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Wales

# Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

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**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 consolidated permit allows the disposal of up to 75,000 tonnes of non-hazardous waste per annum in the existing site. The remaining capacity being 116,657 cubic metres. In addition the permit will continue to control the related activities of landfill gas extraction and leachate management.

This permit allows the following activities to be 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 waste wood, shredded pallets and straw in a Small Waste incinerator 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.

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application BU7766	Received 22/04/03	Duly made 02/05/03
Response to request for information	Request Schedule 4 dated 6/07/03	Response dated 31/07/03

## Status log of the permit

Description	Date	Comments
Response to request for information	Schedule 4 dated 11/08/03	Response dated 05/09/03
	Follow-up Letter dated 21/10/03	Response dated 30/11/03 Response dated 29/12/03
	Follow-up Letter dated 22/12/03	Response dated 05/01/04 Response dated 20/01/04
	Follow-up Letter dated 23/02/04	Response dated 27/02/04
	Follow-up Letter dated 02/03/04	Response dated 11/03/04
Response to request for information	Letter dated 03/06/03	
	Schedule 4 dated 19/09/03	Response dated 01/10/03
	Letter dated 19/11/03	Response dated 20/11/03
	Follow-up Letter dated 22/12/03	Response dated 03/02/04
Response to request for information	Letter dated 11/09/03	Response dated 17/09/03
	Schedule 4 dated 14/10/03	Response dated 27/10/03 Response dated 22/12/03
	Letter dated 12/01/04	
	Follow-up Letter dated 04/02/04	Response dated 18/02/04 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 Response dated 12/05/04

## Status log of the permit

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 dated 19/11/03	Response dated 15/12/03
	Follow-up Letter dated 22/12/03	Response dated 07/01/04
	Letter dated 27/01/04	Response dated 29/01/04
	Follow-up letter dated 02/03/04	Response dated 11/03/04 Leachate management plan dated March 2004
Response to request for information	E-mail dated 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 19/11/03	Response dated 27/11/03
	Financial Provision – Commercially confidential	Follow-up Response dated 05/12/03
	Letter dated 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 15/06/04	

## Status log of the permit

Description	Date	Comments
Partial Transfer Application	Received 10 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 connection to the Gas Engine permit	Response dated 10/05/05  Response dated 25/05/05
New Permit (TP3736SQ) for Gas Engine	Issued 15 June 2005	
Variation (HP3536SG) to Permit BU7766	Issued 15 June 2005	
New Template Variation Determined LP3739ME	Issued 26 March 2007	
Variation TP3331LJ to Permit BU7766	Issued 15 April 2009	
Variation (DP3131ST) to Permit BU7766IC	Request dated 02/02/10	
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 determined	Issued 03/12/10	
Agency variation determined EPR/BU7766IC/V006	Issued 21/03/13	Agency variation to implement the changes introduced by IED
Additional information received in relation to NRW led variation	11/09/17	Operator comments on draft permit, updated operating techniques and updated drawings provided
NRW variation determined EPR/BU7766IC/V007	16/10/17	Consolidated permit issued to Sundorne Products (Llanidloes) Limited
Permit variation application received EPR/BU7766IC/V009	12/04/2018	Variation application received
NRW initiated variation EPR/BU7766IC/V008	24/04/18	Natural Resources Wales led variation to correct admin errors in permit
NRW variation determined EPR/BU7766IC/V008	10/05/18	Consolidated permit issued to Sundorne Products (Llanidloes) Limited
Additional information received	10/08/2018	Landfill gas risk assessment and stability risk assessment
Additional Information Requested	19/09/2018	Proposed waste acceptance, hydrogeology, waste deposits for recovery

**Status log of the permit**

<b>Description</b>	<b>Date</b>	<b>Comments</b>
Additional information received	22/10/2018	Waste recovery plan, site plans, modelling files, site drainage and hydrogeology data
Additional information received	22/02/2019	Hydrogeological risk assessment and supporting information
Additional Information Requested	08/03/2019	Landfill gas management, leachate management and financial provision
Additional information received	10/05/2019	Financial Provision, expenditure plan, Leachate management plan, Landfill gas management plan, letter response to Schedule 5 notice
Additional Information Requested	29/05/2019	Capping Stability, Waste recovery plan, Pre settlement landfilling contours, final restoration contours
Additional information received	09/09/2019	Capping Stability, Waste recovery plan, Pre settlement landfilling contours, final restoration contours
Variation determined EPR/BU7766IC/V009	08/09/2020	Varied and consolidated permit issued
Permit variation application received EPR/BU7766IC/V010	27/05/2021	Variation application received
Additional information received	01/12/2021	Landfill gas perimeter boreholes information
Additional information received	30/3/2022	Relating to biomass boiler waste input, odour management for the leachate treatment plant and the trade effluent consent
Variation application determined	16/06/2022	Part varied permit issued

**Other permits relating to this installation**

<b>Operator</b>	<b>Permit number</b>	<b>Date of issue</b>
Sundorne Products (Llanidloes) Limited	RP3338TA	05/05/2010
Sundorne Products (Llanidloes) Limited	UP3995CV	25/05/2001
Sundorne Products (Llanidloes) Limited	CB3834RQ	22/03/2012

End of introductory note

# Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

**EPR/BU7766IC**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BU7766IC/V0010 authorising,

**Sundorne Products (Llanidloes) Limited** (“the operator”),

whose registered office is

**Potter 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

Holly Noble	16/06/2022
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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 4 September 2020 or other financial provision as subsequently agreed in writing with Natural Resources Wales, 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 activities;
  - (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:

- (a) 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 green on the site plan at schedule 7 to this permit, the site includes the leachate pipeline represented by a green line marking the route in a northerly direction to the town of Llanidloes.

## **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 Pre-operational conditions**

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

## **2.6 Landfill Engineering**

2.6.1 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.

2.6.2 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.

2.6.3 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.
- 2.6.4 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.
- 2.6.5 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.
- 2.6.6 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.
- 2.6.7 The operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant landfill infrastructure.
- 2.6.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.6.5 and 2.6.6 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.
- 2.6.9 For the purposes of conditions 2.6.1, 2.6.2, 2.6.4 and 2.6.5, 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.
- 2.6.10 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.

## 2.7 Waste acceptance

- 2.7.1 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

- (e) 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.
- 2.7.2 Wastes shall only be accepted for recovery if:
- (a) they are listed in schedule 2, Table S2.5; and
  - (b) they are deposited in accordance with the Waste Recovery Plan dated September 2019 reference 3428-CAU-XX-XX-RP-V-0314-A0-C2 or in accordance with other documents as agreed in writing with Natural Resources Wales.
- 2.7.3 The operator shall visually inspect:
- (a) without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill; and
  - (b) waste at the point of deposit;
  - (c) waste at the point of dispatch
- and shall satisfy itself that it conforms to the basic characterisation documentation submitted by the holder.
- 2.7.4 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.
- 2.7.5 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.
- 2.7.6 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing 3456-CAU-XX-XX-DR-G-1817 revision P01 dated 03.09.2019.
- 2.7.7 Waste shall only be deposited in the area shown to be uncapped on drawing 3428-BP-SRA-5-03 dated 09.07.2018.
- 2.7.8 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.5.

- 2.7.9 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.

## **2.8 Leachate levels**

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

## **2.9 Closure and aftercare**

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

## **2.10 Landfill gas management**

- 2.10.1 The operator shall take appropriate measures, including, but not limited to, those specified in the most recently approved landfill gas management plan, to:
- (a) collect landfill gas; and
  - (b) control the migration of landfill gas.
- 2.10.2 The operator shall use the collected landfill gas to produce electricity. If the collected landfill gas cannot be used, the operator shall flare the gas.
- 2.10.3 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 schedule 3 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 Environmental Permitting (England and Wales) Regulations 2016.
- 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.
- 3.1.8 The limits for particulate matter arising from the installation set out in schedule 3, table S3.11 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:
- (a) 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 S3.10;
  - (d) Landfill gas specified in tables S3.6, S3.7 and S3.8;
  - (e) Particulate matter specified in table S3.11.
  - (f) Bioaerosol monitoring specified in table S3.12
- 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
  - (c) following closure of the landfill or part of the landfill.
- 3.7.4 A topographical survey of the area shown to be uncapped on drawing 3428-BP-SRA-5-03 dated 09.07.2018, referenced to ordnance datum shall be carried out:
- (a) annually and not within five months of the topographical survey of the site referenced in condition 3.7.3 (a).
- 3.7.5 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) 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 S4.3;
- (c) the annual production/treatment set out in schedule 4 table S4.2;
- (d) the topographical surveys required by condition 3.7.3 other than those submitted as part of a CQA validation report or as detailed in condition 3.7.3 (a).;
- (e) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous 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) The report of the annual bioaerosol monitoring shall be reported in the format set out in schedule 4 table S4.3.

- 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.
- 4.2.6 Within 28 days of the topographical survey having been undertaken as detailed in condition 3.7.3(a) and in condition 3.7.4(a), the resulting plan shall be submitted to Natural Resources Wales.

### 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,
  - (ii) 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

**Table S1.1 activities**

<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity and WFD Annex I and II operations</b>	<b>Limits of specified activity</b>
Section 5.2 Part A(1)(a) The disposal of waste in a landfill.	Landfill for non-hazardous waste	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in condition 2.6, as an integral part of landfilling.  Waste types and quantities as specified in Table S2.2 and S1.5
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 detailed 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 treatment.	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 and storage shall only take place within the location detailed on drawing 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 and compost effluent generated at the on site composting facility.  Waste limited to leachate from Bryn Posteg Landfill and waste types listed in Table S2.6.
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, shredded pallets and waste straw in a Small Waste incinerator with a capacity of 250 kg/hr.	Only shredded pallets / "Grade A" waste wood or waste straw which conforms to waste codes 02 01 03 or 02 01 06 will be accepted 1. Its total thermal export is 920kW 2. Capacity of plant (weight per hour input) is 250kg

**Table S1.1 activities**

<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity and WFD Annex I and II operations</b>	<b>Limits of specified activity</b>
Deposit of waste for recovery	<p><b>R13:</b> Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)</p> <p><b>R5:</b> Recycling/ reclamation of other inorganic compounds</p> <p><b>R10:</b> Land treatment resulting in benefit to agriculture or ecological improvement</p>	<p>Receipt, handling, storage and recovery only of non-hazardous wastes, consisting of the types and quantities specified in condition 2.7. This waste operation shall consist of the permanent deposit of waste on or in land for the purpose of recovery only.</p> <p>This activity is subject to the specifications set out in the pre-operational condition in table S1.4.</p> <p>In any event the total quantity of waste used shall not exceed the amount needed to complete the recovery operation to the final levels shown on drawing 3456-CAU-XX-XX-DR-G-1813.</p> <p>Topsoil and peat shall only be used for the R10 activity in the final 0.5m thick layer to achieve the restoration profile shown on drawing 3456-CAU-XX-XX-DR-G-1813.</p>

**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 system to point of entry to 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 point of discharge to controlled waters.
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.	<p>Waste tyres for use in landfill engineering on site.</p> <p>Baling shall only take place within the location detailed on drawing reference 1878.A3</p> <p>Tyre bales shall only be stored in the location</p>

**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
		detailed on drawing reference 1878.A3.1 Tyre bales shall be stored in accordance with procedure ref A1878/Bryn Posteg / Tyres Report/ Final

**Table S1.2 Operating techniques**

Description	Date Received
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; Operating 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; BAT review of biological treatment. 1464.01.POT.SR.AGS.A0	01/04/2012
Current Treatment Process, Process Upgrade and Implementation 2233.1.POT.ÅKS.JDM.A0	01/05/2015
Surface Water Management Review, reference 3221-CAU-XX-XX-RP-V-0300-A0-C1	16/02/2018
Surface Water Management Plan, reference 3428-CAU-XX-XX-RP-V-0300	12/04/2018
Bioaerosol monitoring plan, reference 3033-CAU-XX-XX-RP-V-0304.AU-C2	08/06/2018
Odour Management Plan, reference 3033-CAU-XX-XX-RP-V-0303-A0-C3	12/07/2018
Variation application documents including Drawing 3428-BP-SRA-5-03 dated 09.07.2018	10/08/2018
Hydrogeological risk assessment	22/02/2019
Leachate management plan Reference 3428-CAU-XX-XX-RP-V-0304.A0-C3 and landfill gas management plan Reference 3428-CAU-XX-XX-RP-V-0303.A0-C4, and associated schedule 5 response.	10/05/2019
Fire prevention and mitigation plan	12/06/2018
Document entitled "Caulmert's response to NRW's Notice Requesting Further Information dated 29 <sup>th</sup> May 2019", Waste Recovery Plan dated September 2019, Drawing 3428-CAU-XX-XX-D-S-1810 revision P2 dated 13.08.2019, Drawing 3456-CAU-XX-XX-DR-G-1808 revision C4 dated 04.09.2019, Drawing 3456-CAU-XX-XX-DR-G-1813 Revision C4 dated 04.09.2019, and, Drawing 3456-CA, U-XX-XX-DR-G-1817 revision P01 dated 03.09.2019.	09/09/2019
Details of re-seeding of leachate treatment plant	30/03/2022
Procedure for biomass boiler fuel quality, delivery and storage	30/03/2022

**Table S1.3 Improvement programme requirements**

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.	Completed
2	<p>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.</p> <p>This information shall be provided within one month of the variation issue.</p>	Completed
3	<p>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.</p> <p>The operator must implement any improvements identified in the odour management plan within 3 months of approval.</p>	Completed
4	<p>The Operator shall submit a H1 screening report and if necessary dispersion modelling for emissions from the Biomass Boiler. These predictions shall be used to propose appropriate emission limits.</p> <p>A report demonstrating how the Biomass Boiler complies with Best Available Techniques shall be provided.</p> <p>This information shall be provided within two months of variation issue.</p>	Completed
5	<p>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.</p> <p>The operator must implement any improvements identified in the leachate management plan within 3 months of approval.</p>	Completed

**Table S1.3 Improvement programme requirements**

Reference	Requirement	Date
6	<p>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 &amp; 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.</p> <p>The operator must implement the improvements as identified in the review within 9 months of approval.</p>	Completed
7	<p>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.</p> <p>The operator must implement the improvements identified in the review within 12 months of approval.</p>	Progressed by enforcement notice
8	<p>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</p> <p>The operator must submit the plan for approval within 6 months of the variation being issued.</p>	Received 12/06/2018
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.	Refer to IC 11
9b	Within 2 months of completing the 12 month monitoring programme, the operator shall statistically review the data obtained from 9a 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.	Refer to IC 11
10	The operator shall prepare a report and submit it to Natural Resources Wales detailing the existing surface water management system. The report shall include a detailed description of all surface water drainage infrastructure and shall describe the operational performance of that infrastructure and the relevant management techniques. It shall also include a drawing or drawings showing the location and extent of all infrastructure.	8 October 2020



**Table S1.3 Improvement programme requirements**

Reference	Requirement	Date
11	The operator shall prepare a report and submit it to Natural Resources Wales detailing the proposed improvements to the surface water management system so as to achieve compliance with permit emission limits to surface water. This shall describe design changes and methodology proposed both during the operational phase and the closed phase of the landfill. The report shall include a detailed description of all surface water drainage infrastructure with accompanying design drawings as is proposed and shall describe the proposed operational performance of that infrastructure and the relevant management techniques. It shall also include a drawing or drawings showing the location and extent of all proposed infrastructure.	8 December 2020

**Table S1.4 Pre-operational Measures for Future Development**

Reference	Operation	Pre-operational Measures
1	Deposit of waste for recovery for waste types not specifically listed in table S2.5 of this permit	<p>The operator shall submit to Natural Resources Wales a waste recovery plan, and shall have approval in writing from Natural Resources Wales before undertaking this activity.</p> <p>This plan shall specify:</p> <ul style="list-style-type: none"> <li>• A description of the proposed work, including proposed contours/ final levels;</li> <li>• The obligation to carry out the work;</li> <li>• The purpose of depositing the waste;</li> <li>• The proposed waste types;</li> <li>• Explanation for how the waste is fit for the intended purpose;</li> <li>• Waste quantities to be deposited,</li> <li>• Justification for waste quantities;</li> <li>• Explanation of how wastes will replace need for non-waste materials;</li> <li>• Demonstrate that consideration has been given to depositing smaller quantity of waste;</li> <li>• Demonstrate that the waste will not cause environmental problems such as pollution;</li> <li>• Waste acceptance procedures;</li> <li>• If waste is to be stored prior to use, give details of maximum storage times.</li> </ul>
2	Deposit waste for disposal	The operator shall submit to Natural Resources Wales a procedure for confirming waste disposal contours are controlled to within those permitted, and shall receive approval in writing from Natural Resources Wales.
3	Deposit waste for disposal	<p>The operator shall submit to Natural Resources Wales a procedure(s) for waste acceptance. This should include:</p> <ul style="list-style-type: none"> <li>• Pre-acceptance basic characterisation, acceptance on site, checks and verification, rejection, through to disposal/or onward consignment.</li> <li>• All permitted waste activities, how waste is processed, tracked, and recorded through the different permitted activities.</li> <li>• Requirements for documentation/records.</li> <li>• Process of quarterly reporting of waste returns.</li> <li>• Roles &amp; responsibilities.</li> </ul> <p>The operator shall receive approval in writing from NRW that such procedure(s) provided are suitable prior to accepting waste.</p>
4	Deposit waste for disposal	The operator shall submit to Natural Resources Wales evidence that the waste acceptance procedure(s) above has been implemented prior to accepting waste. This should include training records to confirm those with responsibilities for waste acceptance have received appropriate training.
5	Deposit of waste codes 19 05 99 in the leachate treatment facility	<p>The operator shall to provide NRW with evidence that the trade effluent consent permits discharge of this waste following treatment to the sewer.</p> <p>The operator shall receive confirmation in writing of receipt of this evidence from NRW prior to depositing this waste in the leachate treatment facility.</p>

Table S1.5 Annual waste input limits	
Category	Limit Tonnes/ Year
Non-hazardous waste to landfill	75,000
Inert waste to landfill	
Waste treatment and biodegradable waste treatment plant	75,000
Waste for recovery	75,000

## Schedule 2 - List of permitted wastes

Table S2.2 Permitted waste types for disposal at landfill	
Maximum quantity	75,000 tonnes per annum
Waste code	Description
<b>01</b>	<b>WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS</b>
<b>01.01</b>	<b>waste from mineral excavation</b>
01.01.01	Wastes from mineral metalliferous excavation
01.01.02	Wastes from mineral non-metalliferous excavation
<b>01.03</b>	<b>Wastes from physical and chemical processing of metalliferous minerals</b>
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
<b>01.04</b>	<b>Wastes from physical and chemical processing of non-metalliferous minerals</b>
01.04.08	waste gravel and crushed rocks other than those mentioned in 01.04.07
01.04.09	waste sand and clays
01.04.10	dusty and powdery wastes other than those mentioned in 01.04.07
01.04.12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01.04.07 and 01.04.11
01.04.13	wastes from stone cutting and sawing other than those mentioned in 01.04.07
<b>02</b>	<b>WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING</b>
<b>02.01</b>	<b>waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing</b>
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
<b>02.02</b>	<b>wastes from the preparation and processing of meat, fish and other foods of animal origin</b>
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
<b>02.03</b>	<b>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</b>
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

**Table S2.2 Permitted waste types for disposal at landfill**

<b>Maximum quantity</b>	<b>75,000 tonnes per annum</b>
<b>Waste code</b>	<b>Description</b>
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
<b>02.04</b>	<b>wastes from sugar processing</b>
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
<b>02.05</b>	<b>wastes from dairy products industry</b>
02.05.01	materials unsuitable for consumption or processing
02.05.02	sludges from on-site effluent treatment
<b>02.06</b>	<b>wastes from the baking and confectionery industry</b>
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
<b>02.07</b>	<b>wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)</b>
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
<b>03</b>	<b>WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD</b>
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
<b>04</b>	<b>WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES</b>
<b>04.02</b>	<b>wastes from the textile industry</b>
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

**Table S2.2 Permitted waste types for disposal at landfill**

<b>Maximum quantity</b>	<b>75,000 tonnes per annum</b>
<b>Waste code</b>	<b>Description</b>
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
<b>06</b>	<b>WASTES FROM INORGANIC CHEMICAL PROCESSES</b>
<b>06.05</b>	<b>Sludges from on-site effluent treatment</b>
06.05.03	Sludges from on-site effluent treatment other than those mentioned in 06.05.02
<b>06.11</b>	<b>wastes from the manufacture of inorganic pigments and opacifiers</b>
06.11.01	Calcium-based reaction wastes from titanium dioxide production
<b>07</b>	<b>WASTES FROM ORGANIC CHEMICAL PROCESSES</b>
<b>07.02</b>	<b>wastes from the MFSU of plastics, synthetic rubber and man-made fibres</b>
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
<b>08</b>	<b>WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS</b>
<b>08.04</b>	<b>wastes from MFSU of adhesives and sealants (including waterproofing products)</b>
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
<b>10</b>	<b>WASTES FROM THERMAL PROCESSES</b>
<b>10.02</b>	<b>waste from the iron and steel industry</b>
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
<b>10 03</b>	<b>wastes from aluminium thermal metallurgy</b>
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
<b>10.08</b>	<b>wastes from other non-ferrous thermal metallurgy</b>

**Table S2.2 Permitted waste types for disposal at landfill**

<b>Maximum quantity</b>	<b>75,000 tonnes per annum</b>
<b>Waste code</b>	<b>Description</b>
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
<b>10.09</b>	<b>wastes from casting of ferrous pieces</b>
10.09.03	furnace slag
10.09.06	casting cores and moulds which have not undergone pouring other than those mentioned in 10.09.05
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
<b>10.10</b>	<b>wastes from casting of non-ferrous pieces</b>
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
<b>10.11</b>	<b>wastes from manufacture of glass and glass products</b>
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
<b>10.12</b>	<b>wastes from the manufacture of ceramic goods, bricks, tiles and construction products</b>
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 Permitted waste types for disposal at landfill**

<b>Maximum quantity</b>	<b>75,000 tonnes per annum</b>
<b>Waste code</b>	<b>Description</b>
10.12.12	waste from glazing other than those mentioned in 10.12.11
10.12.13	sludge from on-site effluent treatment
<b>12</b>	<b>WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS</b>
<b>12.01</b>	<b>wastes from shaping and physical and mechanical surface treatment of metals and plastics</b>
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
<b>15</b>	<b>WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED</b>
<b>15.01</b>	<b>packaging (including separately collected municipal packaging waste)</b>
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
<b>16</b>	<b>WASTES NOT OTHERWISE SPECIFIED IN THE LIST</b>
<b>16.01</b>	<b>end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16.06 and 16.08)</b>
16.01.06	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
<b>16.02</b>	<b>wastes from electrical and electronic equipment</b>
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
<b>16.03</b>	<b>off-specification batches and unused products</b>
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
<b>16.06</b>	<b>batteries and accumulators</b>
16.05.05	other batteries and accumulators non haz
<b>16.11</b>	<b>waste linings and refractories</b>



**Table S2.2 Permitted waste types for disposal at landfill**

<b>Maximum quantity</b>	<b>75,000 tonnes per annum</b>
<b>Waste code</b>	<b>Description</b>
16.11.02	carbon-based linings and refractories from metallurgical processes other than those mentioned in 16.11.01
16.11.04	other linings and refractories from metallurgical processes other than those mentioned in 16.11.03
16.11.06	linings and refractories from non-metallurgical processes other than those mentioned in 16.11.05
<b>17</b>	<b>CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)</b>
<b>17.01</b>	<b>concrete, bricks, tiles and ceramics</b>
17.01.01	concrete
17.01.02	bricks
17.01.03	tiles and ceramics
17.01.07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17.01.06
<b>17.02</b>	<b>wood, glass and plastic</b>
17.02.01	wood
17.02.02	glass
17.02.03	plastic
<b>17.03</b>	<b>bituminous mixtures, coal tar and tarred products</b>
17.03.02	bituminous mixtures other than those mentioned in 17.03.01
<b>17.04</b>	<b>metals (including their alloys)</b>
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
<b>17.05</b>	<b>soil (including excavated soil from contaminated sites), stones and dredging spoil</b>
17.05.04	soil and stones other than those mentioned in 17.05.03
17.05.06	dredging spoil other than those mentioned in 17.05.05
17.05.08	track ballast other than those mentioned in 17.05.07
<b>17.06</b>	<b>Insulation materials and asbestos-containing construction materials</b>
17.06.04	insulation materials other than those mentioned in 17.06.01 and 17.06.03
<b>17.09</b>	<b>other construction and demolition wastes</b>
17.09.04	mixed construction and demolition wastes other than those mentioned in 17.09.01, 17.09.02 and 17.09.03
<b>19</b>	<b>WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE</b>
<b>19.01</b>	<b>wastes from incineration or pyrolysis of waste</b>
19.01.02	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

**Table S2.2 Permitted waste types for disposal at landfill**

<b>Maximum quantity</b>	<b>75,000 tonnes per annum</b>
<b>Waste code</b>	<b>Description</b>
<b>19.02</b>	<b>wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)</b>
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
<b>19.03</b>	<b>stabilised/solidified wastes</b>
19.03.05	stabilised wastes other than those mentioned in 19.03.04
19.03.07	solidified wastes other than those mentioned in 19.03.06
<b>19.04</b>	<b>vitrified waste and wastes from vitrification</b>
19.04.01	vitrified waste
<b>19.05</b>	<b>wastes from aerobic treatment of solid wastes</b>
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
<b>19.06</b>	<b>wastes from anaerobic treatment of waste</b>
19.06.04	digestate from anaerobic treatment of municipal waste
19.06.06	digestate from anaerobic treatment of animal and vegetable waste
<b>19.08</b>	<b>wastes from waste water treatment plants not otherwise specified</b>
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
<b>19.09</b>	<b>wastes from the preparation of water intended for human consumption or water for industrial use</b>
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
<b>19.11</b>	<b>wastes from oil regeneration</b>
19.11.06	sludges from on-site effluent treatment other than those mentioned in 19.11.05
<b>19.12</b>	<b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>
19.12.01	paper and cardboard
19.12.02	ferrous metal
19.12.03	non-ferrous metal
19.12.04	plastic and rubber
19.12.05	glass

**Table S2.2 Permitted waste types for disposal at landfill**

<b>Maximum quantity</b>	<b>75,000 tonnes per annum</b>
<b>Waste code</b>	<b>Description</b>
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
<b>19.13</b>	<b>wastes from soil and groundwater remediation</b>
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
<b>20</b>	<b>MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS</b>
<b>20.01</b>	<b>separately collected fractions (except 15.01)</b>
20.01.01	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
<b>20.02</b>	<b>garden and park wastes (including cemetery waste)</b>
20.02.01	biodegradable waste
20.02.02	soil and stones
20.02.03	other non-biodegradable wastes
<b>20.03</b>	<b>other municipal wastes</b>
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

**Table S2.3 Permitted wastes for Biological Waste Treatment**

<b>Maximum quantity</b>	<b>75,000 tonnes per annum. Figure is aggregated between biological treatment plant and physical treatment plant.</b>
<b>Waste code</b>	<b>Description</b>
<b>02</b>	<b>WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING</b>
<b>02.01</b>	<b>waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing</b>
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
<b>02.02</b>	<b>wastes from the preparation and processing of meat, fish and other foods of animal origin</b>
02.02.02	animal-tissue waste
<b>02.03</b>	<b>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</b>
02.03.04	materials unsuitable for consumption or processing
<b>02.05</b>	<b>wastes from dairy products industry</b>
02.05.01	materials unsuitable for consumption or processing
<b>02.06</b>	<b>wastes from the baking and confectionery industry</b>
02.06.01	materials unsuitable for consumption or processing
<b>03</b>	<b>WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD</b>
<b>03.01</b>	<b>wastes from wood processing and the production of panels and furniture</b>
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
<b>03.03</b>	<b>wastes from pulp, paper and cardboard production and processing</b>
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
<b>15</b>	<b>WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED</b>
<b>15.01</b>	<b>packaging (including separately collected municipal packaging waste)</b>
15.01.01	paper and cardboard packaging
15.01.03	wooden packaging
<b>17</b>	<b>CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)</b>
<b>17.02</b>	<b>wood, glass and plastic</b>
17.02.01	wood
<b>19</b>	<b>WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE</b>
<b>19.02</b>	<b>Wastes from physico / chemical treatments of wastes (including dechromatation, decyanidation, neutralisation)</b>
19.02.03	Premixed wastes composed only of non-hazardous wastes
<b>19.05</b>	<b>wastes from aerobic treatment of solid wastes</b>
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
<b>19.06</b>	<b>Wastes from anaerobic treatment of waste</b>
19.06.04	digestate from anaerobic treatment of municipal waste
19.06.06	digestate from anaerobic treatment of animal and vegetable waste
<b>19.07</b>	<b>Landfill leachate</b>
19.07.03	Landfill Leachate other than those mentioned in 19 07 02 (from the landfill site itself not offsite)
<b>19.12</b>	<b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>
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
<b>20</b>	<b>MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS</b>
<b>20.01</b>	<b>separately collected fractions (except 15.01)</b>
20.01.01	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
<b>20.02</b>	<b>garden and park wastes (including cemetery waste)</b>
20.02.01	biodegradable waste
<b>20.03</b>	<b>other municipal wastes</b>
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**

<b>Maximum quantity</b>	<b>75,000 tonnes per annum. Figure is aggregated between biological treatment plant and physical treatment plant.</b>
<b>Waste code</b>	<b>Description</b>
<b>02</b>	<b>WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING</b>
<b>02.01</b>	<b>waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing</b>
02.01.03	plant-tissue waste
02.01.07	wastes from forestry
02.03.04	materials unsuitable for consumption or processing
<b>03</b>	<b>WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD</b>
<b>03.01</b>	<b>wastes from wood processing and the production of panels and furniture</b>
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
<b>03.03</b>	<b>wastes from pulp, paper and cardboard production and processing</b>
03.03.01	waste bark and wood
03.03.07	mechanically separated rejects from pulping of waste paper and cardboard

**Table S2.4 Permitted waste types accepted for physical chemical treatment**

<b>Maximum quantity</b>	<b>75,000 tonnes per annum. Figure is aggregated between biological treatment plant and physical treatment plant.</b>
<b>Waste code</b>	<b>Description</b>
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
<b>15</b>	<b>WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED</b>
15.01	packaging (including separately collected municipal packaging waste)
15.01.01	paper and cardboard packaging
15.01.03	wooden packaging
<b>17</b>	<b>CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)</b>
17.02	wood, glass and plastic
17.02.01	wood
<b>19</b>	<b>WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE</b>
<b>19.02</b>	<b>Wastes from physico / chemical treatments of wastes (including dechromatation, decyanidation, neutralisation)</b>
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
<b>19.12</b>	<b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>
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
<b>20</b>	<b>MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS</b>
<b>20.01</b>	<b>separately collected fractions (except 15.01)</b>
20.01.01	paper and cardboard
20.01.38	wood other than that mentioned in 20.01.37
<b>20.03</b>	<b>other municipal wastes</b>
20.03.01	mixed municipal waste

**Table S2.5 Permitted waste types for recovery**

<b>Waste code</b>	<b>Description</b>
<b>01</b>	<b>Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals</b>
<b>01 04</b>	<b>wastes from physical and chemical processing of non-metalliferous minerals</b>
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
<b>02</b>	<b>Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing</b>
<b>02 04</b>	<b>wastes from sugar processing</b>
02 04 01	soil from cleaning and washing beet
<b>17</b>	<b>Construction and demolition wastes (including excavated soil from contaminated sites)</b>
<b>17 05</b>	<b>soil (including excavated soil from contaminated sites), stones and dredging spoil</b>
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	Dredging spoil other than those mentioned in 17 05 05
<b>19</b>	<b>Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use</b>
<b>19 12</b>	<b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>
19 12 09	minerals (for example sand, stones)
<b>19 13</b>	<b>wastes from soil and groundwater remediation</b>
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
<b>20</b>	<b>Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions</b>
<b>20 02</b>	<b>garden and park wastes (including cemetery waste)</b>
20 02 02	soil and stones
<b>Additional waste codes</b>	
Additional waste codes as agreed in writing by Natural Resources Wales in accordance with pre-operational condition 1 in table S1.4.	

**Table S2.6 Permitted waste types for treatment in or re-seeding of the leachate treatment plant**

<b>Waste code</b>	<b>Description</b>
<b>19</b>	<b>Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use</b>
<b>19 05</b>	<b>wastes from aerobic treatment of solid wastes</b>
19 05 99	Limited to composting liquor from Bryn Posteg on site composting activities
<b>19 08</b>	<b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>
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
<b>notes</b>	
Waste Codes 19 08 05 and 19 08 12 for re-seeding of leachate treatment plant only	
Waste code 19 05 99 Composting liquor produced at Bryn posteg composting facility only	

## Schedule 3 – Emissions and monitoring

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

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

**Table S3.2 Point source emissions to air – emission limits and monitoring requirements**

Emission point Ref. & Location	Source	Parameter	Limit (including unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Landfill gas flare	Landfill gas flare	Oxides of Nitrogen	150 mg/m <sup>3</sup>	Hourly mean	Annually	BS EN 14792
		CO	50 mg/m <sup>3</sup>	Hourly mean	Annually	BS EN 15058
		Total VOCs	10 mg/m <sup>3</sup>	Hourly mean	Annually	BS EN 12619
		Operational Temperature	>1000°C	Hourly mean	Annually	None Specified
Biomass Boiler	Biomass Boiler	Oxides of Nitrogen	650 mg/m <sup>3</sup>	Hourly mean	Annually for one year and then once every three years	BS EN 14792
		Particulate Matter	50 mg/m <sup>3</sup>	Hourly mean	Annually for one year and then once every three years	BS EN 13284- 1

**Note:** 1 Annual monitoring of the Landfill Gas Flare 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 (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
P1, P2 as defined on plan referenced Environmental Monitoring Plan 4299-CAU-XX-XX-DR-V-1801 dated 24.11.2021 and received on 1/12/2021	Surface water collection system	Ammoniacal Nitrogen	0.25 mg/l	Spot 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.
		Suspended Solids	50 mg/l			
		pH	6-9			
		BOD	20 mg/l			
SW3 as shown on plan 1009.REED.01.	Surface water collection system	Ammoniacal Nitrogen	1 mg/l (limit to be reviewed under IC11)	Spot Sample	Monthly when discharge occurs	As per LFTGN02 Guidance on the monitoring of landfill leachate, Groundwater and surface water or as agreed in writing with Natural Resources Wales.
		Suspended Solids	50 mg/l (limit to be reviewed under IC11)			
		pH	6-9			
		BOD	To be agreed under IC11			

**Table S3.4 Point source emissions to sewer, effluent treatment plant or by tankering or other transfer off-site– emission limits and monitoring requirements**

Emission point Ref. & Location	Source	Parameter	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Emission point - point where the pumped treated leachate effluent enters a shared sewer	Leachate treatment plant	Ammoniacal Nitrogen	150 mg/l	Spot 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.
		Suspended solids	500 mg/l			
		COD	1000 mg/l			
		Sulphate	1000 mg/l			
		Soluble CH <sub>4</sub>	0.14 mg/l			
		Oils	None visible			

**Table S3.4 Point source emissions to sewer, effluent treatment plant or by tankering or other transfer off-site– emission limits and monitoring requirements**

Emission point Ref. & Location	Source	Parameter	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
		pH	6-10			
		Temperature	Less than 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.

**Table S3.5 Compliance Limits for emissions into groundwater and monitoring requirements**

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
G1/W1 as defined on plan referenced Environmental Monitoring Plan 4299-CAU-XX-XX-DR-V-1801 dated 24.11.2021 and received on 1/12/2021	Ammoniacal Nitrogen – N	2 mg/l	Spot Sample	Quarterly	As per LFTGN02 Guidance on the monitoring of landfill leachate, Groundwater and surface water or as agreed in writing with Natural Resources Wales.
	Cadmium	0.0056 mg/l			
	Chloride	500 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	0.018 mg/l (mean at each monitoring point)			
		0.187 mg/l (95 percentile at each monitoring point)			
	2-4 D	0.0001 mg/l			
	Ammoniacal Nitrogen – N	2 mg/l	Spot Sample	Quarterly	
	Cadmium	0.0056 mg/l			
	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			

**Table S3.5 Compliance Limits for emissions into groundwater and monitoring requirements**

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W2, G13/W3, G16/W4, G18/W5, W6, W7, W8, G32/W9, W10 and G30/W11 as defined on plan referenced Environmental Monitoring Plan 4299-CAU-XX-XX-DR-V-1801 dated 24.11.2021 and received on 1/12/2021	Mecoprop	0.018 mg/l (mean at each monitoring point) 0.187 mg/l (95 percentile at each monitoring point)			As per LFTGN02 Guidance on the monitoring of landfill leachate, Groundwater and surface water or as agreed in writing with Natural Resources Wales.
	2-4 D	0.0001 mg/l			

**Table S3.6 Landfill gas in external monitoring boreholes – limits and monitoring requirements**

Monitoring point Ref. /description	Parameter	Limit (including units)	Monitoring frequency	Monitoring standard or method
All peripheral landfill gas boreholes as defined on plan referenced Environmental Monitoring Plan 4299-CAU-XX-XX-DR-V-1801 dated 24.11.2021 and received on 1/12/2021	Methane	1 %v/v	Monthly	As specified in LFTGN 03 issued September 2004 'Guidance on the management of landfill gas', or such other guidance as may be agreed in writing with Natural Resources Wales
	Carbon Dioxide	1.5 %v/v		
	Oxygen	no limit		
On site Weather Station	Atmospheric pressure Temperature Meteorological data: Daily depth of precipitation (mm), wind speed (m/s) and direction (degrees)	No limit	Daily or as agreed in writing with Natural Resources Wales	

**Table S3.7 Landfill gas from capped surfaces – limits and monitoring requirements**

Monitoring point Ref. /description	Parameter	Limit (including unit)	Monitoring frequency	Monitoring Standard or method
Permanently capped zone	Average methane flux and total methane emission	Average zone emission rate of 0.001 mg/m <sup>2</sup> /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

**Table S3.7 Landfill gas from capped surfaces – limits and monitoring requirements**

Monitoring point Ref. /description	Parameter	Limit (including unit)	Monitoring frequency	Monitoring Standard or method
Temporarily capped zone	Average methane flux and total methane emission	Average zone emission rate of 0.1 mg/m <sup>2</sup> /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

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

**Table S3.8 Landfill gas – other monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Gas collection system at all well control valves, manifolds and strategic points on gas system	Methane Carbon Dioxide Oxygen Carbon Monoxide Hydrogen sulphide Atmospheric pressure Differential pressure	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 carbon monoxide exceeds 100ppm then further investigation shall be 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 Compound	Methane Carbon Dioxide Oxygen Gas flow rate	Continuous when operational	LFTGN 03	
Input to LFG Utilisation Compound	Trace gas analysis in accordance with LFTGN04.	Annually	LFTGN04 version 3.0 (2010)	The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling.

**Table S3.8 Landfill gas – other monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Input to LFG Utilisation Compound	Methane, Carbon Dioxide, Oxygen, % Balance Gas (calculated as the difference between the sum of measured gases and 100%)	Weekly	LFTGN04 version 3.0 (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.

**Table S3.9 Leachate– other monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8  RMLP9A RMLP9B RMLP9C RMLP9D  As detailed in plan No 1168, GPM.MN06C  And New monitoring points installed as agreed in writing with Natural Resources Wales.	pH,	Monthly	As per LFTGN02 Guidance on the monitoring of landfill leachate, Groundwater and surface water or as agreed in writing with Natural Resources Wales.	-
LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8  RMLP9A RMLP9B RMLP9C RMLP9D  As detailed in plan No 1168, GPM.MN06C  And New monitoring points installed as agreed in writing with Natural Resources Wales.	Cadmium, Chloride, Chromium, Copper, Zinc, Lead, Nickel, Cyanide, EC, NH <sub>4</sub> -N, TON, TOC, BOD, COD, Ca, Mg	6 monthly		

**Table S3.9 Leachate– other monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8	List 1 screen	Annually		
RMLP9A RMLP9B RMLP9C RMLP9D				
As detailed in plan No 1168, GPM.MN06C				
And New monitoring points installed as agreed in writing with Natural Resources Wales.				

**Table S3.10 Groundwater – other monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
G1/W1, W2, G13/W3, G16/W4, G18/W5, W6, W7, W8, G32/W9, W10 and G30/W11 as defined on plan referenced Environmental Monitoring Plan 4299-CAU-XX-XX-DR-V-1801 dated 24.11.2021 and received on 1/12/2021	Water Level (mAOD)	Monthly	Spot Sample	As per LFTGN02 Guidance on the monitoring of landfill leachate, Groundwater and surface water or as agreed in writing with Natural Resources Wales.
	pH	Monthly		
	Temperature (°C)	Quarterly		
	Electrical Conductivity	Monthly		
	Dissolved Oxygen	Quarterly		
	Sulphate (mg/l)	Monthly		
	Total alkalinity (mg/l) (as CaCO <sub>3</sub> at pH 4.5)	Quarterly		
	PAH	Quarterly		
	BTEX	Annually		
	K (mg/l)	Quarterly		
	Ca (mg/l)	Quarterly		
	Mg (mg/l)	Quarterly		
	Fe (mg/l)	Quarterly		
	Cr (mg/l)	Quarterly		
	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		
	Antimony (mg/l)	Quarterly		
	Selenium (mg/l)	Quarterly		
	Manganese (mg/l)	Quarterly		
	Silver (mg/l)	Quarterly		
	Phenol (mg/l)	Quarterly		

**Table S3.10 Groundwater – other monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
	Na (mg/l)	Quarterly		
G1/W1, W2, G13/W3, G16/W4, G18/W5, W6, W7, W8, G32/W9, W10 and G30/W11 as defined on plan referenced Environmental Monitoring Plan 4299-CAU-XX-XX-DR-V-1801 dated 24.11.2021 and received on 1/12/2021	Priority Hazardous substances identified within the leachate	Annually	Spot Sample	

**Table S3.11 Particulate matter in ambient air - limits and monitoring requirements**

Monitoring Point Ref. /Description	Parameter	Limit (Including Unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Perimeter of installation adjacent to valley View	Particulate matter	200 mg/m <sup>3</sup> /day	-	Quarterly and when a new phase of the site is being constructed	As agreed in writing with NRW
Perimeter of installation adjacent to Pant Rhoswen	Particulate matter	200 mg/m <sup>3</sup> /day	-	dust monitoring shall take place continuously during construction activities.	
Perimeter of installation adjacent to Penybryn	Particulate matter	200 mg/m <sup>3</sup> /day	-		

**Table S3.12 Bioaerosols monitoring requirements**

Location or description of point of measurement	Parameter	Bioaerosol threshold limits CFU m <sup>-3</sup>	Monitoring Frequency	Monitoring Standard or Method
Bioaerosols shall be monitored: - upwind of the site and - downwind of the site; in accordance with" M9 – Technical Guidance Note (Monitoring) – Environmental monitoring of bioaerosols at regulated facilities, July 2018 Version 2".	Total Mesophilic bacteria	1000	Quarterly (if MBT compost process - 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, is operational during that quarter)	As specified in Technical Guidance Note (Monitoring) M9 Environmental monitoring of bioaerosols at regulated facilities, July 2018, Version 2.
	Aspergillus fumigatus	500		

## Schedule 4 - Reporting

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

**Table S4.1 Reporting of monitoring data**

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Leachate levels As required by condition 3.7.1	Leachate abstraction points	Quarterly	1 January 1 April 1 July 1 October
Emissions to air Parameters as required by condition 3.7.1	Landfill gas flare	Quarterly	1 January 1 April 1 July 1 October
Emissions to water Parameters as required by condition 3.7.1	P1 and P2	Quarterly	1 January 1 April 1 July 1 October
Emissions to sewer. Parameters as required by condition 3.7.1	Discharge point to STW via pipeline	Quarterly	1 January 1 April 1 July 1 October
Groundwater Parameters as required by condition 3.7.1	W1 to W10	Quarterly	1 January 1 April 1 July 1 October
Landfill gas external monitoring boreholes, and meteorological data, temperature and atmospheric pressure. Parameters as required by condition 3.7.1	All peripheral landfill gas monitoring boreholes	Quarterly	1 January 1 April 1 July 1 October
Other Landfill gas monitoring Parameters as required by condition 3.7.1	Permanently and temporarily capped cells	Annually	1 January
	Gas collection system	Quarterly	1 January 1 April 1 July 1 October
	Input to the landfill management compound	Annually	1 January
	Input to the landfill gas management compound (continuous monitoring). Summary data only such as max/min average and total quantity	Quarterly	1 January 1 April 1 July 1 October
Other leachate monitoring Parameters as required by condition 3.7.1	All leachate Monitoring Points	Every 6 months for parameters monitored 6 monthly frequency and annually for parameters monitored on an annual frequency	1 January 1 July



**Table S4.1 Reporting of monitoring data**

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Hazardous substances Screen	All leachate Monitoring Points	Every 12 months	1 January
Other groundwater monitoring Parameters as required by condition 3.7.1	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 1 April 1 July 1 October
Particulate matter In ambient air as required by condition 3.7.1	All monitoring points as shown in plan No.1168.GPM.MN07	Quarterly	1 January 1 April 1 July 1 October

**Table S4.2: Annual production/treatment**

Leachate: Disposed of off site; Disposed of to any onsite effluent treatment plant; Recirculated into the waste mass.	Cubic metres/year
Landfill gas: combustion in flares; combustion in gas engines; Other methods of gas utilisation.	Normalised cubic metres/year

**Table S4.3 Performance Parameters**

Parameter	Frequency of assessment	Annual total	Unit
Energy used (including for leachate treatment)	Annually		MWh of electricity
Bioaerosol monitoring report	Annually	Report of bioaerosols	

**Table S4.4 Reporting Forms**

Media/parameter	Reporting Format	Date of Form
Leachate	Form leachate 1 or other reporting format to be agreed in writing with 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

**Table S4.4 Reporting Forms**

<b>Media/parameter</b>	<b>Reporting Format</b>	<b>Date of Form</b>
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 Resources Wales website or other form as agreed in writing by Natural Resources Wales	N/A
Landfill topographical surveys and interpretation	Scale plan showing contours or other format as agreed in writing by Natural Resources Wales	N/A
Bioaerosol monitoring	As specified in the "M9 – Technical Guidance Note (Monitoring) – Environmental monitoring of bioaerosols at regulated facilities, 2018 Version 2". or other form as agreed in writing by Natural Resources Wales	N/A

# Schedule 5 - Notification

This page outlines the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

## Part A

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

<b>(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment</b>	
<b>To be notified Immediately</b>	
Date and Time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

<b>(b) Notification requirements for the breach of a permit condition</b>	
<b>To be notified immediately</b>	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

<b>Time periods for notification following detection of a breach of a limit</b>
---

Parameter	Notification period

<b>(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:</b>	
<b>To be notified immediately</b>	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

### Part B to be supplied as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

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

\* authorised to sign on behalf of the operator

# 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.

“*bioaerosol threshold limits*” means the maximum acceptable bioaerosol concentrations at the nearest sensitive receptor, or at an equivalent distance downwind of the composting operations, which are attributable to the composting operations. The maximum acceptable concentrations are respectively 1000 and 500 CFU m<sup>-3</sup> for total bacteria and *Aspergillus fumigatus*.

“*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.

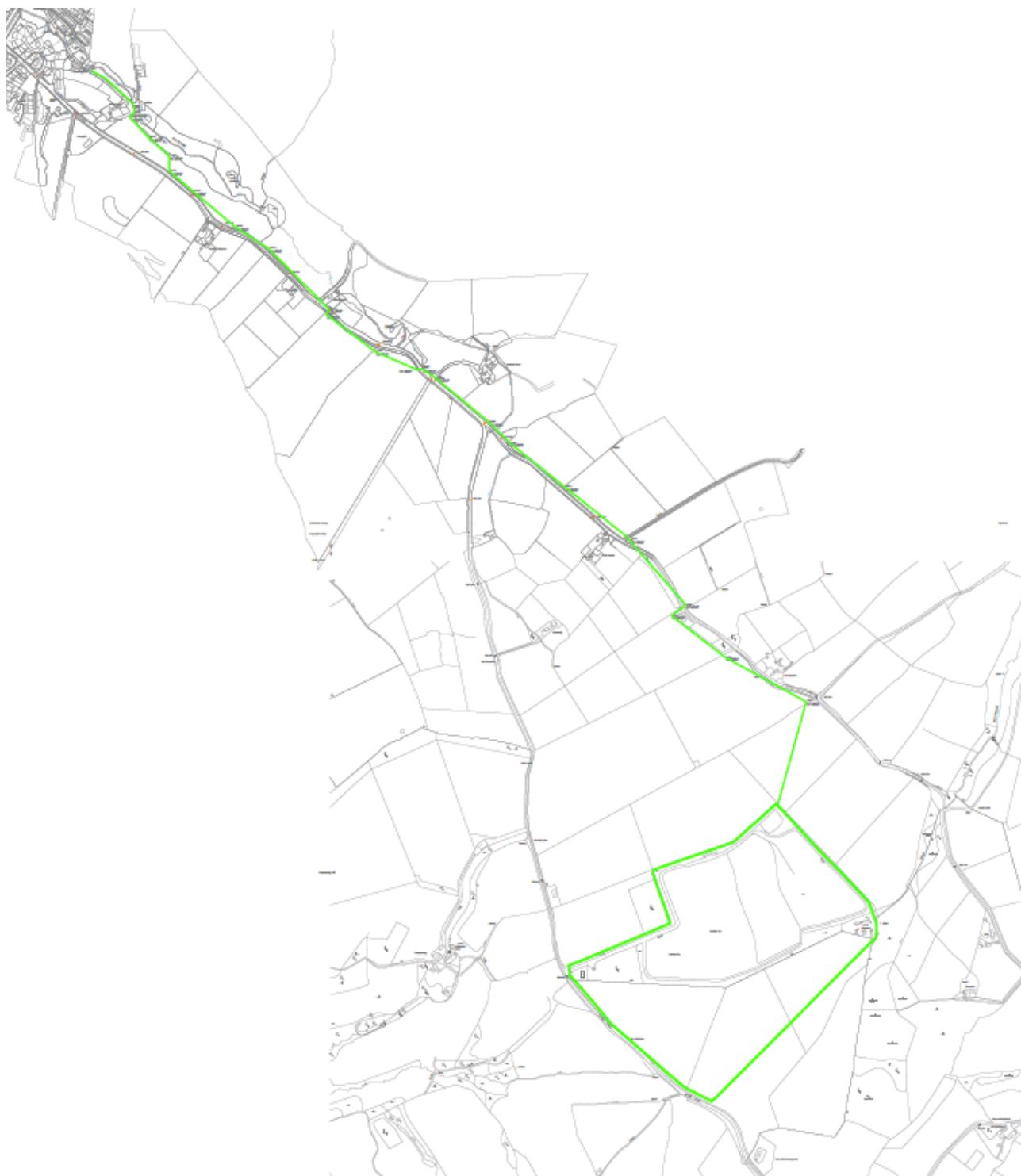
*“Waste code”* means the six digit code referable to a type of waste in accordance with the list of wastes established by Commission Decision 2000/532/EC as amended from time to time (the ‘List of Wastes Decision’) and in relation to hazardous waste, includes the asterisk.

*“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



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

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**

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

- [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 .....  
(Authorised to sign as representative of Operator)

Date.....

Permit Number: BU77661C 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**

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

- [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)

Permit Number: BU7766IC

Operator: Sundorne Products (Llanidloes) Ltd

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**

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

- [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 .....  
(Authorised to sign as representative of Operator)

Date.....

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

Facility: Bryn Posteg Landfill Form Number: Energy1 / 16/101/17

### Reporting of Energy Usage for the year 2017

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

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

Operator's comments :

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

Date.....

Permit Number: BU7766IC Operator: Sundorne Products (Llanidloes) Ltd  
 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 Point	Substance / Parameter	Compliance limit	Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8  RMLP9A RMLP9B RMLP9C RMLP9D	leachate head	1 m above cell base	Monthly				
LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8  RMLP9A RMLP9B RMLP9C RMLP9D	pH						

Monitoring Point	Substance / Parameter	Compliance limit	Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8  RMLP9A RMLP9B RMLP9C RMLP9D	Cadmium, Chromium, Copper, Zinc, Lead, Nickel, Cyanide, EC, NH4-N, TON, TOC, BOD, COD, Ca, Mg		6 monthly				

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

Date.....

Permit Number: BU7766IC

Operator: Sundorne Products (Llanidloes) Ltd

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 Point	Substance / Parameter	Trigger level	Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
All monitoring points	Ammoniacal 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				
	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				

[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)

Permit Number: BU7766IC

Operator: Sundorne Products (Llanidloes) Ltd

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 Point	Substance / Parameter	Compliance limit	Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
All peripheral landfill gas boreholes	methane	1 % v/v	Monthly				
	carbon dioxide	1.5 % v/v					
	oxygen	-					

- [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 .....  
(Authorised to sign as representative of Operator)

Date.....



Permit Number: BU77661C

Operator: Sundorne Products (Llanidloes) Ltd

Facility: Bryn Posteg Landfill

Form Number: Particulate1 / 16/10/17

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

Emission Point	Substance / Parameter	Emission		Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
		Limit Value						
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				

- [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 .....  
(Authorised to sign as representative of Operator)

Date.....