

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

**Welsh Water Organic Energy (Cardiff)
Limited**

**Lamby Way Open Windrow
Composting Facility
Lamby Way
Rumney
Cardiff
CF3 2EH**

Permit number
EPR/AB3096CP

Lamby Way Open Windrow Composting Facility

Permit number EPR/AB3096CP

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

This is a tier 3 bespoke installation permit for a biological activity – composting in open windrows.

Treatment operations are limited to preparatory treatment of waste and biological treatment; stabilisation and maturation. All treatment is for the purpose of recovery only, and may be by either mechanical and/or manual methods.

The site operates under Section 5.4A (1) (b) (i) of Schedule 1 of the Environmental Permitting (England & Wales) Regulations 2016.

The permit does not allow any point source emissions into surface water or groundwater except clean, un-contaminated rainfall dependant drainage from areas that are not used in connection with the storage or treatment of waste.

Discharge from the permitted activity (areas of the site used in connection with the storage and/or treatment of waste) is to foul sewer, in accordance with a trade effluent consent issued by the sewerage undertaker.

The burning of any wastes, either in the open, inside buildings or in any form of incinerator is not permitted.

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

Status log of the permit

Description	Date	Comments
Application received EPR/AB3096CP/T001	Duly made 04/03/2015	Part transfer application, transfer of open windrow composting activity from the City of Cardiff Council to Kelda Organic Energy (Cardiff) Ltd
Additional information received in response to draft permit consultation	16/07/2015	Odour management plan and bioaerosol monitoring plan
Permit determined EPR/AB3096CP	29/02/2016	Permit for open windrow composting activity issued to Kelda Organic Energy (Cardiff) Ltd
Application received EPR/AB3096CP/V002	29/02/2016	Application to vary Tier 3 waste facility permit to become a Tier 3 Installation permit
Application EPR/AB3096CP/V002	Duly Made 30/03/2016	
Permit determined EPR/AB3096CP/V002	24/06/2016	
Notification of variation EPR/AB3096CP/V003	30/01/2019	Update the company name and registered office address
Variation issued EPR/AB3096CP/V003	09/04/2019	Varied permit issued to Welsh Water Organic Energy (Cardiff) Ltd
Regulation 61(1) Notice sent to the Operator	04/04/2019	Issue of a Notice under Regulation 61(1) of the EPR. Natural Resources Wales initiated review and variation to vary the permit following the publication of the revised Best Available Techniques (BAT) Reference Document (BRef) for Waste Treatment.
Regulation 61(1) Notice response	27/09/2019	Response received from the operator.
Additional information received	02/03/2020	Clarifications provided to sections 1, 2, 3, 4, 5, 6 and 7 of Reg 61 Notice.
NRW-initiated variation determined EPR/AB3096CP/V004	27/04/2021	Varied and consolidated permit issued in modern condition format.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/AB3096CP

This is the consolidated permit referred to in the variation and consolidation notice for application **EPR/AB3096CP/V004** authorising,

Welsh Water Organic Energy (Cardiff) Limited (“the operator”),

whose registered office is

Dŵr Cymru Welsh Water Linea

Fortran Road

St. Mellons

Cardiff

Wales

CF3 0LT

company registration number **08356859**

to operate an installation at

Lamby Way Open Windrow Composting Facility

Lamby Way

Rumney

Cardiff

CF3 2EH

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

Name	Date
Holly Noble	27/04/2021

Authorised on behalf of Natural Resources Wales

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

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

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

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

1.2 Energy efficiency

1.2.1 The operator shall:

- (a) 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) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 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.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

1.4.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.
- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and 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”).
- 2.1.2 Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at Schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in Schedule 1, table S1.2, unless otherwise agreed in writing by 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 if:
- (a) it is of a type and quantity listed in Schedule 2 table S2.1; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 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.

2.4.2 Except in the case of an improvement which consists only of a submission to Natural Resources Wales, the operator shall notify Natural Resources Wales within 14 days of completion of each improvement.

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.

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 S3.1 and S3.2.

3.1.2 The limits given in Schedule 3 shall not be exceeded.

3.1.3 Where a substance is specified in Schedule 3 table S3.1 or S3.2 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.

3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

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.

3.4 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 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake the monitoring specified in the following tables in Schedule 3 to this permit:

- (a) point source emissions specified in tables S3.1 and S3.2.
- (b) process monitoring specified in table S3.3.
- (c) bioaerosol monitoring specified in table S3.4.

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by Natural Resources Wales.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 3 tables S3.1 and S3.2, unless otherwise agreed in writing by Natural Resources Wales.

3.6 Pests

- 3.6.1 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.
- 3.6.2 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.

3.7 Fire

- 3.7.1 The operator shall manage and operate the activities in accordance with a written fire prevention plan using the current, relevant fire prevention mitigation plan guidance.
- 3.7.2 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 mitigation plan which identifies and minimises the risks of fire;
 - (b) Operate the activity in accordance with the fire prevention mitigation plan, from the date of submission, 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.
- 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 the permit including an interpretive review of that data;
 - (b) the annual production / treatment data set out in Schedule 4 table S4.2; and
 - (c) the performance parameters set out in Schedule 4 table S4.3 using the forms specified in table S4.4 of that Schedule.
- 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 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.
- 4.2.5 Within 1 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.

4.3 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 “immediately”, in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1	S5.4 A(1)(b)(i)	<p>Recovery of non-hazardous waste with a capacity exceeding 75 tonnes per day involving (i) biological treatment</p> <p>R3: Recycling/reclamation of organic substances which are not used as solvents</p> <p>R13: Storage of waste pending any of the operations numbered R1 to R12 (excl temporary storage, pending collection, on the site where it is produced)</p>	<p>Maximum annual throughput of 38,000 tonnes per annum.</p> <p>Maximum storage at any one time to be no greater than 8,500 tonnes</p> <p>The biological treatment of waste for the purpose of recovery or a mix of recovery and disposal, shall be limited to 167 tonnes per day</p> <p>All non-hazardous waste must be stored and treated on an impermeable surface with sealed drainage.</p> <p>All treatment must take place: i) within a well ventilated building equipped with suitable containment measures, or; ii) outdoors</p> <p>Physical treatment of biological waste prior to and/or post biological treatment is permitted</p> <p>Biological treatment operations shall be limited to: i) aerobic composting in open windrows ii) maturation of permitted waste for the purpose of recovery only</p> <p>The storage, physical treatment, composting and maturation of waste must not take place in any form of enclosed reactor vessel</p> <p>The storage, physical treatment, composting and maturation of wastes under anaerobic conditions shall be prevented, or where that is not possible minimised</p> <p>Waste types as specified in Table S2.1</p>

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	Odour Management Plan (OMP) dated February 2015, reference – 407.04012.00009/OMP – all sections	04/03/2015
Application	Site Specific Bioaerosol Risk Assessment (SSBRA) dated February 2015, reference – 407.04012.00009/SSBRA – all sections	04/03/2015
Application	Non-technical summary dated February 2015, reference – 407.04012.00009/NTS – all sections	04/03/2015
Application	H1 Environmental Risk Assessment dated February 2015, reference – 407.04012.00009/H1 – all sections	04/03/2015
Application	Site Specific Drainage Scheme dated February 2015, reference – 402.04012.00002 – all sections	04/03/2015
Application	Best available techniques and operating techniques dated February 2015, reference – 407.04012.00009/BATOT – all sections	04/03/2015
Application	Email response from the operator confirming site drainage to sewer.	16/06/2016
Response to regulation 61(1) Notice – request for information dated 04/04/2019 detailing how the Operator will comply with the BAT conclusions for Waste Treatment, under Directive 2010/75/EU of the European Parliament and of the Council	Response to Regulation 61(1) Notice for Waste Treatment - Cardiff Lamby Way Composting BAT Conclusion Notice	27/09/2019
Additional information	Additional information received. Clarifications provided to sections 1, 2, 3 and 5 of Reg 61 (1) Notice : - Lamby Way Composting S61 Response letter - Copy of WT BREF Spreadsheet Guide Lamby Way - Lamby Way Composting Opra-Installations-2019	02/03/2020
Additional information	Odour Management Plan Issue 3	01/10/2020
Fire prevention and mitigation plan guidance – Waste Management	All relevant sections	N/A
Fire prevention and mitigation plan	All relevant sections	In line with IC1

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC1	<p>The operator shall submit an updated written Fire prevention and mitigation plan for approval in writing by Natural Resources Wales.</p> <ul style="list-style-type: none">• The Fire prevention and mitigation plan must be produced in line with the standards set out in Fire prevention and mitigation plan guidance – Waste.	3 months after permit issue or otherwise agreed in writing with Natural Resources Wales
IC2	<p>The operator shall submit for approval in writing by Natural Resources Wales information to evidence compliance with the following BAT requirements in accordance with requirements specified within BAT Conclusions of the Waste Treatment BREF Document (EU 2018) in relation to:</p> <ul style="list-style-type: none">• BAT 1 - Implement and adhere to an environmental management system (EMS) that incorporates all of the following features:<ul style="list-style-type: none">○ (VII) Following development of cleaner technologies;○ (VIII) Whole life cycle considerations when designing a new plant;○ (IX) Regular sectoral bench marking;○ (X) Waste stream management;○ (XI) Inventory of waste water & waste gas streams;○ (XII) Residues Management Plan.• BAT 2 In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques described within BAT 2 Table.• BAT 3 In order to facilitate the reduction of emissions to water and air, BAT is to establish and to maintain an inventory of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the following features:<ul style="list-style-type: none">○ information about the characteristics of the waste to be treated and the waste treatment processes;○ information about the characteristics of the waste water streams (including analysis of PFOS and PFOA); and○ information about the characteristics of the waste gas streams.• BAT 4 In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of the techniques described within BAT 4 Table.• BAT 5 In order to reduce the environmental risk associated with the handling and transfer of waste, BAT is to set up and implement handling and transfer procedures.	17 February 2022 or otherwise agreed in writing with Natural Resources Wales

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- BAT 6 For relevant emissions to water as identified by the inventory of waste water streams (see BAT 3), BAT is to monitor key process parameters (e.g. waste water flow, pH, temperature, conductivity, BOD) at key locations (e.g. at the inlet and/or outlet of the pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation).
 - BAT 7 BAT is to monitor emissions to water with at least the frequency given within BAT 7 Table, and in accordance with EN standards. If EN standards are not available.
 - BAT 10 BAT is to periodically monitor odour emissions.
 - BAT 12 In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the requirements specified within BAT 12 Table.
 - BAT 13 Techniques to prevent, or where not practicable reduce odour emissions.
 - BAT 14 In order to prevent or, where that is not practicable, to reduce diffuse emissions to air, in particular of dust, organic compounds and odour, BAT is to use an appropriate combination of the techniques described within BAT 14 Table.
 - BAT 19 In order to optimise water consumption, to reduce the volume of waste water generated and to prevent or, where that is not practicable, to reduce emissions to soil and water, BAT is to use an appropriate combination of the techniques described within BAT 19 Table.
 - BAT 20 In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques described within BAT 20 Table.
 - BAT 21 In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques described within BAT 21 Table.
 - BAT 22 In order to use materials efficiently, BAT is to substitute materials with waste.
 - BAT 23 Energy efficiency Plan and Energy Balance Record.
 - BAT 24 Maximise the reuse of packaging as part of a Residues Management Plan.
 - BAT 33 In order to reduce odour emissions and to improve the overall environmental performance, by selecting the waste input (to ensure its suitability for biological treatment).
 - BAT 35 In order to reduce the generation of waste water and to reduce water usage, BAT is to use all of the techniques described within BAT 35 Table.
 - BAT 36 In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.
 - BAT 37 In order to reduce diffuse emissions to air of dust, odour and bioaerosols from open-air treatment steps, BAT is to use one or both of the techniques described within BAT 37 Table.
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IC3	<p>The Operator shall complete and submit for approval in writing by Natural Resources Wales:</p> <ul style="list-style-type: none"> • a baseline report containing information necessary to determine the current state of soil and groundwater contamination; or • Provide a summary report referring to information previously submitted where you are satisfied that such information represents the current state of soil and groundwater contamination; <p>so as to enable a quantified comparison to be made with the state of soil and groundwater contamination upon definitive cessation of activity.</p>	17 February 2022 or otherwise agreed in writing with Natural Resources Wales
IC4	<p>The Operator shall complete and submit for approval in writing by Natural Resources Wales a Phase 1 screening test report for priority hazardous pollutants and any other relevant priority hazardous substances discharged to sewer.</p> <p>For any substance which is not screened out by the screening tests, further modelling (as described in the risk assessment guidance “Surface water pollution risk assessment for your environmental permit”) should be undertaken, and the results of the modelling submitted to NRW for approval.</p> <p>The Operator shall submit for written approval a methodology for the appropriate monitoring requirements for discharges to sewer. Where a process parameter cannot be monitored justification should be provided and/or a suitable alternative proposed. The methodology should include trigger levels for each of the parameters with associated procedures in place if trigger levels are exceeded.</p>	17 February 2022 or otherwise agreed in writing with Natural Resources Wales
IC5	<p>The operator shall submit for approval in writing by Natural Resources Wales an updated Site Boundary and Layout Plan clearly showing all points source emissions from the site.</p>	17 February 2022 or otherwise agreed in writing with Natural Resources Wales

Table S1.4 Pre-operational measures for future development

Reference	Operation	Pre-operational measures
1	Composting Operations within Building	No composting operations shall commence within a building until the Operator has submitted a written report and the report has been approved in writing by Natural Resources Wales, describing how the operations will comply with the requirements specified within BAT Conclusions of the Waste Treatment BREF Document (EU 2018).
2	Biofilters	<p>The permit allows for composting operations to take place within a building, subject to appropriate ventilation and abatement being installed in the form of Biofilters.</p> <p>Prior to these operations commencing, the Operator shall submit a written report and the report has been approved in writing by Natural Resources Wales, detailing how the site will implement the latest version of ‘Technical Guidance Note M9 Environmental monitoring of bioaerosols at regulated facilities dated July 2018 Version 2’. The written report shall provide procedures and timelines for implementing the new methodology prior to these operations commencing on site.</p>

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Permitted waste types and quantities for open windrow composting facility

Maximum quantity	The maximum quantity of waste to be accepted on-site shall not exceed 38,000 tonnes per annum
Exclusions	Notwithstanding the waste types set out in this table, wastes having any of the following characteristics shall not be accepted: <ul style="list-style-type: none"> - catering waste and other waste containing animal by-products - consisting solely or mainly of dusts, powders or loose fibres - odour producing or likely to be odour producing
Waste code	Description
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 03	Plant-tissue waste
02 01 07	Wastes from forestry
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 02	Garden and park wastes (including cemetery waste)
20 02 01	Biodegradable waste

Schedule 3 (a) – Emissions and monitoring effective until 16 August 2022

Table S3.1 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
A1 (Outlets from bio-filters) ¹	Treated air	None specified	No limit		No monitoring required	N/A

Note 1: Emission point only applies following completion of pre-operational measure 2.

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 (as drawing ref: 407 04012 00009)	Contaminated water from the process and contaminated site run-off	None specified	No limit		No monitoring required	N/A

Table S3.3 Process monitoring requirements for composting in open windrows

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Internal for each windrow and for any sample of waste or compost	Temperature	None specified	Thermocouple probe	Windrows shall be maintained at either: i) an internal temperature of at least 55°C for at least fourteen consecutive days with a minimum of five turnings, or ii) an internal temperature of at least 65°C for at least seven consecutive days with a minimum of three turnings Windrows shall be turned at a frequency that maintains aerobic conditions within the windrow Records shall be made in the site diary of the date and results of internal temperature monitoring and the date on which each windrow is turned Monitoring equipment must be available on-site and used as required to ensure compliance with the conditions of this permit
Internal for each windrow and for any sample of waste or compost	Moisture	None specified	Moisture meter	Windrow content shall be maintained between 40% (w/w) and 60% (w/w) during composting Where the moisture content of a windrow has been measured as being above 60% (w/w), remediation actions shall be taken to decrease the moisture content to between 40% (w/w) and 60% (w/w) Where the moisture content of a windrow has been measured as being below 40% (w/w), remediation actions shall be taken to increase the moisture content to between 40% (w/w) and 60% (w/w) Records shall be made in the site diary of the date and results of moisture content monitoring. Monitoring equipment must be available on-site and used as required to ensure compliance with the conditions of this permit.

Table S3.4 Bioaerosol monitoring requirements

Location or description of point of measurement	Parameter	Bioaerosol threshold limits CFU m ⁻³	Monitoring frequency	Monitoring standard or method	Other specifications
Bioaerosols shall be monitored: - upwind of the operational area and - downwind of the operational area, in accordance with "M9 – Technical Guidance Note (Monitoring) – Environmental monitoring of bioaerosols at regulated facilities, 2018 Version 2".	Total bacteria ¹	1000	Quarterly or otherwise agreed with NRW	In accordance with "M9 – Technical Guidance Note (Monitoring) – Environmental monitoring of bioaerosols at regulated facilities, 2018 Version 2"	As described M9 Technical Guidance Note, including all the additional data requirements specified therein.
	Aspergillus	500			
	Fumigatus ¹				

Note 1: Monitoring only applies when the parameter concerned is identified as relevant in accordance with "M9 – Technical Guidance Note (Monitoring) – Environmental monitoring of bioaerosols at regulated facilities, 2018 Version 2" and following completion of pre-operational measure 2.

Schedule 3 (b) – Emissions and monitoring effective from 17 August 2022

Table S3.1 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
A1 (Outlets from bio-filters)	Biofilter ¹	Hydrogen Sulphide (H ₂ S)	No Limit Set	-	Every 6 months	BS EN 14791
		Ammonia (NH ₃)	20 mg/Nm ³	-	Every 6 months	US EPA Method 11 (Impinger method) or CEN TS 13649 (Charcoal tube), US EPA Method 15
		Odour	1000 ouE/Nm ³	-	Every 6 months	BS EN 13725

Note 1: Biofilter monitoring only applies following completion of pre-operational measure 2.

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 (as drawing ref: 407 04012 00009)	Contaminated water from the process and contaminated site run-off	To be agreed with NRW upon completion of IC2	To be agreed with NRW upon completion of IC2	To be agreed with NRW upon completion of IC2	To be agreed with NRW upon completion of IC2	To be agreed with NRW upon completion of IC2

Table S3.3 Process monitoring requirements for composting in open windrows

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Internal for each windrow and for any sample of waste or compost	Temperature	At least daily during sanitisation, at least weekly during stabilisation stage	Thermocouple probe	<p>Windrows shall be maintained at either:</p> <ul style="list-style-type: none">i) an internal temperature of at least 55°C for at least fourteen consecutive days with a minimum of five turnings, orii) an internal temperature of at least 65°C for at least seven consecutive days with a minimum of three turnings <p>Windrows shall be turned at a frequency that maintains aerobic conditions within the windrow</p> <p>Records shall be made in the site diary of the date and results of internal temperature monitoring and the date on which each windrow is turned</p> <p>Monitoring equipment must be available on-site and used as required to ensure compliance with the conditions of this permit</p>
Internal for each windrow and for any sample of waste or compost	Moisture	None specified	Moisture meter	<p>Windrow content shall be maintained between 40% (w/w) and 60% (w/w) during composting</p> <p>Where the moisture content of a windrow has been measured as being above 60% (w/w), remediation actions shall be taken to decrease the moisture content to between 40% (w/w) and 60% (w/w)</p> <p>Where the moisture content of a windrow has been measured as being below 40% (w/w), remediation actions shall be taken to increase the moisture content to between 40% (w/w) and 60% (w/w)</p> <p>Records shall be made in the site diary of the date and results of moisture content monitoring.</p> <p>Monitoring equipment must be available on-site and used as required to ensure compliance with the conditions of this permit.</p>

Waste input characteristics	C to N ratio	None Specified	None Specified	Subject to approved methodology in accordance with improvement condition IC2 BAT36 and as agreed with NRW
	Particle size			
Aeration of the windrow	Windrow turning frequency	None Specified	None Specified	Subject to approved methodology in accordance with improvement condition IC2 BAT36 and as agreed with NRW
	O ₂ and/or CO ₂ concentration in the windrow			
	Temperature of air streams in the case of forced aeration			
	Windrow porosity, height and width			

Table S3.4 Bioaerosol monitoring requirements

Location or description of point of measurement	Parameter	Bioaerosol threshold limits CFU m ⁻³	Monitoring frequency	Monitoring standard or method	Other specifications
Bioaerosols shall be monitored: - upwind of the operational area and - downwind of the operational area, in accordance with "M9 – Technical Guidance Note (Monitoring) – Environmental monitoring of bioaerosols at regulated facilities, 2018 Version 2".	Total bacteria ¹	1000	Quarterly or otherwise agreed with NRW	In accordance with "M9 – Technical Guidance Note (Monitoring) – Environmental monitoring of bioaerosols at regulated facilities, 2018 Version 2"	As described M9 Technical Guidance Note, including all the additional data requirements specified therein.
	Aspergillus	500			
	Fumigatus ¹				

Note 1: Monitoring only applies when the parameter concerned is identified as relevant in accordance with "M9 – Technical Guidance Note (Monitoring) – Environmental monitoring of bioaerosols at regulated facilities, 2018 Version 2" and following completion of pre-operational measure 2.

Schedule 4 (a) – Reporting effective until 16 August 2022

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
Emissions to air Parameters as required by condition 3.5.1 ¹	A1	No reporting Required	
Emissions to sewer Parameters as required by condition 3.5.1	S1	No reporting Required	
Bioaerosol emissions as required by condition 3.5.1 ¹	Upwind of the site and downwind of the site	Quarterly or as agreed in writing by the Natural Resources Wales	1 January, 1 April, 1 July, 1 October

Note 1: Reporting of monitoring only applies when identified as relevant in accordance with "M9 – Technical Guidance Note (Monitoring) – Environmental monitoring of bioaerosols at regulated facilities, 2018 Version 2" and following completion of pre-operational measure 2.

Table S4.2: Annual production/treatment	
Parameter	Units
Total amount of waste treated	tonnes

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes
Energy usage	Annually	MWh

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Form air1 or other form as agreed in writing by Natural Resources Wales	27/04/2021
Water usage	Form water usage 1 or other form as agreed in writing by Natural Resources Wales	24/06/2016
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	24/06/2016
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	24/06/2016
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
Waste Subject to Conditions 4.2.5	Waste tonnage return form from the Natural Resources Wales website or other form as agreed in writing by Natural Resources Wales	N/A

Schedule 4 (b) – Reporting effective from 17 August 2022

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
Emissions to air Parameters as required by condition 3.5.1 ¹	A1	Every 6 months	1 January, 1 July
Emissions to sewer Parameters as required by condition 3.5.1	S1	To be agreed with NRW	To be agreed with NRW
Bioaerosol emissions as required by condition 3.5.1 ¹	Upwind of the site and downwind of the site	Quarterly or as agreed in writing by the Natural Resources Wales	1 January, 1 April, 1 July, 1 October

Note 1: Reporting of monitoring only applies when identified as relevant in accordance with "M9 – Technical Guidance Note (Monitoring) – Environmental monitoring of bioaerosols at regulated facilities, 2018 Version 2" and following completion of pre-operational measure 2.

Table S4.2: Annual production/treatment

Parameter	Units
Total amount of compost produced	tonnes
Total amount of waste treated	tonnes

Table S4.3 Performance parameters

Parameter	Frequency of assessment	Units
Water usage	Annually	m ³
Energy usage	Annually	MWh
Total raw material used	Annually	tonnes
Generation of reidsidues	Annually	tonnes
Generation of wastewater	Annually	m ³

Table S4.4 Reporting forms

Media/parameter	Reporting format	Date of form
Air	Form air1 or other form as agreed in writing by Natural Resources Wales	27/04/2021
Sewer	Form sewer 1 or other form as agreed in writing by Natural Resources Wales	17/08/2022
Water usage	Form water usage 1 or other form as agreed in writing by Natural Resources Wales	24/06/2016
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	24/06/2016
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	17/08/2022

Table S4.4 Reporting forms

Media/parameter	Reporting format	Date of form
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
Waste Subject to Conditions 4.2.5	Waste tonnage return form from the Natural Resources Wales website or other form as agreed in writing by Natural Resources Wales	N/A

Schedule 5 - Notification

These pages outline the information that the operator must provide.

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

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

Part A

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

(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a permit condition	
To be notified within 24 hours of detection	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

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

To be notified within 24 hours of detection

Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted 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.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

“*Accident*” means an accident that may result in pollution.

“*Annex I*” means Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“*Annex II*” means Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“*Application*” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“*Authorised officer*” means any person authorised by 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.

“*Best available treatment, recovery and recycling techniques*” shall have the meaning given to it in the document published jointly by the Department for Environment, Food and Rural Affairs, the Welsh Assembly Government and the Scottish Executive on 27th November 2006, entitled “Guidance on Best Available Treatment, Recovery and Recycling Techniques (BATRRT) and Treatment of Waste Electrical and Electronic Equipment (WEEE).”

“*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⁻³ for total bacteria and *Aspergillus fumigatus*.

“*Building*” means a construction that has the objective of providing sheltering cover and minimising emissions of noise, particulate matter, odour and litter.

“*Compost*” means solid particulate material that is the result of composting, which has been *sanitised* and *stabilised*, and which confers beneficial effects when added to soil, used as a component of growing media or used in another way in conjunction with plants.

“*Composting*” means the biological decomposition of organic materials, under conditions that are predominantly aerobic and that allow the development of thermophilic temperatures as a result of biologically produced heat.

“*Disposal*” or “*D*” means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

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

“*EP Regulations*” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“*Emissions of substances not controlled by emission limits*” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

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

“*Industrial Emissions Directive*” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

“*Nearest sensitive receptors*” means the nearest place to the composting operations where people are likely to be for prolonged or frequent periods. This term would therefore apply to dwellings (including any associated gardens) and to workplaces where workers would frequently be present. It does not apply to the operators of composting facilities or their staff while carrying out the composting operation as their health is covered by Health and Safety legislation.

“*Pests*” means Birds, Vermin and Insects.

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

“*Recovery*” or “*R*” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

‘*Residue*’ means the solid waste generated by the waste treatment activity and is not directly related to the type of waste treated in the plant

“*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.

“*Waste Treatment BAT Conclusions*” means the BAT Conclusions for the Waste Treatment sector published as a Commission Implementing Decision EU 2018/1447 in the Official Journal of the EU on 17 August 2018

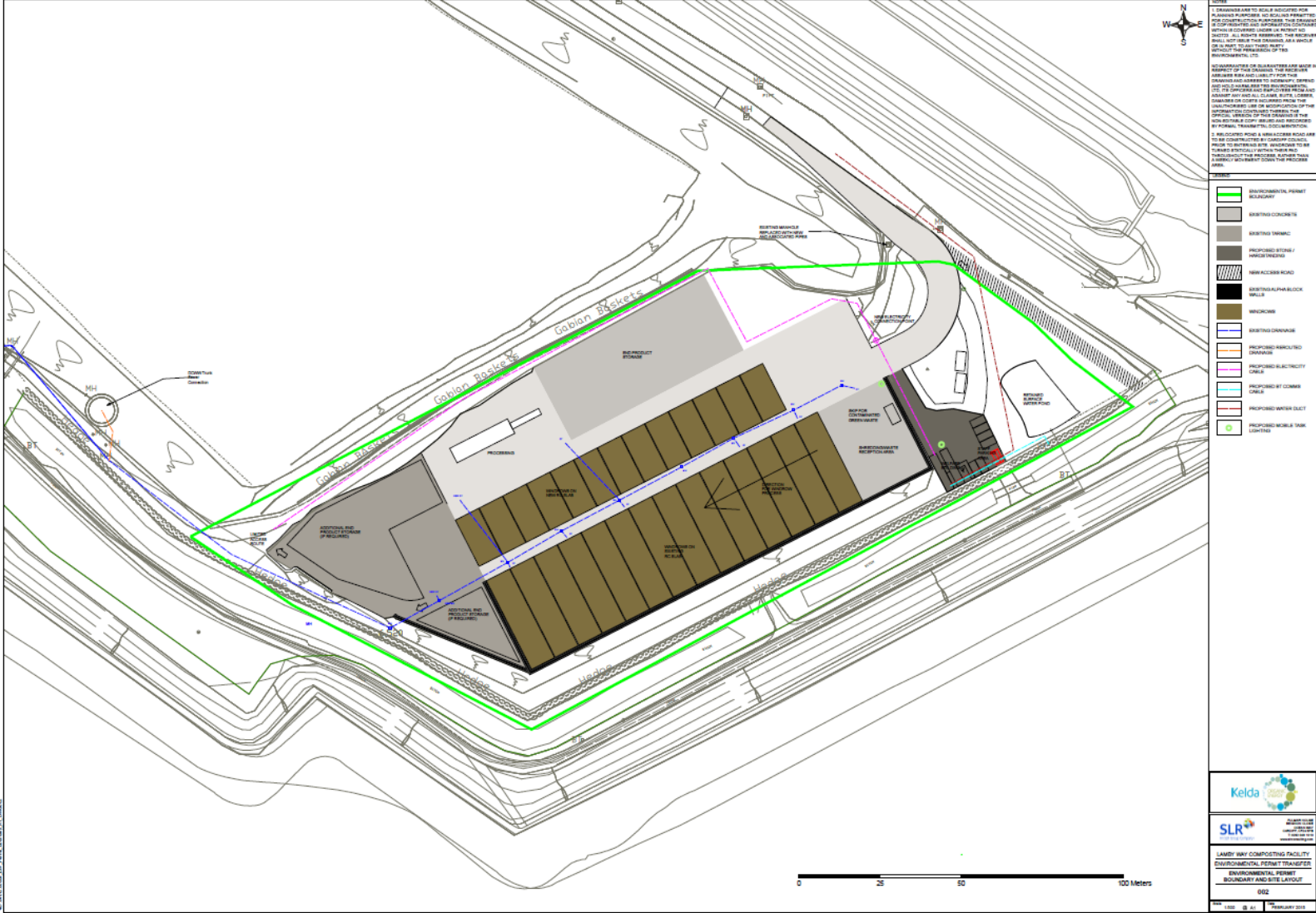
“*Year*” means calendar year ending 31 December.

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

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- (a) in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- (b) in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

Schedule 7 - Site plan



END OF PERMIT