



ENVIRONMENT
AGENCY

Variation Notice with introductory note

Pollution Prevention and Control (England & Wales) Regulations 2000

Pen-y-Bont Landfill Site

WRG Waste Services Ltd
Pentre
Chirk
Wrexham
Cheshire
LL14 5AR

Variation Notice Number
PP3032LN

Permit number
GP3830BG

Pen-y-Bont Landfill Site

Permit Number GP3830BG

Variation Number PP3032LN

Introductory note

This introductory note does not form a part of the permit

The following notice is issued under regulation 17 of The Pollution Prevention and Control (England and Wales) Regulations 2000 (S.I.2000 No. 1973 (as amended) (the Regulations) to vary the conditions of a permit issued under the Regulations to operate an installation. The notice comprises schedule 1 containing conditions to be deleted, schedule 2 conditions to be amended and schedule 3 conditions to be added.

The effect of this variation is to delete all the existing conditions attached to the permit and to replace these with an entire new set of conditions. The new conditions are in line with the new PPC Template Permit for Landfill (Version 3). The operator has lodged an appeal against former conditions of the permit and the Version 3 template conditions should answer many of the generic appeal points against former template conditions.

There are no substantial changes to the Installation as a result of this variation.

There have been few site-specific alterations to the effect of the conditions

The non-technical summary from the original permit is repeated here for the sake of clarity.

The Installation is located within the West to East trending 'Vale of Llangollen' principally constituting the valley of the easterly flowing River Dee. The Installation is located on the southern bank of a large incised meander of the river.

The Installation comprises a large bowl like structure excavated within a Northeast to South-Southwest trending spur possessing a maximum elevation of approximately 78mAOD. The South and Southeast portions of the Installation are essentially flat-lying and have an elevation of approximately 75mAOD, within which are located the Installation's weighbridge, wheelwash, offices, maintenance workshops, leachate holding tanks and power generation plant.

Beyond the existing Waste Management Licence boundary further to the Southeast, East and Northeast, is land within the freehold ownership of the Operator. This land exists as flat lower lying agricultural (pasture) fields, possessing ground levels in the order of 50 to 55mAOD - these fields are part of the floodplain for the river. To the Northeast of the waste disposal area is land developed for surface water treatment in the form of three inter-connected shallow settlement lagoons, beyond which to the Northeast is a series of three 'bunded fields' within which surface water from the final settlement lagoon can be discharged.

The Installation is located between the villages of Newbridge and Pentre and isolated detached residential properties are located approximately 100m to the Southwest and West of the Installation.

The Installation is located within a minimum of 60m of the River Dee, which is a candidate Special Area of Conservation (cSAC) and Site of Special Scientific Interest (SSSI). The Installation is also located within 2km of the Nant y Belan and Prynella Woods Sites of Special Scientific Interest. 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.

Status Log of the Permit		
Detail	Date	Response Date
Application GP3830BG	Received 9 November 2004	
Schedule 4 Information Requests in relation to Landfill Gas Risk Assessment, Stability Risk Assessment and Hydrogeological Risk Assessment.	Requested 27 April 2005	Response received 9 July 2005
Request for further information in relation to Schedule 4 served on 27 April 2005	Requested 13 September 2005	Response received in two sections: 26 September 2005 - ECNIA response 27 September 2005 - Golders response
Permit determined	9 November 2005	
Permit varied	28 th June 2008	

Superseded or Partially Superseded Licences/Authorisations/Consents relating to this installation			
Holder	Reference Number	Date of Issue	Fully or Partially Superseded
Shanks Waste Services Limited	Trade Effluent Discharge Consents CG0385601 and CM009410101	28 February 2002	Fully Superseded
Shanks & McEwan (Northern) Ltd	Waste Management Licence NOW-508-L (EAWML/37123)	24 December 1994	Fully Superseded

End of Introductory Note

Variation Notice

Pollution Prevention and Control
(England and Wales) Regulations 2000

Variation Notice

Permit number

GP3830BG

Variation number

PP3032LN

The Environment Agency (the Agency) in exercise of its powers under Regulation 17 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (SI 2000 No 1973) hereby varies the permit held by you

WRG Waste Services Limited ("the operator"),

whose registered office (or principal office) is

Ground Floor West

900 Pavillion Drive

Northampton Business Park

Northampton

NN4 7RG

Company registration number **988844**

to operate an Installation at

Pen-y-Bont Landfill Site

Pentre

Chirk

Wrexham

LL14 5AR

to the extent set out in schedules 1 to 3 of this variation notice.

The notice shall take effect from 28th June 2008

Signed

Date

	28 th June 2007
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Martin Jenkins

Authorised to sign on behalf of the Agency

SCHEDULE 1 – CONDITIONS TO BE DELETED

All conditions and schedules in the original permit are deleted

SCHEDULE 2 – CONDITIONS TO BE AMENDED

None

SCHEDULE 3 – CONDITIONS TO BE ADDED

All the following conditions and schedules are added to the permit

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 shall be set out in the Deed of Performance dated 5 October 2004 between Waste Recycling Group Limited and the Agency. This provision shall be maintained throughout the subsistence of this Permit and the Operator shall produce evidence of such provision whenever required by 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.
- 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 red 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

There are no pre-operational conditions in this permit.

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 excluding liquid waste accepted at a permitted leachate treatment activity, 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, or liquid waste accepted for treatment at a permitted leachate treatment activity.
- (k) any code beginning with 07 05 and 16 03 shall exclude waste medicinal products and pharmaceutically active waste materials arising from their manufacture

2.8.5 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.

2.8.6 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.

2.8.7 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.

2.8.8 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing WR4446/ESID4

2.8.9 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.5.

2.8.10 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 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.

2.12 Stability

- 2.12.1 The placement of waste must ensure stability of all the waste on the site and associated structures and in particular must avoid slippages.

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 and S4.3
- 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 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 S4.4 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 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 S4.5 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 S4.8;
- (b) Point source emissions specified in tables S4.2, S4.3;
- (c) Groundwater specified in tables S4.4 and S4.10;
- (d) Landfill gas specified in tables S4.5, S4.6 and S4.7;
- (e) Surface water specified in table S4.9.

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.

The topographical survey shall be used to produce a plan of a scale adequate to show the surveyed features of the site.

3.6.4 Within 10 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 monitoring;
 - (ii) the Site Protection and Monitoring Programme;
 - (iii) sub-surface landfill gas monitoring;
 - (iv) leachate levels, quality and quantities;
 - (v) landfill gas generation and collection;
 - (vi) waste types and quantities;
 - (vii) topographical surveys; and
 - (viii) 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 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 relevant assumptions, parameters and results in the risk assessments submitted in relation to the installation and any agreed amendments thereto;
 - (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 annual production/treatment set out in schedule 5 table S5.2;
 - (e) details of any contamination or decontamination of the site which has occurred;
 - (f) the topographical surveys required by condition 3.6.3 other than those submitted as part of a CQA validation report;
 - (g) 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;
 - (h) 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;

- (i) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
 - (j) a summary of the WAC compliance testing undertaken in that 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.
- 4.2.5 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:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address;
- (b) any change to particulars of the operator's ultimate holding company (including details of an ultimate holding company where an operator has become a subsidiary); 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 non-hazardous wastes, consisting of the types and quantities specified in condition 2.1, as an integral part of landfilling.
Section 1.1 Part A(1)(b)(iii). Burning of waste as a fuel	Utilisation of landfill gas for energy recovery in an appliance with a net rated thermal input of greater than 3MW, but less than 50 MW	Landfill gas arising from the Permitted landfill.
Directly Associated Activity		
Leachate Management	Storage and handling of leachate	Storage of leachate arising from the permitted landfill prior to removal to suitably licensed effluent treatment facility.
Fuel storage.	Storage of fuel for operation of plant and equipment.	Fuel storage tank.
Landfill Gas Management	Flaring of landfill gas.	Landfill gas arising from the permitted landfill.
Water discharges to controlled waters	Discharge of site drainage from the landfill.	From surface water management system to point of entry to controlled waters (excluding clean uncontaminated waters).

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	The response to questions, 2.1, 2.2, 2.3, 2.4, 2.5, 2.7, 2.8 and 2.9 of part B of the Application Form.	9 November 2004
Schedule 4 Notice response from WRG Waste Services Ltd	All Parts	Received 9 July 2005
Response from WRG Waste Services Ltd to Agency letter requesting further information dated 13 September 2005	All Parts	Received in two sections dated 26 & 27 September 2005
Revised version of drawing reference WR4446/ESID6A	Doc Ref – 0552552.250 ESID6A	December 05
The location, design, installation and monitoring of additional groundwater monitoring points to be located between the site and the River	Document Ref 05529525.250 - Golders Associates (UK) Ltd. Document Ref 05529525.250 - Golders Associates (UK) Ltd.	7 February 2006 Amended 29 th Sept 2006

Table S1.2 Operating techniques

Description	Parts	Date Received
Dee.		
Review of the groundwater monitoring data for all existing boreholes individually including submission of revised borehole specific control and trigger levels derived in accordance with Agency guidance document LFTGN01 'Hydrogeological risk assessment for landfills'.	Document Ref 05529525.250 - Golders Associates (UK) Ltd. Document Ref 05529525.250 - Golders Associates (UK) Ltd.	7 February 2006 Amended 29 th Sept 2006
Detailed leachate management plan.	Leachate management Plan Version 3 Letter – PYB GF03 – GP3830BG	10 th September 2006
The location, design, installation and monitoring of additional off-site groundwater monitoring points to be located between the site and the River Dee.	Document reference Ref 05529525.500 - Golder Associates (UK) Ltd	February 2007
Revised conceptual model from the review of all the information gathered from existing and new groundwater monitoring boreholes	Document reference Ref 05529525.500 - Golder Associates (UK) Ltd	February 2007
Air impact assessment report incorporating detailed air dispersion modelling	Document Reference: Ref 06529200.500 Golder Associates (UK) Ltd Document Reference : Ref 06529200.500 Golder Associates (UK) Ltd	Submitted 7 July 06 Amended 19 Feb 07
Slope Monitoring Plan	Slope Monitoring Plan – Document reference - AS 5916/PYB/rac/01	February 06
Landfill Gas Management Plan	Document Reference: Ref 05529525.501/A.2 Golders Associates	November 2006

Table S1.3 Improvement programme requirements

Reference	Requirement	Date	
1	<p>The Operator shall submit to the Agency borehole specific groundwater control and trigger levels using the first 12 months data obtained from borehole T10. Trigger and control levels shall be derived in accordance with Agency guidance document LFTGN01 'Hydrogeological Risk Assessment for Landfills'.</p> <p>The proposed trigger levels shall be implemented by the operator from the date of approval in writing by the Agency</p>	28 th June 2008	
2	<p>The Operator shall submit to the Agency for approval, proposed timescales for reducing the leachate head to 1m as required by Table S4.1.</p> <p>The proposed timescales shall be implemented by the operator from the date of approval in writing by the Agency</p>	28 th 2008	August

Table S1.5 Annual waste input limits

Category	Limit Tonnes/ Year
Non-hazardous waste	270,000
Inert waste	30,000
Total Quantity per annum	300,000

Schedule 2 - Site plan



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Schedule 3 - List of permitted wastes

01 01 wastes from mineral excavation

- 01 01 01 wastes from mineral metalliferous excavation
- 01 01 02 wastes from mineral non-metalliferous excavation

01 03 wastes from physical and chemical processing of metalliferous minerals

- 01 03 06 tailings other than those mentioned in 01 03 04 and 01 03 05
- 01 03 08 dusty and powdery wastes other than those mentioned in 01 03 07
- 01 03 09 red mud from alumina production other than the wastes mentioned in 01 03 07

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

- 01 04 08 waste gravel and crushed rocks other than those mentioned in 01 04 07
- 01 04 09 waste sand and clays
- 01 04 10 dusty and powdery wastes other than those mentioned in 01 04 07
- 01 04 11 wastes from potash and rock salt processing other than those mentioned in 01 04 07
- 01 04 12 tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 and 01 04 11

- 01 04 13 wastes from stone cutting and sawing other than those mentioned in 01 04 07

01 05 drilling muds and other drilling wastes

- 01 05 04 freshwater drilling muds and wastes
- 01 05 07 barite-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06

- 01 05 08 chloride-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06

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

- 02 01 01 sludges from washing and cleaning
- 02 01 03 plant-tissue waste
- 02 01 04 waste plastics (except packaging)
- 02 01 06 animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site
- 02 01 07 wastes from forestry
- 02 01 09 agrochemical waste other than those mentioned in 02 01 08
- 02 01 10 waste metal

02 02 wastes from the preparation and processing of meat, fish and other foods of animal origin

- 02 02 01 sludges from washing and cleaning
- 02 02 03 materials unsuitable for consumption or processing
- 02 02 04 sludges from on-site effluent treatment

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 01 sludges from washing, cleaning, peeling, centrifuging and separation
- 02 03 02 wastes from preserving agents
- 02 03 03 wastes from solvent extraction
- 02 03 04 materials unsuitable for consumption or processing
- 02 03 05 sludges from on-site effluent treatment

02 04 wastes from sugar processing

- 02 04 01 soil from cleaning and washing beet
- 02 04 02 off-specification calcium carbonate
- 02 04 03 sludges from on-site effluent treatment

02 05 wastes from the dairy products industry

- 02 05 01 materials unsuitable for consumption or processing
- 02 05 02 sludges from on-site effluent treatment

02 06 wastes from the baking and confectionery industry

02 06 01 materials unsuitable for consumption or processing
02 06 02 wastes from preserving agents
02 06 03 sludges from on-site effluent treatment

02 07 wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)

02 07 01 wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02 wastes from spirits distillation
02 07 03 wastes from chemical treatment
02 07 04 materials unsuitable for consumption or processing
02 07 05 sludges from on-site effluent treatment

Pulp, Paper and Card

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 02 green liquor sludge (from recovery of cooking liquor)
03 03 05 de-inking sludges from paper recycling
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
03 03 11 sludges from on-site effluent treatment other than those mentioned in 03 03 10

04 Wastes from the Leather, Fur and Textile Industries

04 01 wastes from the leather and fur industry

04 01 01 fleshings and lime split wastes
04 01 02 liming waste
04 01 06 sludges, in particular from on-site effluent treatment containing chromium
04 01 07 sludges, in particular from on-site effluent treatment free of chromium
04 01 08 waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium
04 01 09 wastes from dressing and finishing

04 02 wastes from the textile industry

04 02 09 wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 10 organic matter from natural products (for example grease, wax)
04 02 15 wastes from finishing other than those mentioned in 04 02 14
04 02 17 dyestuffs and pigments other than those mentioned in 04 02 19
04 02 20 sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 21 wastes from unprocessed textile fibres
04 02 22 wastes from processed textile fibres

05 Wastes from Petroleum Refining, Natural Gas Purification and

05 01 wastes from petroleum refining

05 01 10 sludges from on-site effluent treatment other than those mentioned in 05 01 09
05 01 13 boiler feedwater sludges
05 01 14 wastes from cooling columns
05 01 16 sulphur-containing wastes from petroleum desulphurisation
05 01 17 bitumen

05 06 wastes from the pyrolytic treatment of coal

05 06 04 waste from cooling columns

05 07 wastes from natural gas purification and transportation

05 07 02 wastes containing sulphur

06 Wastes from Inorganic Chemical Processes

06 03 wastes from the MFSU of salts and their solutions and metallic oxides

06 03 14 solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13
06 03 16 metallic oxides other than those mentioned in 06 03 15

06 05 sludges from on-site effluent treatment

06 05 03 sludges from on-site effluent treatment other than those mentioned in 06 05 02

06 06 wastes from the MSFU of sulphur chemicals, sulphur chemical processes and desulphurisation processes

06 06 03 wastes containing sulphides other than those mentioned in 06 06 02

06 09 wastes from the MSFU of phosphorous chemicals and phosphorous chemical processes

06 09 02 phosphorous slag

06 09 04 calcium-based reaction wastes other than those mentioned in 06 09 03

06 11 wastes from the manufacture of inorganic pigments and opacifiers

06 11 01 calcium-based reaction wastes from titanium dioxide production

06 13 wastes from inorganic chemical processes not otherwise specified

06 13 03 carbon black

07 Wastes from Organic Chemical Processes

07 01 wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals

07 01 12 sludges from on-site effluent treatment other than those mentioned in 07 01 11

07 02 wastes from the MFSU of plastics, synthetic rubber and man-made fibres

07 02 12 sludges from on-site effluent treatment other than those mentioned in 07 02 11

07 02 13 waste plastic

07 02 15 wastes from additives other than those mentioned in 07 02 14

07 02 17 wastes containing silicones other than those mentioned in 07 02 16

07 03 wastes from the MFSU of organic dyes and pigments (except 06 11)

07 03 12 sludges from on-site effluent treatment other than those mentioned in 07 03 11

07 04 wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 0109), wood preserving agents (except 03 02) and other biocides

07 04 11* sludges from on-site effluent treatment containing dangerous substances

07 05 wastes from the MFSU of pharmaceuticals

07 05 12 sludges from on-site effluent treatment other than those mentioned in 07 05 11

07 05 14 solid wastes other than those mentioned in 07 05 13

07 06 wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics

07 06 12 sludges from on-site effluent treatment other than those mentioned in 07 06 11

07 07 wastes from the MFSU of fine chemicals and chemical products not otherwise specified

07 07 12 sludges from on-site effluent treatment other than those mentioned in 07 07 11

08 01 wastes from MFSU and removal of paint and varnish

08 01 12 waste paint and varnish other than those mentioned in 08 01 11

08 01 14 sludges from paint or varnish other than those mentioned in 08 01 13

08 01 16 aqueous sludges containing paint or varnish other than those mentioned in 08 01 15

08 01 18 wastes from paint or varnish removal other than those mentioned in 08 01 17

08 02 wastes from MFSU of other coatings (including ceramic materials)

08 02 01 waste coating powders

08 02 02 aqueous sludges containing ceramic materials

08 03 wastes from MFSU of printing inks

08 03 07 aqueous sludges containing ink

08 03 13 waste ink other than those mentioned in 08 03 12

08 03 15 ink sludges other than those mentioned in 08 03 14

08 03 18 waste printing toner other than those mentioned in 08 03 17

08 04 wastes from MFSU of adhesives and sealants (including waterproofing products)

08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09

08 04 12 adhesive and sealant sludges other than those mentioned in 08 04 11

08 04 14 aqueous sludges containing adhesives or sealants other than those mentioned in 08 04 13

09 01 wastes from the photographic industry

09 01 07 photographic film and paper containing silver or silver compounds

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

09 01 10 single-use cameras without batteries

09 01 12 single-use cameras containing batteries other than those mentioned in 09 01 11

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 05 calcium-based reaction wastes from flue-gas desulphurisation in solid form
10.01.07 calcium-based reaction wastes from flue-gas desulphurisation in sludge form
10 01 15 bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14

10 01 17 fly ash from co-incineration other than those mentioned in 10 01 16
10 01 19 wastes from gas cleaning other than those mentioned in 10 01 05, 10 01 07 and 10 01 18

10 01 21 sludges from on-site effluent treatment other than those mentioned in 10 01 20
10 01 23 aqueous sludges from boiler cleansing other than those mentioned in 10 01 22
10 01 24 sands from fluidised beds
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 02 08 solid wastes from gas treatment other than those mentioned in 10 02 07
10 02 10 mill scales
10 02 14 sludges and filter cakes from gas treatment other than those mentioned in 10 02 13
10 02 15 other sludges and filter cakes

10 03 wastes from aluminium thermal metallurgy

10 03 02 anode scraps
10 03 05 waste alumina
10 03 16 skimmings other than those mentioned in 10 03 15
10 03 18 carbon-containing wastes from anode manufacture other than those mentioned in 10 03 17
10 03 20 flue-gas dust other than those mentioned in 10 03 19
10 03 22 other particulates and dust (including ball-mill dust) other than those mentioned in 10 03 21
10 03 24 solid wastes from gas treatment other than those mentioned in 10 03 23
10 03 26 sludges and filter cakes from gas treatment other than those mentioned in 10 03 25
10 03 28 wastes from cooling-water treatment other than those mentioned in 10 03 27
10 03 30 wastes from treatment of salt slags and black drosses other than those mentioned in 10 03 29

10 04 wastes from lead thermal metallurgy

10 04 10 waste from cooling-water treatment other than those mentioned in 10 04 09

10 05 wastes from zinc thermal metallurgy

10 05 01 slags from primary and secondary production
10.05.04 other particulates and dusts
10 05 09 wastes from cooling-water treatment other than those mentioned in 10 05 08
10.05.11 dross and skimmings other than those mentioned in 10 05 01

10 06 wastes from copper thermal metallurgy

10 06 01 slags from primary and secondary production
10 06 02 dross and skimmings from primary and secondary production
10 06 04 other particulates and dust
10 06 10 wastes from cooling-water treatment other than those mentioned in 10 06 09

10 07 wastes from silver, gold and platinum thermal metallurgy

10 07 01 slags from primary and secondary production
10 07 02 dross and skimmings from primary and secondary production
10 07 03 solid wastes from gas treatment
10 07 04 other particulates and dust
10 07 05 sludges and filter cakes from gas treatment
10 07 08 wastes from cooling-water treatment other than those mentioned in 10 07 07

10 08 wastes from other non-ferrous thermal metallurgy

10 08 04 particulates and dust
10 08 09 other slags
10 08 11 dross and skimmings other than those mentioned in 10 08 10
10 08 13 carbon-containing wastes from anode manufacture other than those mentioned in 10 08 12
10 08 14 anode scrap
10 08 16 flue-gas dust other than those mentioned in 10 08 15
10 08 18 sludges and filter cakes from flue-gas treatment other than those mentioned in 10 08 17

10 08 20 wastes from cooling-water treatment other than those mentioned in 10 08 19

10 09 wastes from casting of ferrous pieces

10 09 03 furnace slag
10 09 06 casting cores and moulds which have not undergone pouring other than those mentioned in 10 09 05
10 09 08 casting cores and moulds which have undergone pouring other than those mentioned in 10 09 07
10 09 10 flue-gas dust other than those mentioned in 10 09 09
10 09 12 other particulates other than those mentioned in 10 09 11
10 09 14 waste binders other than those mentioned in 10 09 13
10 09 16 waste crack-indicating agent other than those mentioned in 10 09 05

10 10 wastes from casting of non-ferrous pieces

10 10 03 furnace slag

10 10 06 casting cores and moulds which have not undergone pouring, other than those mentioned in 10 10 05

10 10 08 casting cores and moulds which have undergone pouring, other than those mentioned in 10 10 07

10 10 10 flue-gas dust other than those mentioned in 10 10 09
10 10 12 other particulates other than those mentioned in 10 10 11
10 10 14 waste binders other than those mentioned in 10 10 13
10 10 16 waste crack-indicating agent other than those mentioned in 10 10 15

10 11 wastes from manufacture of glass and glass products

10 11 03 waste glass-based fibrous materials
10 11 05 particulates and dust
10 11 10 waste preparation mixture before thermal processing, other than those mentioned in 10 11 09

10 11 12 waste glass other than those mentioned in 10 11 11
10 11 14 glass-polishing and -grinding sludge other than those mentioned in 10 11 13
10 11 16 solid wastes from flue-gas treatment other than those mentioned in 10 11 15
10 11 18 sludges and filter cakes from flue-gas treatment other than those mentioned in 10 11 17
10 11 20 solid wastes from on-site effluent treatment other than those mentioned in 10 11 19

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

10 12 01 waste preparation mixture before thermal processing
10 12 03 particulates and dust
10 12 05 sludges and filter cakes from gas treatment
10 12 06 discarded moulds
10 12 08 waste ceramics, bricks, tiles and construction products (after thermal processing)
10 12 12 wastes from glazing other than those mentioned in 10 12 11
10 12 13 sludge from on-site effluent treatment

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
10 13 06 particulates and dust (except 10 13 12 and 10 13 13)
10 13 07 sludges and filter cakes from gas treatment
10 13 10 wastes from asbestos-cement manufacture other than those mentioned in 10 13 09
10 13 11 wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10

10 13 13 solid wastes from gas treatment other than those mentioned in 10 13 12

10 13 14 waste concrete and concrete sludge

Chemical Surface Treatment and Coating of Metalurgy

11 01 wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising)

11 01 10 sludges and filter cakes other than those mentioned in 11 01 09

11 01 14 degreasing wastes other than those mentioned in 11 01 13

11 02 wastes from non-ferrous hydrometallurgical processes

11 02 03 wastes from the production of anodes for aqueous electrolytical processes

11 02 06 wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05

11 05 wastes from hot galvanising processes

11 05 01 hard zinc

11 05 02 zinc ash

12 01 wastes from shaping and physical and mechanical surface treatment of metals and plastics

12 01 01 ferrous metal filings and turnings

12 01 02 ferrous metal dust and particles

12 01 03 non-ferrous metal filings and turnings

12 01 04 non-ferrous metal dust and particles

12 01 05 plastics shavings and turnings

12 01 13 welding wastes

12 01 15 machining sludges other than those mentioned in 12 01 14

12 01 17 waste blasting material other than those mentioned in 12 01 16

12 01 21 spent grinding bodies and grinding materials other than those mentioned in 12 01 20

15 Waste Packaging; Absorbents, Wiping Cloths, Filter Materials and Protective Clothing

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 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 03 end-of-life tyres

16 01 06 end-of-life vehicles, containing neither liquids nor other hazardous components

16 01 12 brake pads other than those mentioned in 16 01 11

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 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 08 spent catalysts

16 08 01 spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)

16 08 03 spent catalysts containing transition metals or transition metal compounds not otherwise specified

16 11 waste linings and refractories

16 11 02 carbon-based linings and refractories from metallurgical processes other than those mentioned in 16 11 01
16 11 04 other linings and refractories from metallurgical processes other than those mentioned in 16 11 03
16 11 06 linings and refractories from non-metallurgical processes other than those mentioned in 16 11 05

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 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

18 01 wastes from natal care, diagnosis, treatment or prevention of diseases in humans

18 01 04 wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, line, disposable clothing, diapers)

18 02 wastes from research, diagnosis, treatment or preventative disease involving animals

18 02 03 wastes whose collection and disposal is not subject to special requirements in order to prevent infection

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 16 boiler dust other than those mentioned in 19 01 15
19 01 18 pyrolysis wastes other than those mentioned in 19 01 15
19 01 19 sands from fluidised beds

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

19 02 03 premixed wastes composed only of non-hazardous waste
19 02 06 sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 02 10 combustible wastes other than those mentioned in 19 02 08 and 19 02 09

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 animal and vegetable waste

19 05 03 off-specification compost

19 08 wastes from waste water treatment plants not otherwise specified

19 08 01 screenings

19 08 02 waste from desanding

19 08 05 sludges from treatment of urban waste water

19 08 12 sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11

19 08 14 sludges from other treatment of industrial waste water other than those mentioned in 19 08 13

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 02 sludges from water clarification

19 09 03 sludges from decarbonation

19 09 04 spent activated carbon

19 09 05 saturated or spent ion exchange resins

19 09 06 solutions and sludges from regeneration of ion exchangers

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 11 wastes from oil regeneration

19 11 06 sludges from on-site effluent treatment other than those mentioned in 19 11 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

20 01 separately collected fractions (except 15 01)

20 01 01 paper and cardboard

20 01 02 glass

20 01 08 biodegradable kitchen and canteen waste

20 01 10 clothes

20 01 11 textiles

20 01 25 edible oil and fat

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 35* discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components

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

Schedule 4 – Emissions and monitoring

Table S4.1 Leachate level limits and monitoring requirements

Monitoring point reference/ Description	Limit	Monitoring frequency	Monitoring method
Leachate collection chambers LC01, LC03, LC04a, LC05a, LM04a, LM05, LM06 and LM07 as specified in drawing reference WR/4446/ESID7 (09/11/04) and ESID14 (15/01/07)	1m above the base of the cells*	weekly	To be agreed in writing with the Environment Agency

* The base of the cell shall be taken to mean the lip or point at which the liner dips into the leachate collection/extraction sump

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
A1 Flare Stack as identified on drawing reference WR4446/E SID8	Nitrogen Oxides (Nox)	Landfill Gas Flare	150 mg/m3	Hourly mean	Annually	Chemiluminescence
	Carbon Monoxide (CO)	Landfill Gas Flare	50 mg/m3	Hourly mean	Annually	Non-Dispersive Infrared Analysis
	Total VOCs	Landfill Gas Flare	10 mg/m3	Hourly mean	Annually	Extractive Sampling and FID analysis
	Non Methane Volatile Organic Compounds (NMVOCs)	Landfill Gas Flare	5 mg/m3	Hourly mean	Annually	Extractive sampling onto sorbent extraction by Carbon Disulphide, analysis by Gas Chromatography with appropriate detector
For Engines Commissioned before 31st December 2005						
A2 Engine Exhausts as identified on drawing reference WR4446/E SID8	Nitrogen Oxides (Nox)	Gas utilisation plant	650 mg/m3	Hourly mean	Annually	Extractive Sampling and Chemiluminescence
	Carbon Monoxide (CO)	Gas utilisation plant	1500 mg/m3	Hourly mean	Annually	Extractive Sampling and Non-Dispersive Infra Red Analysis
	Total Volatile Organic Compounds (VOCs)	Gas utilisation plant	1750 mg/m3	Hourly mean	Annually	Extractive Sampling and FID Analysis
	Non Methane Volatile Organic Compounds (NMVOCs)	Gas utilisation plant	150 mg/m3	Hourly mean	Annually	Extractive sampling onto sorbent extraction by Carbon Disulphide, analysis by Gas Chromatography with appropriate detector
For Engines Commissioned After 31st December 2005						
A2 Engine Exhausts as identified on drawing reference WR4446/E SID8	Nitrogen Oxides (Nox)	Gas utilisation plant	500 mg/m3	Hourly mean	Annually	Extractive Sampling and Chemiluminescence
	Carbon Monoxide (CO)	Gas utilisation plant	1400 mg/m3	Hourly mean	Annually	Extractive Sampling and Non-Dispersive Infra Red Analysis
	Total Volatile Organic Compounds (VOCs)	Gas utilisation plant	1000 mg/m3	Hourly mean	Annually	Extractive Sampling and FID Analysis
	Non Methane Volatile Organic Compounds (NMVOCs)	Gas utilisation plant	75 mg/m3	Hourly mean	Annually	Extractive sampling onto sorbent extraction by Carbon Disulphide, analysis by Gas Chromatography with appropriate detector

Footnote: Annual monitoring is only required when flares operate in excess of 10% of the time, taken on an annual assessment period.

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
Surface water discharge points WP5 to the River Dee and WP4 at the grass plots as identified on drawing reference ESID6A submitted 20th December 2005	Suspended Solids	Surface water arising from the Installation**.	100mg/l	Spot Sample	Monthly	Monitoring to be carried out in accordance with Agency document LFTGN02 'Guidance on Monitoring of Landfill Leachate, Groundwater & Surface Water', unless otherwise agreed with the Agency.
	Oil and Grease		No visible oil or grease	Spot Sample	Monthly	
	Ammoniacal Nitrogen		3mg/l	Spot Sample	Monthly	
	Chloride		250mg/l	Spot Sample	Monthly	
	Volume		5616m ³	Continuous	Daily	

** The discharge shall consist solely of surface water arising from the Installation and be discharged via a 200mm diameter pipe which shall be regularly maintained and protected from damage.

Table S4.4 Trigger levels for emissions into groundwater and monitoring requirements

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
BH1, BH2, BH3, BH4, BH5, BH3A, T1, T2, T3, T4, T5, T6, T7, T8, T9, T11 and T13	Chloride	250 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Chromium	0.05 mg/l	Spot Sample	Quarterly	
	Nickel	0.02 mg/l	Spot Sample	Annually	
	Lead	0.025 mg/l	Spot Sample	Quarterly	
	Cadmium	0.5 µg/l	Spot Sample	Biannually	
	Mecoprop	0.04 µg/l	Spot Sample	Biannually	
	Naphthalene	1 µg/l	Spot Sample	Biannually	
BH1	Ammoniacal Nitrogen	2.2 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Zinc	0.033 mg/l	Spot Sample	Annually	
	Manganese	0.1 mg/l	Spot Sample	Annually	
BH2	Ammoniacal Nitrogen	1.3 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	1.1 mg/l	Spot Sample	Annually	
	Zinc	0.029 mg/l	Spot Sample	Annually	
BH3	Ammoniacal Nitrogen	1.5 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	0.04 mg/l	Spot Sample	Annually	
	Zinc	0.033 mg/l	Spot Sample	Annually	
BH4	Ammoniacal Nitrogen	3.0 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	7.7 mg/l	Spot Sample	Annually	
	Zinc	0.014 mg/l	Spot Sample	Annually	
BH5	Ammoniacal Nitrogen	1.4 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	2.3 mg/l	Spot Sample	Annually	
	Zinc	0.031 mg/l	Spot Sample	Annually	
BH3A	Ammoniacal Nitrogen	0.5 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	0.2 mg/l	Spot Sample	Annually	
	Zinc	0.047 mg/l	Spot Sample	Annually	
T1	Ammoniacal Nitrogen	3.9 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	1.0 mg/l	Spot Sample	Annually	
	Zinc	0.018 mg/l	Spot Sample	Annually	

Table S4.4 Trigger levels for emissions into groundwater and monitoring requirements - continued

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
T2	Ammoniacal Nitrogen	0.4 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	6.3 mg/l	Spot Sample	Annually	
	Zinc	0.030 mg/l	Spot Sample	Annually	
T3	Ammoniacal Nitrogen	4.1 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	8.4 mg/l	Spot Sample	Annually	
	Zinc	0.030 mg/l	Spot Sample	Annually	
T4	Ammoniacal Nitrogen	1.3 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	0.5 mg/l	Spot Sample	Annually	
	Zinc	0.021 mg/l	Spot Sample	Annually	
T5	Ammoniacal Nitrogen	0.5 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	0.8 mg/l	Spot Sample	Annually	
	Zinc	0.023 mg/l	Spot Sample	Annually	
T6	Ammoniacal Nitrogen	2.8 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	6.1 mg/l	Spot Sample	Annually	
	Zinc	0.024 mg/l	Spot Sample	Annually	
T7	Ammoniacal Nitrogen	0.7 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	1.4 mg/l	Spot Sample	Annually	
	Zinc	0.024 mg/l	Spot Sample	Annually	
T8	Ammoniacal Nitrogen	4.4 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	18.5 mg/l	Spot Sample	Annually	
	Zinc	0.029 mg/l	Spot Sample	Annually	
T9	Ammoniacal Nitrogen	1.6 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	11.3 mg/l	Spot Sample	Annually	
	Zinc	0.055 mg/l	Spot Sample	Annually	
T10	Ammoniacal Nitrogen	To be in agreed in writing in accordance with Improvement condition ref 1, Table S1.3	To be in agreed in writing in accordance with Improvement condition ref 1, Table S1.3	To be in agreed in writing in accordance with Improvement condition ref 1, Table S1.3	To be agreed in writing with the Environment Agency
	Manganese				
	Zinc				
	Chloride				
	Chromium				
	Nickel				
	Lead				
	Cadmium				
T11	Mecoprop	To be in agreed in writing in accordance with Improvement condition ref 1, Table S1.3	To be in agreed in writing in accordance with Improvement condition ref 1, Table S1.3	To be in agreed in writing in accordance with Improvement condition ref 1, Table S1.3	To be agreed in writing with the Environment Agency
	Naphthalene				
	Ammoniacal Nitrogen				
	Manganese				
	Zinc	0.031 mg/l	Spot Sample	Annually	To be agreed in writing with the Environment Agency

Table S4.4 Trigger levels for emissions into groundwater and monitoring requirements - continued

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
T12	Ammoniacal Nitrogen	0.5 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	12.0 mg/l	Spot Sample	Annually	
	Zinc	0.251 mg/l	Spot Sample	Annually	
	Chloride	250 mg/l	Spot Sample	Monthly	
	Chromium	0.05 mg/l	Spot Sample	Quarterly	
	Nickel	1.4 mg/l	Spot Sample	Annually	
	Lead	0.025mg/l	Spot Sample	Quarterly	
	Cadmium	6 µg/l	Spot Sample	Biannually	
	Mecoprop	0.04 µg/l	Spot Sample	Biannually	
	Naphthalene	1 µg/l	Spot Sample	Biannually	
T13	Ammoniacal Nitrogen	2.5 mg/l	Spot Sample	Monthly	To be agreed in writing with the Environment Agency
	Manganese	2.1 mg/l	Spot Sample	Annually	
	Zinc	0.031 mg/l	Spot Sample	Annually	

Table S4.5 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Monitoring point Ref. /description	Parameter	Limit (including units)	Monitoring frequency	Monitoring standard or method
G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13	Oxygen	N/A	Monthly	To be agreed in writing with the Environment Agency
	Atmospheric Pressure	N/A	Monthly	
	Methane	1 %v/v	Monthly	
G1	Carbon Dioxide	1.6 %v/v	Monthly	
G2	Carbon Dioxide	2.4 %v/v	Monthly	
G3	Carbon Dioxide	1.7 %v/v	Monthly	
G4	Carbon Dioxide	1.6 %v/v	Monthly	
G5	Carbon Dioxide	1.6 %v/v	Monthly	
G6	Carbon Dioxide	1.7 %v/v	Monthly	
G7	Carbon Dioxide	3.9 %v/v	Monthly	
G8	Carbon Dioxide	2.5 %v/v	Monthly	
G9	Carbon Dioxide	3.2 %v/v	Monthly	
G10	Carbon Dioxide	2.1 %v/v	Monthly	
G11	Carbon Dioxide	4.1 %v/v	Monthly	
G12	Carbon Dioxide	2.3 %v/v	Monthly	
G13	Carbon Dioxide	4.2 %v/v	Monthly	
G14	Carbon Dioxide	1.9 %v/v	Monthly	
G15	Carbon Dioxide	4.1 %v/v	Monthly	
G16	Carbon Dioxide	1.6 %v/v	Monthly	
G17	Carbon Dioxide	4.0 %v/v	Monthly	
T1	Carbon Dioxide	2.1 %v/v	Monthly	
T2	Carbon Dioxide	3.1 %v/v	Monthly	
T3	Carbon Dioxide	2.0 %v/v	Monthly	
T4	Carbon Dioxide	2.6 %v/v	Monthly	
T5	Carbon Dioxide	3.2 %v/v	Monthly	
T6	Carbon Dioxide	2.9 %v/v	Monthly	
T7	Carbon Dioxide	5.4 %v/v	Monthly	
T8	Carbon Dioxide	2.3 %v/v	Monthly	
T9	Carbon Dioxide	3.0 %v/v	Monthly	
T10	Carbon Dioxide	1.8 %v/v	Monthly	
T11	Carbon Dioxide	1.8 %v/v	Monthly	
T12	Carbon Dioxide	2.5 %v/v	Monthly	
T13	Carbon Dioxide	1.8 %v/v	Monthly	

Table S4.6 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.	As per LFTGN 07 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.	As per LFTGN 07 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 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 S4.7 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
In waste landfill gas monitoring points as specified on Drawing Reference 6167/1 in Landfill Gas Management Plan 9 Jun 06, Ref. 05529525.501/ A.2 updated by ESID14	Oxygen	Monthly	To be agreed in writing with the Environment 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
	Carbon Dioxide	Monthly		
	Methane	Monthly		
	Atmospheric pressure	Monthly		
In waste landfill gas monitoring points as specified on Drawing Reference 6167/1 in Landfill Gas Management Plan 9 Jun 06, Ref. 05529525.501/ A.2 updated by ESID14	Trace gas analysis	Annually	Agency guidance document 'Guidance for monitoring trace components in landfill gas' (LFTGN04) unless otherwise agreed in writing by the Agency.	

Table S4.8 Leachate– other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Leachate collection chambers LC01, LC03, LC04a, LC05a, LM04a, LM05, LM06 and LM07 as specified in drawing reference WR/4446/ESID7 (09/11/04) and ESID14 (15/01/07)	pH	Monthly		
	Electrical Conductivity	Monthly		
	Ammoniacal Nitrogen	Monthly		
	Temperature	Monthly		
	Chloride	Monthly		
	Sulphate	Quarterly		
	BOD	Quarterly		
	Total Alkalinity (CaCO ₃) (tot alk)	Quarterly		
	Total Phenols	Quarterly		
	COD	Quarterly		
	TOC	Quarterly		
	TON	Quarterly		
	Na	Quarterly		
	K	Quarterly		
	Ca	Quarterly		
	Cr	Quarterly		
	Cu	Quarterly		
	Fe	Quarterly		
	Pb	Quarterly		
	Mg	Quarterly		
	Mn	Quarterly		
	Cd	Quarterly		
	Mecoprop	Biannually		
	Naphthalene	Biannually		
	Ni	Quarterly		
	Zn	Quarterly		
	Hg	Quarterly		
	Total Cyanide	Annual		
	List I screen **	Annually*		

* The operator shall carry out leachate screening from leachate sampled from each hydraulically separate cell in accordance with the Agency's guidance document "Hydrogeological Risk Assessment for Landfills (LFTGN01)

** Any substance detected in the annual List I screening of leachate required above shall be incorporated into the biannual monitoring regime for groundwater unless otherwise agreed with the Agency.

Table S4.9 Surface water – other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
WP1, WP2, WP3, WP4 and WP5 as identified on drawing reference ESID6A submitted 20th December 2005	pH	Monthly	To be agreed in writing with the Environment Agency	To be agreed in writing with the Environment Agency
	Electrical Conductivity	Monthly		
	Ammoniacal Nitrogen	Monthly		
	Chloride	Monthly		
	COD	Monthly		
	Suspended Solid	Monthly		
	Dissolved Oxygen	Monthly		
	Sulphate	Quarterly		
	Alkalinity	Quarterly		
	Total Oxidised Nitrogen	Quarterly		
	Total Organic Carbon	Quarterly		
	Sodium	Quarterly		
	Potassium	Quarterly		
	Calcium	Quarterly		
	Magnesium	Quarterly		
	Iron	Quarterly		
	Manganese	Quarterly		
	Cadmium	Quarterly		
	Chromium	Quarterly		
	Copper	Quarterly		
	Nickel	Quarterly		
	Lead	Quarterly		
	Zinc	Quarterly		
	Phosphate	Quarterly		

Table S4.10 Groundwater – other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Groundwater Boreholes ref BH1, BH2, BH3, BH4, BH5, BH3A, T1 – T13 inclusive and 7 to 14 inclusive as identified on drawing No ESID14 and additional monitoring points specified once improvement condition 1 in Table ref S1.3 has been complied with and confirmed in writing by the Agency.	Groundwater Level	Monthly	To be agreed in writing with the Environment Agency	To be agreed in writing with the Environment Agency
	Temperature	Monthly		
	pH	Monthly		
	Cl	Monthly		
	Electrical Conductivity	Monthly		
	Ammoniacal Nitrogen	Monthly		
	Dissolved Oxygen	Monthly		
	COD	Monthly		
	BOD	Monthly		
	Suspended Solids	Monthly		
	Ca	Quarterly		
	Mg	Quarterly		
	K	Quarterly		
	Alkalinity	Quarterly		
	TOC	Quarterly		
	TON	Quarterly		
	SO ₄	Quarterly		
	Mecoprop	Biannually		
	Cd	Biannually		
	Naphthalene	Biannually		
	TPH	Biannually		
	Total Phenols	Biannually		
	Hg	Biannually		
	Cr	Annually		
	Cu	Annually		
	Fe	Annually		
	Pb	Annually		
	Mn	Annually		
	Zn	Annually		
	Toluene	Annually		
	Orthophosphate	Annually		
	List I's found in the leachate annual screen	Biannually		

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 As required by condition 3.6.1	Leachate collection chambers LC01, LC03, LC04a, LC05a, LM04a, LM05, LM06 and LM07 as specified in drawing reference WR/4446/ESID7 (09/11/04) and ESID14 (15/01/07)	Quarterly	9th Nov 2005
Emissions to air Parameters as required by condition 3.6.1	A1 Flare Stack as identified on drawing reference WR4446/ESID8	Annually	9th Nov 2005
	A2 Engine Exhausts as identified on drawing reference WR4446/ESID8 - For Engines Commissioned before 31st December 2005	Annually	9th Nov 2005
	A2 Engine Exhausts as identified on drawing reference WR4446/ESID8 - For Engines Commissioned After 31st December 2005	Annually	9th Nov 2005
Emissions to water Parameters as required by condition 3.6.1	Surface water discharge points WP5 to the River Dee and WP4 at the grass plots as identified on drawing reference ESID6A submitted 20th December 2005	Monthly, unless otherwise agreed in writing with the Agency	9th Nov 2005
Groundwater Parameters as required by condition 3.6.1	Groundwater Boreholes ref BH1, BH2, BH3, BH4, BH5, BH3A, T1 – 13 inclusive as identified on Doc Ref – 0552552.250 ESID6A	Quarterly for all parameters monitored at monthly or quarterly frequency. Annually for all parameters monitored at bi-annual or annual frequency.	9th Nov 2005
Landfill gas surface emissions Parameters as required by condition 3.6.1	Permanently Capped Zones	Annually	9th Nov 2005
	Temporarily Capped Zones	Annually	9th Nov 2005
Landfill gas lateral migration Parameters as required by condition 3.6.1	G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13	Quarterly	9th Nov 2005
Other Landfill gas monitoring Parameters as required by condition 3.6.1	In waste landfill gas monitoring points as specified on Drawing Reference 6167/1 in Landfill Gas Management Plan 9 Jun 06, Ref. 05529525.501/ A.2 updated by ESID14	Monthly, unless otherwise agreed in writing with the Agency	9th Nov 2005
Trace Gas Analysis	In waste landfill gas monitoring points as specified on Drawing Reference 6167/1 in Landfill Gas Management Plan 9 Jun 06, Ref. 05529525.501/ A.2 updated by ESID14	Annually within three months of end of last monitoring period.	9th November Each Year

Table S5.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Other leachate monitoring Parameters as required by condition 3.6.1 List 1 Screen	Leachate collection chambers LC01, LC03, LC04a, LC05a, LM04a, LM05, LM06 and LM07 as specified in drawing reference WR/4446/ESID7 (09/11/04) and ESID14 (15/01/07)	Quarterly for all parameters monitored at monthly or quarterly frequency. Annually for all parameters monitored at bi-annual or annual frequency.	9th Nov 2005
Other surface water monitoring Parameters as required by condition 3.6.1	WP1, WP2, WP3, WP4 and WP5	Quarterly	9th Nov 2005

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
Energy used (including for leachate treatment)	Annually		MWh of electricity

Table S5.4 Reporting Forms		
Media/parameter	Reporting Format	Date of Form
Leachate	Form 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	
Particulate matter	Form Particulate 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
Carbon Dioxide in external boreholes LFGMP 2 to 14 and LFGMP 18.	48 hours
Leachate level limit	5 working days

(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 WRG Waste Services 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, List of Wastes (Northern Ireland) Regulations 2005 (as amended), or The Special Waste Amendment (Scotland) Regulations 2004 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