

## Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

**Sundorne Products (Llanidloes) Limited** 

Bryn Posteg Landfill Tylwch Road Llanidloes Powys SY18 6JJ

Permit number

EPR/BU7766IC

# Bryn Posteg Landfill Permit number EPR/BU7766IC

## Introductory note

#### This introductory note does not form a part of the permit

The main features of the permit are as follows.

This permit varies and consolidates all existing permits allowing the disposal of up to 75,000 tonnes of non-hazardous waste in the existing site. In addition the permit will control the related activities of landfill gas extraction and treatment and leachate management.

This permit allows the following activities to carried out within the permitted boundary:

- Physico-chemical treatment of non hazardous waste prior to disposal.
- Biological treatment of waste arising from waste treatment area prior to disposal.
- Biological treatment of leachate arising from the landfill.
- Incineration of "Grade A" waste wood and shredded pallets in a Small Waste incincerator with a capacity of 250 kg/hr.
- Flaring of landfill gas.
- Discharge of leachate to foul sewer.
- Other Directly Associated Activities.

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

| Status log of the permit            |  |                         |  |
|-------------------------------------|--|-------------------------|--|
| Description                         | Date                                   | Comments                |  |
| ApplicationBU7766                   | Received 22/04/03                      | Duly made 02/05/03      |  |
| Response to request for information | Request<br>Schedule 4<br>dated 6/07/03 | Response dated 31/07/03 |  |

| Status log of the permit Description | Date                                  | Comments   |
|--------------------------------------|---------------------------------------|--|
| Response to request for information  | Schedule 4<br>dated 11/08/03          | Response dated 05/09/03                            |
|                                      | Follow-up<br>Letter dated<br>21/10/03 | Response dated 30/11/03<br>Response dated 29/12/03 |
|                                      | Follow-up<br>Letter dated<br>22/12/03 | Response dated 05/01/04<br>Response dated 20/01/04 |
|                                      | Follow-up<br>Letter dated<br>23/02/04 | Response dated 27/02/04                            |
|                                      | Follow-up<br>Letter dated<br>02/03/04 | Response dated 11/03/04                            |
| Response to request for information  | Letter dated<br>03/06/03              |  |
|                                      | Schedule 4<br>dated 19/09/03          | Response dated 01/10/03                            |
|                                      | Letter dated<br>19/11/03              | Response dated 20/11/03                            |
|                                      | Follow-up<br>Letter dated<br>22/12/03 | Response dated 03/02/04                            |
| Response to request for information  | Letter dated<br>11/09/03              | Response dated 17/09/03                            |
|                                      | Schedule 4<br>dated 14/10/03          | Response dated 27/10/03<br>Response dated 22/12/03 |
|                                      | Letter dated<br>12/01/04              |  |
|                                      | Follow-up<br>Letter dated<br>04/02/04 | Response dated 18/02/04<br>Response dated 23/02/04 |
| Response to request for information  | Letter dated 22/09/03                 | Response dated 01/10/03                            |
|                                      |                                       | CQA Plan received dated 20/01/04                   |
|                                      | Letter dated 02/03/04                 | Response dated 11/03/04<br>Response dated 12/05/04 |

| Status log of the permit                    | Dete  | Commonto   |
|---|---|--|
| Description                                 | Date  | Comments   |
| Response to request for information         | Letter dated 26/09/03                           | Response dated 20/10/03  |
| Response to request for information         | Schedule 4<br>dated 19/11/03                    | Response dated 15/12/03  |
|   | Follow-up<br>Letter dated<br>22/12/03           | Response dated 07/01/04  |
|   | Letter dated<br>27/01/04                        | Response dated 29/01/04  |
|   | Follow-up<br>letter dated                       | Response dated 11/03/04  |
|   | 02/03/04  | Leachate management plan dated March 2004  |
| Response to request for information         | E-mail dated<br>15/09/03                        | Response by e-mail dated 26/09/03  |
|   | Further E-mail dated 25/09/03                   | Response dated 04/11/03  |
|   | Letter dated 22/12/03                           | Response dated 09/01/04  |
| Response to request for information         | Letter dated<br>19/11/03                        | Response dated 27/11/03  |
|   | Financial Provision – Commercially confidential | Follow-up Response dated 05/12/03  |
|   | Letter dated<br>16/12/04                        | Response dated 17/02/04  |
| Response to request for information - odour | Meeting of the 05/04/04                         | Appendix 1 & 2 dated 16/04/04  Odour Management Plan dated 14/05/04  Appendix 3 dated 17/05/04 |
| Request to extend determination             | Request dated 06/04/04                          | Request accepted 07/04/04  |
| Request to extend determination             | Request dated 07/05/04                          | Request accepted 10/05/04  |
| Request to extend determination             | Request dated 20/05/04                          | Request accepted 24/05/04  |
| Request to extend determination             | Request dated 28/05/04                          | Request accepted 01/05/04  |
| Request to extend determination             | Request dated 11/06/04                          | Request accepted 14/06/04  |
| Permit determined                           | Issued<br>15/06/04                              |  |

| Status log of the permit              |                            | 2   |
|---------------------------------------|----------------------------|---|
| Description                           | Date                       | Comments  |
| Partial Transfer Application          | Received 10<br>March 2005  | Additional information received 18/03/05        |
|                                       |                            | Duly Made 18 April 2005                         |
|                                       |                            | Additional information received 21/04/05        |
| Request for further Information       | Meeting of the 03/05/05 in | Response dated 10/05/05                         |
|                                       | connection to              | Response dated 25/05/05                         |
|                                       | the Gas                    |   |
|                                       | Engine permit              |   |
| New Permit (TP3736SQ) for Gas         | Issued 15                  |   |
| Engine                                | June 2005                  |   |
| Variation (HP3536SG) to Permit BU7766 | Issued 15<br>June 2005     |   |
|                                       | Issued 26                  |   |
| New Template Variation Determined     | March 2007                 |   |
| LP3739ME                              | March 2007                 |   |
| Variation TP3331LJ to Permit          | Issued 15 April            |   |
| BU7766                                | 2009                       |   |
| Variation (DP3131ST) to Permit        | Request dated              |   |
| BU7766IC                              | 02/02/10                   | Decrease received via arreit from Devid         |
| Additional Information Received       | 27/02/10                   | Response received via email from David Williams |
| Additional Information Received       | 09/03/10                   | Response received via email from David Williams |
| Additional Information Received       | 14/05/10                   | Response received via email from David Williams |
| Additional Information Received       | 20/05/10                   | Response received via email from David Williams |
| Variation EPR/BU7766IC/V004           | Issued                     |   |
| determined                            | 03/12/10                   |   |
| Agency variation determined           | Issued                     | Agency variation to implement the               |
| EPR/BU7766IC/V006                     | 21/03/13                   | changes introduced by IED                       |
| Additional information received in    | 11/09/17                   | Operator comments on draft permit,              |
| relation to NRW led variation         |                            | updated operating techniques and                |
|                                       |                            | updated drawings provided                       |
| NRW variation determined              | 16/10/17                   | Consolidated permit issued to Sundorne          |
| EPR/BU7766IC/V007                     |                            | Products (Llanidloes) Limited                   |

| Other Part A installation permits relating to this installation |          |          |  |
|---|----------|----------|--|
| Operator Permit number Date of issue                            |          |          |  |
| Sundorne Products (Llanidloes) Limited                          | RP3338TA | 05/05/10 |  |

End of introductory note

## **Permit**

The Environmental Permitting (England and Wales) Regulations 2010

Permit number EPR/BU7766IC

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BU7766IC/V007authorising,

Sundorne Products (Llanidloes) Limited ("the operator"),

whose registered office is

Potters House Henfaes Lane Welshpool Powys SY21 7BE

company registration number 03353423

to operate an installation at

Bryn Posteg Landfill Tylwch Road Llanidloes Powys SY18 6JJ

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

| Signed          | Date     |
|-----------------|----------|
| Stephen Attwood | 16/10/17 |

Authorised on behalf of Natural Resources Wales

### **Conditions**

## 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 Finance

- 1.2.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the operator and Natural Resources Wales 21<sup>st</sup> June 2006 shall be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by Natural Resources Wales.
- 1.2.2 The financial provision provided under condition 1.2.1 above shall thereafter be maintained by the operator throughout the subsistence of the permit and the Operator shall produce evidence of such provision whenever required by Natural Resources Wales.
- 1.2.3 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 1.2.1; and
  - (c) the estimated costs for the closure and aftercare of the landfill.

## 1.3 Energy efficiency

- 1.3.1 The operator shall:
  - (a) take appropriate measures to ensure that energy is used efficiently in the activites;
  - (b) Review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
  - (c) Implement any appropriate measures identified by a review.

#### 1.4 Efficient use of raw materials

#### 1.4.1 The operator shall:

- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
- (b) maintain records of raw materials and water used in the activities;
- (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- (d) take any further appropriate measures identified by a review.

## 1.5 Avoidance, recovery and disposal of wastes produced by the activities

#### 1.5.1 The operator shall:

- take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;
- (b) review and record at least every four years whether changes to those measures should be made; and
- (c) take any further appropriate measures identified by a review.

## 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 red on the site plan at schedule 7 to this permit, excluding the area hatched red identified as "MRF" in Schedule 7.

## 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 Natural Resources Wales.

- (b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 2.3.2 Waste shall only be accepted for treatment if:
  - (a) it is of a type and quantity listed in schedule 2 table S2.3, S2.4; and
  - (b) it conforms to the description in the documentation supplied by the producer and holder.
  - (c) it is only processed in the activities specified in Table S1.1.
- 2.3.3 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
  - (a) the nature of the process producing the waste;
  - (b) the composition of the waste;
  - (c) the handling requirements of the waste;
  - (d) the hazardous property associated with the waste, if applicable; and
  - (e) the waste code of the waste.
- 2.3.4 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

### 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 Natural Resources Wales.

## 2.5 Landfill Engineering

- 2.5.1 No construction of any new cell of the landfill shall commence until the operator has submitted construction proposals and Natural Resources Wales has confirmed that it is satisfied with the construction proposals.
- 2.5.2 Where the operator proposes to construct any new cell other than the first cell, but proposes no change from the design of the most recently approved cell which could have any impact on the performance of any element of the design, no construction of the new cell shall commence until the operator has submitted a cell layout drawing and Natural Resources Wales has confirmed that it is satisfied with the cell layout drawing.
- 2.5.3 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 Natural Resources Wales.

- 2.5.4 No disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and Natural Resources Wales has confirmed that it is satisfied with the CQA Validation Report.
- 2.5.5 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 Natural Resources Wales has confirmed that it is satisfied with the construction proposals.
- 2.5.6 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 Natural Resources Wales.
- 2.5.7 The operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant landfill infrastructure.
- 2.5.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.5.5 and 2.5.6 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to Natural Resources Wales as soon as practicable.
- 2.5.9 For the purposes of conditions 2.5.1,2.5.2, 2.5.4 and 2.5.5, Natural Resources Wales 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.
- 2.5.10 Where Natural Resources Wales has required further information under condition 2.6.9(b), Natural Resources Wales 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 Wastes shall only be accepted for disposal if:
  - (a) they are listed in schedule 2, and
  - (b) they are non- hazardous waste, and
  - (c) they are not whole used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm), and
  - (d) they are not shredded used tyres, and
  - they are not liquid waste (including waste waters but excluding sludge[and excluding liquid waste accepted at a permitted leachate treatment activity), and
  - (f) they are not chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown, and

- (g) all the relevant waste acceptance procedures have been completed, and
- (h) they fulfil the relevant waste acceptance criteria, and
- (i) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria, and
- (j) they are wastes which have been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment, [or liquid waste accepted for treatment at a permitted leachate treatment activity, and
- (k) where they are wastes with a code beginning with 07 05 and 16 03, they shall exclude waste medicinal products and pharmaceutically active waste materials arising from their manufacture.
- 2.6.2 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;
  - (c) waste at the point of dispatch

and shall satisfy itself that it conforms to the basic characterisation documentation submitted by the holder.

- 2.6.3 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.
- 2.6.4 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 presettlement levels shown on drawing DRWG9.
- 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 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.

#### 2.7 Leachate levels

2.7.1 The limits for the level of leachate listed in schedule 3 table S3.1 shall not be exceeded.

#### 2.8 Closure and aftercare

2.8.1 The operator shall maintain a closure and aftercare management plan.

#### 2.9 Landfill gas management

- 2.9.1 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; and
  - (b) control the migration of landfill gas.
- 2.9.2 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 the gas.
- 2.9.3 The operator shall:
  - (b) if notified by Natural Resources Wales, submit to Natural Resources Wales 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 Natural Resources Wales.

## 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 Table S3.2 shall not be exceeded, save that compliance with an emission limit in that table shall include incorporation of the uncertainty allowance stated in Environment Agency guidance LFTGN 05 and LFTGN 08.
- 3.1.3 There shall be no emission from the activities into groundwater of any hazardous substances contrary to the EP Regulations.
- 3.1.4 There shall be no emission from the activities into groundwater of any non-hazardous pollutants so as to cause pollution.
- 3.1.5 The trigger levels for emissions into groundwater for the parameters and monitoring points set out in schedule 3 table S3.5 shall not be exceeded.
- 3.1.6 The operator shall submit to Natural Resources Wales 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.
- 3.1.7 The limits for landfill gas arising from the installation set out in schedule 3, tables S3.6 and S3.7 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 Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
- (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 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 Natural Resources Wales, 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 Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
  - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

#### 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 Natural Resources Wales, 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 Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
  - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

#### 3.5 Pests

- 3.5.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.5.2 The operator shall:
  - if notified by Natural Resources Wales, submit to Natural Resources Wales for approval within the period specified, a pests management plan which identifies and minimises risks of pollution, hazard or annoyance from pests;
  - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by Natural resources Wales

#### **3.6** Fire

- 3.6.1 The operator shall manage and operate the activities in accordance with a written fire prevention plan using the current, relevant fire prevention plan guidance.
- 3.6.2 The operator shall:
  - (a) if notified by Natural Resources Wales that the activities could cause a fire risk, submit to Natural Resources Wales a fire prevention plan which identifies and minimises the risks of fire;
  - (b) Operate the activity in accordance with the fire prevention plan, from the date of submission, unless otherwise agreed in writing by Natural Resources Wales.

## 3.7 Monitoring

- 3.7.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, 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 S3.9;
  - (b) Point source emissions specified in tables S3.2, S3.3 and S3.4;
  - (c) Groundwater specified in tables S3.5 and S3.11;
  - (d) Landfill gas specified in tables S3.6, S3.7 and S3.8;
  - (e) Surface water specified in table S3.10.
- 3.7.2 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.
- 3.7.3 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

- (a) following closure of the landfill or part of the landfill.
- 3.7.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2, S3.3, S3.4, S3.5, S3.6, S3.7, S3.8, S3.9, S3.10 and S3.11 unless otherwise agreed in writing by Natural Resources Wales.

### 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 Natural Resources Wales, 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;

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 Natural Resources Wales.

## 4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) each year. The report(s) shall include as a minimum:
  - 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 installation and any agreed amendments thereto;

- (b) the energy consumed at the site, reported in the format set out in schedule 4 table \$4.3;
- (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 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;
- (g) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
- (h) details of compliance with the waste acceptance ratios set out in schedule 1 table \$1.6.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by Natural Resources Wales, 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 Within one month of the end of each quarter, the operator shall submit to Natural Resources Wales using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.
- 4.2.5 The operator shall, unless notice under this condition has been served within the preceding four years, submit to Natural Resources Wales, 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 (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
  - (i) inform Natural Resources Wales,
  - take the measures necessary to limit the environmental consequences of such an incident or accident, and
  - (iii) take the measures necessary to prevent further possible incidents or accidents;
  - (b) in the event of a breach of any permit condition the operator must immediately—

- (i) inform Natural Resources Wales, and
- (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, 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 Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 Natural Resources Wales 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.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 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) Natural Resources Wales 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.
- 4.3.6 Natural Resources Wales shall be given at least 14 days notice before implementation of any part of the site closure plan.

## 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**

| Activity listed in Schedule 1 of the EP Regulations   | Description of specified activity and WFD Annex I and II operations  | Limits of specified activity  |
|---|--|---|
| Section 5.2 Part A(1)(a)<br>The disposal of waste in a<br>landfill.   | Landfill for non-hazardous waste   | Receipt, handling, storage<br>and disposal of wastes,<br>consisting of the types and<br>quantities specified in<br>conditions 2.6, as an integral<br>part of landfilling.   |
|   |  | Waste types and quantities as specified in Table S2.2 and S1.4  |
| Section 5.4 Part A(1)(a)(i) Disposal of non-hazardous waste in a facility with a capacity exceeding 50 tonnes per day by biological treatment | D8 – biological treatment  | Biological treatment of waste arising from the waste treatment facility prior to disposal at landfill.  Treatment shall only take place within the area detailer on drawing reference 1878.A3  Waste types as specified in Table S2.3 |
| Section 5.4 Part A(1)(a)(ii) Disposal of non-hazardous waste in a facility with a capacity exceeding 50 tonnes per day by physico-chemical    | D9 – physical treatment consisting of sorting, shredding and chipping D15 – storage prior to treatment or disposal off site    | Receipt, handling and storage of wastes, consisting of the types specified in Table S2.4  |
| treatment.  |  | Treatment and storage shall<br>only take place within the<br>location detailed on drawing<br>reference 1878.A3  |
| Section 5.4 Part A(1)(a)(i) Disposal of non-hazardous waste in a facility with a capacity exceeding 50 tonnes per day by biological treatment | D8 – biological treatment D15 – storage prior to treatment or disposal off site  | Storage and treatment of leachate arising from the landfill.  |
| Section 5.1 Part B (a) (v) The incineration in a small waste incineration plant with an aggregate capacity of 50 kg or more                   | Incineration of "Grade A" waste wood<br>and shredded pallets in a Small<br>Waste incincerator with a capacity of<br>250 kg/hr. | Only shredded pallets / "Grade A" waste wood will be accepted 1. Its total thermal export is 920kW 2. Capacity of plant (tonnes per hour input) is 250kg  |
| Directly Associated Activity  |  |   |
| Landfill gas flaring  | Flaring of landfill gas for disposal in an appliance.  | Landfill gas arising from the landfill.   |
| Leachate discharges to foul sewers  | Discharge of leachate from the landfill  | From leachate management<br>system to point of entry to<br>public sewer   |
| Surface water management e.g. physico / chemical treatment of surface water .   | Storage and treatment of surface water   | Surface water arising from the permitted area.  |
| Water discharges to controlled waters.  | Treatment and discharge of site drainage from the installation.  | From surface water management system to poin of discharge to controlled waters.   |

| Table S1.1 activities                               |   |   |
|---|---|---|
| Activity listed in Schedule 1 of the EP Regulations | Description of specified activity and WFD Annex I and II operations | Limits of specified activity  |
| Fuel storage.                                       | Storage of fuel for operation of plant and equipment.               | Fuel storage tank.  |
| Storage and baling of waste tyres                   | Storage and baling of waste tyres.                                  | Waste tyres for use in landfill engineering on site.  |
|   |   | Baling shall only take place<br>within the location detailed<br>on drawing reference<br>1878.A3   |
|   |   | Tyre bales shall only be stored in the location detailed on drawing reference 1878.A3.1 Tyre bales shall be stored in accordance with procedure ref A1878/Bryn Posteg / Tyres Report/ Final |

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| Description  | Date Received |
|--|---------------|
| Letter from Enviroarm Ltd detailing mine shaft stability issues (GS/2)   | 25/10/2003    |
| Letter from Evans Logistics containing a response from Mouchel Parkman in connection with mineshaft issues (1003299/GS/CO)   | 29/01/2004    |
| H4 Odour management plan mnrev1  | 13/04/2004    |
| Revised closure and aftercare plan and surface emissions risk assessment 14/12/2005  | 14/12/2005    |
| Variation application reference DP3131ST including the following associated Documents  | 21/07/2005    |
| Leachate sewer management and monitoring plan (SewerMP2005v1)  | 21/07/2005    |
| Variation application Ref TP3331LJ Bryn Posteg Waste Treatment Facility - Response to Questions 2.1 to 2.2 of the Part B application form. Excluding operational techniques report dated May 07 Rev 1. | 07/05/2007    |
| Letter regarding Tyre storage proposals  | 18/12/2008    |
| PPC Variation Application Supporting Document: tyre storage. (Tyres report final: A1878.EA.HS.10.07.08)  | 10/07/2008    |
| Egniol; Opperating Techniques Report Rev2 Oct-08   | Oct-08        |
| Composting Management Plan   | 01/11/2008    |
| Accident Management Plan   | 01/11/2008    |
| Tributary to Nant y Bradnant - Water Quality Study: 1239.2.POT.JDM.ÅKS.A0  | 05/04/2011    |
| Caulmert Landfill Gas Management Plan (April 2012)   | 01/04/2012    |
| Caulmert; BAT review of biological treatment. 1464.01.POT.SR.AGS.A0  | 01/04/2012    |
| Surface Water Management Plan 1881.BP.PWM.01.A(0) (to be reviewd as required by Improvement Condition 2)   | 01/12/2013    |
| Odour Management Plan 1925.12.POT.JDM.SDB.A0 (review required by Improvement Condition 3)  | 01/10/2014    |
| Current Treatment Process, Process Upgrade and Implementation 2233.1.POT.ÅKS.JDM.A0  | 01/05/2015    |
| Caulmert; 2010 Hydrological Risk Assessment (HRA) 1148.HRA.SV.JRC.DH   | May-10        |

| Reference | Requirement  | Date     |
|-----------|--|----------|
| 1         | The operator shall provide an up to date site plan delineating landfill activities, MRF and Composting activities to Natural Resources Wales within one month of the variation being issued.   | 16/11/17 |
| 2         | The operator shall submit a monitoring plan demonstrating how monitoring of bioaerosols will be undertaken from the biological treatment of waste arising from the waste treatment facility. The monitoring procedures must be in accordance with Technical Guidance Note (Monitoring) M9 Environmental monitoring of bioaerosols at regulated facilities.  This information shall be provided within one month of the variation issue.  | 16/11/17 |
| 3         | Within one month of variation issue, the operator shall submit an updated odour management plan to Natural Resources Wales for approval. The plan must be prepared in accordance with Horizontal Guidance Note H4 – Odour Management and must contain proposals for the review, management and reduction of both point and diffuse sources of odour from the site, such as those arising from landfilling, biological treatment of fines and the treatment of leachate.  The operator must implement any improvements identified | 16/11/17 |
| 4         | in the odour management plan within 3 months of approval.  The Operator shall submit a H1 screening report and if necessary dispersion modelling for emissions form the Biomass Boiler. These predictions shall be used to propose appropriate emission limits.  | 16/12/17 |
|           | A report demonstrating how the Biomass Boiler complies with Best Available Techniques shall be provided.   |          |
|           | This information shall be provided within two months of variation issue.   |          |
| 5         | Within 2 months of the variation issue the operator shall submit an updated leachate management plan to Natural Resources Wales for approval. The plan must contain proposals for the monitoring, treatment, and management of leachate across all landfill phases / cells, including how leachate heads will be managed to the levels as required by the permit.  | 16/12/17 |
|           | The operator must implement any improvements identified in the leachate management plan within 3 months of approval.   |          |
| 6         | Within 3 months of the issue of this variation, the operator shall submit a review detailing an options appraisal for the remediation of landfill gas migration on phases 1 & 2 to Natural Resources Wales for approval. The proposal must contain details of the proposed remediation strategies and measures to comply with condition 3.1.7.   | 16/01/18 |
|           | The operator must implement the improvements as identified in the review within 9 months of approval.  |          |

| Reference | Requirement   | Date     |
|-----------|---|----------|
| 7         | Within 3 months of the issue of this variation, the operator shall submit a review for the improvement of the surface water management system to Natural Resources Wales for approval. The plan must contain a review of the existing arrangements and further measures that could be taken to ensure compliance with conditions 3.1.1 and 3.1.2. | 16/01/18 |
|           | The operator must implement the improvements identified in the review within 12 months of approval.   |          |
| 8         | The operator shall submit a Fire Prevention and Mitigation Plan for the Waste Treatment Plant, the Biological Waste Treatment Plant and the Biomass Boiler for approval. The Plan must be produced using Natural Resources Wales current guidance on Fire Prevention and Mitigation Plans   | 16/04/18 |
|           | The operator must submit the plan for approval within 6 months of the variation being issued.   |          |
| 9a        | The operator shall monitor on a monthly basis, for a period of 12 months, up stream water quality and flow from the new surface water discharge point SW3 as shown on plan 1009.REED.01.  | 16/10/18 |
| 9b        | Within 2 months of completing the 12 month monitoring programme, the operator shall statistically review the data obtained from 5a and submit a report to Natural Resources Wales for approval that identifies revised compliance limits. The determinants as specified in table S3.3 shall be included.  | 16/10/18 |

| Table S1.4 Annual waste input limits                    |                    |  |
|---|--------------------|--|
| Category  | Limit Tonnes/ Year |  |
| Non-hazardous waste                                     | 70,000             |  |
| Inert waste   | 5,000              |  |
| Waste treatment and biodegradable waste treatment plant | 75,000             |  |

## **Schedule 2 - List of permitted wastes**

| Maximum quantity | 75,000 tonnes per annum  |
|------------------|--|
| Waste code       | Description  |
| 01               | WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS  |
| 01.01            | waste from mineral excavation  |
| 01.01.01         | Wastes from mineral metalliferous excavation   |
| 01.01.02         | Wastes from mineral non-metalliferous excavation   |
| 01.03            | Wastes from physical and chemical processing of metalliferous minerals   |
| 01.03.06         | Tailings other than those mentioned in 01.03.04 and 01.03.05   |
| 01.03.08         | dusty and powdery wastes other than those mentioned in 01.03.07  |
| 01.04            | Wastes from physical and chemical processing of non-metalliferous minerals   |
| 01.04.08         | waste gravel and crushed rocks other than those mentioned in 01.04.07  |
| 01.04.09         | waste sand and clays   |
| 01.04.10         | dusty and powdery wastes other than those mentioned in 01.04.07  |
| 01.04.12         | 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  |
| 02               | WASTES FROM ARGICULTURE, HORTICULTURE, AQUACULTURE, FORESTR HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING   |
| 02.01            | waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing   |
| 02.01.01         | sludges from washing and cleaning  |
| 02.01.02         | animal-tissue waste  |
| 02.01.03         | plant-tissue waste   |
| 02.01.04         | waste plastics (except packaging)  |
| 02.01.06         | animal faeces, urine and manure (including spoiled straw), effluent, collected   |
|                  | separately and treated off-site  |
| 02.01.07         | wastes from forestry   |
| 02.01.09         | agrochemical waste other than those mentioned in 02.01.08  |
| 02.01.10         | waste metal  |
| 02.02            | wastes from the preparation and processing of meat, fish and other foods of animal origin  |
| 02.02.01         | sludges from washing and cleaning  |
| 02.02.02         | animal-tissue waste  |
| 02.02.03         | materials unsuitable for consumption or processing   |
| 02.02.04         | sludges from on-site effluent treatment  |
| 02.03            | wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation |
| 02.03.01         | sludges from washing, cleaning, peeling, centrifuging and separation   |
| 02 03 02         | Wastes from preserving agents  |
| 02 03 03         | Wastes from solvent extraction   |
| 02.03.04         | materials unsuitable for consumption or processing   |
| 02.03.05         | sludges from on-site effluent treatment  |
| 02.02            | wastes from the preparation and processing of meat, fish and other foods of animal origin  |
| 02.02.01         | sludges from washing and cleaning  |
| 02.02.02         | animal-tissue waste  |

| Maximum quantity | 75,000 tonnes per annum  |
|------------------|--|
| Waste code       | Description  |
| 02.02.03         | materials unsuitable for consumption or processing   |
| 02.02.04         | sludges from on-site effluent treatment  |
| 02.03            | wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco  |
|                  | preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation |
| 02.03.01         | sludges from washing, cleaning, peeling, centrifuging and separation   |
| 02.03.01         | Wastes from preserving agents  |
| 02 03 03         | Wastes from solvent extraction   |
| 02.03.04         | materials unsuitable for consumption or processing   |
| 02.03.05         | sludges from on-site effluent treatment  |
| 02.04            | wastes from sugar processing   |
| 02.04.01         | soil from washing and cleaning beet  |
| 02.04.02         | off-specification calcium carbonate  |
| 02.04.03         | sludges from on-site effluent treatment  |
| 02.05            | wastes from dairy products industry  |
| 02.05.01         | materials unsuitable for consumption or processing   |
| 02.05.02         | sludges from on-site effluent treatment  |
| 02.06            | wastes from the baking and confectionery industry  |
| 02.06.01         | materials unsuitable for consumption or processing   |
| 02 06 02         | Wastes from preserving agents  |
| 02.06.03         | sludges from on-site effluent treatment  |
| 02.07            | wastes from the production of alcoholic and non-alcoholic beverages (except  |
|                  | coffee, tea and cocoa)   |
| 02.07.01         | wastes from washing, cleaning and mechanical reduction of raw materials  |
| 02 07 02         | Wastes from spirit distillation  |
| 02.07.03         | wastes from chemical treatment   |
| 02 07 04         | Materials unsuitable for consumption or processing   |
| 02.07.05         | sludges from on-site effluent treatment  |
| 03               | WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD                          |
| 03.01            | wastes from wood processing and the production of panels and furniture   |
| 03.01.01         | waste bark and cork  |
| 03.01.05         | sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03.01.04                        |
| 03.03            | wastes from pulp, paper and cardboard production and processing  |
| 03.03.01         | waste bark and wood  |
| 03.03.02         | green liquor sludge (from recovery of cooking liquor)  |
| 03.03.05         | de-inking sludges from paper recycling   |
| 03.03.07         | mechanically separated rejects from pulping of waste paper and cardboard   |
| 03.03.08         | wastes from sorting of paper and cardboard destined for recycling  |
| 03.03.09         | lime mud waste   |
| 03.03.10         | fibre rejects, fibre-, filler- and coating-sludges from mechanical separation  |
| 03.03.11         | Sludges from on-site effluent treatment other than those mentioned in 03.03.10   |
| 04               | WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES  |
| 04.02            | wastes from the textile industry   |
| 04.02.09         | wastes from composite materials (impregnated textile, elastomer, plastomer)  |
| 04.02.10         | Organic matter from natural products (for example grease, wax)   |
| 04.02.15         | wastes from finishing other than those mentioned in 04.02.14   |

| Maximum quantity | 75,000 tonnes per annum   |
|------------------|---|
| Waste code       | Description   |
| 04.02.17         | dyestuffs and pigments other than those mentioned 04.02.16  |
| 04.02.20         | Sludges from on-site effluent treatment other than those mentioned in 04.02.19                      |
| 04.02.21         | wastes from unprocessed textile fibres  |
| 04.02.22         | wastes from processed textile fibres  |
| 06               | WASTES FROM INORGANIC CHEMICAL PROCESSES  |
| 06.05            | Sludges from on-site effluent treatment   |
| 06.05.03         | Sludges from on-site effluent treatment other than those mentioned in 06.05.02                      |
| 06.11            | wastes from the manufacture of inorganic pigments and opacificiers                                  |
| 06.11.01         | Calcium-based reaction wastes from titanium dioxide production                                      |
| )7               | WASTES FROM ORGANIC CHEMICAL PROCESSES  |
| 7.02             | wastes from the MFSU of plastics, synthetic rubber and man-made fibres                              |
| 07.02.12         | Sludges from on-site effluent treatment other than those mentioned in 07.02.11                      |
| 07.02.13         | waste plastic   |
| 07.02.15         | wastes from additives other than those mentioned in 07 02 14  |
| 07.02.17         | Wastes containing silicones other than those mentioned in 07 02 16                                  |
| 07.06            | waste from the MFSU of fats, grease, soap, detergents, disinfectants and cosmetics                  |
| 07.06.12         | Sludges from on-site effluent treatment other than those mentioned in 07.06.11                      |
| 08               | WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE  |
|                  | (MFSU) OF COATINGS (PAINTS, VARNISHERS AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS |
| 08.04            | wastes from MFSU of adhesives and sealants (including waterproofing products)                       |
| 08.04.10         | waste adhesives and sealants other than those mentioned in 08.04.09                                 |
| 08.04.12         | adhesive and sealant sludges other than those mentioned in 08.04.11                                 |
| 08.04.14         | aqueous sludges containing adhesives or sealants other than those                                   |
| 10               | WASTES FROM THERMAL PROCESSES   |
| 10.02            | waste from the iron and steel industry  |
| 10.02.01         | wastes from the processing of slag  |
| 10 02 02         | Unprocessed slag  |
| 10.02.08         | solid wastes from gas treatment other than those mentioned in 10.02.07                              |
| 10 02 10         | Mill scales   |
| 10.02.12         | waste from cooling-water treatment other than those mentioned in 10.02.11                           |
| 10.02.14         | Sludges and filter cakes from gas treatment other than those mentioned in 10.02.13                  |
| 10.02.15         | other sludges and filter cakes  |
| 10 03            | wastes from aluminium thermal metallurgy  |
| 10.03.02         | anode scraps  |
| 10.03.05         | waste alumina   |
| 10.03.16         | skimmings other than those mentioned in 10 03 15  |
| 10.03.18         | carbon-containing wastes from anode manufacture other than those mentioned in 10 03 17              |
| 10.03.20         | flue-gas dust other than those mentioned in 10 03 19  |
| 10.03.22         | other particulates and dust (including ball-mill dust) other than those mentioned in 10 03 21       |
| 10.03.24         | solid wastes from gas treatment other than those mentioned in 10 03 23                              |
| 10.03.26         | Sludges and filter cakes from gas treatment other than those mentioned in 10 03 25                  |
| 10.03.28         | wastes from cooling-water treatment other than those mentioned in 10 03 27                          |
| 10.03.30         | wastes from treatment of salt slags and black drosses other than those mentioned in 10 03 29        |
| 10.08            | wastes from other non-ferrous thermal metallurgy  |

| Maximum quantity | 75,000 tonnes per annum  |
|------------------|--|
| Waste code       | Description  |
| 10.08.04         | particulates and dust  |
| 10.08.09         | other slags  |
| 10.08.11         | dross and skimmings other than those mentioned in 10 08 10                                       |
| 10.08.13         | carbon-containing wastes from anode manufacture other than those mentioned in 10 08 12           |
| 10.08.14         | anode scrap  |
| 10.08.16         | flue-gas dust other than those mentioned in 10 08 15   |
| 10.08.18         | sludges and filter cakes from flue-gas treatment other than those mentioned in 10 08 17          |
| 10.08.20         | wastes from cooling-water treatment other than those mentioned in 10 08 19                       |
| 10.09            | wastes from casting of ferrous pieces  |
| 10.09.03         | furnace slag   |
| 10.09.06         | casting cores and moulds which have not undergone pouring other than those mentioned in 10.09.05 |
| 10.09.08         | casting cores and moulds which have undergone pouring other than those mentioned in 10.09.07     |
| 10.09.10         | flue-gas dust other than those mentioned in 10.09.09   |
| 10.09.12         | other particulates other than those mentioned in 10.09.11  |
| 10.09.14         | waste binders other than those mentioned in 10 09 13   |
| 10.09.16         | waste crack-indicating agent other than those mentioned in 10 09 15                              |
| 10.10            | wastes from casting of non-ferrous pieces  |
| 10.10.03         | furnace slag   |
| 10.10.06         | casting cores and moulds which have not undergone pouring other than those mentioned in 10.10.05 |
| 10.10.08         | casting cores and moulds which have undergone pouring other than those mentioned in 10.10.07     |
| 10.10.10         | flue-gas dust other than those mentioned in 10.10.09   |
| 10.10.12         | other particulates other than those mentioned in 10 10 11  |
| 10.10.14         | waste binders other than those mentioned in 10 10 13   |
| 10.10.16         | waste crack-indicating agent other than those mentioned in 10 10 15                              |
| 10.11            | wastes from manufacture of glass and glass products  |
| 10.11.03         | waste glass-based fibrous materials  |
| 10.11.05         | particulates and dust  |
| 10.11.10         | waste preparation mixture before thermal processing, other than those mentioned in 10.11.09      |
| 10.11.12         | waste glass other than those mentioned in 10.11.11   |
| 10.11.14         | glass-polishing and -grinding sludge other than those mentioned in 10.11.13                      |
| 10.11.16         | solid wastes from flue-gas treatment other than those mentioned in 10 11 15                      |
| 10.11.18         | sludges and filter cakes from flue-gas treatment other than those mentioned in 10.11.17          |
| 10.11.20         | solid wastes from on-site effluent treatment other than those mentioned in 10.11.19              |
| 10.12            | wastes from the manufacture of ceramic goods, bricks, tiles and construction products            |
| 10.12.01         | waste preparation mixture before thermal processing  |
| 10.12.03         | particulates and dust  |
| 10.12.05         | sludges and filter cakes from gas treatment  |
| 10.12.06         | discarded moulds   |
| 10.12.08         | waste ceramics, bricks, tiles and construction products (after thermal processing)               |
| 10.12.10         | solid waste from gas treatment other than those mentioned in 10.12.09                            |

| Table S2.2 Permitte | d waste types for disposal at landfill  |
|---------------------|---|
| Maximum quantity    | 75,000 tonnes per annum   |
| Waste code          | Description   |
| 10.12.12            | waste from glazing other than those mentioned in 10.12.11   |
| 10.12.13            | sludge from on-site effluent treatment  |
| 12                  | WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS                                |
| 12.01               | wastes from shaping and physical and mechanical surface treatment of metals and plastics                                |
| 12.01.01            | ferrous metal filings and turnings  |
| 12.01.02            | ferrous metal dust and particles  |
| 12.01.03            | non-ferrous metal filings and turnings  |
| 12.01.04            | non-ferrous metal dust and particles  |
| 12.01.05            | plastics shavings and turnings  |
| 12.01.13            | welding wastes  |
| 12.01.15            | machining sludges other than those mentioned in 12 01 14  |
| 12.01.17            | waste blasting material other than those mentioned in 12 01 16  |
| 12.01.21            | spent grinding bodies and grinding materials other than those mentioned in 12 01 20                                     |
| 15                  | WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED            |
| 15.01               | packaging (including separately collected municipal packaging waste)  |
| 15.01.01            | paper and cardboard packaging   |
| 15.01.02            | plastic packaging   |
| 15.01.03            | wooden packaging  |
| 15.01.04            | metallic packaging  |
| 15.01.05            | composite packaging   |
| 15.01.06            | mixed packaging   |
| 15.01.07            | glass packaging   |
| 15.01.09            | textile packaging   |
| 16                  | WASTES NOT OTHERWISE SPECIFIED IN THE LIST  |
| 16.01               | end-of-life vehicles form different means of transport (including off-road  |
|                     | machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16.06 and 16.08) |
| 16.01.06            | end-of-life vehicles, containing neither liquids nor other hazardous components   |
| 16.01.12            | brake pads other than those mentioned in 16 01 11   |
| 16.01.16            | tanks for liquefied gas   |
| 16.01.17            | ferrous metal   |
| 16.01.18            | non-ferrous metal   |
| 16.01.19            | plastic   |
| 16.01.20            | glass   |
| 16.01.22            | components not otherwise specified  |
| 16.02               | wastes from electrical and electronic equipment   |
| 16.02.14            | discarded equipment other than those mentioned in 16.02.09 to 16.02.13  |
| 16.02.16            | components removed from discarded equipment other than those mentioned in 16.02.15                                      |
| 16.03               | off-specification batches and unused products   |
| 16.03.04            | inorganic wastes other than those mentioned in 16.03.03   |
| 16.03.06            | organic wastes other than those mentioned in 16.03.05   |
| 16.06               | batteries and accumulators  |
| 16.05.05            | other batteries and accumulators non haz  |
| 16.11               | waste linings and refractories  |

|                  | d waste types for disposal at landfill  |
|------------------|---|
| Maximum quantity | 75,000 tonnes per annum   |
| Waste code       | Description   |
| 16.11.02         | carbon-based linings and refractories from metallurgical processes other than those mentioned in 16.11.01   |
| 16.11.04         | other linings and refractories from metallurgical processes other than those mentione in 16.11.03   |
| 16.11.06         | linings and refractories from non-metallurgical processes other than those mentioned in 16.11.05  |
| 17               | CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)   |
| 17.01            | concrete, bricks, tiles and ceramics  |
| 17.01.01         | concrete  |
| 17.01.02         | bricks  |
| 17.01.03         | tiles and ceramics  |
| 17.01.07         | mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17.01.06   |
| 17.02            | wood, glass and plastic   |
| 17.02.01         | wood  |
| 17.02.02         | glass   |
| 17.02.03         | plastic   |
| 17.03            | bituminous mixtures, coal tar and tarred products   |
| 17.03.02         | bituminous mixtures other than those mentioned in 17.03.01  |
| 17.04            | metals (including their alloys)   |
| 17.04.01         | copper, bronze, brass   |
| 17.04.02         | aluminium   |
| 17.04.03         | lead  |
| 17.04.04         | zinc  |
| 17.04.05         | iron and steel  |
| 17.04.06         | tin   |
| 17.04.07         | mixed metals  |
| 17.04.11         | cables other than those mentioned in 17.04.10   |
| 17.05            | soil (including excavated soil from contaminated sites), stones and dredging spoil  |
| 17.05.04         | soil and stones other than those mentioned in 17.05.03  |
| 17.05.06         | dredging spoil other than those mentioned in 17.05.05   |
| 17.05.08         | track ballast other than those mentioned in 17.05.07  |
| 17 06            | Insulation materials and asbestos-containing construction materials   |
| 17.06.04         | insulation materials other than those mentioned in 17.06.01 and 17.06.03  |
| 17.09            | other construction and demolition wastes  |
| 17.09.04         | mixed construction and demolition wastes other than those mentioned in 17.09.01, 17.09.02 and 17.09.03  |
| 19               | WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE |
| 19.01            | wastes from incineration or pyrolysis of waste  |
| 19.01.02         | ferrous materials removed from bottom ash   |
| 19.01.12         | bottom ash and slag other than those mentioned in 19.01.11  |
| 19.01.14         | fly ash other than those mentioned in 19.01.13  |
| 19.01.16         | boiler dust other than those mentioned in 19.01.15  |
| 19.01.18         | pyrolysis wastes other than those mentioned in 19.01.17   |
| 19.01.19         | sands from fluidised beds   |

|                  | d waste types for disposal at landfill   |
|------------------|--|
| Maximum quantity | 75,000 tonnes per annum  |
| Waste code       | Description  |
| 19.02            | wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)                     |
| 19.02.03         | premixed wastes composed only of non-hazardous wastes  |
| 19.02.06         | sludges from physico/chemical treatment other than those mentioned in 19.02.05   |
| 19.02.10         | combustible wastes other than those mentioned in 19.02.08 and 19.02.09   |
| 19.03            | stabilised/solidified wastes   |
| 19.03.05         | stabilised wastes other than those mentioned in 19.03.04   |
| 19.03.07         | solidified wastes other than those mentioned in 19.03.06   |
| 19.04            | vitrified waste and wastes from vitrification  |
| 19.04.01         | vitrified waste  |
| 19.05            | wastes from aerobic treatment of solid wastes  |
| 19.05.01         | non-composted fraction of municipal and similar wastes   |
| 19.05.02         | non-composted fraction of animal and vegetable waste   |
| 19.05.03         | off-specification compost  |
| 19.05.99         | wastes not otherwise specified   |
| 19.06            | wastes from anaerobic treatment of waste   |
| 19.06.04         | digestate from anaerobic treatment of municipal waste  |
| 19.06.06         | digestate from anaerobic treatment of animal and vegetable waste   |
| 19.08            | wastes from waste water treatment plants not otherwise specified   |
| 19.08.01         | screenings   |
| 19.08.02         | waste from desanding   |
| 19.08.05         | sludges from treatment of urban waste water  |
| 19.08.12         | Sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11                             |
| 19.08.14         | sludges from other treatment of industrial waste water other than those mentioned in 19.08.13                                  |
| 19.09            | wastes from the preparation of water intended for human consumption or water for industrial use                                |
| 19.09.01         | solid waste from primary filtration and screenings   |
| 19.09.02         | sludges from water clarification   |
| 19.09.03         | sludges from decarbonation   |
| 19.09.04         | spent activated carbon   |
| 19.09.05         | saturated or spent ion exchange resins   |
| 19.09.06         | solutions and sludges from regeneration of ion exchangers  |
| 19.10            | wastes from shredding of metal-containing wastes   |
| 19.10.01         | iron and steel waste   |
| 19.10.02         | non-ferrous waste  |
| 19.10.04         | fluff-light fraction and dust other than those mentioned in 19.10.03   |
| 19.10.06         | other fractions other than those mentioned in 19.10.05   |
| 19.11            | wastes from oil regeneration   |
| 19.11.06         | sludges from on-site effluent treatment other than those mentioned in 19.11.05   |
| 19.12            | wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified |
| 19.12.01         | paper and cardboard  |
| 19.12.02         | ferrous metal  |
| 19.12.03         | non-ferrous metal  |
| 19.12.04         | plastic and rubber   |
|                  | ·  |

| Maximum quantity | d waste types for disposal at landfill 75,000 tonnes per annum  |
|------------------|---|
| Waste code       | Description   |
| 19.12.07         | wood other than that mentioned in 19.12.06  |
| 19.12.08         | textiles  |
| 19.12.09         | minerals (for example sand, stones)   |
| 19.12.10         | combustible waste (refuse derived fuel)   |
| 19.12.12         | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19.12.11               |
| 19.13            | wastes from soil and groundwater remediation  |
| 19.13.02         | solid wastes from soil remediation other than those mentioned in 19.13.01   |
| 19.13.04         | sludges from soil remediation other than those mentioned in 19.13.03  |
| 19.13.06         | sludges from groundwater remediation other than those mentioned in 19.13.05   |
| 20               | MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS |
| 20.01            | separately collected fractions (except 15.01)   |
| 20.01.01         | paper and cardboard   |
| 20.01.02         | glass   |
| 20.01.08         | biodegradable kitchen and canteen waste   |
| 20.01.10         | clothes   |
| 20.01.11         | textiles  |
| 20.01.25         | edible oil and fat  |
| 20.01.28         | paint, inks, adhesives and resins other than those mentioned in 20.01.27  |
| 20.01.30         | detergents other than those mentioned in 20 01 29   |
| 20.01.32         | medicines other than those mentioned in 20 01 31  |
| 20.01.34         | batteries and accumulators other than those mentioned in 20.01.33   |
| 20.01.36         | discarded electrical and electronic equipment other than those mentioned in 20.01.21, 20.01.23 and 20.01.35                             |
| 20.01.38         | wood other than that mentioned in 20.01.37  |
| 20.01.39         | plastics  |
| 20.01.40         | metals  |
| 20.01.41         | wastes from chimney sweeping  |
| 20.02            | garden and park wastes (including cemetery waste)   |
| 20.02.01         | biodegradable waste   |
| 20.02.02         | soil and stones   |
| 20.02.03         | other non-biodegradable wastes  |
| 20.03            | other municipal wastes  |
| 20.03.01         | mixed municipal waste   |
| 20.03.02         | wastes from markets   |
| 20.03.03         | street-cleaning residues  |
| 20.03.04         | septic tank sludge  |
| 20.03.06         | waste from sewage-cleaning  |
| 20.03.07         | bulky waste   |

| Maximum quantity | 75,000 tonnes per annum. Figure is aggregated between biological treatment plan and physical treatment plant.  |
|------------------|--|
| Waste code       | Description  |
| 02               | WASTES FROM ARGICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING  |
| 02.01            | waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing   |
| 02.01.02         | animal-tissue waste  |
| 02.01.03         | plant-tissue waste   |
| 02.01.06         | animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site   |
| 02.01.07         | wastes from forestry   |
| 02.02            | wastes from the preparation and processing of meat, fish and other foods of anima origin   |
| 02.02.02         | animal-tissue waste  |
| 02.03            | wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobaccopreparation and processing; conserve production; yeast and yeast extrac production, molasses preparation and fermentation |
| 02.03.04         | materials unsuitable for consumption or processing   |
| 02.05            | wastes from dairy products industry  |
| 02.05.01         | materials unsuitable for consumption or processing   |
| 02.06            | wastes from the baking and confectionery industry  |
| 02.06.01         | materials unsuitable for consumption or processing   |
| 03               | WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD  |
| 03.01            | wastes from wood processing and the production of panels and furniture   |
| 03.01.01         | waste bark and cork  |
| 03.01.05         | sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03.01.04  |
| 03.03            | wastes from pulp, paper and cardboard production and processing  |
| 03.03.01         | waste bark and wood  |
| 03.03.07         | mechanically separated rejects from pulping of waste paper and cardboard   |
| 03.03.08         | wastes from sorting of paper and cardboard destined for recycling  |
| 03.03.10         | fibre rejects, fibre-, filler- and coating-sludges from mechanical separation  |
| 15               | WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED   |
| 15.01            | packaging (including separately collected municipal packaging waste)   |
| 15.01.01         | paper and cardboard packaging  |
| 15.01.03         | wooden packaging   |
| 17               | CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)  |
| 17.02            | wood, glass and plastic  |
| 17.02.01         | wood   |
| 19               | WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE                                      |
| 19.02            | Wastes from physico / chemical treatments of wastes (including dechromatation, decyanidation, neutralisation)  |
| 19.02.03         | Premixed wastes composed only of non-hazardous wastes  |
| 19.05            | wastes from aerobic treatment of solid wastes  |
| 19.05.01         | non-composted fraction of municipal and similar wastes   |
| 19.05.02         | non-composted fraction of animal and vegetable waste   |
| 19.05.03         | off-specification compost  |

| 19.05.99 | wastes not otherwise specified  |
|----------|---|
| 19.06    | Wastes from anaerobic treatment of waste  |
| 19.06.04 | digestate from anaerobic treatment of municipal waste   |
| 19.06.06 | digestate from anaerobic treatment of animal and vegetable waste  |
| 19.07    | Landfill leachate   |
| 19.07.03 | Landfill Leachate other than those mentioned in 19 07 02 (from the landfill site itself not offsite)                                    |
| 19.12    | wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified          |
| 19.12.01 | paper and cardboard   |
| 19.12.07 | wood other than that mentioned in 19.12.06  |
| 19.12.08 | textiles  |
| 19.12.09 | minerals (e.g. sand, stones)  |
| 19.12.10 | Combustible waste (refuse derived fuel)   |
| 19.12.12 | Other waste (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 19 12 11                 |
| 20       | MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS |
| 20.01    | separately collected fractions (except 15.01)   |
| 20.01.01 | paper and cardboard   |
| 20.01.08 | biodegradable kitchen and canteen waste   |
| 20.01.10 | clothes   |
| 20.01.11 | textiles  |
| 20.01.25 | edible oil and fat  |
| 20.01.38 | wood other than that mentioned in 20.01.37  |
| 20.02    | garden and park wastes (including cemetery waste)   |
| 20.02.01 | biodegradable waste   |
| 20.03    | other municipal wastes  |
| 20.03.01 | mixed municipal waste   |
| 20.03.02 | wastes from markets   |
| 20.03.03 | street-cleaning residues  |
| 20.03.07 | bulky waste   |
| ·        |   |

| Table S2.4 Permitted waste types accepted for physical chemical treatment |  |
|---|--|
| Maximum quantity  | 75,000 tonnes per annum. Figure is aggregated between biological treatment plant and physical treatment plant.     |
| Waste code  | Description  |
| 02  | WASTES FROM ARGICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING |
| 02.01   | waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing                                   |
| 02.01.03  | plant-tissue waste   |
| 02.01.07  | wastes from forestry   |
| 02.03.04  | materials unsuitable for consumption or processing   |
| 03  | WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD                  |
| 03.01   | wastes from wood processing and the production of panels and furniture   |
| 03.01.01  | waste bark and cork  |
| 03.01.05  | sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03.01.04                |
| 03.03   | wastes from pulp, paper and cardboard production and processing  |
| 03.03.01  | waste bark and wood  |
| 03.03.07  | mechanically separated rejects from pulping of waste paper and cardboard   |

| Table S2.4 Permitte | d waste types accepted for physical chemical treatment  |
|---------------------|---|
| Maximum quantity    | 75,000 tonnes per annum. Figure is aggregated between biological treatment plant and physical treatment plant.  |
| Waste code          | Description   |
| 03.03.08            | wastes from sorting of paper and cardboard destined for recycling   |
| 03.03.10            | fibre rejects, fibre-, filler- and coating-sludges from mechanical separation   |
| 15                  | WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED  |
| 15.01               | packaging (including separately collected municipal packaging waste)  |
| 15.01.01            | paper and cardboard packaging   |
| 15.01.03            | wooden packaging  |
| 17                  | CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)   |
| 17.02               | wood, glass and plastic   |
| 17.02.01            | wood  |
| 19                  | WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE |
| 19.02               | Wastes from physico / chemical treatments of wastes (including  |
|                     | dechromatation, decyanidation, neutralisation)  |
| 19.02.03            | Premixed wastes composed only of non-hazardous wastes   |
| 19.05               | wastes from aerobic treatment of solid wastes   |
| 19.05.99            | wastes not otherwise specified  |
| 19.06               | Wastes from anaerobic treatment of waste  |
| 19.06.04            | digestate from anaerobic treatment of municipal waste   |
| 19.06.06            | digestate from anaerobic treatment of animal and vegetable waste  |
| 19.12               | wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified  |
| 19.12.01            | paper and cardboard   |
| 19.12.07            | wood other than that mentioned in 19.12.06  |
| 19.12.08            | textiles  |
| 19.12.09            | minerals (e.g. sand, stones)  |
| 19.12.10            | Combustible waste (refuse derived fuel)   |
| 19.12.12            | Other waste (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 19 12 11   |
| 20                  | MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS                                 |
| 20.01               | separately collected fractions (except 15.01)   |
| 20.01.01            | paper and cardboard   |
| 20.01.38            | wood other than that mentioned in 20.01.37  |
|                     |   |

## Schedule 3 – Emissions and monitoring

| Monitoring point reference/ Description   | Limit               | Monitoring frequency | Monitoring method   |
|---|---------------------|----------------------|---|
| LCP1, LCP2, LCP3, LCP6, LCP7<br>and LCP8 LCP1, LCP2, LCP3,<br>LCP6, LCP7 and LCP8 | 1 m above sump base | Monthly              | As per LFTGN02 Guidance on the monitoring of landfill leachate, Groundwater |
| RMLP9A  |                     |                      | and surface water or as   |
| RMLP9B  |                     |                      | agreed in writing with  |
| RMLP9C  |                     |                      | Natural Resources   |
| RMLP9D  |                     |                      | Wales.  |
| As detailed in plan No 1168,  |                     |                      |   |
| GPM.MN06C   |                     |                      |   |

| Emission<br>point Ref. &<br>Location | Source                | Parameter                                 | Limit<br>(including<br>unit)              | Reference<br>Period | Monitoring<br>Frequency | Monitoring<br>Standard or<br>Method |
|--------------------------------------|-----------------------|---|---|---------------------|-------------------------|-------------------------------------|
| -                                    | Landfill gas<br>flare | Oxides of<br>Nitrogen                     | 150 mg/m <sup>3</sup>                     | Hourly mean         | Annually                | As per M2,<br>Version 11,           |
|                                      |                       | CO  | 50 mg/m <sup>3</sup>                      | _                   |                         | November                            |
|                                      |                       | Total VOCs                                | 10 mg/m <sup>3</sup>                      | _                   |                         | 2015.                               |
|                                      |                       | Operational<br>Temperature                | >1000°C                                   | _                   |                         | None<br>Specified                   |
|                                      | Oxides of<br>Nitrogen | To be confirmed following receipt of IC 4 | -   | -                   | -                       |                                     |
| Biomass<br>Boiler                    | Biomass<br>Boiler     | Particulate<br>Matter                     | To be confirmed following receipt of IC4  | -                   | -                       | -                                   |
|                                      |                       | SO <sub>2</sub>                           | To be confirmed following receipt of IC 4 | -                   | -                       |                                     |

Note: 1 Annual monitoring is only required when flare operates in excess of 10% of the time taken on annual assessment period.

|                                | Table S3.3 Point source emissions to water (other than sewer) – emission limits and monitoring requirements |                        |  |                     |                         |   |
|--------------------------------|---|------------------------|--|---------------------|-------------------------|---|
| Emission point Ref. & Location | Source  | Parameter              | Limit<br>(incl unit)                                 | Reference<br>Period | Monitoring<br>Frequency | Monitoring<br>Standard or<br>Method                               |
| P1, P2                         | Surface<br>water  | Ammoniacal<br>Nitrogen | 0.25 mg/l  | Spot<br>Sample      | Monthly                 | As per<br>LFTGN02<br>Guidance on<br>the monitoring<br>of landfill |
|                                | collection<br>system  | Suspended<br>Solids    | 50 mg/l  |                     |                         |   |
|                                |   | pН                     | 6-9  |                     |                         |   |
|                                |   | BOD                    | 20 mg/l  | -                   |                         | leachate,<br>Groundwater  |
| SW3                            | -   | Ammoniacal<br>Nitrogen | 1 mg/l<br>(limit to be<br>reviewed<br>under<br>IC9)  | -                   |                         | and surface water or as agreed in writing with Natural            |
|                                |   | Suspended<br>Solids    | 50 mg/l<br>(limit to be<br>reviewed<br>under<br>IC9) |                     |                         | Resources<br>Wales.   |
|                                |   | рН                     | 6-9  | _                   |                         |   |
|                                |   | BOD                    | To be<br>agreed<br>under IC9                         | -                   |                         |   |

| Emission point Ref. & Location | Source             | Parameter  | Limit<br>(incl<br>unit) | Referenc<br>e Period | Monitoring<br>Frequency | Monitoring<br>Standard or<br>Method   |
|--------------------------------|--------------------|--|-------------------------|----------------------|-------------------------|---|
| point where the trea           | Leachate treatment | Ammoniacal<br>Nitrogen   | 150<br>mg/l             | Spot<br>Sample       | Monthly                 | As per LFTGN02 Guidance on the monitoring of landfill leachate, Groundwater and surface water or as agreed in writing with Natural Resources Wales. |
|                                | plant              | Suspended solids   | 500<br>mg/l             |                      |                         |   |
| enters a shared sewer          |                    | COD  | 1000<br>mg/l            |                      |                         |   |
|                                |                    | Sulphate   | 1000<br>mg/l            |                      |                         |   |
|                                |                    | Soluble CH <sub>4</sub>  | 0.14<br>mg/l            |                      |                         |   |
|                                | Oils               | Nil  | _                       |                      |                         |   |
|                                |                    | рН   | 6-10                    |                      |                         |   |
|                                |                    | Temperature  | Less<br>than<br>43°C    |                      |                         |   |
|                                |                    | Priority hazardous substances identified to be present within the leachate |                         | _                    | 6-monthly               | _   |

Note: 2 Monitoring point is considered the same effluent quality as emission point because no other inputs present in sewer pipe between the 2 points. As confirmed in writing from the operator on 20<sup>th</sup> May 2010.

| Monitoring point reference | Parameter                  | Limit<br>(including<br>unit) | Reference<br>Period   | Monitoring frequency | Monitoring<br>standard or<br>method   |
|----------------------------|----------------------------|------------------------------|-----------------------|----------------------|---|
| W1 – W10                   | Ammoniacal<br>Nitrogen – N | 2 mg/l                       | Spot Sample Quarterly | As per<br>LFTGN02    |   |
|                            | Cadmium                    | 0.0056 mg/l                  |                       |                      | Guidance on<br>the monitoring<br>of landfill<br>leachate,<br>Groundwater<br>and surface<br>water or as<br>agreed in<br>writing with |
|                            | Chloride                   | 69 mg/l                      |                       |                      |   |
|                            | Nickel                     | 0.12 mg/l                    |                       |                      |   |
|                            | Toluene                    | 0.004 mg/l                   |                       |                      |   |
|                            | Xylene                     | 0.003 mg/l                   |                       |                      |   |
|                            | Zinc                       | 0.85 mg/l                    |                       |                      |   |
|                            | Ethylbenzene               | 0.001 mg/l                   |                       |                      |   |
|                            | Mecoprop                   | 0.0001 mg/l                  |                       | Natural              |   |
|                            | 2-4 D                      | 0.0001 mg/l                  | -                     |                      | Resources<br>Wales.   |

| Monitoring point Ref.<br>/description  | Parameter           | Limit<br>(including<br>units) | Monitoring frequency | Monitoring standard or<br>method         |
|--|---------------------|-------------------------------|----------------------|--|
| All peripheral landfill gas<br>boreholes identified on<br>drawing No. 1168.GPM | Methane             | 1 %v/v                        | Monthly              | As per LFTGN 07<br>Version 2, March 2011 |
|  | Carbon Dioxide      | 1.5 %v/v                      | _                    |  |
|  | Oxygen              | no limit                      |                      |  |
|  | Atmospheric         |                               |                      |  |
| On site Weather Station  | pressure            | NIa liasit                    | Monthly              |  |
|  | Temperature         | - No limit                    |                      |  |
|  | Meteorological data | _                             |                      |  |

| Monitoring point Ref. /description | Parameter                                       | Limit (including unit)                                 | Monitoring frequency  | Monitoring Standard or<br>method   |
|------------------------------------|---|--|-----------------------|--|
| Permanently capped zone            | Average methane flux and total methane emission | Average zone<br>emission rate of 0.001<br>mg/m²/second | Annually              | Flame ionisation detector walkover, flux box or as otherwise agreed in writing with NRW. |
|                                    |   |  |                       | Alternatively As per LFTGN 07 Version 2, March 2011                                      |
| Temporarily capped zone            | Average methane flux and total methane emission | Average zone<br>emission rate of 0.1<br>mg/m²/second   | Annually <sup>1</sup> | Flame ionisation detector walkover, flux box or as otherwise agreed in writing with NRW. |
|                                    |   |  |                       | Alternatively As per LFTGN 07 Version 2, March 2011                                      |

<sup>&</sup>lt;sup>1</sup> Annual monitoring only required when flare operates in excess of 10% of the time, taken on an annual assessment period.

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

| Emission point reference or source or description of point of measurement | Parameter   | Monitoring frequency              | Monitoring<br>standard or<br>method | Other specifications  |  |
|---|---|-----------------------------------|-------------------------------------|---|--|
| Gas collection system   | Methane Carbon Dioxide Oxygen Carbon Monoxide Hydrogen sulphide Atmospheric pressure Differential pressure Meteorological Data      | Monthly                           | LFTGN 03                            | Where the Oxygen level exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken. Additionally where the concentration of carbor monoxide exceeds 100ppm then further investigation shall be |  |
| First EMS unit  | Methane Carbon Dioxide Oxygen Gas flow rate or suction  | Continuous<br>when<br>operational | LFTGN 03                            | undertaken or where the addition of the Carbon Dioxide and Methane percentages is less than 80% an assessment of air ingress into the system shall be undertaken.   |  |
| Input to LFG Utilisation<br>Compound                                      | Trace gas analysis in accordance with LFTGN04.  | Annually                          | LFTGN04<br>version 3.0<br>(2010)    | The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling.  |  |
| Input to LFG Utilisation<br>Compound                                      | Methane Carbon Dioxide Oxygen Gas flow rate % Balance Gas (calculated as the difference between the sum of measured gases and 100%) | Weekly                            | LFTGN04<br>version 3.0<br>(2010)    | Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken.  |  |

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| Emission point reference or source or description of point of measurement | Parameter  | Monitoring frequency | Monitoring<br>standard or<br>method     | Other specifications |
|---|--|----------------------|---|----------------------|
| LCP1, LCP2, LCP3, LCP6,<br>LCP7 and LCP8                                  | pH,  | Monthly              | As per<br>LFTGN02<br>Guidance on<br>the | -                    |
| RMLP9B  |  |                      | monitoring of                           |                      |
| RMLP9C  |  |                      | landfill                                |                      |
| RMLP9D  |  |                      | leachate,<br>Groundwater                |                      |
| As detailed in plan No 1168, GPM.MN06C                                    |  |                      | and surface water or as agreed in       |                      |
| LCP1, LCP2, LCP3, LCP6,<br>LCP7 and LCP8                                  | Cadmium,<br>Chromium, Copper,<br>Zinc, Lead, Nickel, | 6 monthly            | writing with<br>Natural                 |                      |
| RMLP9A  | Cyanide, EC, NH4-N,                                  |                      | Resources<br>Wales.                     |                      |
| RMLP9B  | TON, TOC, BOD,                                       |                      | vvaloo.                                 |                      |
| RMLP9C  | COD, Ca, Mg etc                                      |                      |   |                      |
| RMLP9D  |  |                      |   |                      |
| As detailed in plan No 1168,<br>GPM.MN06C                                 |  |                      |   |                      |
| LCP1, LCP2, LCP3, LCP6,<br>LCP7 and LCP8                                  | List 1 screen  | Annually             | _                                       |                      |
| RMLP9A  |  |                      |   |                      |
| RMLP9B  |  |                      |   |                      |
| RMLP9C  |  |                      |   |                      |
| RMLP9D  |  |                      |   |                      |
| As detailed in plan No 1168, GPM.MN06C                                    |  |                      |   |                      |

| Table S3.10 Groundwater – oth   | er monitoring requiren                                   | nents                |                                     |                                     |
|---|--|----------------------|-------------------------------------|-------------------------------------|
| Emission point reference or source or description of point of measurement | Parameter  | Monitoring frequency | Monitoring<br>standard or<br>method | Other specifications                |
| Bh1/1999, BH2 A/03, BH4,  | Water Level (mAOD)                                       | Weekly               | Spot Sample                         | As per LFTGN02                      |
| A/03, BH6/03, BH8/03, BH9/03,   | рН   | Monthly              |                                     | Guidance on the                     |
| BH10/03, BH11/03, BH107   | Temeprature (°C)   | Quarterly            | _                                   | monitoring of<br>landfill leachate, |
|   | Electrical<br>Conductivity                               | Monthly              | _                                   | Groundwater and surface water or as |
|   | Dissolved Oxygen   | Quarterly            | _                                   | agreed in writing                   |
|   | Sulphate (mg/l)  | Monthly              | _                                   | with Natural                        |
|   | Total alkalinity (mg/l) (as CaCO <sub>3</sub> at pH 4.5) | Quarterly            | _                                   | Resources Wales.                    |
|   | PAH  | Quarterly            | _                                   |                                     |
|   | BTEX   | Annually             | _                                   |                                     |
|   | K (mg/l)   | Quarterly            | _                                   |                                     |
|   | Ca (mg/l)  | Quarterly            | _                                   |                                     |
|   | Mg (mg/l)  | Quarterly            | _                                   |                                     |
|   | Fe (mg/l)  | Quarterly            | _                                   |                                     |
|   | Cr (mg/l)  | Quarterly            |                                     |                                     |

| Emission point reference or  | Parameter  | Monitoring | Monitoring            | Other          |
|--|--|------------|-----------------------|----------------|
| source or description of point of measurement  |  | frequency  | standard or<br>method | specifications |
|  | Cu (mg/l)  | Quarterly  |                       |                |
|  | Pb (mg/l)  | Quarterly  | _                     |                |
|  | Bicarbonate HCO <sub>3</sub> (mg/l)                                | Quarterly  | _                     |                |
|  | Nitrate (mg/l)   | Quarterly  | _                     |                |
|  | Arsenic (mg/l)   | Quarterly  | _                     |                |
|  | Cyanide (mg/l)   | Quarterly  |                       |                |
|  | Mercury (mg/l)   | Quarterly  | _                     |                |
|  | Antimoney (mg/l)   | Quarterly  | _                     |                |
|  | Selenium (mg/l)  | Quarterly  |                       |                |
|  | Managanese (mg/l)  | Quarterly  | _                     |                |
|  | Silver (mg/l)  | Quarterly  | _                     |                |
|  | Phenol (mg/l)  | Quarterly  | _                     |                |
|  | Na (mg/l)  | Quarterly  |                       |                |
| Bh1/1999, BH2 A/03, BH4,<br>A/03, BH6/03, BH8/03, BH9/03,<br>BH10/03, BH11/03, BH107 | Priority Hazardous<br>substances identified<br>within the leachate | Annually   | Spot Sample           | _              |

| Monitoring Point Ref. /Description                | Parameter             | Limit<br>(Including<br>Unit) | Reference<br>Period | Monitoring<br>Frequency   | Monitoring<br>Standard or Method |
|---|-----------------------|------------------------------|---------------------|---|----------------------------------|
| Perimeter of installation adjacent to valley View | Particulate matter    | 200<br>mg/m³/day             | -                   | Quarterly As agreed in wath NRW new phase of the site is being                            | As agreed in writing with NRW    |
|   | Particulate<br>matter | 200<br>mg/m³/day             | -                   |   |                                  |
| Perimeter of installation adjacent to Penybryn    | Particulate<br>matter | 200<br>mg/m³/day             | -                   | constructed dust monitoring shall take place continuously during construction activities. |                                  |

# **Schedule 4 - Reporting**

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

| Parameter   | Emission or monitoring            | Reporting period              | Period begins       |
|---|-----------------------------------|-------------------------------|---------------------|
|   | point/reference                   |                               |                     |
| _eachate levels   | Leachate abstraction              | Quarterly                     | 1 January           |
| As required by condition 3.6.1                                | points                            |                               | 1 April             |
|   |                                   |                               | 1 July              |
|   |                                   |                               | 1 October           |
| Emissions to air  | Landfill gas flare                | Quarterly                     | 1 January           |
| Parameters as required by condition                           |                                   |                               | 1 April             |
| 3.6.1   |                                   |                               | 1 July              |
|   |                                   |                               | 1 October           |
| Emissions to water  | P1 and P2                         | Quarterly                     | 1 January           |
| Parameters as required by condition                           |                                   |                               | 1 April             |
| 3.6.1   |                                   |                               | 1 July              |
|   |                                   |                               | 1 October           |
| Emissions to sewer.   | Discharge point to STW via        | Quarterly                     | 1 January           |
| Parameters as required by condition                           | pipeline                          |                               | 1 April             |
| 3.6.1   |                                   |                               | 1 July              |
|   |                                   |                               | 1 October           |
| Groundwater   | W1 to W10                         | Quarterly                     | 1 January           |
| Parameters as required by condition                           |                                   |                               | 1 April             |
| 3.6.1   |                                   |                               | 1 July              |
|   |                                   |                               | 1 October           |
| _andfill gas external monitoring                              | All peripheral landfill gas       | Quarterly                     | 1 January           |
| poreholes   | monitoring boreholes              |                               | 1 April             |
| Parameters as required by condition                           |                                   |                               | 1 July              |
| 3.6.1   |                                   |                               | 1 October           |
| Other Landfill gas monitoring                                 | Permanently and                   | Annually                      | 1 January           |
| Parameters as required by condition                           | temporarily capped cells          |                               |                     |
| 3.6.1   | Gas collection system             | Quarterly                     | 1 January           |
|   |                                   |                               | 1 April             |
|   |                                   |                               | 1 July              |
|   |                                   |                               | 1 October           |
|   | Imput to the landfill             | Annually                      | 1 January           |
|   | management compound               |                               |                     |
|   | Input to the landfill gas         | Quarterly                     | 1 January           |
|   | management compound               |                               | 1 April             |
|   | (continuous monitoring).          |                               | 1 July              |
|   | Sumamry dat only such as          |                               | 1 October           |
|   | max/min average and total         |                               |                     |
| Other leachate monitoring                                     | quantity  All leachate Menitoring | Every 6 months                | 1 January           |
| Other leachate monitoring Parameters as required by condition | All leachate Monitoring Points    | Every 6 months for parameters | 1 January<br>1 July |
| 3.6.1   | · Onto                            | monitored 6                   | i July              |
| 3.0.1   |                                   | monthly                       |                     |
|   |                                   | frequency and                 |                     |
|   |                                   | annually for                  |                     |
|   |                                   | parameters                    |                     |
|   |                                   | monitored on an               |                     |
|   |                                   | annual frequency              |                     |
| Hazardous substances Screen                                   | All leachate Monitoring           | Every 12 months               | 1 January           |
|   | Points                            |                               |                     |

| Parameter  | Emission or monitoring point/reference                        | Reporting period  | Period begins                               |
|--|---|---|---|
| Other groundwater monitoring Parameters as required by condition 3.6.1 | W1 to W10   | Every 3 months for parameters monitored a monthly or quarterly frequency and annually for parameters monitored on an annual frequency | 1 January<br>1 April<br>1 July<br>1 October |
| Particulate matter In ambient air as required by condition 3.6.1       | All monitoring points as<br>shown in plan<br>No.1168.GPM.MN07 | Quarterly   | 1 January<br>1 April<br>1 July<br>1 October |

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

| 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 F | orms  |              |
|------------------------|---|--------------|
| Media/parameter        | Reporting Format  | Date of Form |
| Leachate               | Form leachate 1 or other reporting format to be agreed in writing with Natural Resources Wales    | 16/10/17     |
| Air                    | Form Air 1 or other reporting format to be agreed in writing with Natural Resources Wales         | 16/10/17     |
| Controlled water       | Form Water 1 or other reporting format to be agreed in writing with Natural Resources Wales       | 16/10/17     |
| Groundwater            | Form Groundwater 1 or other reporting format to be agreed in writing with Natural Resources Wales | 16/10/17     |
| Sewer                  | Form Sewer 1 or other reporting format to be agreed in writing with Natural Resources Wales       | 16/10/17     |
| Landfill gas           | Form LFG 1 or other reporting format to be agreed in writing with Natural Resources Wales         | 16/10/17     |

| Media/parameter                                   | Reporting Format   | Date of Form |
|---|--|--------------|
| Particulate matter                                | Form Particulate 1 or other reporting format to be agreed in writing with Natural Resources Wales                                      | 16/10/17     |
| Waste Return                                      | Waste tonnage return form from the Natural<br>Resources Wales website or other form as<br>agreed in writing by Natural Resources Wales | 16/10/17     |
| Landfill topographical surveys and interpretation | Reporting format to be agreed in writing with<br>Natural Resources Wales   | 16/10/17     |

### **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, visions of

| supplied on a separate sheet and acc<br>the EP Regulations. | companied by an application for commercial confidentiality under the pro- |
|---|---|
| Part A  |   |
| Permit Number   |   |
| Name of operator  |   |
| Location of Facility  |   |
|   |   |
| Time and date of the detection                              |   |
|   |   |
| (a) Notification requirements for a                         | any activity that gives rise to an incident or accident which             |
| significantly affects or may signif                         | ficantly affect the environment   |
|   | To be notified Immediately  |
| 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 permit condition  |
|   | To be notified immediately  |
| 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

| (c) In the event of a breach of permit condition which poses an immediate danger to human health |  |  |  |  |
|--|--|--|--|--|
| or threatens to cause an immediate significant adverse effect on the environment:                |  |  |  |  |
| To be notified immediately   |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Notification period

Part B to be supplied as soon as practicable

| Name*     |  |
|-----------|--|
| Post      |  |
| Signature |  |
| Date      |  |

<sup>\*</sup> authorised to sign on behalf of the operator

Parameter

## **Schedule 6 - Interpretation**

"annually" means once every year.

"authorised officer" means any person authorised by Natural Resources Wales 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.

"Cell layout drawing" means:

- (a) A drawing or drawings of the proposed new cell that illustrate(s) in sufficient detail:
  - i. the location of the new cell on the site;
  - ii. the proposed level (Above Ordnance Datum) of the base of the excavation;
  - iii. the proposed finished levels of all containment and leachate drainage layers;
  - iv. the positions of leachate management infrastructure; and
  - v. the positions of landfill gas infrastructure (if appropriate).
- (b) A detailed written explanation of any minor design changes from the most recently approved cell that result from the new cell layout. This would include, for example:
  - i. changes to slope length and gradient within the cell;
  - ii. new leachate or landfill gas infrastructure construction design;
  - iii. slope stability issues such as new basal excavation level; and/or
  - iv. depth of waste.

"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.

"D" means a disposal operation provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

"hazardous property" has the meaning in Annex III of the Waste Framework Directive

"hazardous waste" has the meaning given in the Hazardous Waste (Wales) Regulations 2005 (as amended)

"hazardous substance" means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008

"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;
- lining within the installation.

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.

"LFTGN 07" means Environment Agency Guidance on monitoring landfill gas surface emissions.

"LFTGN 08" means Environment Agency Guidance for monitoring landfill gas engines...

"Medicinal product" means any medicine licensed by the Medicines and Healthcare products Regulatory Agency (MHRA) of their predecessors under the Medicines Act 1968, section 130.

"M2" means Environment Agency Guidance Monitoring of stack emissions to air.

"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.

"Pests" means Birds, Vermin and Insects.

"R" means a recovery operation provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

"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.

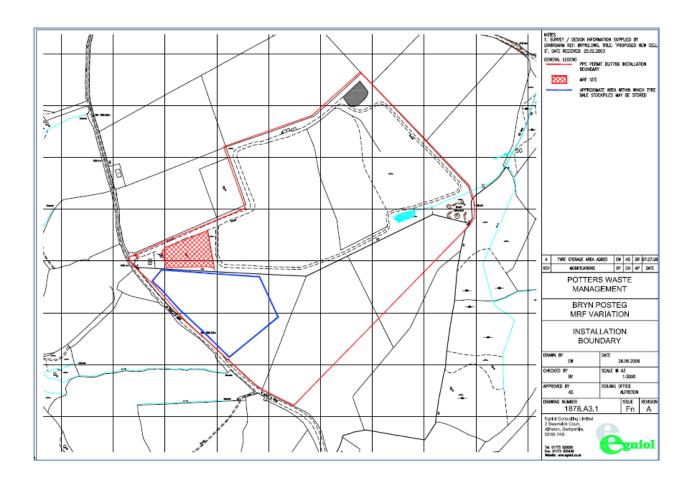
""Waste code" means the six digit code referable to a type of waste in accordance with the list of wastes established by Commission Decision 2000/532/EC as amended from time to time (the 'List of Wastes Decision') and in relation to hazardous waste, includes the asterisk.

"Waste Framework Directive" or "WFD" means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste.

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



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END OF PERMIT

Facility: Bryn Posteg Landfill Form Number: Air1 / 16/10/17

#### Reporting of emissions to air for the period from DD/MM/YYYY to DD/MM/YYYY

|                   |  | <b>Emission</b>       |                  |            |                               |   |                               |
|-------------------|--|-----------------------|------------------|------------|-------------------------------|---|-------------------------------|
| Emission<br>Point | Substance /<br>Parameter   | Limit Value           | Reference Period | Result [1] | Test<br>Method <sup>[2]</sup> | Sample<br>Date and Times <sup>[3]</sup> | Uncertainty<br><sup>[4]</sup> |
| Flare             | Oxides of<br>nitrogen (NO and<br>NO <sub>2</sub> expressed as<br>NO <sub>2</sub> ) | 150 mg/m <sup>3</sup> | 1 hour period    |            |                               |   |                               |
| A1                | Carbon<br>monoxide   | 50 mg/m <sup>3</sup>  | 1 hour period    |            |                               |   |                               |
| A1                | Total VOCs   | 10 mg/m <sup>3</sup>  | 1 hour period    |            |                               |   |                               |

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

| Signed   | Date |
|--|------|
| (Authorised to sign as representative of Operator) |      |

<sup>[1]</sup> 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.

<sup>[2]</sup> Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with Natural Resources Wales is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

<sup>[3]</sup> 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.

| Permit Number: | BU7766IC | Operator: | Sundorne Products ( | (Llanidloes) | ) Ltd |
|----------------|----------|-----------|---------------------|--------------|-------|
|                |          |           |                     |              |       |

Facility: Bryn Posteg Landfill Form Number: Water1 / 16/10/17

#### Reporting of emissions to water (other than to sewer) and land for the period from DD/MM/YYYY to DD/MM/YYYY

|                   |                          | <b>Emission</b> |                  |            |                               |   |                               |
|-------------------|--------------------------|-----------------|------------------|------------|-------------------------------|---|-------------------------------|
| Emission<br>Point | Substance /<br>Parameter | Limit Value     | Reference Period | Result [1] | Test<br>Method <sup>[2]</sup> | Sample<br>Date and Times <sup>[3]</sup> | Uncertainty<br><sup>[4]</sup> |
|                   | Ammoniacal<br>Nitrogen   | 0.25 mg/l       | Spot Sample      |            |                               |   |                               |
| D4 D2             | Suspended Solids         | 50 mg/l         | Spot Sample      |            |                               |   |                               |
| P1, P2            | рН                       | 6-9             | Spot Sample      |            |                               |   |                               |
|                   | BOD                      |                 | Spot Sample      |            |                               |   |                               |
| W1                | Ammoniacal<br>Nitrogen   | 1 mg/l          | Spot Sample      |            |                               |   |                               |
|                   | Suspended Solids         | 50 mg/l         | Spot Sample      |            |                               |   |                               |
|                   | рН                       | 6 - 9           | Spot Sample      |            |                               |   |                               |
|                   | BOD                      |                 | Spot Sample      |            |                               |   |                               |

<sup>[1]</sup> 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.

| [4] | The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated. |
|-----|--|
|     |  |

| Signed |  | Date |
|--------|--|------|
|        | (Authorised to sign as representative of Operator) |      |

<sup>[2]</sup> Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with Natural Resources Wales is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

<sup>[3]</sup> 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.

Facility: Bryn Posteg Landfill Form Number: Sewer1 / 16/10/17

#### Reporting of emissions to sewer for the period from DD/MM/YYYY to DD/MM/YYYY

|                   |                                     | <b>Emission</b>   |                  |            |                               |   |                               |
|-------------------|-------------------------------------|-------------------|------------------|------------|-------------------------------|---|-------------------------------|
| Emission<br>Point | Substance /<br>Parameter            | Limit Value       | Reference Period | Result [1] | Test<br>Method <sup>[2]</sup> | Sample<br>Date and Times <sup>[3]</sup> | Uncertainty<br><sup>[4]</sup> |
|                   | Ammoniacal<br>Nitrogen              | 150 mg/l          | Spot Sample      |            |                               |   |                               |
| point where the   | Suspended solids                    | 500 mg/l          | Spot Sample      |            |                               |   |                               |
| pumped            | COD                                 | 1000 mg/l         | Spot Sample      |            |                               |   |                               |
| treated           | Sulphate                            | 1000 mg/l         | Spot Sample      |            |                               |   |                               |
| leachate          | Soluble CH4                         | 0.14 mg/l         | Spot Sample      |            |                               |   |                               |
| effluent          | Oils                                | None              | Spot Sample      |            |                               |   |                               |
| enters a shared   | рН                                  | 6 – 10            | Spot Sample      |            |                               |   |                               |
| sewer<br>S1<br>S1 | Temperature                         | Less than<br>43°C | Spot Sample      |            |                               |   |                               |
|                   | Priority<br>hazardous<br>substances |                   | Spot Sample      |            |                               |   |                               |

<sup>[1]</sup> 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.

| Signed   | Date |
|--|------|
| (Authorised to sign as representative of Operator) |      |

<sup>[2]</sup> Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with Natural Resources Wales is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

<sup>[3]</sup> 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.

| Energy Source                   | Energy Usage                        |                         | Specific Usage    |
|---------------------------------|-------------------------------------|-------------------------|-------------------|
| Energy course                   | Quantity                            | Primary Energy<br>(MWh) | (MWh/unit output) |
|                                 |                                     |                         |                   |
| 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 :           |                                     |                         |                   |
|                                 |                                     |                         |                   |
|                                 |                                     |                         |                   |
|                                 |                                     |                         |                   |
|                                 |                                     |                         |                   |

Sundorne Products (Llanidloes) Ltd

Energy1 / 16/101/17

Operator:

Form Number:

Permit Number:

Facility:

BU7766IC

Bryn Posteg Landfill

Facility: Bryn Posteg Landfill Form Number: Leachate 1 / 16/10/17

### Reporting of leachate monitoring for the period from DD/MM/YYYY to DD/MM/YYYY

| Monitoring<br>Point                                 | Substance /<br>Parameter | Compliance<br>limit    | Reference Period | Result <sup>[1]</sup> | Test<br>Method <sup>[2]</sup> | Sample<br>Date and Times <sup>[3]</sup> | Uncertainty<br><sup>[4]</sup> |
|---|--------------------------|------------------------|------------------|-----------------------|-------------------------------|---|-------------------------------|
| LCP1,<br>LCP2,<br>LCP3,<br>LCP6, LCP7<br>and LCP8   |                          |                        |                  |                       |                               |   |                               |
| RMLP9A<br>RMLP9B<br>RMLP9C<br>RMLP9D                | leachate head            | 1 m above cell<br>base | Monthly          |                       |                               |   |                               |
| As detailed<br>in plan No<br>1168,<br>GPM.MN06<br>C |                          |                        |                  |                       |                               |   |                               |

| Monitoring<br>Point   | Substance /<br>Parameter   | Compliance<br>limit | Reference Period | Result <sup>[1]</sup> | Test<br>Method <sup>[2]</sup> | Sample<br>Date and Times <sup>[3]</sup> | Uncertainty<br><sup>[4]</sup> |
|---|--|---------------------|------------------|-----------------------|-------------------------------|---|-------------------------------|
| LCP1,<br>LCP2,<br>LCP3,<br>LCP6, LCP7<br>and LCP8   |  |                     |                  |                       |                               |   |                               |
| RMLP9A<br>RMLP9B<br>RMLP9C<br>RMLP9D  | рН   |                     |                  |                       |                               |   |                               |
| As detailed<br>in plan No<br>1168,<br>GPM.MN06<br>C                                       |  |                     |                  |                       |                               |   |                               |
| LCP1,<br>LCP2,<br>LCP3,<br>LCP6, LCP7<br>and LCP8<br>RMLP9A<br>RMLP9B<br>RMLP9C<br>RMLP9D | Cadmium,<br>Chromium,<br>Copper, Zinc,<br>Lead, Nickel,<br>Cyanide, EC,<br>NH4-N, TON,<br>TOC, BOD, COD, |                     | 6 monthly        |                       |                               |   |                               |
| As detailed<br>in plan No<br>1168,<br>GPM.MN06<br>C                                       | Ca, Mg   |                     |                  |                       |                               |   |                               |

- [1] 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.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with Natural Resources Wales is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] 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.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

| Signed   | Date |
|--|------|
| (Authorised to sign as representative of Operator) |      |

Facility: Bryn Posteg Landfill Form Number: Groundwater1 / 16/10/17

#### Reporting of groundwater monitoring for the period from DD/MM/YYYY to DD/MM/YYYY

| Monitoring<br>Point | Substance /<br>Parameter                                   | Trigger level | Reference Period | Result <sup>[1]</sup> | Test<br>Method <sup>[2]</sup> | Sample<br>Date and Times <sup>[3]</sup> | Uncertainty<br>[4] |
|---------------------|--|---------------|------------------|-----------------------|-------------------------------|---|--------------------|
|                     | Ammoniacal<br>Nitrogen – N                                 | 2 mg/l        | Spot Sample      |                       |                               |   |                    |
|                     | Cadmium and its compounds, expressed as cadmium (Total Cd) | 0.0056 mg/l   | Spot Sample      |                       |                               |   |                    |
|                     | Chloride   | 69 mg/l       | Spot Sample      |                       |                               |   |                    |
| W1 – W10            | Nickel   | 0.12 mg/l     | Spot Sample      |                       |                               |   |                    |
|                     | Toluene  | 0.004 mg/l    | Spot Sample      |                       |                               |   |                    |
|                     | Xylene   | 0.003 mg/l    | Spot Sample      |                       |                               |   |                    |
|                     | Zinc   | 0.85 mg/l     | Spot Sample      |                       |                               |   |                    |
|                     | Ethylbenzene   | 0.001 mg/l    | Spot Sample      |                       |                               |   |                    |
|                     | Mecoprop   | 0.0001 mg/l   | Spot Sample      |                       |                               |   |                    |
|                     | 2-4 D  | 0.0001 mg/l   | Spot Sample      |                       |                               |   |                    |

<sup>[1]</sup> 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.

| [4] | The uncertainty | associated with | the quoted | result at the 95% | confidence interva | l, unless otherwise stated. |
|-----|-----------------|-----------------|------------|-------------------|--------------------|-----------------------------|
|-----|-----------------|-----------------|------------|-------------------|--------------------|-----------------------------|

| Signed | Date | (Authorised to sign as representative of Operator |
|--------|------|---|
|--------|------|---|

<sup>[2]</sup> Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with Natural Resources Wales is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

<sup>[3]</sup> 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.

Facility: Bryn Posteg Landfill Form Number: LFG1 / 16/10/17

#### Reporting of landfill gas monitoring for the period from DD/MM/YYYY to DD/MM/YYYY

| Monitoring<br>Point         | Substance /<br>Parameter | Compliance<br>limit | Reference Period | Result <sup>[1]</sup> | Test<br>Method <sup>[2]</sup> | Sample<br>Date and Times <sup>[3]</sup> | Uncertainty<br><sup>[4]</sup> |
|-----------------------------|--------------------------|---------------------|------------------|-----------------------|-------------------------------|---|-------------------------------|
| All peripheral landfill gas | methane                  | 1 % v/v             |                  |                       |                               |   |                               |
| boreholes identified on     | carbon dioxide           | 1.5 % v/v           | Monthly          |                       |                               |   |                               |
| drawing No.<br>1168.GPM     | oxygen                   | -                   |                  |                       |                               |   |                               |
|                             |                          |                     |                  |                       |                               |   |                               |
|                             |                          |                     |                  |                       |                               |   |                               |
|                             |                          |                     |                  |                       |                               |   |                               |

<sup>[1]</sup> 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.

| [4 | The uncertaint | ty associated with the | quoted result a | at the 95% confiden | ce interval, un | less otherwise stated. |
|----|----------------|------------------------|-----------------|---------------------|-----------------|------------------------|

| Signed   | Date |
|--|------|
| (Authorised to sign as representative of Operator) |      |

<sup>[2]</sup> Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with Natural Resources Wales is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

<sup>[3]</sup> 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.

Facility: Bryn Posteg Landfill Form Number: Particulate1 / 16/10/17

#### Reporting of particulates for the period from DD/MM/YYYY to DD/MM/YYYY

|  |                          | <b>Emission</b>       |                  |                       |                               |   |                               |
|--|--------------------------|-----------------------|------------------|-----------------------|-------------------------------|---|-------------------------------|
| Emission<br>Point                                  | Substance /<br>Parameter | Limit Value           | Reference Period | Result <sup>[1]</sup> | Test<br>Method <sup>[2]</sup> | Sample<br>Date and Times <sup>[3]</sup> | Uncertainty<br><sup>[4]</sup> |
| Perimeter of installation adjacent to valley View  | Particulate Matter       | 200 mg/m <sup>3</sup> | 24 hour          |                       |                               |   |                               |
| Perimeter of installation adjacent to Pant Rhoswen | Particulate Matter       | 200 mg/m <sup>3</sup> | 24 hour          |                       |                               |   |                               |
| Perimeter of installation adjacent to Penybryn     | Particulate Matter       | 200 mg/m <sup>3</sup> | 24 hour          |                       |                               |   |                               |

<sup>[1]</sup> 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.

| [4] | The uncertainty | y associated with th | e quoted resul | t at the 95% | confidence interval | , unless otherwise st | tated. |
|-----|-----------------|----------------------|----------------|--------------|---------------------|-----------------------|--------|

| Signed   | Date |
|--|------|
| (Authorised to sign as representative of Operator) |      |

<sup>[2]</sup> Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with Natural Resources Wales is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

<sup>[3]</sup> 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.