

# Variation notice with introductory note

Environmental Permitting (England & Wales) Regulations 2010

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Harwood Quarry

Harwood Quarry Co. Ltd  
Brookfold Lane  
Bolton  
BL2 4LT

Variation notice number  
EPR/XP3796CW/V002

Permit number  
EPR/XP3796CW

# **Harwood Quarry**

## **Permit Number EPR/XP3796CW**

### **Introductory note**

This introductory note does not form a part of the notice

The following notice gives notice of the variation of an environmental permit.

The main features of the facility are as follows. The original waste disposal licence allowed a range of commercial and industrial wastes to be disposed of at the site. In the early 1980's the waste types were limited to dry chemically inert, insoluble, non-toxic and non-putrescible. From 1992 until 2005 landfilling activities reduced at the site to allow for quarrying.

In 2004 an application was made for a PPC permit for the Harwood Quarry site, but as the area covered by this permit did not have an engineered basal liner to the standards required by the Landfill Directive, the permit for this section of the site was withdrawn. A closure notice was then served by the Agency on Harwood Quarry Co Ltd in November 2006 requiring that the site produces a closure report and follows the closure process.

In 2006 landfilling re-commenced using a restricted number of mainly inert waste types in order that the site could progress towards closure.

The closure report dated March 2007 was received by the Agency and a second closure notice was served on Harwood Quarry Co Ltd in February 2008 requiring a second closure report and allowing waste to be deposited at the site until November 2008. An extension to this deadline until 16<sup>th</sup> July 2009 was given by the Agency as a result of the economic downturn.

In July 2009 the operator submitted a closure report addendum to the Agency demonstrating that remaining waste deposits at the site were a recovery activity rather than a disposal activity. The main justification being the requirement of the adjacent PPC permit to have an engineered separation zone (ESZ) constructed between this permit and the PPC permit. The ESZ can only be constructed if there is adequate support for the barrier from the Harwood Quarry Co Ltd side of the site (a suitable landform).

This is an Agency Initiated permit variation following a periodic review conducted in April 2010.

The Schedules specify the changes made to the permit. A varied and consolidated environmental permit, reflecting the changes made to the permit, has been issued.

The status log of the permit sets out the permitting history, including any changes to the permit reference number

| <b>Status Log of the permit</b>                                                   |               |                 |
|-----------------------------------------------------------------------------------|---------------|-----------------|
| <b>Detail</b>                                                                     | <b>Date</b>   | <b>Comments</b> |
| Application - Harwood Quarry Co. Ltd                                              | 17/03/77      |                 |
| Waste Disposal Licence Issued                                                     | November 1977 | RD/LIC/122/77   |
| Modification WML/0122/M1 Issued                                                   | 27/11/81      |                 |
| Modification WML/0122/M2 Issued                                                   | 22/09/83      |                 |
| Modification WML/0122/M3 Issued                                                   | 15/03/85      |                 |
| Modification WML/0122/M4 Issued                                                   | 26/08/87      |                 |
| Modification WML/0122/M5 Issued                                                   | 20/05/88      |                 |
| Modification WML/0122/M6 Issued                                                   | 20/04/90      |                 |
| Modification WML/0122/M7 Issued                                                   | 17/07/91      |                 |
| Modification WML/0122/M8 Issued                                                   | 26/07/94      |                 |
| Environment Agency Variation duly made<br>EPR/XP3796CW/V002                       | 09/04/10      |                 |
| Variation EPR/XP3796CW/V002 determined<br>(varied and consolidated permit issued) | 05/11/10      |                 |

| <b>Other Part A installation permits relating to this installation</b> |                      |                      |
|------------------------------------------------------------------------|----------------------|----------------------|
| <b>Operator</b>                                                        | <b>Permit Number</b> | <b>Date of Issue</b> |
| Booth Ventures Limited                                                 | BV8741IL             | 17/10/05             |

End of Introductory Note

**Notice of variation**

The Environmental Permitting  
(England and Wales) Regulations 2010

**Permit number**

**EPR/XP3796CW**

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies the environmental permit issued to

**Harwood Quarry Company Ltd** ("the operator"),

whose registered office is

C/O JAMES BOOTH (BOLTON) LTD  
MANCHESTER ROAD, WESTHOUGHTON  
BOLTON  
LANCASHIRE  
BL5 3QH

company registration number 00341753

Holds a permit to operate a *regulated facility* at

**Harwood Quarry**

**Brookfold Lane**

**Bolton**

**BL2 4LT**

and that permit is varied to the extent set out in schedules 1 to 3 of this variation notice

The notice shall take effect from 05/11/10

| Name                                                                                | Date                          |
|-------------------------------------------------------------------------------------|-------------------------------|
|  | 5 <sup>th</sup> November 2010 |

Authorised on behalf of the Environment Agency

## **Schedule 1 – conditions to be deleted**

All conditions in Modification WML/0122/M8 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 operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

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.

1.1.4 The operator shall comply with the requirements of an approved competence scheme

### **1.2 Energy efficiency**

1.2.1 The operator shall:

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

## **1.3 Multiple operator installations**

- 1.3.1 Where the operator notifies the Environment Agency under condition 4.3.1 (a) or 4.3.1 (c), the operator shall also notify without delay the other operator(s) of the installation of the same information.

## **2 Operations**

### **2.1 Permitted activities**

- 2.1.1 The operator is only 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 7 to this permit.

### **2.3 Operating techniques**

- 2.3.1 (a) 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 Environment Agency.
- (b) If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan specified in schedule 1, table S1.2 or otherwise required under this permit, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

### **2.4 Improvement programme**

- 2.4.1 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 Environment Agency.
- 2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

### **2.5 Landfill Engineering**

- 2.5.1 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 Environment Agency has confirmed that it is satisfied with the construction proposals.
- 2.5.2 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 Environment Agency.
- 2.5.3 The operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant landfill infrastructure.
- 2.5.4 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.5.1 and 2.5.2 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to the Environment Agency as soon as practicable.
- 2.5.5 For the purpose of condition 2.5.1, the Environment Agency shall be deemed to be satisfied where it has not, within the period of four 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.
- 2.5.6 Where the Environment Agency has required further information under condition 2.5.5(b), the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the further information, either:
  - (a) confirmed whether or not it is satisfied; or
  - (b) informed the operator that it requires further information.

## **2.6 Waste acceptance**

- 2.6.1 No waste shall be accepted for disposal within the facility
- 2.6.2 Wastes shall only be accepted for recovery if:
  - (a) they are listed in schedule 2.
- 2.6.3 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.
- 2.6.4 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.
- 2.6.5 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing 0760/1/004.
- 2.6.6 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.4.

- 2.6.7 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 recovery and of the identity of the producer. Any information regarded by the operator as commercially confidential shall be clearly identified in the record.

## **2.7 Closure and aftercare**

- 2.7.1 The operator shall maintain a closure and aftercare management plan.

## **2.8 Landfill Gas Management**

- 2.8.1 The operator shall take appropriate measures, including, but not limited to, those specified in any approved landfill gas management plan, to:
- (a) collect landfill gas where feasible; and
  - (b) control the migration of landfill gas.
- 2.8.2 The operator shall use the collected landfill gas to produce energy. If the collected landfill gas cannot be used to produce energy, the operator shall flare or otherwise treat the gas unless otherwise in writing by the Environment Agency.
- 2.8.3 The operator shall:
- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a revised landfill gas management plan;
  - (b) implement the revised landfill gas management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

# **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 3 tables S3.2, S3.3 and S3.4.
- 3.1.2 The limits given in that schedule shall not be exceeded, save that compliance with an emission limit shall include incorporation of the uncertainty allowance stated in Environment Agency guidance LFTGN 05 and LFTGN 08.
- 3.1.3 The trigger levels for emissions into groundwater for the parameter(s) and monitoring point(s) set out in schedule 3 table S3.4 shall not be exceeded.
- 3.1.4 The operator shall submit to the Environment Agency a review of the Hydrogeological Risk Assessment:
- (a) between nine and six months prior to the sixth anniversary of the granting of the permit, and
  - (b) between nine and six months prior to every subsequent six years after the sixth anniversary of the granting of the permit.
- 3.1.5 The limits for landfill gas arising from the facility set out in schedule 3, table S3.5 shall not be exceeded.

## **3.2 Emissions of substances not controlled by emission limits**

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan;
  - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, 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 Odour**

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan;
  - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

## **3.4 Noise and vibration**

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan;
  - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

## 3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring and any other actions specified in the following tables in schedule 3 to this permit:
- (a) Leachate specified in tables S3.1 and S3.7;
  - (b) Point source emissions specified in tables S3.2 and S3.3;
  - (c) Groundwater specified in tables S3.4 and S3.9;
  - (d) Landfill gas specified in tables S3.5 and S3.6;
  - (e) Surface water specified in table S3.8;
- 3.5.2 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.
- 3.5.3 A topographical survey of the site referenced to ordnance datum shall be carried out:
- (a) annually (or any other frequency agreed in writing with the Agency) and
  - (b) 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.

## 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 Environment 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) off-site environmental effects; and
    - (ii) matters which affect the condition of the land and groundwater.
    - (iii) the results of groundwater monitoring;
    - (iv) sub-surface landfill gas monitoring;
    - (v) leachate levels, quality and quantities;
    - (vi) landfill gas generation and collection;
    - (vii) waste types and quantities;
    - (viii) the specification and as built drawings of the basal, sidewall and capping engineering systems.

- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

## 4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment 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 in relation to this facility and any agreed amendments thereto;
  - (b) the energy consumed at the site, reported in the format set out in schedule 4 table S4.3
  - (c) the annual production/treatment set out in schedule 4 table S4.2;
  - (d) the topographical surveys required by condition 3.5.3 other than those submitted as part of a CQA validation report;
  - (e) 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;
  - (f) an assessment of the settlement behaviour 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;
  - (g) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment 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 4 table S4.1;
  - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
  - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six 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.

## 4.3 Notifications

- 4.3.1 The Environment Agency shall be notified without delay following the detection of:

- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
  - (b) the breach of a limit specified in the permit; or
  - (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 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment 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 Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Environment 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; and
  - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

  - (a) any change in the operator's name or address; and
  - (b) any steps taken with a view to the dissolution of the operator.
- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
  - (a) the Environment Agency shall be notified at least 14 days before making the change; and
  - (b) the notification shall contain a description of the proposed change in operation.

## **4.4 Interpretation**

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

## Schedule 1 - Operations

| <b>Table S1.1</b> | <b>Description of activities for waste operations</b>                                                                                                                                                                   | <b>Limits of activities</b>                                                                                                                                                                                                                                                                                                               |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A1                | R3: Recycling/reclamation of organic substances which are not used as solvents;<br>R5: Recycling or reclamation of other inorganic materials<br>R13: Storage of wastes pending any of the operations numbered R3 and R5 | Use of waste soils (specified within Table 2.2) to provide restoration material for completion of landform on HQ1 and the subgrade of the engineered separation zone between this permit and installation permit number BV8741IL.<br><br>Management and monitoring of emissions from the closed landfill (e.g. leachate and landfill gas) |

| <b>Table S1.2 Operating techniques</b>                                                                      |                                                                                    |                      |
|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------|
| <b>Description</b>                                                                                          | <b>Parts</b>                                                                       | <b>Date Received</b> |
| Harwood Quarry HQ1 Landfill Site Closure Plan. March 2007<br>Document Ref: 760/1                            | All sections excluding Closure Plan Form 0760-1 form dated February 2007 (6 pages) | 26/03/07             |
| Closure Plan Form v2 attached to email from John Martin to Matthew Bennett dated 3 <sup>rd</sup> April 2007 | Form containing correct information                                                | 03/04/07             |
| Additional information<br>- Closure Report Addendum - July 2009 Report No 760/2; Issue 1                    | All sections                                                                       | 16/07/09             |

| <b>Table S1.3 Improvement programme requirements</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>Reference</b>                                     | <b>Requirement</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Date</b> |
| 1                                                    | <p>The operator shall provide the Agency with a closure report including:</p> <ul style="list-style-type: none"> <li>• A plan identifying the area of the site to be closed;</li> <li>• An assessment of the stability of the waste mass;</li> <li>• A review of the monitoring provisions at the site against the requirements of Annex III of Council Directive 1999/31/EC on the landfill of waste.;</li> <li>• A review of the management system at the site to ensure that all significant environmental effects are reported to the Agency.</li> </ul> | 31/05/11    |
| 2                                                    | <p>The operator shall develop and implement an Environmental Management system at the site. This EMS shall consider:</p> <ul style="list-style-type: none"> <li>• Procedures to be put in place to control the management of leachate</li> <li>• Procedures to be put in place to control the management of landfill gas;</li> <li>• Procedures to be put in place to monitor the impact of the site on groundwater, surface water and air quality.</li> </ul>                                                                                               | 31/09/11    |
| 3                                                    | <p>The operator shall carry out a survey on the cap within the area of land within HQ1 to assess its effectiveness at controlling the ingress of air into the waste mass and escape of landfill gas. Where the controls are found not to be effective the operator shall propose improvements to the landfill cap, together with an implementation programme.</p>                                                                                                                                                                                            | 31/05/12    |

| <b>Table S1.4 Annual waste input limits</b>   |                           |
|-----------------------------------------------|---------------------------|
| <b>Category</b>                               | <b>Limit Tonnes/ Year</b> |
| Waste for restoration                         | Up to 95 000              |
| Waste for engineering landfill infrastructure | Up to 95 000              |
| Total waste input limited to                  | 95 000                    |

## Schedule 2 - List of permitted wastes

| Table S2.2 Permitted waste types and quantities for providing restoration soils |                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste code                                                                      | Description                                                                                                                                                                                               |
| <b>01</b>                                                                       | <b>WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS</b>                                                                                              |
| <b>01 01</b>                                                                    | wastes from mineral excavation                                                                                                                                                                            |
| 01 01 02                                                                        | wastes from mineral non-metalliferous excavation                                                                                                                                                          |
| <b>01 04</b>                                                                    | <b>wastes from physical and chemical processing of non-metalliferous minerals</b>                                                                                                                         |
| 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 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                                                                                                                               |
| <b>10</b>                                                                       | <b>Wastes from Thermal Processes</b>                                                                                                                                                                      |
| <b>10 01</b>                                                                    | <b>Wastes from power stations and other combustion plants</b>                                                                                                                                             |
| 10 01 01                                                                        | Bottom ash from power stations (excl boiler dust)                                                                                                                                                         |
| <b>10 03</b>                                                                    | <b>wastes from aluminium thermal metallurgy</b>                                                                                                                                                           |
| 10 03 16                                                                        | Aluminum waste skimmings other than those mentioned in 10 03 15                                                                                                                                           |
| <b>10 08</b>                                                                    | <b>wastes from other non-ferrous thermal metallurgy</b>                                                                                                                                                   |
| 10 08 09                                                                        | Slags from thermal processing of non ferrous minerals                                                                                                                                                     |
| 10 08 11                                                                        | Dross and skimmings from non-ferrous metallurgy, other than those mentioned in 10 08 10                                                                                                                   |
| <b>10 09</b>                                                                    | <b>wastes from casting of ferrous pieces</b>                                                                                                                                                              |
| 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                                                                                                          |
| <b>10 10</b>                                                                    | <b>wastes from casting of non-ferrous pieces</b>                                                                                                                                                          |
| 10 10 06                                                                        | casting cores and moulds which have not undergone pouring, other than those mentioned in 10 10 05                                                                                                         |
| <b>10 11</b>                                                                    | <b>wastes from manufacture of glass and glass products</b>                                                                                                                                                |
| 10 11 03                                                                        | waste glass-based fibrous materials                                                                                                                                                                       |
| 10 11 12                                                                        | waste glass other than those mentioned in 10 11 11                                                                                                                                                        |
| <b>10 12</b>                                                                    | <b>wastes from manufacture of ceramic goods, bricks, tiles and construction products</b>                                                                                                                  |
| 10 12 06                                                                        | discarded moulds                                                                                                                                                                                          |
| 10 12 08                                                                        | waste ceramics, bricks, tiles and construction products (after thermal processing)                                                                                                                        |
| <b>10 13</b>                                                                    | <b>wastes from manufacture of cement, lime and plaster and articles and products made from them</b>                                                                                                       |
| 10 13 14                                                                        | waste concrete and concrete sludge                                                                                                                                                                        |
| <b>16</b>                                                                       | <b>WASTES NOT OTHERWISE SPECIFIED IN THE LIST</b>                                                                                                                                                         |
| <b>16 01</b>                                                                    | <b>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)</b> |
| 16 01 20                                                                        | glass                                                                                                                                                                                                     |
| <b>17</b>                                                                       | <b>CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)</b>                                                                                                              |
| <b>17 01</b>                                                                    | <b>concrete, bricks, tiles and ceramics</b>                                                                                                                                                               |
| 17 01 01                                                                        | concrete                                                                                                                                                                                                  |
| 17 01 02                                                                        | bricks                                                                                                                                                                                                    |

| <b>Table S2.2 Permitted waste types and quantities for providing restoration soils</b> |                                                                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Waste code</b>                                                                      | <b>Description</b>                                                                                                                                                             |
| 17 01 03                                                                               | tiles and ceramics                                                                                                                                                             |
| 17 01 07                                                                               | mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06                                                                                        |
| <b>17 02</b>                                                                           | <b>wood, glass and plastic</b>                                                                                                                                                 |
| 17 02 02                                                                               | glass                                                                                                                                                                          |
| <b>17 03</b>                                                                           | <b>bituminous mixtures, coal tar and tarred products</b>                                                                                                                       |
| 17 03 02                                                                               | bituminous mixtures other than those mentioned in 17 03 01                                                                                                                     |
| <b>17 05</b>                                                                           | <b>soil (including excavated soil from contaminated sites), stones and dredging spoil</b>                                                                                      |
| 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                                                                                                                           |
| <b>17 09</b>                                                                           | <b>other construction and demolition wastes</b>                                                                                                                                |
| 17 09 04                                                                               | mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03                                                                         |
| <b>19</b>                                                                              | <b>WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE</b> |
| <b>19 01</b>                                                                           | <b>wastes from incineration or pyrolysis of waste</b>                                                                                                                          |
| 19 01 12                                                                               | Bottom ash and slag other than those mentioned in 19 01 11                                                                                                                     |
| <b>19 03</b>                                                                           | <b>stabilised/solidified wastes</b>                                                                                                                                            |
| 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                                                                                                                       |
| <b>19 04</b>                                                                           | <b>vitrified waste and wastes from vitrification</b>                                                                                                                           |
| 19 04 01                                                                               | vitrified waste                                                                                                                                                                |
| <b>19 12</b>                                                                           | <b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>                                          |
| 19 12 05                                                                               | glass                                                                                                                                                                          |
| 19 12 09                                                                               | minerals (for example sand, stones)                                                                                                                                            |
| 19 12 12                                                                               | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11                                                      |
| <b>20</b>                                                                              | <b>MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS</b>                                 |
| <b>20 01</b>                                                                           | <b>separately collected fractions (except 15 01)</b>                                                                                                                           |
| 20 01 02                                                                               | glass                                                                                                                                                                          |
| <b>20 02</b>                                                                           | <b>garden and park wastes (including cemetery waste)</b>                                                                                                                       |
| 20 02 02                                                                               | soil and stones                                                                                                                                                                |

## Schedule 3 – Emissions and monitoring

**Table S3.1 Leachate level limits and monitoring requirements**

| Monitoring point reference/<br>Description    | Limit | Monitoring<br>frequency | Monitoring method |
|-----------------------------------------------|-------|-------------------------|-------------------|
| LW1<br>To be agreed in accordance with<br>IC1 |       |                         |                   |

**Table S3.2 Point source emissions to water (other than sewer) – emission limits and monitoring**

| Emission point<br>Ref. & Location         | Parameter | Source | Limit<br>(incl<br>unit) | Reference<br>Period | Monitoring<br>Frequency | Monitoring<br>Standard or<br>Method |
|-------------------------------------------|-----------|--------|-------------------------|---------------------|-------------------------|-------------------------------------|
| To be agreed in<br>accordance with<br>IC1 |           |        |                         |                     |                         |                                     |

**Table S3.3 Point source emissions to sewer, effluent treatment plant or by tankering or other transfer off-site– emission limits and monitoring requirements**

| Emission point<br>Ref. & Location         | Parameter | Source | Limit<br>(incl<br>unit) | Reference<br>Period | Monitoring<br>Frequency | Monitoring<br>Standard or<br>Method |
|-------------------------------------------|-----------|--------|-------------------------|---------------------|-------------------------|-------------------------------------|
| To be agreed in<br>accordance with<br>IC1 |           |        |                         |                     |                         |                                     |

**Table S3.4 Trigger levels for emissions into groundwater and monitoring requirements**

| monitoring point<br>reference | Parameter                           | Limit<br>(including<br>unit) | Reference<br>Period | Monitoring<br>frequency | Monitoring<br>standard or<br>method |
|-------------------------------|-------------------------------------|------------------------------|---------------------|-------------------------|-------------------------------------|
| R1, R2, R4<br>BH1, BH2, BH3   | To be agreed in accordance with IC1 |                              |                     |                         |                                     |

| <b>Table S3.5 Landfill gas in external monitoring boreholes – limits and monitoring requirements</b> |                                                                                                                            |                                     |                             |                                      |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|--------------------------------------|
| <b>Monitoring point Ref. /description</b>                                                            | <b>Parameter</b>                                                                                                           | <b>Limit (including units) *</b>    | <b>Monitoring frequency</b> | <b>Monitoring standard or method</b> |
| R1, R2, R4<br>BH1, BH2, BH3                                                                          | Methane<br>Carbon Dioxide<br>Oxygen<br>Atmospheric pressure<br>Differential Pressure<br>Temperature<br>Meteorological data | To be agreed in accordance with IC1 |                             |                                      |

\* - The limits specified take account of the agreed background concentrations that may be submitted as part of IC1

| <b>Table S3.6 Landfill gas – other monitoring requirements</b>                   |                                                                                                                                                     |                                     |                                      |                             |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------|-----------------------------|
| <b>Emission point reference or source or description of point of measurement</b> | <b>Parameter</b>                                                                                                                                    | <b>Monitoring frequency</b>         | <b>Monitoring standard or method</b> | <b>Other specifications</b> |
| In waste monitoring borehole LW1                                                 | Methane<br>Carbon Dioxide<br>Oxygen<br>Carbon Monoxide<br>Hydrogen sulphide<br>Atmospheric pressure<br>Differential pressure<br>Meteorological Data | To be agreed in accordance with IC1 |                                      |                             |
| HQ1GM1<br>HQ1GM2                                                                 | Gas flow                                                                                                                                            | To be agreed in accordance with IC1 |                                      |                             |

| <b>Table S3.7 Leachate– other monitoring requirements</b>                        |                                               |                             |                                      |                             |
|----------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------|--------------------------------------|-----------------------------|
| <b>Emission point reference or source or description of point of measurement</b> | <b>Parameter</b>                              | <b>Monitoring frequency</b> | <b>Monitoring standard or method</b> | <b>Other specifications</b> |
| LW1                                                                              | pH, EC, NH4-N, TON, TOC, BOD, COD, Ca, Mg etc | quarterly                   |                                      |                             |
| LW1                                                                              | Hazardous substance screen                    | Annually                    |                                      |                             |

| <b>Table S3.8 Surface water – other monitoring requirements</b>                  |                                                             |                                     |                                      |                             |
|----------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|--------------------------------------|-----------------------------|
| <b>Emission point reference or source or description of point of measurement</b> | <b>Parameter</b>                                            | <b>Monitoring frequency</b>         | <b>Monitoring standard or method</b> | <b>Other specifications</b> |
| To be agreed in accordance with IC1                                              | Temperature, DO, pH, EC, TSS, NH4-N, TON, TOC, BOD, COD, Cl | To be agreed in accordance with IC1 |                                      |                             |

| <b>Table S3.9 Groundwater – other monitoring requirements</b>                    |                                                                                  |                             |                                      |                             |
|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------|--------------------------------------|-----------------------------|
| <b>Emission point reference or source or description of point of measurement</b> | <b>Parameter</b>                                                                 | <b>Monitoring frequency</b> | <b>Monitoring standard or method</b> | <b>Other specifications</b> |
| R1, R2, R4<br>BH1, BH2, BH3                                                      | Water level, monitoring point base, pH, EC, NH4-N, TOC, K, Alk, SO4, Cl          | Quarterly                   |                                      |                             |
|                                                                                  | Phenol<br>Mecoprop<br>Fe, Mn, As, Cd, Cr<br>Cu, Ni, Pb, Zn,<br>Mineral oil / PAH | Annually                    |                                      |                             |

## Schedule 4 - Reporting

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

| <b>Table S4.1 Reporting of monitoring data</b>                              |                                               |                                     |                      |
|-----------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------|----------------------|
| <b>Parameter</b>                                                            | <b>Emission or monitoring point/reference</b> | <b>Reporting period</b>             | <b>Period begins</b> |
| Leachate levels<br>As required by condition 3.5.1                           | LW1                                           | Every 12 months                     | 1 January            |
| Emissions to water<br>Parameters as required by condition 3.5.1             | To be agreed in accordance with IC1           | Every 12 months                     | 1 January            |
| Groundwater<br>Parameters as required by condition 3.5.1                    | R1, R2, R4<br>BH1, BH2, BH3                   | To be agreed in accordance with IC1 | 1 January            |
| Landfill gas surface emissions<br>Parameters as required by condition 3.5.1 | HQ1                                           | Every 12 months                     | 1 January            |
| Landfill gas lateral migration<br>Parameters as required by condition 3.5.1 | R1, R2, R4<br>BH1, BH2, BH3                   | e.g. Every 3 months                 | 1 January            |
| Other Landfill gas monitoring<br>Parameters as required by condition 3.5.1  | R1, R2, R4<br>BH1, BH2, BH3                   | e.g. Every 3 months                 | 1 January            |
| Other leachate monitoring<br>Parameters as required by condition 3.5.1      | LW1                                           | Every three months                  | 1 January            |
| Hazardous substance Screen                                                  |                                               | Every 12 months                     |                      |
| Other surface water monitoring<br>Parameters as required by condition 3.5.1 | To be agreed in accordance with IC1           | To be agreed in accordance with IC1 | 1 January            |

| <b>Table S4.2: Annual production/treatment</b>                                                                                                             |                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>Leachate:</b><br><b>Disposed of off site;</b><br><b>Disposed of to any onsite effluent treatment plant;</b><br><b>Recirculated into the waste mass.</b> | <b>Cubic metres/year</b>            |
| <b>Surface water:</b><br><b>Disposed of off site;</b>                                                                                                      | <b>Cubic metres/year</b>            |
| <b>Landfill gas:</b><br><b>combustion in flares;</b><br><b>combustion in gas engines;</b><br><b>Other methods of gas utilisation.</b>                      | <b>Normalised cubic metres/year</b> |

**Table S4.3 Performance Parameters**

| Parameter                                      | Frequency of assessment | Annual total | Unit               |
|------------------------------------------------|-------------------------|--------------|--------------------|
| Energy used (including for leachate treatment) | Annually                |              | MWh of electricity |

**Table S4.4 Reporting Forms**

| Media/parameter                                   | Reporting Format                                                                                 | Date of Form |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------|
| Leachate                                          | Form leachate 1 or other reporting format to be agreed in writing with the Environment Agency    |              |
| Air                                               | Form Air 1 or other reporting format to be agreed in writing with the Environment Agency         |              |
| Controlled water                                  | Form Water 1 or other reporting format to be agreed in writing with the Environment Agency       |              |
| Groundwater                                       | Form Groundwater 1 or other reporting format to be agreed in writing with the Environment Agency |              |
| Sewer                                             | Form Sewer 1 or other reporting format to be agreed in writing with the Environment Agency       |              |
| Landfill gas                                      | Form LFG 1 or other reporting format to be agreed in writing with the Environment Agency         |              |
| Particulate matter                                | Form Particulate 1 or other reporting format to be agreed in writing with the Environment Agency |              |
| Waste Return                                      | Waste Return Form RATS2E                                                                         |              |
| Landfill topographical surveys and interpretation | Reporting format to be agreed in writing with the Environment Agency                             |              |

## Schedule 5 - 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 EP Regulations.

### Part A

|                                |  |
|--------------------------------|--|
| Permit Number                  |  |
| Name of operator               |  |
| Location of Facility           |  |
|                                |  |
| Time and date of the detection |  |

**(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit 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>(b) Notification requirements for the breach of a limit</b>                      |  |
| <b>To be notified within 24 hours of detection unless otherwise specified below</b> |  |
| 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                       |  |

|                                                                                 |                            |
|---------------------------------------------------------------------------------|----------------------------|
| <b>Time periods for notification following detection of a breach of a limit</b> |                            |
| <b>Parameter</b>                                                                | <b>Notification period</b> |
|                                                                                 |                            |
|                                                                                 |                            |

|                                                                                                        |  |
|--------------------------------------------------------------------------------------------------------|--|
| <b>(c) Notification requirements for the detection of any significant adverse environmental effect</b> |  |
| <b>To be notified within 24 hours of detection</b>                                                     |  |
| 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 facility in the preceding 24 months.                                                                  |  |

|                  |  |
|------------------|--|
| <b>Name*</b>     |  |
| <b>Post</b>      |  |
| <b>Signature</b> |  |
| <b>Date</b>      |  |

\* authorised to sign on behalf of Harwood Quarry Co Ltd

## Schedule 6 - 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 5 to the EP Regulations.

*“authorised officer”* means any person authorised by the Environment 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 Landfill Infrastructure.

*“CQA Validation Report”* means the final “as built” construction and engineering details 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 Landfill Infrastructure;
- Validation by a qualified person that all of the construction has been carried out in accordance with the Construction Proposals.

*“emissions to land”* includes emissions to groundwater.

*“EP Regulations”* means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

*“emissions of substances not controlled by emission limits”* means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised

or diffuse sources, which are not controlled by an emission or background concentration limit..

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

*“Landfill Infrastructure”* means any specified element of the:

- permanent capping;
- 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.

*“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.

*“MCERTS”* means the Environment Agency’s Monitoring Certification Scheme.

*“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 affect the agreed design criteria, specification or performance in a way that has a negative effect.

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

*“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 EP 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 EP Regulations.

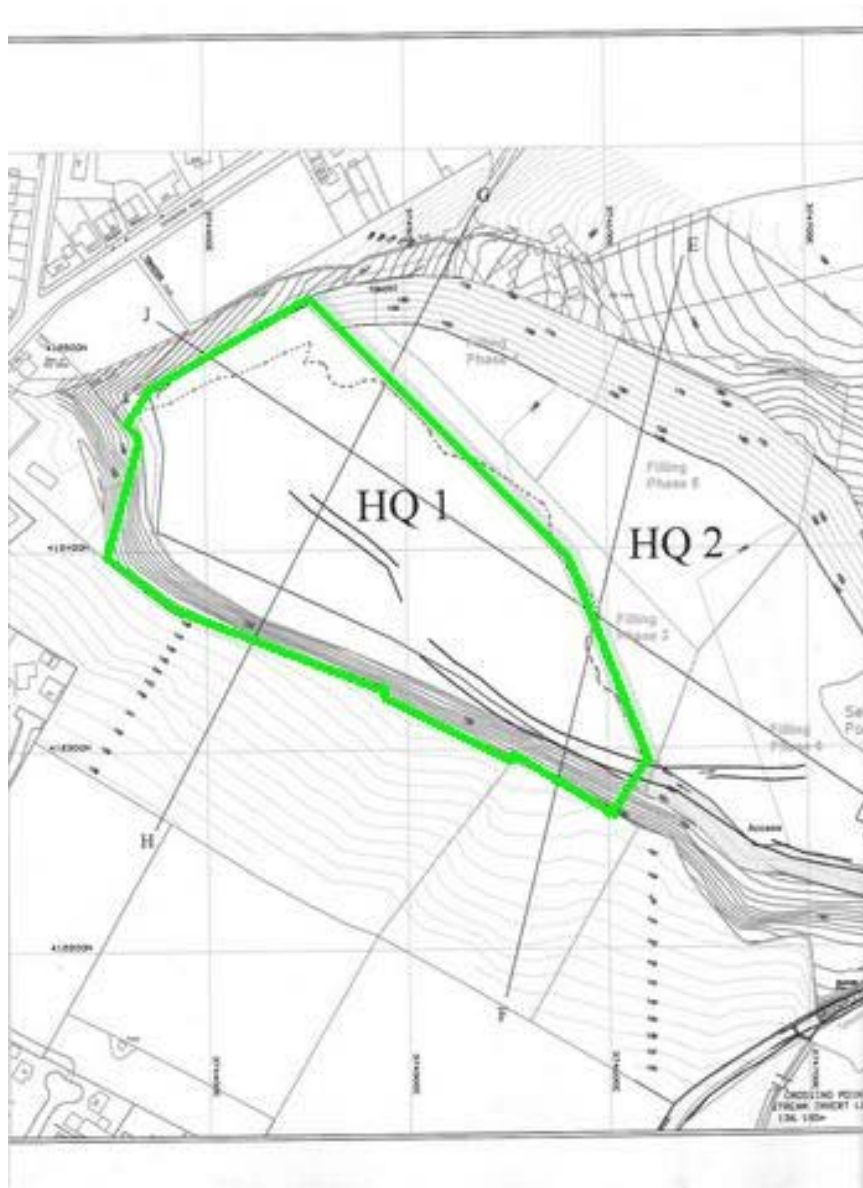
*“Waste code”* means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

*“year”* means calendar year ending 31 December.

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

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means the standards included in Environment Agency Guidance for Monitoring Enclosed Landfill Gas Flares LFTGN 05 or Guidance for Monitoring Landfill Gas Engine Emissions LFTGN 08.

## Schedule 7 - Site plan



END OF PERMIT

Permit Number: EPR/XP3796CW

Operator: Harwood Quarry Co. Ltd

Facility: Harwood Quarry

Form Number: Water1 / 16/08/10

**Reporting of emissions to water (other than to sewer) and land for the period from                      to**

| Emission Point                      | Emission              |             |                  | Result <sup>[1]</sup> | Test Method <sup>[2]</sup> | Sample Date and Times <sup>[3]</sup> | Uncertainty <sup>[4]</sup> |
|-------------------------------------|-----------------------|-------------|------------------|-----------------------|----------------------------|--------------------------------------|----------------------------|
|                                     | Substance / Parameter | Limit Value | Reference Period |                       |                            |                                      |                            |
| To be agreed in accordance with IC1 |                       |             |                  |                       | BS EN 872                  |                                      |                            |
|                                     |                       |             |                  |                       |                            |                                      |                            |
|                                     |                       |             |                  |                       |                            |                                      |                            |
|                                     |                       |             |                  |                       |                            |                                      |                            |
|                                     |                       |             |                  |                       |                            |                                      |                            |

The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed .....  
(Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/XP3796CW

Operator: Harwood Quarry Co. Ltd

Facility: Harwood Quarry

Form Number: Sewer1 / 16/08/10

**Reporting of emissions to sewer for the period from                      to**

| Emission Point                      | Emission              |             |                  | Result <sup>[1]</sup> | Test Method <sup>[2]</sup> | Sample Date and Times <sup>[3]</sup> | Uncertainty <sup>[4]</sup> |
|-------------------------------------|-----------------------|-------------|------------------|-----------------------|----------------------------|--------------------------------------|----------------------------|
|                                     | Substance / Parameter | Limit Value | Reference Period |                       |                            |                                      |                            |
| To be agreed in accordance with IC1 |                       |             |                  |                       |                            |                                      |                            |
|                                     |                       |             |                  |                       |                            |                                      |                            |
|                                     |                       |             |                  |                       |                            |                                      |                            |

The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed .....  
(Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/XP3796CW

Operator: Harwood Quarry Co. Ltd

Facility: Harwood Quarry

Form Number: Energy1 / 16/08/10

## Reporting of Energy Usage for the year

| Energy Source      | Energy Usage |                         | Specific Usage<br>(MWh/unit output) |
|--------------------|--------------|-------------------------|-------------------------------------|
|                    | Quantity     | Primary Energy<br>(MWh) |                                     |
| Electricity *      | MWh          |                         |                                     |
| Natural Gas        | MWh          |                         |                                     |
| Gas Oil            | tonnes       |                         |                                     |
| Recovered Fuel Oil | tonnes       |                         |                                     |
|                    |              |                         |                                     |
| TOTAL              | -            |                         |                                     |
|                    |              |                         |                                     |

\* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments :

Signed .....  
(Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/XP3796CW

Operator: Harwood Quarry Co. Ltd

Facility: Harwood Quarry

Form Number: Leachate1 / 16/08/10

**Reporting of leachate monitoring for the period from                      to**

| Monitoring Point | Substance / Parameter                                      | Compliance limit | Reference Period | Result <sup>[1]</sup> | Test Method <sup>[2]</sup> | Sample Date and Times <sup>[3]</sup> | Uncertainty <sup>[4]</sup> |
|------------------|------------------------------------------------------------|------------------|------------------|-----------------------|----------------------------|--------------------------------------|----------------------------|
| L1               | To be agreed in accordance with IC1<br>X m above cell base |                  |                  |                       |                            |                                      |                            |
|                  |                                                            |                  |                  |                       |                            |                                      |                            |
|                  |                                                            |                  |                  |                       |                            |                                      |                            |

The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed .....  
(Authorised to sign as representative of Operator)

Date.....

Operator: Harwood Quarry Co. Ltd

Form Number: Groundwater1 / 16/08/10

## Reporting of groundwater monitoring for the period from to

| Monitoring Point                | Substance / Parameter               | Trigger level | Reference Period | Result <sup>[1]</sup> | Test Method <sup>[2]</sup> | Sample Date and Times <sup>[3]</sup> | Uncertainty <sup>[4]</sup> |
|---------------------------------|-------------------------------------|---------------|------------------|-----------------------|----------------------------|--------------------------------------|----------------------------|
| R1, R2, R3, R4<br>BH1, BH2, BH3 | To be agreed in accordance with IC1 |               |                  |                       |                            |                                      |                            |

Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed .....  
(Authorised to sign as representative of Operator)

Date.....

Operator: Harwood Quarry Co. Ltd

Form Number: LFG1 / 16/08/10

## Reporting of landfill gas monitoring for the period from to

| Monitoring Point                | Substance / Parameter               | Compliance limit                         | Reference Period | Result <sup>[1]</sup> | Test Method <sup>[2]</sup> | Sample Date and Times <sup>[3]</sup> | Uncertainty <sup>[4]</sup> |
|---------------------------------|-------------------------------------|------------------------------------------|------------------|-----------------------|----------------------------|--------------------------------------|----------------------------|
| R1, R2, R3, R4<br>BH1, BH2, BH3 | methane<br>carbon dioxide<br>oxygen | To be agreed in accordance with IC1<br>- |                  |                       |                            |                                      |                            |

For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Date.....