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**Natural
Resources**
Wales

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Biocatalysts Limited

**Nantgarw Enzyme Production Facility
Cefn Coed
Parc Nantgarw,
Cardiff
CF15 7QQ**

Permit number

EPR/CB3593CX

Nantgarw Enzyme Production Facility

Permit number EPR/CB3593CX

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

Nantgarw Enzyme Production Facility is an enzyme production site located at Cefn Coed, Parc Nantgarw and operated by Biocatalysts Limited. The enzymes are produced through fermentation growth of bacteria or yeast microorganisms. Once the microorganism has grown to a suitable level the specific enzyme is removed and filtered. The enzyme is either then used as a liquid or further processed by spray or freeze drying to produce a concentrated powdered enzyme.

The site has been categorised as a low impact installation and as such the site operates to the low impact installation criteria. All activities occur within the building and the emissions to air consist of ventilation from fermenters, fume hoods, local exhaust ventilation and from the steam boilers which have a thermal input of less than 1MWth.

All process effluent is discharged to foul sewer under a trade effluent consent. The only discharge to surface water is of uncontaminated rainwater run off.

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 PAN-011842	Duly made 16/09/2021	Application for a bespoke Low Impact Installation
Additional information received	26/11/2021	Details on discharge to Soakaway
Additional information received	28/01/2022	Response to Schedule 5 Notice on details to modify drainage to meet Low impact installation criteria
Permit determined (EPR/CB3593CX/A001)	01/06/2022	Permit issued to Biocatalysts Limited

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number
EPR/CB3593CX

The Natural Resources Body for Wales (“Natural Resources Wales”) authorises,
under regulation 13 of the Environmental Permitting (England and Wales)
Regulations 2016

Biocatalysts Limited (“the operator”),

whose registered office is
Cefn Coed
Parc Nantgarw,
Cardiff
CF15 7QQ

company registration number **02570883**

to operate an installation at
Nantgarw Enzyme Production Facility
Cefn Coed
Parc Nantgarw,
Cardiff
CF15 7QQ

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

Signed

Date

Rebecca Williams	01/06/2022
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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.

1.2 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”).

2.2 The site

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

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated in accordance with the Low Impact Installation criteria specified in Natural Resources Wales’s Environmental Permitting application form at the time the permit application was duly made.
- 2.3.2 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.
- 2.3.3 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.

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 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.
- 3.3.2 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.

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 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 shall include as a minimum, a review of the results of the actual and anticipated operation of the installation against the low impact criteria issued by Natural Resources Wales at the time of the review.

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 S4.2 ; 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.

4.3 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.

- 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	Limits of specified activity
AR1	S4.1 Part A (1)(a)(iv) Producing organic chemicals such as organic compounds containing nitrogen (for example amines, amides, nitrous-, nitro or azo-compounds, nitrates, nitriles, nitrogen heterocyclics, cyanates, isocyanates, di-isocyanates and di-isocyanate prepolymers)	Production of organic chemicals by the use of fermentation to produce proteins molecules (enzymes), long chain hydrocarbons containing carbon, nitrogen oxygen, sulphur atoms.	Low Impact Installation criteria specified in Natural Resources Wales's Environmental Permitting application form B2 at the time the permit application was duly made.
Directly Associated Activity			
AR2	Discharge of effluent to sewer	Discharge of process effluent to sewer under trade effluent consent	Low Impact Installation criteria specified in Natural Resources Wales's Environmental Permitting application form B2 at the time the permit application was duly made.
AR3	Steam Boilers	2x Natural gas powered steam boilers	Low Impact Installation criteria specified in Natural Resources Wales's Environmental Permitting application form B2 at the time the permit application was duly made.

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels

Raw materials and fuel description	Specification
-	-

Schedule 3 – Emissions and monitoring

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 [Point A on site plan in schedule 7]	Lab Fume Cabinet	No parameters set	No limit set	--	--	-
A2 [Point B on site plan in schedule 7]	2x Electric Boiler (227 KWth) and Steam Boiler (300 KWth), Autoclave and Fermenter	No parameters set	No limit set	--	--	-
A3 [Point C on site plan in schedule 7]	Local Exhaust ventilation	No parameters set	No limit set	--	--	-
A4 [Point D on site plan in schedule 7]	Fermenter	No parameters set	No limit set	--	--	-
A5 on [Point E on site plan in schedule 7]	Steam Boiler 732 KWth	No parameters set	No limit set	--	--	-
A6 [Point F on site plan in schedule 7]	Domestic CHS Boiler (25.8 KWth)	No parameters set	No limit set	--	--	-

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 (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 [Sample Point in BIOCAT 3 Sampling Point]	Process effluent from fermentation	No parameters set	No limit set	-	-	-

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
None	-	-	-

Table S4.2 Reporting forms

Media/parameter	Reporting format	Date of form
None	-	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	EPR/CB3593CX
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 unless otherwise specified below

Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

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

(c) 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	
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.

“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.

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

“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 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.

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

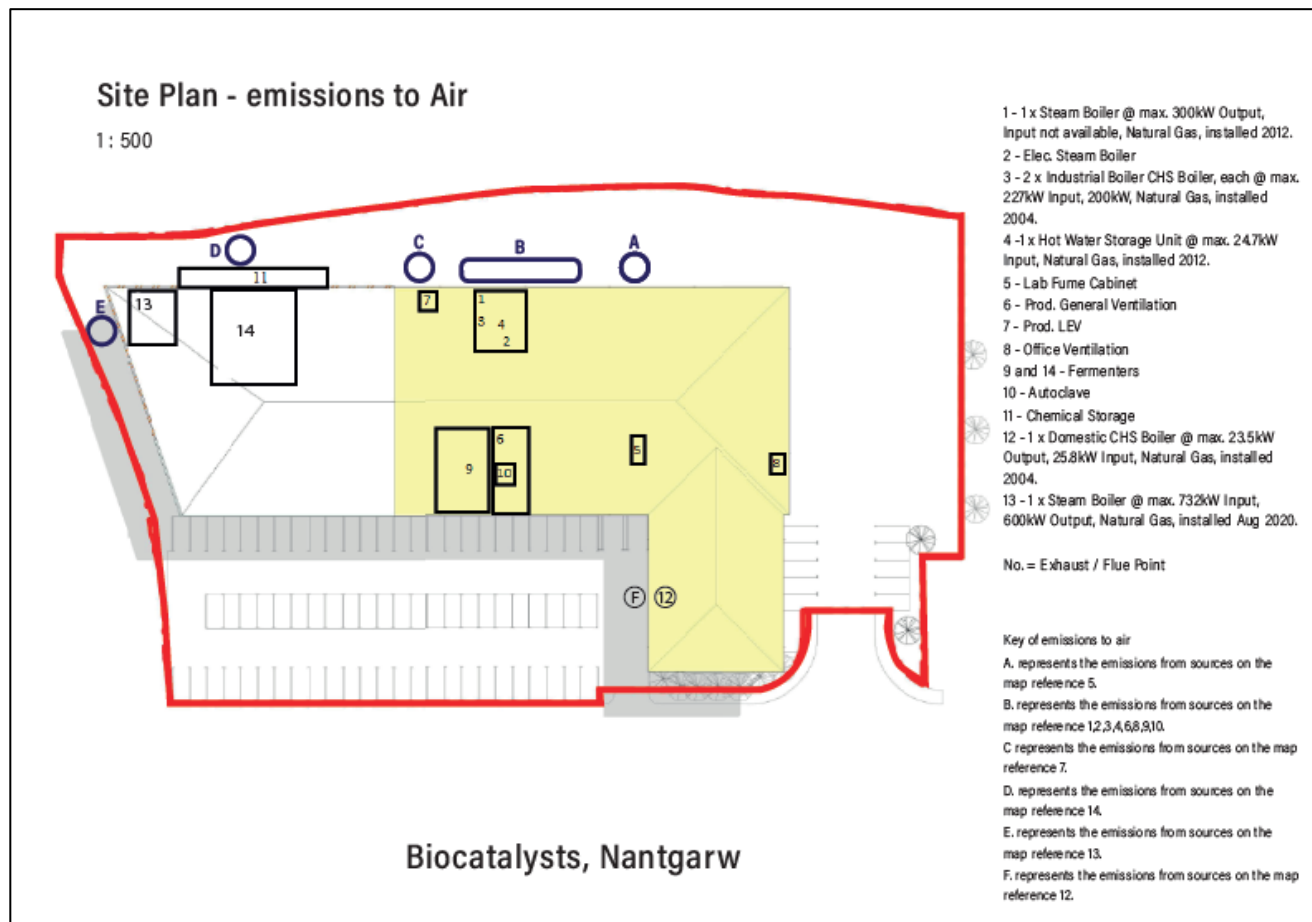
“hazardous waste” has the meaning given in the Hazardous Waste (Wales) Regulations 2005 (as amended)

“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

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

“year” means calendar year ending 31 December.

Schedule 7 - Site plan



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END OF PERMIT