maintain and update annually an energy management system which shall include, in particular, the monitoring of energy flows and targeting of areas for improving energy efficiency.
- 2.7.3 The Operator shall design, maintain and operate the Permitted Installation so as to secure energy efficiency, taking into account relevant guidance including the Agency's Energy Efficiency Horizontal Guidance Note H2 as from time to time amended. Energy efficiency shall be secured in particular by:
- 2.7.3.1 ensuring that the appropriate operating and maintenance systems are in place;
 - 2.7.3.2 ensuring that all plant is adequately insulated to minimise energy loss or gain;
 - 2.7.3.3 ensuring that all appropriate containment methods, (e.g. seals and self-closing doors) are employed and maintained to minimise energy loss;
 - 2.7.3.4 ensuring employing appropriate basic controls, such as simple sensors and timers, to avoid unnecessary discharge of heated water or air;
 - 2.7.3.5 where building services constitute more than 5% of the total energy consumption of the installation, identifying and employing the appropriate energy efficiency techniques for building services, having regard in particular to the Building services part of the Agency's Energy Efficiency Horizontal Guidance Note H2; and
 - 2.7.3.6 maintaining and implementing an energy efficiency plan which identifies energy saving techniques that are applicable to the activities and their associated environmental benefit and prioritises them, having regard to the appraisal method in the Agency's Energy Efficiency Horizontal Guidance Note H2.

2.8 Accident prevention and control

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

2.9 Noise and Vibration

- 2.9.1 The Permitted Installation shall be designed, operated and maintained so as to avoid reasonable cause for annoyance from noise or vibration, in particular by:
- equipment maintenance e.g. fans, pumps, motors, conveyors and mobile plant;
 - use and maintenance of appropriate attenuation e.g. silencers, barriers, enclosures;
 - timing and location of noisy activities and vehicle movements;
 - periodic checking of noise emissions, either qualitatively or quantitatively; and
 - maintenance of building fabric.

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

2.10 On Site Monitoring

- 2.10.1 The Operator shall maintain and implement an emissions monitoring programme which ensures that emissions are monitored from the specified points, for the parameters listed in and to the frequencies and methods described in Tables 2.2.2, 2.2.5, 2.2.9a, 2.2.12, 2.2.13, 2.2.14, 2.10.1, 2.10.2, 2.10.3, 2.10.4 and 2.10.5, unless otherwise agreed in writing, and that the results of such monitoring are assessed. The programme shall ensure that monitoring is carried out under an appropriate range of operating conditions.
- 2.10.2 The monitoring point specific landfill gas control and trigger levels listed in the Letter dated 23 December 2004 from Golder Associates to John Weetman entitled 'Response to Schedule 4 Calvert Landfill Site' shall be reviewed and updated on an annual basis and the review submitted to the Agency.
- 2.10.3 Prior to 1st March 2013, the leachate head within Pit 4 and Cells 1, 2A, 2B, 3A, 4A, 4B, 5A, 5B1, 5B2, 5C, 5D and 5F of Pit 5 shall be managed in accordance with the Document 'Calvert Landfill PPC Application – Leachate Management Strategy' dated 23 February 2005, submitted under a covering letter dated 23 February 2005 (or as updated in accordance with this condition.)

This plan shall be reviewed and updated on an annual basis and the review submitted to the Agency.

- 2.10.3.1 Unless otherwise agreed in writing with the Agency, from 1st March 2013, for Pit 4 and Cells 1, 2A, 2B, 3A, 4A, 4B, 5A, 5B1, 5B2, 5C, 5D and 5F of Pit 5 the compliance limits for leachate set out in Table 2.10.1 shall not be exceeded.

Table 2.10.1 : Compliance limit for leachate levels

Leachate Wells	Compliance limit
Pit 4	4 metres above base of cell
Cells 1, 2A, 2B, 3A, 4A, 4B and 5A of Pit 5	2 metres below local piezometric head
Cells 5B1, 5B2, 5C, 5D and 5F of Pit 5	5 metres above base of cell

- 2.10.3.2 Unless otherwise agreed in writing with the Agency, from 1st March 2013, if the assessment level for leachate for the parameter set out in Table 2.10.2 is exceeded the actions detailed in the Leachate Contingency Action Plan shall be instigated.

Table 2.10.2 : Assessment limit for leachate levels

Determinand	Assessment limit
Pit 4	3.5 metres above base of cell
Cells 1, 2A, 2B, 3A, 4A, 4B and 5A of Pit 5	2.5 below local piezometric head
Cells 5B1, 5B2, 5C, 5D and 5F of Pit 5	4.5 metres above base of cell

- 2.10.3.3 Unless otherwise agreed in writing with the Agency, the compliance limit for leachate for the parameter set out in Table 2.10.3 shall not be exceeded.

Table 2.10.3 : Compliance limit for leachate levels

Determinand	Leachate Wells in Cells 5E, 5G, 5H and 5J (shown on plan S.2003.CV.PPC1)
Compliance limit	2 metres above base of cell

2.10.3.4 Unless otherwise agreed in writing with the Agency, if the assessment level for leachate for the parameter set out in Table 2.10.4 is exceeded the actions detailed in the Leachate Contingency Action Plan shall be instigated.

Table 2.10.4 : Assessment limit for leachate levels

Determinand	Leachate Wells in Cells 5E, 5G, 5H and 5J (shown on plan shown on plan S.2003.CV.PPC1)
Assessment limit	1 metre above base of cell

2.10.3.5 If any of the assessment limits in Table 2.10.5 are exceeded, in areas not under hydraulic containment, a review shall be undertaken of leachate quality across the site and re-evaluation of risk to groundwater in those specific cells in accordance with the actions detailed in Document from Entec entitled 'Calvert Landfill PPC Permit Application – Response to Agency Letter of 24 Jan 2005.'

2.10.3.6 If any of the compliance limits in Table 2.10.5 are exceeded, this shall be followed by: confirmation of the result(s) by additional sampling; increased sampling to evaluate rising trends; and re-evaluation of the Hydrogeological Risk Assessment to ensure the leachate does not pose a risk to receptors.

Table 2.10.5: Leachate Quality Compliance and Assessment Limits

Determinand	Assessment Limit	Compliance Limit
Chloride (mg/l)	2520	3150
Ammoniacal Nitrogen (mg/l N)	1320	1650
Mecoprop (µg/l)	220	660
Toluene (µg/l)	500	5000
Assessment Test	Concentration exceeds assessment level on 3 consecutive surveys	

2.10.4 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.

2.10.5 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.

2.10.6 There shall be provided:

2.10.6.1 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

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

2.11 Closure, Aftercare and Decommissioning

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

Table 2.11.1: Closure, Aftercare and Decommissioning techniques

Description	Parts	Date Received
Application	The response to questions 2.5 in Part B of the application form	03/10/2003

- 2.11.2 Where the above Table refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the later document(s) shall prevail to the extent of such conflict.
- 2.11.3 In respect of activities on the installation which are not Listed in Section 5.2 Part 1 A(1)(a) or (b) of Schedule 1 of the PPC Regulations, the Operator shall maintain and operate these activities so as to prevent or minimise any pollution risk, including the generation of waste, on closure and decommissioning in particular by:
- 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 Operator shall implement the site closure plan on receipt of a notice from the Agency approving definitive closure of the landfill or part thereof.
- 2.11.6 The Operator shall give at least 30 days written notice to the Agency before implementing the site closure plan in respect of any non-landfill activities.

2.12 Multiple Operator installations

- 2.12.1 This is not a multi-Operator installation

2.13 Transfer to effluent treatment plant

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

3 Records

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

4 Reporting

- 4.1.1 All reports and written and or oral notifications required by this Permit and notifications required by Regulation 16 of the PPC Regulations shall be made or sent to the Agency using the contact details notified in writing to the Operator by the Agency.
- 4.1.2 The Operator shall, unless otherwise agreed in writing, submit reports of the monitoring and assessment carried out under condition 2.10, as follows:
 - 4.1.2.1 in respect of the parameters and emission points specified in Table S2 to Schedule 2.
 - 4.1.2.2 for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;
 - 4.1.2.3 giving the information from such results and assessments as may be required by the forms specified in those Tables; and
 - 4.1.2.4 to the Agency within 28 days of the end of the reporting period.
- 4.1.3 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 Where the Operator has a formal environmental management system applying to the Permitted Installation which encompasses annual improvement targets the Operator shall, not later than 31 January in each year, provide a summary report of the previous year's progress against such targets.
- 4.1.6 The Operator shall, within 6 months of receipt of written notice from the Agency, submit to the Agency a report assessing whether all appropriate preventive measures continue to be taken against pollution at the installation. The report shall consider any relevant published technical guidance current at the time of the notice which is either supplied with or referred to in the notice, and shall assess the costs and benefits of applying techniques described in that guidance, or otherwise identified by the Operator, that may provide environmental improvement
- 4.1.7 The Operator shall submit to the Agency an interpretation report of the monitoring results for landfill gas, leachate, surface and groundwater against the relevant emission limits, assessment limits, control and trigger levels specified in the permit on a three monthly basis, and shall submit a summary report of these interpretations to the Agency within one month of the end of each three month period.
- 4.1.8 The Operator shall review all monitoring data required by this permit on an annual basis and shall submit a summary report to the Agency within three months of the end of each year.
- 4.1.9 The Operator shall submit to the Agency a report setting out the types and quantities of waste disposed of at the landfill on a three monthly basis ie for the periods 1 April - 30 June; 1 July - 30 September; 1 October - 31 December and 1 January - 31 March, such report to be received within 1 month from the end of each period.

5 Notifications

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

- 5.1.6.2 a decision by the Secretary of State not to re-certify that Agreement
- 5.1.6.3 a decision by either the Operator or the Secretary of State to terminate that agreement
- 5.1.6.4 any subsequent decision by the Secretary of State to re-certify such an Agreement
- 5.1.7 Where the Operator has entered into a Direct Participant Agreement in the Emissions Trading Scheme which covers emissions relating to the energy consumption of the activities, the Operator shall notify the Agency within one month of:
 - 5.1.7.1 a decision by the Operator to withdraw from or the Secretary of State to terminate that agreement
 - 5.1.7.2 a failure to comply with an annual target under that Agreement at the end of the trading compliance period

6 Interpretation

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

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

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

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

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

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

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

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

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

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

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

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

weighting *“The Landfill Regulations”* means the Landfill (England and Wales) Regulations SI 2002 No. 1559 and

words and expressions defined in the Landfill Regulations shall have the same meanings when used in this

Permit, save to the extent that they are specifically defined in this Permit. It shall include future amendments or superseding legislation

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

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

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

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

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

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

“Year” means calendar year ending 31 December.

6.1.2 Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

6.1.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means; the standards included in Environment Agency Guidance for Monitoring Enclosed Landfill Gas Flares or Guidance for Monitoring Landfill Gas Engine Emissions

6.1.4 Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such conflict,

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

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

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

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

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

Part A

Permit Number	
Name of Operator	
Location of Installation	
Location of the emission/ significant adverse environmental effect	
Time and date of the emission/ significant adverse environmental effect	

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

Measures taken, or intended to be taken, to stop the emission	
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Part B

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

Name*	
Post	

Signature	
Date	

* authorised to sign on behalf of WRG Waste Services Limited

PART C

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of WRG Waste Services Limited

Schedule 2 - Reporting of monitoring data

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

Table S2: Reporting of monitoring data			
Parameter	Emission point	Reporting period	Period begins
Leachate levels and quality	Leachate Wells	Every 3 months	Date of issue of permit
Groundwater – List I suite	WB 1, 3, 9, 10, 12, 13, 16, 17	Every 12 months	Date of issue of permit
Groundwater – all determinands excluding List I	WB 1, 3, 9, 10, 12, 13, 16, 17	Every 3 months	Date of issue of permit
Surface Water	WP1, 2, 3, 4, 5, 6, 7 + at grid reference SP 69282286	Every 3 months	Date of issue of permit
Landfill Gas (external boreholes and probes)	External Gas Monitoring boreholes: GB001, 2, 3, 4, 5, 6, 7, 8, 11, 14, 15, 19, 20, 22, 28 Gas Probes: GP0001, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32, 33, 34, L1, L2	Every month	Date of issue of permit
Landfill Gas (ambient air at site boundary)	See Table 2.2.12	Every month	Date of issue of permit
Landfill Gas (surface emissions)	Permanently and temporarily capped areas	Every 12 months	Date of issue of permit
Flare emissions	7 Flares	Every 12 months	Date of issue of permit
Gas engine emissions	7 gas engine exhausts	Every 12 months	Date of issue of permit
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.		Every 3 months	Date of issue of permit
Assessment of environmental impact of emissions		Every 12 months	Date of issue of permit

Schedule 3 - Forms to be used

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

Schedule 4 - Reporting of performance data

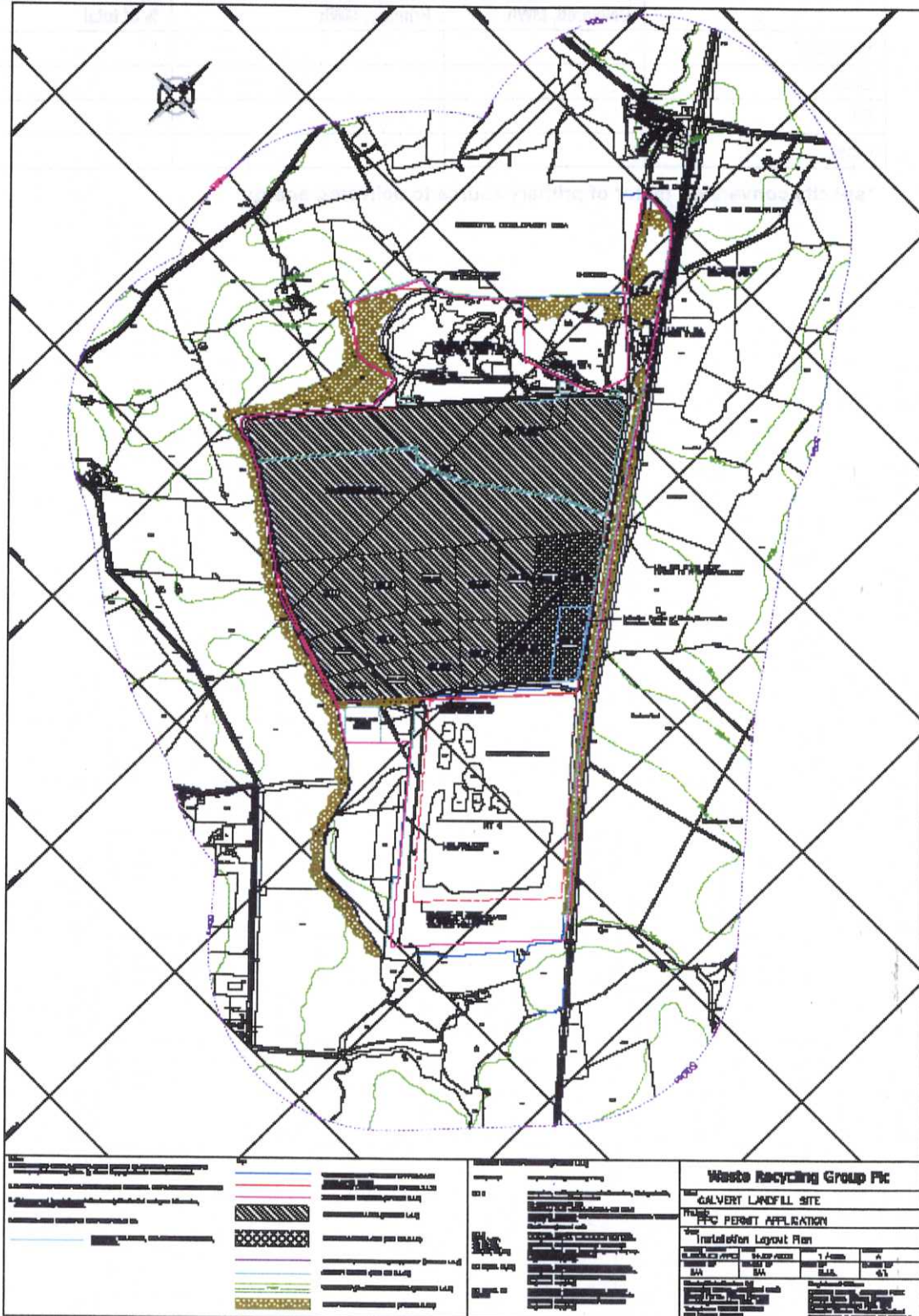
Data required to be recorded and reported by Condition 2.7.1.

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

*specify conversion factor of primary source to delivered energy

Schedule 5 - Site Plan

Drawing number S.2003/CV/PPC1, dated 04/07/2003, Revision A submitted as part of the application.



END OF PERMIT