



ENVIRONMENT
AGENCY

Variation Notice with introductory note

Pollution Prevention and Control (England & Wales) Regulations 2000

Marsden Quarry Landfill

Owen Pugh and Company Limited
Marsden Quarry
Whitburn
Sunderland
SR6 7NG

Variation Notice Number
HP3732LD

Permit number
BU5119IQ

Marsden Quarry Landfill
Permit Number BU5119IQ
Variation Number HP3732LD

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 permit conditions have been varied at the instigation of the Agency in line with the conditions contained within the revised template issued in October 2006. There has been no significant change in the operation of the installation. The main features of the installation are as detailed in the original permit.

Status Log of the permit

Detail	Date	Response Date
Application BU5119	Received 09/06/2004	
EA request for proof of local advert	Request dated 16/06/2004	Response received 23/07/2004
Applicant request to amend conversion factor and annual tonnage	Received 17/06/2004	Reply by phone dated 21/06/2004 (see file note)
EA request to extend determination	Request dated 05/10/2004	Response received 07/10/2004
Applicant request to amend restoration contours	Received 07/10/2004	Reply by phone dated 10/2004 (see file note)
EA request to extend determination	Request dated 24/11/2004	Response received 30/11/2004
EA request to amend EPOPRA score	Request dated 25/11/2004	Response received 29/11/2004
EA request confirmation of restoration materials	Request dated 07/12/2004	Response received by phone 12/12/2004
EA request to extend determination	Request dated 29/12/2004	Response received 07/01/2005
EA request to extend determination	Request dated 28/01/2005	Response received 03/02/2005
Applicant request various including changes to waste types and tonnages, proposed additional boreholes and monitoring frequencies.	Request dated 10/01/2005	Reply dated 18/02/2005
Applicant request to reduce the attenuation layer	Request dated 04/02/2005	Reply dated 24/02/2005
EA request to extend determination	Request dated 28/02/2005	Response received 02/03/2005
EA request for financial provision fee	Request dated 03/03/2005	Response received 10/03/2005
Financial Provision fee paid	Confirmation letter dated 23/03/2005	
EA request confirmation of wording of financial provision bond	Request by phone 07/04/2005	Reply by e-mail dated 07/04/2005
EA request to extend determination	Request dated 24/03/2005	Response received 05/04/2005
EA Financial Provision documents to be signed	Request dated 13/04/2005	Reply received 03/05/2005
EA proposed dust monitoring conditions	Request dated 15/04/2005	Response received 28/04/2005
EA request to extend determination	Request dated 28/04/2005	Response received 05/05/2005
Applicant request for alternative attenuation layer	Request dated 03/05/2005	Reply by phone dated 16/05/2005
Applicant request to amend site boundary	Request dated 06/05/2005	Reply by phone dated 06/05/2005 (see file note)
EA request confirmation of access to off site monitoring boreholes	Request dated 11 May 2005	Reply dated 16/05/2005
Applicant submission of CQA Report	Request dated 20/05/2005	Reply dated 27/05/2005
Permit determined	Issue dated 31/05/2005	
Variation notice HP3732LD issued	Issue date 19/04/2007	

End of Introductory Note

Variation Notice

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

Variation Notice

Permit number

BU5119IQ

Variation number

HP3732LD

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

Owen Pugh and Company Limited ("the operator"),

whose registered office is:

Dudley

Cramlington

Northumberland

NE23 7PR

company registration number: **00415592**

to operate an installation at:

Marsden Quarry

Whitburn

Sunderland

SR6 7NG

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

The notice shall take effect from 00.01 hours 20 April 2007

Signed	Date
	19 April 2007

Martin Jenkins

Authorised to sign on behalf of the Agency

SCHEDULE 1 – CONDITIONS TO BE DELETED

All conditions and schedules are deleted

SCHEDULE 2 – CONDITIONS TO BE AMENDED

None

SCHEDULE 3 – CONDITIONS TO BE ADDED

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 set out in the agreement made between the operator and the Agency dated 31/05/2005 shall be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by the Agency.
- 1.3.2 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:
- (a) the costs of setting up and operating the landfill;
 - (b) the costs of the financial provision required by condition 1.3.1; and
 - (c) the estimated costs for the closure and aftercare of the landfill.

1.4 Site security

- 1.4.1 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 dates 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 inert waste, and
 - (c) they are not liquid waste (including waste waters but excluding sludge), and
 - (d) all the relevant waste acceptance procedures set out in schedule 1 of the Landfill Regulations have been completed, and
 - (e) they fulfil the relevant waste acceptance criteria, and
 - (f) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria, and
 - (g) they are wastes which have been treated, except for wastes for which treatment is not technically feasible.
- 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 not exceed 4,200,000 tonnes.
- 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 S1.4.
- 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 Closure, aftercare and decommissioning

- 2.9.1 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.

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.

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 S4.1 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 S4.2, shall not be exceeded.
- 3.3.6 The limits for particulate matter 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 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.
- 3.5.2 The level of noise emitted from the site shall not exceed 55 dB(A), expressed as an L_{Aeq} , 1 hour assessed at Toll House & Golf Club, Hill House, Souter Lighthouse Cottages, and Lizards Farm as identified in document reference number NT2571/015. The locations shall be chosen and the measurements and assessment made according to BS4142:1997.

3.6 Monitoring

- 3.6.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring and any other actions for the parameters specified in the following tables in schedule 4 to this permit:
- (a) Groundwater specified in tables S4.1 and S4.4;
 - (b) Landfill gas specified in tables S4.2;
 - (c) Surface water specified in table S4.1;
 - (d) Leachate specified in table S4.3;
 - (e) Particulate matter specified in table S4.5: and
 - (f) Noise specified in condition 3.5.2 and table S4.6.

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.

3.7 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) particulate matter;
 - (iii) sub-surface landfill gas monitoring;
 - (iv) leachate levels, quality and quantities;
 - (v) waste types and quantities; and
 - (vi) 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 annual production/treatment set out in schedule 5 table S5.2;
 - (d) details of any contamination or decontamination of the site which has occurred;
 - (e) the topographical surveys required by condition 3.6.3 other than those submitted as part of a CQA validation report;
 - (f) 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;
 - (g) 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;
 - (h) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey; and
 - (i) a summary of the WAC 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 S5.3; 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

4.3 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 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.
- 4.3.5 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.
- 4.3.6 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.
- 4.3.7 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.
- 4.3.8 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) (b) , The disposal of waste in a landfill.	Landfill for inert 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, as an integral part of landfilling.

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	The response to questions, 2.1, 2.2, 2.3, 2.4, 2.5 and 2.9 in part B of the Application	10/06/2004
Applicants request letter received 17/06/2004	This letter replaces the response to question 2.1.1 of part B of the application form	17/06/2004
Applicants request letter received 13/01/2005	This letter replaces the response to question 2.1.7 of part B of the application form. This letter replaces tables 2-10.1 and 2-10.2 in document B2-10. This letter replaces drawing NT02571/002 dated March 2004 with drawing NT02571/002 Revision A. This letter replaces drawing NT02571/005 dated January 2003 with drawing NT02571/005 Revision A.	13/01/2005
Applicants request letter received 09/05/2005	This letter replaces drawing NT02571/002 Revision A dated March 2004 with drawing NT02571/002 Revision B.	09/05/2005

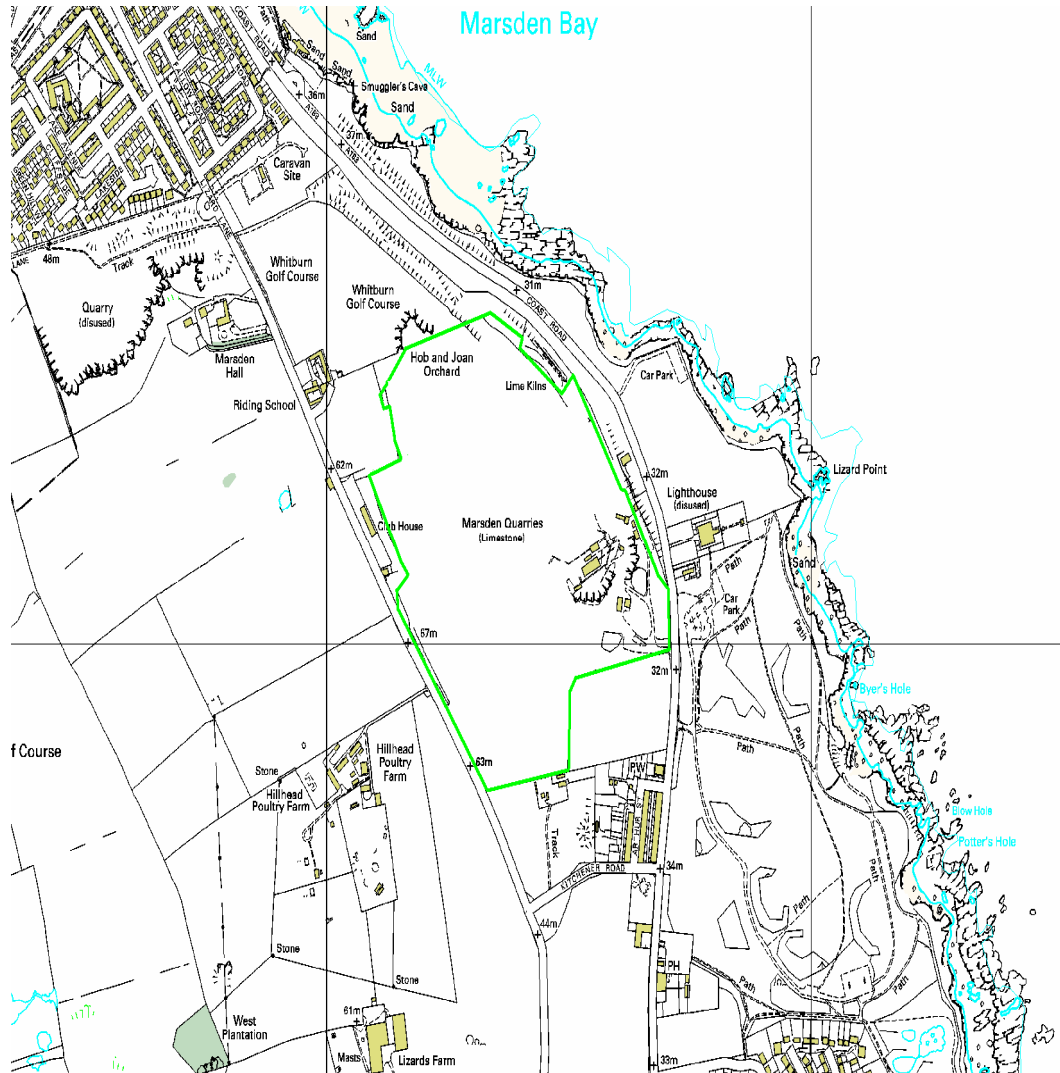
Table S1.3 Improvement programme requirements

Reference	Requirement	Date
1	The Operator shall provide a pre-settlement contour plan for the installation.	30/03/2008
2	The Operator shall provide in writing a report to the Agency that proposes a noise limit for the Arthur Street monitoring point that considers the existing background noise levels.	21/08/2007

Table S1.4 Annual waste input limits

Category	Limit Tonnes/ Year
Inert waste	382,500

Schedule 2 - Site plan



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Schedule 3 - List of permitted wastes

Wastes that may be accepted without testing at a landfill for inert waste

EWG Code	Description	Restrictions
10 11 03	Waste glass based fibrous materials	Only without organic binders
15 01 07	Glass packaging	
17 01 01	Concrete	Selected C&D waste only ^(a)
17 01 02	Bricks	Selected C&D waste only ^(a)
17 01 03	Tiles and ceramics	Selected C&D waste only ^(a)
17 01 07	Mixtures of concrete, bricks, tiles and ceramics	Selected C&D waste only ^(a)
17 02 02	Glass	
17 05 04	Soil and stones	Excluding topsoil, peat; excluding soil and stones from contaminated sites
19 12 05	Glass	
20 01 02	Glass	Separately collected glass only
20 02 02	Soil and stones	Only from garden and parks waste; Excluding top soil, peat

- (a) Selected construction and demolition waste (C & D waste): with low contents of other types of materials (like metals, plastic, organics, wood, rubber, etc). The origin of the waste must be known.

No C & D waste from constructions, polluted with inorganic or organic dangerous substances, e.g. because of production processes in the construction, soil pollution, storage and usage of pesticides or other dangerous substances, etc., unless it is made clear that the demolished construction was not significantly polluted.

No C & D waste from constructions, treated, covered or painted with materials, containing dangerous substances in significant amounts.

Schedule 4 – Emissions and monitoring

Table S4.1 Trigger levels for emissions into groundwater and monitoring requirements

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
BH8, BH10, BH13 and BH14 (as identified in document reference number NT02571/002)	Ammoniacal Nitrogen	0.5 mg/litre	Spot Sample	Quarterly	In accordance with Agency document "Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water – LFTGN02" dated February 2003, unless otherwise agreed in writing with the Agency.
	Chloride	250 mg/litre	Spot Sample	Quarterly	
Surface water lagoon as identified in document reference number NT02571/012 (once constructed)	Ammoniacal Nitrogen	0.5 mg/litre	Spot Sample	Quarterly*	
	Chloride	250 mg/litre	Spot Sample	Quarterly*	
	pH	No less than 6 and no greater than 9 pH units	Spot Sample	Quarterly*	
	Visible Oil	None	Visual Inspection	Quarterly*	

* Following the construction of the surface water lagoon.

Table S4.2 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Monitoring point Ref. /description	Parameter	Limit (including units) *	Monitoring frequency	Monitoring standard or method
BH8, BH9, BH13 and BH 14 as identified in document reference number NT02571/002	Methane	1 %v/v	Monthly	Guidance on the Management of Landfill Gas LFTGN03 dated September 2004, unless otherwise agreed in writing with the Agency.
	Carbon Dioxide	5.7 %v/v		

* The limits specified take account of the agreed background concentrations.

Table S4.3 Leachate– monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
LMP1, LMP2, LMP3, LMP4, LMP5 & LMP6 (as identified in document reference number NT02571/005)	Level (in metres)	Monthly	Agency document	None
	pH	(following the installation of the monitoring points)	'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water, dated February 2003'.	
	Temperature	Quarterly then reducing to annually if stable conditions achieved (following the installation of the monitoring points)	Unless otherwise agreed in writing with the Agency.	
	Electrical Conductivity			
	Ammoniacal Nitrogen (NH ₄ -N)			
	Chloride (Cl)			
	Sulphate (SO ₄)			
	Alkalinity			
	Total Organic Carbon			
	Total Oxidised Nitrogen			
	BOD			
	COD			
	Sodium			
Potassium				
Calcium				
Magnesium				

Table S4.4 Groundwater – other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
BH 15 & BH16	Ammoniacal Nitrogen Chloride	Quarterly	In accordance with Agency document "Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water – LFTGN02" dated February 2003. Unless otherwise agreed in writing with the Agency.	None

Table S4.5 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
Souter Lighthouse & Whitburn as identified in document reference number NT02571/015	Deposit of Dust	300 mg/m ²	per day	Monthly	Agency Document "Monitoring of Particulate Matter in Ambient Air around Waste Facilities (M17)" dated March 2004, unless otherwise agreed in writing with the Agency.
Toll House & Golf Club, Hill House & Field immediately south east of site as identified in document reference number NT02571/015	Deposit of Dust	350 mg/m ²	per day	Monthly	

Table S4.6 Noise Monitoring

Monitoring Point Ref. /Description	Parameter	Limit (Including Unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Toll House & Golf Club, Hill House, Souter Lighthouse Cottages, and Lizard Farm as identified in document reference number NT02571/015	Noise	55dB(A)L _{aeq}	1 hour	Monthly	BS4142:1997
Arthur Street as identified in document reference number NT02571/015	Noise	No Limited	1 hour	Monthly	BS4142:1997

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	LMP1, LMP2, LMP3, LMP4, LMP5 & LMP6	Every 3 months	31/05/2005
Groundwater Parameters as required by condition 3.6.1	BH8, BH10, BH13 and BH14	Every 3 months	31/05/2005
Groundwater Parameters as required by condition 3.6.1	B H15 & BH16	Every 3 Months	31/05/2007
Surface Water Lagoon Parameters as required by condition 3.6.1	Surface water lagoons as identified in document reference number NT02571/012	Every 3 Months	31/05/2005
Particulate matter Parameters as required by condition 3.6.1	Souter Lighthouse, Whitburn, Toll House & Golf Club, Hill House & Field immediately south east of site as identified in document reference number NT02571/015	Every 3 months	31/05/2005
Noise Parameters as required by condition 3.6.1	Toll House & Golf Club, Hill House, Souter Lighthouse Cottages, Arthur Street and Lizards Farm as identified in document reference number NT2571/015.	Every 12 months	31/05/2005

Table S5.2: Annual production/treatment

Surface water and/ or groundwater: Disposed of off site; Disposed of to any onsite effluent treatment plant.	Cubic metres/year

Table S5.3 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	
Surface 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	
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	BU5119IQ (Variation HP3732LD)
Name of operator	Owen Pugh and Company Limited
Location of Installation	Marsden Quarry, Coast Road, Whitburn, Sunderland, SR6 7NG
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 Owen Pugh & Co Limited

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 in a way that has negative effect.

"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