



**ENVIRONMENT
AGENCY**

Permit with introductory note

Pollution Prevention and Control (England & Wales) Regulations 2000

Whiscombe Hill Landfill Site

**Westcombe Waste Ltd
Somertonfield Road
Westcombe
Somerton
Somerset
TA11 6HY**

Permit number

QP3230LE

Whiscombe Hill Landfill Site

Permit Number QP3230LE

Introductory note

This introductory note does not form a part of the permit

The main features of the installation are as follows.

A non-technical summary of the Installation is contained within Appendix 8, Volume 3 of the Application Documents. The Application is to operate a non-hazardous landfill.

Whiscombe Hill Landfill is located in the Valley of Whiscombe, Westcombe, 2km West North West of Somerton, Somerset at NGR ST 610 310. The valley opens out to Somerton Moor and the River Cary flows from East to West 750m to the North of the landfill.

The landfill is located on the Mercia Mudstone Group which is classified as a minor aquifer (where sandstone beds within the formation are present) or non-aquifer (where these are absent as is believed to be the case at this location). Groundwater within the Mercia Mudstone beneath the site discharges to the Whiscombe Brook approximately 20m North of the site. Groundwater base flows are considered to be low. The landfill is not situated in a Source Protection Zone (SPZ) associated with a public water supply.

The landfill has been in operation since 1973. The site was previously licensed under EAWML 26022. This permit application is for inert and non-hazardous waste.

The site comprises three areas; a restored area at the southern end of the site (covered by an earlier EAWML 27082; a central area known as Phase 1 which is close to finished levels; the southern area known as Phase 2 which includes Cells 1, 2 and 3. The PPC permit installation boundary incorporates all of these areas.

The leachate is collected and pumped to sewer under a trade effluent discharge consent from Wessex Water.

Phase 1 includes a waste transfer/recycling facility that will remain operational under EAWML 26022. The waste transfer/recycling facility does not form part of this PPC Permit application.

Status Log of the Permit

Detail	Date	Response Date
Application QP3230LE	Received 30/11/2005	Duly Made 30/11/2005
Response to Schedule 4 request for info	Request dated 13/01/2006	Response dated 02/02/2006
Permit determined	08/12/2006	

Other PPC permits relating to this installation

Operator	Permit Number	Date of Issue
None		

Superseded or Partially Superseded Licences/Authorisations/Consents relating to this installation			
Holder	Reference Number	Date of Issue	Fully or Partially Superseded
Westcombe Waste Ltd, WML, (Landfill part only)	EAWML26022	01/03/2001	Partially superseded
Westcombe Waste Ltd, WML	EAWML27082	07/12/1995	Superseded
Westcombe Waste Ltd, Consent to discharge	101389	20/12/2000	Superseded

Other existing licences/authorisations/registrations relating to this site			
Holder	Reference Number	Date of issue	
Westcombe Waste Ltd (Waste Transfer/Recycling Facility only)	EAWML26022	01/03/2001	

End of Introductory Note

Permit

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

Permit

Permit number

QP3230LE

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

Westcombe Waste Ltd ("the operator"),

whose registered office (or principal office) is

Whiscombe Hill Landfill Site

Somertonfield Road

Westcombe

Somerton

Somerset

TA11 6HY

Company registration number 2205997

to operate an installation at

Whiscombe Hill Landfill Site

Somertonfield Road

Westcombe

Somerton

Somerset

TA11 6HY

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

Signed

Date

	8 th December 2006
---	-------------------------------

Luke Prazsky, Team Leader, Strategic Permitting Group

Authorised to sign on behalf of the Agency

Conditions

1. Management

1.1 General management

- 1.1.1 The activities shall be managed and operated:
- (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the operator as a result of complaints; and
 - (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Accidents that may cause pollution

- 1.2.1 The operator shall:
- (a) maintain and implement an accident management plan;
 - (b) review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;
 - (c) make any appropriate changes to the plan identified by a review.

1.3 Finance

- 1.3.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the operator and the Agency dated 8th December 2006 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.
- 1.3.2 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover the cost of operating the landfill, as far as possible the cost of the financial provision required by condition 1.3.1 and thus the estimated costs for the closure and aftercare of the landfill.

1.4 Energy efficiency

- 1.4.1 The operator shall:
- (a) Review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (b) Implement any appropriate measures identified by a review.

1.5 Site security

- 1.5.1 Site security measures shall prevent unauthorised access to the site, as far as practicable.

2. Operations

2.1 Permitted activities

- 2.1.1 The operator is authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 2 to this permit.

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1 table S1.2, unless otherwise agreed in writing by the Agency.

2.4 Off-site conditions

There are no conditions in this permit to which regulation 12(12) of the PPC Regulations apply.

2.5 Improvement programme

- 2.5.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Agency.
- 2.5.2 Except in the case of an improvement which consists only of a submission to the Agency, the operator shall notify the Agency within 14 days of completion of each improvement.

2.6 Pre-operational conditions

- 2.6.1 The operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table have been completed.

2.7 Engineering

- 2.7.1 No construction of any new cell shall commence until the operator has submitted construction proposals and the Agency has confirmed that it is satisfied with the construction proposals.
- 2.7.2 The construction of a new cell shall take place only in accordance with the approved construction proposals unless:

- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Agency.
- 2.7.3 No disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and the Agency has confirmed that it is satisfied with the CQA Validation Report.
- 2.7.4 No construction of landfill Infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Agency has confirmed that it is satisfied with the construction proposals.
- 2.7.5 The construction of the landfill Infrastructure shall take place only in accordance with the approved construction proposals unless:
 - (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Agency.
- 2.7.6 The operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant landfill Infrastructure.
- 2.7.7 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.7.4 and 2.7.5 do not apply and the relevant landfill Infrastructure may be constructed, provided that the construction proposals are submitted to the Agency as soon as practicable.
- 2.7.8 For the purposes of conditions 2.7.1, 2.7.3 and 2.7.4, the Agency shall be deemed to be satisfied where it has not, within the period of 4 weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:
 - (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.

2.8 Waste acceptance

- 2.8.1 Wastes shall only be accepted for disposal if:
 - (a) they are listed in schedule 3, and
 - (b) they are non- hazardous waste, and
 - (c) they are not whole used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm), and
 - (d) they are not shredded used tyres, and
 - (e) from 30th October 2007 they are not liquid waste (including waste waters but excluding sludge), and
 - (f) they are not 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, and
 - (g) all the relevant waste acceptance procedures set out in schedule 1 of the Landfill Regulations have been completed, and
 - (h) they fulfil the relevant waste acceptance criteria, and

- (i) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria, and
 - (j) from 30th October 2007 they are wastes which have 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.
 - (k) any code beginning with 07 05 and 16 03 shall exclude waste medicinal products and pharmaceutically active waste materials arising from their manufacture
- 2.8.2 The operator shall visually inspect:
- (a) without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill; and
 - (b) waste at the point of deposit;
- and shall satisfy itself that it conforms to the basic characterisation documentation submitted by the holder.
- 2.8.3 Where the operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.
- 2.8.4 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.
- 2.8.5 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels as shown on the drawing submitted in compliance with improvement condition Table S1.3(17).
- 2.8.6 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.5.
- 2.8.7 The operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, date of delivery and, where practicable, origin of any waste that is received for disposal or recovery and of the identity of the producer, or in the case of municipal waste and multiple collection vehicles, of the collector of such waste. Any information regarded by the operator as commercially confidential shall be clearly identified in the record.

2.9 Leachate levels

- 2.9.1 The limits for the level of leachate listed in schedule 4 table S4.1 shall not be exceeded.

2.10 Closure, aftercare and decommissioning

- 2.10.1 The operator shall maintain and operate the activities so as to prevent or where that is not practicable, to minimise, any pollution risk on closure and decommissioning.
- 2.10.2 The operator shall maintain a site closure plan which demonstrates how the activities can be decommissioned to avoid any pollution risk and return the site of operation to a satisfactory state.
- 2.10.3 The operator shall carry out and record a review of the site closure plan at least every 4 years.

- 2.10.4 The site closure plan (or relevant part thereof) shall be implemented on final cessation or decommissioning of the activities or part thereof.

2.11 Site protection and monitoring programme

- 2.11.1 The operator shall, within a minimum of 3 months prior to undertaking the relevant activity, submit a Site Protection and Monitoring Programme.
- 2.11.2 The Operator shall implement and maintain the Site Protection and Monitoring Programme in relation to all areas which will not comprise permanent deposits of waste and shall carry out and record a review of it at least every 4 years commencing from the date the Site Protection and Monitoring Programme was received.

3. Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 4 tables S4.2, S4.3 and S4.4.
- 3.1.2 The limits given in that schedule shall not be exceeded, save that compliance with an emission limit shall include incorporation of the uncertainty allowance stated in Agency guidance LFTGN 05 and LFTGN 08.
- 3.1.3 Where a substance is specified in schedule 4 table S4.3 or S4.4 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.

3.2 Emissions to groundwater

- 3.2.1 There shall be no emission from the activities into groundwater of any substance in List I (as defined by the Groundwater Regulations) contrary to those regulations.
- 3.2.2 There shall be no emission from the activities into groundwater of any substance in List II (as defined in the Groundwater Regulations) so as to cause pollution (as defined in those regulations).
- 3.2.3 The trigger levels for emissions into groundwater for the parameter(s) and monitoring point(s) set out in schedule 4 Table S4.5 shall not be exceeded.
- 3.2.4 The operator shall submit to the Agency a review of the Hydrogeological Risk Assessment:
- (a) between 9 and 6 months prior to the fourth anniversary of the granting of the permit, and
 - (b) between 9 and 6 months prior to every subsequent 4 years after the fourth anniversary of the granting of the permit.

3.3 Fugitive emissions of substances

- 3.3.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.3.2 Litter or mud arising from the activities shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, have been used to prevent or where that is not practicable to minimise, the litter and mud.
- 3.3.3 Litter or mud arising from the activities shall be cleared from affected areas outside the site as soon as practicable.
- 3.3.4 All liquids, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.
- 3.3.5 The limits for landfill gas arising from the installation set out in schedule 4, table S4.6, shall not be exceeded.
- 3.3.6 The limits for particulate matter arising from the installation set out in schedule 4, table S4.10, shall not be exceeded.

3.4 Odour

- 3.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, to prevent or where that is not practicable to minimise the odour.

3.5 Noise and vibration

- 3.5.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures to prevent or where that is not practicable to minimise the noise and vibration.

3.6 Monitoring

- 3.6.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring specified in the following tables in schedule 4 to this permit:
 - (a) Leachate specified in tables S4.1 and S4.9;
 - (b) Point source emissions specified in tables S4.2, S4.3 and S4.4;
 - (c) Groundwater specified in table S4.5;
 - (d) Landfill gas specified in tables S4.6, S4.7 and S4.8; and
 - (e) Particulate matter specified in table S4.10.

- 3.6.2 The operator shall maintain records of all monitoring required by this permit including 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.
- 3.6.3 A topographical survey of the site referenced to ordnance datum shall be carried out:
- (a) annually, and
 - (b) prior to the disposal of waste in any new cell or new development area of the landfill, and
 - (c) following closure of the landfill or part of the landfill.
- 3.6.4 Within 12 months of the issue of this Permit (unless otherwise agreed in writing by the Agency) the site reference data identified in the Site Protection and Monitoring Programme shall be collected and submitted to the Agency.

3.7 Transfers off-site

- 3.7.1 Records of all the wastes sent off site from the activities, for either disposal or recovery, shall be maintained.

4. Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) the results of groundwater and surface water monitoring;
 - (ii) the Site Protection and Monitoring Programme;
 - (iii) ambient air monitoring for particulate matter;
 - (iv) sub-surface landfill gas monitoring;
 - (v) leachate levels, quality and quantities;
 - (vi) landfill gas generation and collection;
 - (vii) waste types and quantities;
 - (viii) topographical surveys; and
 - (ix) the specification and as built drawings of the basal, sidewall and capping engineering systems.

- 4.1.2. Any records required to be made by this permit shall be supplied to the Agency within 14 days where the records have been requested in writing by the Agency.
- 4.1.3. All records required to be held by this permit shall be held on site and shall be available for inspection by the Agency at any reasonable time.

4.2 Reporting

- 4.2.1 A report or reports on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted with the application;
 - (b) where the operator's management system encompasses annual improvement targets, a summary report of the previous year's progress against such targets;
 - (c) the energy consumed at the site, reported in the format set out in schedule 5 table S5.3
 - (d) the water consumed at the site, reported in the format set out in schedule 5 table S5.3;
 - (e) the annual production/treatment set out in schedule 5 table S5.2;
 - (f) details of any contamination or decontamination of the site which has occurred;
 - (g) the topographical surveys required by condition 3.6.3 other than those submitted as part of a CQA validation report;
 - (h) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;
 - (i) an assessment of the settlement behavior of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;
 - (j) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
 - (k) the compliance testing undertaken in the period;
- 4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 5 Table S5.1;
 - (b) for the reporting periods specified in schedule 5 Table S5.1 and using the forms specified in schedule 5 Table S5.4; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

- 4.2.3 A summary report of the waste types and quantities accepted and removed from the site shall be made for each quarter. It shall be submitted to the Agency within one month of the end of the quarter and shall be in the format required by the Agency.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.4 All reports and notifications required by the Permit shall be sent to the Agency using the contact details supplied in writing by the Agency
- 4.2.6 The results of reviews and any changes made to the Site Protection and Monitoring Programme shall be reported to the Agency, within 1 month of the review or change.

4.3 Notifications

- 4.3.1 The Agency shall be notified without delay following the detection of:
 - (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in the permit;
 - (c) any significant adverse environmental effects.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 6 to this permit within the time period specified in that schedule.
- 4.3.3. Prior written notification shall be given to the Agency of the following events and in the specified timescales:
 - (a) as soon as practicable prior to the permanent cessation of any of the permitted activities;
 - (b) as soon as practicable prior to the cessation of the landfill disposal activities, for a period likely to exceed 1 month; and
 - (c) at least 7 days prior to the resumption of the landfill disposal activities after a cessation notified under (b) above.
- 4.3.4 The Agency shall be given at least 14 days notice before implementation of any part of the site closure plan in respect of any activities other than the disposal of waste in the landfill.
- 4.3.5 Where the Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.6 The Agency shall be notified within 7 days of any changes in technically competent management and the name of any incoming person together with evidence that such person has the required technical competence.
- 4.3.7 The Agency shall be provided, within 14 days of the operator or any relevant person being convicted of a relevant offence, (unless such information has already been notified to the Agency), with details of the nature of the offence, the place and date of conviction, and the sentence imposed.

- 4.3.8 The Agency shall be notified within 14 days of the operator and/or any relevant person lodging an appeal against a conviction for any relevant offence and of the outcome when the appeal is decided.
- 4.3.9 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- (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); and
 - (c) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 7 shall have the meaning given in that schedule.

Schedule 1 - Operations

Table S1.1 Activities		
Activity listed in Schedule 1 of the PPC Regulations	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 wastes, consisting of the types and quantities specified in conditions 2.8 and Schedule 3, as an integral part of landfilling.
Directly Associated Activity		
Leachate management	Extraction and storage of leachate prior to removal off-site.	Leachate arising from the landfill.
Landfill gas utilisation.	Utilisation of landfill gas for energy recovery in a appliance <3 MW rated thermal input	Landfill gas arising from the Permitted landfill
Landfill gas flaring	Flaring of landfill gas for disposal in an appliance.	Landfill gas arising from the Permitted landfill
Leachate discharge to foul sewer	Discharge of leachate from the landfill.	From leachate management system to point of entry to sewer (including tankering off-site)
Water discharges to controlled waters.	Discharges of site drainage and the under-cell groundwater drainage system at the landfill.	From surface water management system to point of entry to controlled waters.

Table S1.2 Operating Techniques		
Description	Parts	Date Received
Application	The response to questions 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 2.5, 2.7, 2.8, 2.9, 2.11 and 3.1 in Part B of the Application Form. Excluding- - Application - Table 2.1, Volume 3, appendix 10 Waste Throughput - Application – All references to asbestos disposal - Application – All references to the recycling operation	30/11/2005
	Response to Schedule 4 - request for information, request dated 13/01/2006	02/02/2006
	Final post-settlement drawings 5018355/LA/4902 Rev. B and 5018355/LA/4903 Rev. C	20/10/2006
Site Protection and Monitoring Plan	Site Protection and Monitoring Plan submitted in response to condition 2.11 of this permit.	

Table S1.3 Improvement Programme Requirements		
Reference	Requirement	Date
1	Proposals and details for the re-grading of the northern waste slope of Phase 1 and for the method of filling of Phase 2 to be in horizontal lifts shall be submitted to the Agency for approval in writing. The operator shall implement any improvements or measures as approved in writing with the Agency.	By 28/02/2007
2	An analysis of the stability of the final, pre-settlement, profile of the whole waste mass (as shown in a north to south Section along the valley floor) shall be undertaken and the factor of safety reported. The profile shall include the cap and shall simulate a softened clay liner. All strength parameters used in the analyses shall be derived from laboratory testing of materials to be used and associated interfaces.	Timetable to be agreed with the Agency
3	The discharge point of the groundwater drain from beneath the liner shall be reconstructed so that if the exiting groundwater is contaminated it can be collected and discharged to foul sewer using the leachate drainage pumps or recirculated into the waste mass.	By 28/02/2007
4	The operator shall monitor the discharge from the groundwater drain weekly for 6 months from the date of issue of the permit. On completion revised emission limit values for pH, Electrical Conductivity, Chloride, Ammoniacal Nitrogen, Iron and Dissolved Oxygen are to be calculated and forwarded to the Agency for approval in writing. Monitoring and the review shall be in accordance with the guidance provided in Agency document 'Hydrogeological Risk Assessments for Landfills' (LFTGN01) and 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02). Once approved, the limits shall supersede their equivalent limits prescribed in Table S4.5 of this Permit.	By 31/05/2007
5	The operator shall:	
	i. Review the status of leachate monitoring well 17a and submit a report to the Agency for agreement in writing. Should the monitoring point fail to meet its objective and cannot be remediated a replacement shall be provided, and	By 31/03/2007
	ii. install two remote leachate monitoring well in Cell 1/2 of Phase 2, and	By 31/03/2007
	iii. install one remote leachate monitoring well in Cell 3 of Phase 2 (timetable for installation to be agreed with the Agency in writing), and	
	iv. be in accordance with the guidance provided in Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02) and the objectives set out in Improvement Condition 12 below.	
	v. remote monitoring points should be located over the base of the cell (valley centre) and not over the side slopes of the valley.	
	Proposals for the method of installation and construction of borehole 17a and the leachate monitoring wells in Phase 2 shall be submitted to the Agency for approval in writing. The operator shall implement any improvements or measures as approved in writing with the Agency.	By 31/01/2007
6	The Operator shall install two further external gas perimeter monitoring boreholes. The first borehole midway between boreholes 2 and 21 and the second midway between boreholes 21 and 12. Installation shall be in accordance with the guidance provided in Agency document 'Guidance on the Management of Landfill Gas' (LFTGN03) and the objectives set out in Improvement Condition 12 below.	By 31/05/2007
7	Proposals for the installation of in waste gas monitoring wells shall be submitted to the Agency for approval in writing and shall be in accordance with LFTGN 03 – Guidance on the Management of Landfill Gas.	By 31/01/2007

	The operator shall implement any measures as approved in writing by the Agency and within a time scale approved by the Agency.	
8	The Operator shall submit in writing to the Agency a particulates monitoring and action plan, (in accordance with the methods given in Agency guidance 'M17 - Monitoring of particulate matter in ambient air around waste facilities'), that shall include, but need not be restricted to, a monitoring methodology, monitoring points and an action plan that details measures to be taken should an emission limit for particulates specified in Table S4.10 be reached. Following submission of the particulates monitoring and action plan the Operator shall undertake any measures approved in writing by the Agency.	By 31/03/2007
9	The operator shall install a fence along the northern boundary to prevent unauthorised access to the site, inline with the design standards set out in Table 4.1 of Appendix 10 of the application.	By 31/01/2007
10	Stable, permanent survey control stations shall be established and maintained for the control of all survey work around the site. The stations shall be referenced to Ordnance Survey National Grid co-ordinates, the grid alignment to be within +/-1 metre and levels referenced to Ordnance Datum. The accuracy of horizontal control shall not be less than 1:20 000. The level values of adjacent stations shall agree to less than or equal to 0.005 metres. A schedule of descriptions, co-ordinates and level values of all control stations, together with details of Bench Marks used, shall be submitted in writing to the Agency. All survey stations shall be clearly marked, maintained and secured to prevent accidental damage.	By 30/01/2007
11	The Operator shall undertake an assessment of the impact on the water environment from current emissions of effluent to sewer. The operator shall use the methodology prescribed in the Agency's guidance 'Environmental Assessment and Appraisal of BAT' (Ref. IPPC H1) in making this assessment. The Operator shall identify substances present in the effluent that are considered significant, and submit proposed emission limit values for these substances in the form of a report. Flow rate must also be considered as part of this assessment. The report shall also include an effluent monitoring plan for any key substances identified and an action plan to reduce releases of those substances that are considered significant as part of the H1 Assessment. The operator shall implement any improvements or measures as agreed in writing with the Environment Agency. Once approved, the limits and parameters shall supersede those prescribed in Table S4.4 of this Permit.	By 30/06/2007
12	The operator shall submit a monitoring plan in accordance with the principles and design objectives laid out in LFTGN02, The Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water, in particular Chapter 8, Sections 8.2, 8.3, 8.4, 8.5 and 8.6, that covers all existing and proposed monitoring points. The operator shall implement any improvements or measures as approved in writing by the Agency.	By 30/05/2007
13	The operator shall submit detailed design proposals and a timetable for construction for the lining system for the existing leachate storage lagoon for approval in writing by the Agency. The operator shall implement measures as approved in writing by the Agency.	By 31/03/2007
14	The operator shall submit a revised drawing to include details of all monitoring points such as: All perimeter gas monitoring boreholes. (Including those required by S1.3(6)) All in waste monitoring boreholes. (Including those required by S1.3(7))	By 30/06/2007

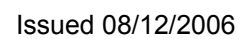
	All groundwater boreholes. All leachate wells. Location of leachate rising main. Groundwater outfall point to Whiscombe Brook.	
15	The operator shall carry out a feasibility study, as detailed in section 4.1 of the application gas risk assessment, to determine when/if landfill gas generation on site is sufficient for the utilisation of landfill gas for energy recovery and / or flare, for approval in writing by the Agency. Should collection of landfill gas for flaring / utilisation be concluded to be appropriate the operator shall submit to the Agency for approval in writing the final design details and locations of the proposed Gas Utilisation Compound and/or the proposed gas flare at least 6 weeks prior to construction. The scope of the information and risk assessment required including information required for the site protection monitoring programme(SPMP) shall be agreed with the Agency in writing prior to submission of the reports.	By 31/12/2007
16	The operator shall establish background concentrations of CH₄ and CO₂ in existing external landfill gas monitoring boreholes. The proposed background levels shall be submitted for approval to the Environment Agency.	By 31/08/2007
17	The operator shall submit a revised drawing detailing the pre-settlement levels referenced in condition 2.8.5 of this permit for agreement in writing with the Agency.	By 30/11/2007

Table S1.4 Pre-operational Measures for Future Development		
Reference	Operation	Pre-operational Measures
1	Capping and Restoration Scheme	Submit to the Agency for Approval in writing, revised/final details of the design of the landfill capping system and restoration scheme in line with the proposals set out in the application, in order to ensure compliance with the requirements of the Landfill Regulations.
2	Leachate Drainage Blanket	All the parts of the site that are unfilled on the date of issue of the permit shall be engineered with a 500mm thick drainage blanket on the base of the site and a minimum of 300mm thick to the top of the side slopes.
3	Cell Engineering	At least 4 weeks prior to the engineering of the side slope lining system a report shall be submitted to the Agency detailing the chosen lining design. The design shall determine the appropriate strength characteristics required of the materials to be used. Site specific strength testing shall be undertaken so as to demonstrate that the materials to be used have the required strength characteristics. All areas unlined as of the date of issue of this permit shall, prior to the laying of the artificial sealing liner, be provided with a system of land/groundwater drains so as to prevent the build up of pore water pressures beneath the base and side slope liners. These drains shall link into the groundwater drains already established at the site such that all excess porewater building up beneath the liner can discharge to the Whiscombe Brook at the north end of the site as detailed in Improvement Condition 1. The layout and design of this required drainage system shall be submitted to the Agency for review and approval or amendment as appropriate.

Table S1.5 Annual Waste Input Limits	
Category	Limit Tonnes/ Year
Non-hazardous Waste	14,500
Inert Waste	5,500
Total	20,000

Schedule 2 - Site plan

Drawing Number 003-DV51137-E - Site Plan with Cell Layout. Dated 27/01/2006



Schedule 3 - List of permitted wastes

01 Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals

01 01 wastes from mineral excavation

01 01 01 wastes from mineral metalliferous excavation

01 01 02 wastes from mineral non-metalliferous excavation

01 04 wastes from physical and chemical processing of non-metalliferous minerals

01 04 09 waste sand and clays

01 05 drilling muds and other drilling wastes

01 05 04 freshwater drilling muds and wastes

02 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing

02 01 wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing

02 01 03 plant-tissue waste

02 01 07 wastes from forestry

02 01 10 waste metal

02 03 wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation

02 03 02 wastes from preserving agents

02 03 03 wastes from solvent extraction

02 03 04 materials unsuitable for consumption or processing

03 Wastes from Wood Processing and the Production of Panels and Furniture, Pulp, Paper

03 01 wastes from wood processing and the production of panels and furniture

03 01 01 waste bark and cork

03 01 05 sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04

03 03 wastes from pulp, paper and cardboard production and processing

03 03 01 waste bark and wood

03 03 07 mechanically separated rejects from pulping of waste paper and cardboard

03 03 08 wastes from sorting of paper and cardboard destined for recycling

03 03 09 lime mud waste

03 03 10 fibre rejects, fibre-, filler- and coating-sludges from mechanical separation

04 Wastes from the Leather, Fur and Textile Industries

04 01 wastes from the leather and fur industry

04 01 08 waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium

04 02 wastes from the textile industry

04 02 09 wastes from composite materials (impregnated textile, elastomer, plastomer)

04 02 21 wastes from unprocessed textile fibres

04 02 22 wastes from processed textile fibres

09 Wastes from the Photographic Industry

09 01 wastes from the photographic industry

09 01 08 photographic film and paper free of silver or silver compounds

09 01 10 single-use cameras without batteries

10 Wastes from Thermal Processes

10 01 wastes from power stations and other combustion plants (except 19)

10 01 01 bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)

10 01 02 coal fly ash

10 01 03 fly ash from peat and untreated wood

10 01 17 fly ash from co-incineration other than those mentioned in 10 01 16

10 01 24 sands from fluidised beds

10 01 25 wastes from fuel storage and preparation of coal fired power plants

10 01 26 wastes from cooling-water treatment

10 02 wastes from the iron and steel industry

10 02 01 wastes from the processing of slag

10 02 02 unprocessed slag

10 11 wastes from manufacture of glass and glass products

10 11 03 waste glass-based fibrous materials

10 12 wastes from manufacture of ceramic goods, bricks, tiles and construction products

10 12 01 waste preparation mixture before thermal processing

10 12 06 discarded moulds

10 12 08 waste ceramics, bricks, tiles and construction products (after thermal processing)

10 13 wastes from manufacture of cement, lime and plaster and articles and products made from them

10 13 01 waste preparation mixture before thermal processing

10 13 04 wastes from calcination and hydration of lime

11 Wastes from chemical surface treatment and coating of metals and other materials; Non-Ferrous Hydro-Metallurgy

11 05 wastes from hot galvanising processes

11 05 01 hard zinc

11 05 02 zinc ash

15 Waste Packaging; Absorbents, Wiping Cloths, Filter Materials and Protective Clothing not otherwise specified

15 01 packaging (including separately collected municipal packaging waste)

15 01 01 paper and cardboard packaging

15 01 02 plastic packaging
15 01 03 wooden packaging
15 01 04 metallic packaging
15 01 05 composite packaging
15 01 06 mixed packaging
15 01 07 glass packaging
15 01 09 textile packaging

15 02 absorbents, filter materials, wiping cloths and protective clothing

15 02 03 absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02

16 Wastes not otherwise specified in the list

16 01 end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)

16 01 16 tanks for liquefied gas
16 01 17 ferrous metal
16 01 18 non-ferrous metal
16 01 19 plastic
16 01 20 glass
16 01 22 components not otherwise specified

16 02 wastes from electrical and electronic equipment

16 02 14 discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 16 components removed from discarded equipment other than those mentioned in 16 02 15

16 03 off-specification batches and unused products

16 03 04 inorganic wastes other than those mentioned in 16 03 03
16 03 06 organic wastes other than those mentioned in 16 03 05

16 05 gases in pressure containers and discarded chemicals

16 05 05 gases in pressure containers other than those mentioned in 16 05 04
16 05 09 discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

17 Construction and Demolition Wastes (including excavated soil from contaminated sites)

17 01 concrete, bricks, tiles and ceramics

17 01 01 concrete
17 01 02 bricks
17 01 03 tiles and ceramics
17 01 07 mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06

17 02 wood, glass and plastic

17 02 01 wood
17 02 02 glass

17 02 03 plastic

17 03 bituminous mixtures, coal tar and tarred products

17 03 02 bituminous mixtures other than those mentioned in 17 03 01

17 04 metals (including their alloys)

17 04 01 copper, bronze, brass

17 04 02 aluminium

17 04 03 lead

17 04 04 zinc

17 04 05 iron and steel

17 04 06 tin

17 04 07 mixed metals

17 04 11 cables other than those mentioned in 17 04 10

17 05 soil (including excavated soil from contaminated sites), stones and dredging spoil

17 05 04 soil and stones other than those mentioned in 17 05 03

17 05 06 dredging spoil other than those mentioned in 17 05 05

17 05 08 track ballast other than those mentioned in 17 05 07

17 06 insulation materials and asbestos-containing construction materials

17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03

17 08 gypsum-based construction material

17 08 02 gypsum-based construction materials other than those mentioned in 17 08 01

17 09 other construction and demolition wastes

17 09 04 mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03

19 Wastes from waste management facilities, off-site waste water treatment plants and the Preparation of Water Intended for Human Consumption and Water for Industrial Use

19 01 wastes from incineration or pyrolysis of waste

19 01 02 ferrous materials removed from bottom ash

19 01 12 bottom ash and slag other than those mentioned in 19 01 11

19 01 14 fly ash other than those mentioned in 19 01 13

19 01 18 pyrolysis wastes other than those mentioned in 19 01 17

19 01 19 sands from fluidised beds

19 02 wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)

19 02 03 premixed wastes composed only of non-hazardous wastes

19 03 stabilised/solidified wastes

19 03 05 stabilised wastes other than those mentioned in 19 03 04

19 03 07 solidified wastes other than those mentioned in 19 03 06

19 04 vitrified waste and wastes from vitrification

19 04 01 vitrified waste

19 05 wastes from aerobic treatment of solid wastes

19 05 01 non-composted fraction of municipal and similar wastes

19 05 02 non-composted fraction of vegetable waste

19 05 03 off-specification compost

19 06 wastes from anaerobic treatment of waste

19 06 04 digestate from anaerobic treatment of municipal waste

19 06 06 digestate from anaerobic treatment of vegetable waste

19 08 wastes from waste water treatment plants not otherwise specified

19 08 01 screenings

19 08 02 waste from desanding

19 09 wastes from the preparation of water intended for human consumption or water for industrial use

19 09 01 solid waste from primary filtration and screenings

19 09 04 spent activated carbon

19 10 wastes from shredding of metal-containing wastes

19 10 01 iron and steel waste

19 10 02 non-ferrous waste

19 10 04 fluff-light fraction and dust other than those mentioned in 19 10 03

19 10 06 other fractions other than those mentioned in 19 10 05

19 12 wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified

19 12 01 paper and cardboard

19 12 02 ferrous metal

19 12 03 non-ferrous metal

19 12 04 plastic and rubber

19 12 05 glass

19 12 07 wood other than that mentioned in 19 12 06

19 12 08 textiles

19 12 09 minerals (for example sand, stones)

19 12 10 combustible waste (refuse derived fuel)

19 12 12 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11

19 13 wastes from soil and groundwater remediation

19 13 02 solid wastes from soil remediation other than those mentioned in 19 13 01

20 Municipal wastes (household waste and similar commercial industrial and institutional wastes) Including separately collected fractions

20 01 separately collected fractions (except 15 01)

20 01 01 paper and cardboard

20 01 02 glass

20 01 10 clothes

20 01 11 textiles

20 01 28 paint, inks, adhesives and resins other than those mentioned in 20 01 27

20 01 30 detergents other than those mentioned in 20 01 29

20 01 34 batteries and accumulators other than those mentioned in 20 01 33

20 01 36 discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35

20 01 38 wood other than that mentioned in 20 01 37

20 01 39 plastics

20 01 40 metals

20 01 41 wastes from chimney sweeping

20 02 garden and park wastes (including cemetery waste)

20 02 01 biodegradable waste

20 02 02 soil and stones

20 02 03 other non-biodegradable wastes

20 03 other municipal wastes

20 03 01 mixed municipal waste

20 03 02 waste from markets

20 03 03 street-cleaning residues

20 03 04 septic tank sludge

20 03 06 waste from sewage cleaning

20 03 07 bulky waste

Schedule 4 – Emissions and monitoring

Table S4.1 Leachate level limits and monitoring requirements

Monitoring point reference/ Description	Parameter	Limit	Monitoring frequency	Monitoring method
All new leachate monitoring points installed in Phase 2 in accordance with Improvement Condition Table S1.3(5).	Leachate Level	1.0 m above top of basal liner	Weekly	Monitoring to be carried out in accordance with Environment Agency Document "Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water" LFTGN02 unless otherwise approved in writing with the Agency.

Table S4.2 Point Source Emissions to Air – emission limits and monitoring requirements

Emission point Ref. & Location	Parameter	Source	Limit (including unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Gas Engine, subject to improvement condition Table S1.3(15)	Oxides of Nitrogen	Gas utilisation plant	500 mg/m ³	Hourly mean	Annually	ISO 10849: 1996
	CO	Gas utilisation plant	1400 mg/m ³	Hourly mean	Annually	ISO 12039: 2001
	Total VOCs	Gas utilisation plant	1000 mg/m ³	Hourly mean	Annually	BS EN 12619: 1999 or BS EN 13526: 2002
	NMVOCs	Gas utilisation plant	75 mg/m ³	Hourly mean	Annually	BS EN 13649: 2002
NB. Annual monitoring is only required when flares operate in excess of 10% of the time, taken on an annual assessment period.						
Flare Subject to improvement condition Table S1.3(15)	Oxides of Nitrogen	Landfill Gas Flares	150 mg/m ³	Hourly mean	Annually	ISO 10849
	CO	Landfill Gas Flares	50 mg/m ³	Hourly mean	Annually	ISO 12039
	Total VOCs	Landfill Gas Flares	10 mg/m ³	Hourly mean	Annually	BS EN 12619 or BS EN 13526
	NMVOCs	Landfill Gas Flares	5 mg/m ³	Hourly mean	Annually	BS EN 13649

Table S4.3 Point Source Emissions to Water (Other than Sewer) – emission limits and monitoring requirements

Emission point Ref. & Location	Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Groundwater underdrain discharge point into Whiscombe Brook. Subject to Improvement Condition Table S1.3(3).	pH	Sub liner ground- water drainage system	7 - 8	Spot Sample	Weekly for first 6 months then Monthly	Monitoring to be carried out in accordance with Environment Agency Document "Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water" LFTGN02 unless otherwise approved in writing with the Agency.
	EC		750 us/cm		Monthly	
	NH ₄ -N		0.5 mg/l			
	COD		75 mg/l			
	Cl		120 mg/l			
DO	20%					
Na, K, Mg, Ca, Alk, SO ₄ , TON, TOC, Fe, Mn, Cd, Cr, Cu, Ni, Pb, Zn.						
List 1 Suite*		MRV for all List 1 substances detected*		Annually		

*List 1 substances and MRV (minimum reporting value) as published in the Agency's technical guidance document LFTGN01, "Hydrogeological risk assessment for landfills and the derivation of groundwater control and trigger levels", Appendix 7.

Table S4.4 Point Source Emissions to Sewer, Effluent Treatment Plant or by Tankering or other transfer Off-Site– emission limits and monitoring requirements

Emission point Ref. & Location	Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Leachate holding Lagoon as detailed on plan Reference DV51137/003 Rev. E and new leachate out-fall manhole prior to discharge to sewer at Bancombe Road	Flow Rate	Leachate arising from the landfill.	Limits to be established and agreed under improvement condition Table S1.3 (11).	Reference Period to be established and agreed under improvement condition Table S1.3 (11).	Continuous	Unless otherwise agreed in writing with the Environment Agency, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02).
	Substances / parameters to be established and agreed under improvement condition Table S1.3 (11).				Monitoring Frequency to be established and agreed under improvement condition Table S1.3 (11).	

Table S4.5 Trigger levels for emissions into groundwater and monitoring requirements

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
Up Gradient boreholes BH6, BH8. identified on Drawing HRA2	pH, Temp. EC, NH ₄ -N, Cl, COD, DO, Level	None	Spot Sample	Quarterly	Monitoring to be carried out in accordance with Environment Agency Document "Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water" LFTGN02 unless otherwise approved in writing with the Agency.
	Na, K, Mg, Ca, Alk, SO ₄ , TON, TOC, Fe, Mn, Cd, Cr, Cu, Ni, Pb, Zn.			6 Monthly	
	List 1 Screen			Annually	
Down Gradient – BH15, BH18 and BH19. identified on Drawing HRA2	pH	6 – 8	Spot Sample	Quarterly	
	NH ₄ -N	0.39 mg/l		Quarterly	
	Cl	65 mg/l			
	Fe	60 mg/l			
	Temp. EC, COD, DO, Level	None			
	Na, K, Mg, Ca, Alk, SO ₄ , TON, TOC, Fe, Mn, Cd, Cr, Cu, Ni, Pb, Zn.	None		6 Monthly	
	List 1 Screen*	MRV's*		Annually	
*List 1 substances and MRV (minimum reporting value) as published in the Agency's technical guidance document LFTGN01, "Hydrogeological risk assessment for landfills and the derivation of groundwater control and trigger levels", Appendix 7.					
NB. The limits in this table are interim levels to be revised upon discharge of [Improvement Programme Table S1.3(4)]					

Table S4.6 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Monitoring point Ref. /description	Parameter	Limit (including units) *	Monitoring frequency	Monitoring standard or method
Combined gas and groundwater monitoring boreholes 3, 4, 6, 7, 8, 11, 12A, 15, 16A, 18A, 19A, 20, 21 and additional gas monitoring boreholes as required in improvement condition Table S1.3(6)	Methane	1%v/v	Monthly	Monitoring to be carried out in accordance with Environment Agency Document "Guidance on Monitoring of Landfill Gas" LFTGN03 unless otherwise agreed in writing with the Agency.
	Carbon Dioxide	1.5%v/v		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
	Differential Pressure	no limit		
	Temperature	no limit		
	Meteorological data	no limit		
* The limits specified may need to be altered to take account of the background concentrations agreed in writing with the Environment Agency as a result of improvement condition Table S1.3(16).				

Table S4.7 Landfill gas from capped surfaces - monitoring requirements

Monitoring point Ref. /description	Parameter	Monitoring frequency	Other specifications	Monitoring Standard or method
Permanently capped zone	Average Methane flux	Annually	Where a rate of 0.001 mg/m ² /second is exceeded appropriate measures must be taken to reduce the rate.	Flame ionisation detector walkover, flux box or as otherwise agreed in writing by the Agency*.
Temporarily capped zone	Average Methane flux	Annually	Where a rate of 0.1 mg/m ² /second is exceeded appropriate measures must be taken to reduce the rate.	Flame ionisation detector walkover, flux box or as otherwise agreed in writing by the Agency*.

Footnote * If a cap has previously been shown compliant and there have been no significant physical changes in the gas management during the year, a detailed walkover survey with an FID can be used to demonstrate that the surface emissions are under control. If this survey shows no change in the pattern of methane emission, it may be used as the annual survey. The values for flux and total methane emissions measured in the previous year may be reported and a fresh flux box survey is not necessary. If the zone remains stable, the results of a full walkover survey may be accepted as the site report for a period of four years before a further quantitative flux box survey is required.

Table S4.8 Landfill Gas – other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Borehole 17a and all in waste monitoring boreholes as required by improvement condition Table S1.3(7).	Methane Carbon Dioxide Oxygen	Monthly		None
Gas collection system when installed subject to improvement condition Table S1.3(15).	Methane Carbon Dioxide Oxygen Carbon Monoxide Atmospheric pressure Differential pressure Temperature Gas flow rate	Fortnightly	Monitoring to be carried out in accordance with Environment Agency Document "Guidance on Monitoring of Landfill Gas" LFTGN03 unless otherwise approve in writing with the Agency.	Where the Oxygen level exceeds 5% or where the addition of the Carbon Dioxide and Methane percentages is less than 80%, an assessment of air ingress into the system shall be undertaken
All manifolds subject to improvement condition Table S1.3(15)	Trace gas analysis	Annually		
Input to Flare subject to improvement condition Table S1.3(15)	Methane Carbon Dioxide Oxygen Gas flow rate	Continuous		

Table S4.9 Leachate– other monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
BH17A and all new leachate monitoring points in Phase 2, installed in accordance with Improvement Condition Table S1.3(5), and new leachate out-fall manhole	Leachate Level	Weekly	Monitoring to be carried out in accordance with Environment Agency Document “Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water” LFTGN02 unless otherwise approved in writing with the Agency.	Emission Limit*
	pH	Monthly		
	Temperature			
	Electrical Conductivity			
	Chloride			400 mg/l *
	NH ₄ -N			35 mg/l *
	Sodium	6 monthly		
	Potassium			
	Magnesium			
	Calcium			
Alkalinity				
Sulphate				
TON				
TOC				
Iron				
Manganese				
Cadmium				
Chromium				
Nickel				
Lead				
Zinc				
Depth to base of monitoring well.				
List 1 screen*	Annually			

Table S4.10 Particulate matter in ambient air - limits and monitoring requirements					
Monitoring Point Ref. /Description	Parameter	Limit (Including Unit)*	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Subject to improvement condition Table S1.3(8)	Particulate matter	To be agreed with the Agency			

Schedule 5 - Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S5.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Leachate levels (S4.1) As required by condition 3.6.1	All new leachate monitoring points installed in Phase 2 in accordance with Improvement Condition Table S1.3(5).	Every 3 months	On permit issue
Emissions to air (S4.2) Parameters as required by condition 3.6.1	Gas Engine and/or Flare	Every 12 months	On installation
Emissions to water (S 4.3 and S4.4) Parameters as required by condition 3.6.1	Groundwater underdrain discharge point into Whiscombe Brook	Every 3 months	On permit issue
	Leachate storage lagoon and sewer discharge point	To be agreed	To be agreed
Groundwater (S4.5) Parameters as required by condition 3.6.1 List 1 Screen	BH6, BH8, BH15, BH18 BH19	Every 3 Months List 1 -Every 12 months	On permit issue
Landfill gas surface emissions (S4.7) Parameters as required by condition 3.6.1	Permanent and temporary capped zones	Every 12 months	On permit issue
Landfill gas lateral migration (S4.6) Parameters as required by condition 3.6.1	BH3, BH4, BH8, BH11, BH12A, BH15, BH16A, BH17, BH18A, BH19A	Every 3 months	On permit issue
Other Landfill gas monitoring (S4.8) Parameters as required by condition 3.6.1	All in-waste gas monitoring boreholes	Every 3 months	On permit issue
	Monitoring points associated with gas collection system and Flare	Every 12 months	
Other leachate monitoring (S4.9) Parameters as required by condition 3.6.1 List 1 Screen	BH17A and all new leachate wells installed in accordance with Table S1.3(11)	Every 3 months List 1 - Every 12 months	On permit issue
Particulate matter (Table S4.10) Parameters as required by condition 3.6.1 and Table S1.3(10)	Monitoring Points to be agreed in accordance with improvement condition Table S1.3(8)	Subject to IC Table S1.3(8)	Subject to IC Table S1.3(8)

Table S5.2: Annual production/treatment	
Leachate: Disposed of off site; Disposed of to any onsite effluent treatment plant; Recirculated into the waste mass.	Cubic metres/year
Surface water and/ or groundwater: Disposed of off site; Disposed of to any onsite effluent treatment plant.	Cubic metres/year
Landfill gas: combustion in flares; combustion in gas engines; Other methods of gas utilisation.	Normalised cubic metres/year

Table S5.3 Performance Parameters			
Parameter	Frequency of assessment	Annual total	Unit
Potable water use	Annually		Cubic metres
Energy used (including for leachate treatment)	Annually		MWh of electricity
Non potable water use	Annually		Cubic metres

Table S5.4 Reporting Forms		
Media/parameter	Reporting Format	Date of Form
Leachate	From leachate 1 or other reporting format to be agreed in writing with the Agency	
Air	Form Air 1 or other reporting format to be agreed in writing with the Agency	
Controlled water	Form Water 1 or other reporting format to be agreed in writing with the Agency	
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with the Agency	
Sewer	Form Sewer 1 or other reporting format to be agreed in writing with the Agency	
Landfill gas	Form LFG 1 or other reporting format to be agreed in writing with the Agency	
Waste Return	Waste Return Form RATS2E	
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Agency	

Schedule 6 - Notification

This page outlines the information that the operator must provide.

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.

Part A

Permit Number	
Name of operator	
Location of Installation	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution

To be notified within 24 hours of detection

Date and Time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit

To be notified within 24 hours of detection unless otherwise specified below

Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B to be supplied as soon as practicable

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 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 Westcombe Waste Ltd

Schedule 7 - Interpretation

“Accident” means an accident that may result in pollution.

“Annually” means once every Year.

“Application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 4 to the PPC Regulations

“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:

- For emissions to surface water, the surface water quality up-gradient of the site; or
- For emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge; or
- For emissions of landfill gas, the ground or air outside the site and not attributable to the site.

“Construction Proposals” means written information, at a level of detail appropriate to the complexity and pollution risk, on the design, specifications of materials selected, stability assessment (where relevant) and the construction quality assurance (CQA) programme in relation to the New Cell or Landfill Infrastructure.

“CQA Validation Report” means the final “as built” construction and engineering details of the New Cell or of the Landfill Infrastructure. It must provide a comprehensive record of the construction and must include, where relevant:

- The results of all testing required by the CQA programme - this must include the records of any failed tests with a written explanation, details of the remedial action taken, referenced to the appropriate secondary testing;
- Plans showing the location of all tests;
- “As-built” plans and sections of the works;
- Copies of the site engineer’s daily records;
- Records of any problems or non-compliances and the solution applied;
- Any other site specific information considered relevant to proving the integrity of the New Cell or Landfill Infrastructure;
- Validation by a qualified person that all of the construction has been carried out in accordance with the Construction Proposals.

“Fugitive emission” means an emission to air, water or land from the activities which is not controlled by an emission or background concentration limit.

“Groundwater Regulations” means the Groundwater Regulations SI 1998 No. 2746, and words and expressions used in this permit which are also used in the Regulations shall have the same meanings as in those Regulations.

“Landfill Infrastructure” means any specified element of the:

- permanent capping;
- temporary capping (i.e. engineered temporary caps not cover materials);
- leachate abstraction systems;
- leachate transfer, treatment and storage systems;
- surface water drainage systems;
- leachate monitoring wells;
- groundwater monitoring boreholes;
- landfill gas monitoring boreholes;
- landfill gas management systems;

within the site.

“Landfill Regulations” means the Landfill (England and Wales) Regulations SI 2002 No. 1559, and words and expressions used in this permit which are also used in the Regulations shall have the same meanings as in those Regulations.

“Land Protection Guidance” means Agency guidance “H7 - Guidance on the protection of land under the PPC Regime: Application site report and site protection monitoring programme”.

“Liquids” means any liquid other than leachate within the engineered landfill containment system.

“LFTGN 05” means Environment Agency Guidance for monitoring enclosed landfill gas flares, September 2004.

“LFTGN 08” means Environment Agency Guidance for monitoring landfill gas engines, September 2004.

“New Cell” means any new cell, part of a cell or other similar new area of the site where waste deposit is to commence after issue of this permit and can comprise:

- groundwater under-drainage system;
- permanent geophysical leak location system;
- leak detection layer;
- sub-grade;
- barriers;

- liners;
- leachate collection system;
- leachate abstraction system;
- separation bund/layer;
- cell or area surface water drainage system;
- side wall subgrade and containment systems;

for the New Cell.

"*No impact*" means that the change made to the construction process will not alter the agreed design criteria, specification or performance.

"notify without delay" and "notified without delay" means that a telephone call can be used, whereas all other reports and notifications must be supplied in writing, either electronically or on paper.

"*PPC Regulations*" means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"*Quarter*" means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

"*Relevant person*" and "*relevant conviction*" shall have the meanings given to them in the Environmental Protection Act 1990

"*Review of the Hydrogeological Risk Assessment*" means a written review of the hydrogeological risk assessment included in the Application, together with any other parts of the Application that addressed the requirements of the Groundwater Regulations. The review shall assess whether the activities of disposal or tipping for the purpose of disposal of waste authorised by the permit continue to meet the requirements of the Groundwater Regulations

"*Site Protection and Monitoring Programme*" means a document which meets the requirements for Site Protection and Monitoring Programmes described in the Land Protection Guidance.

"*Technically competent management*" and "*technical competence*" shall have the meanings given to them in the Environmental Protection Act 1990.

"Waste code" means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

"*Year*" means calendar year ending 31 December.

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.

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 LFTGN 05 or Guidance for Monitoring Landfill Gas Engine Emissions LFTGN 08.

END OF PERMIT