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Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Morganite Electrical Carbon Limited

Electrical Carbon, Swansea
Upper Fforest Way
Morrison
Swansea
West Glamorgan
SA6 8PP

Permit number

EPR/VP3339PD

Electrical Carbon, Swansea

Permit number EPR/VP3339PD

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

Morganite Electrical Carbon is part of the Morgan Advanced Materials Group and has been operational at the Morrison facility since the late 1960's.

Morganite is the sole operator of the Installation. The processes carried out on-site are the manufacture of electrical and mechanical carbon products.

The manufacture of both product groups is predominantly concerned with the mixing of carbon and metallic powders with binder material (pitch, tar or resins) that is pressed into shape prior to heat treatment to carbonise the material and/or cure the resins. The material is then impregnated with metals to achieve the required physical properties, before final machining. In 2024 a new graphitisation furnace was added to the existing carbon production activity to meet rising customer demand for graphitised carbon felt. Associated plant including a product inspection table with dust extraction and standby diesel generator (0.77 MWth) have also been installed.

Releases to air include particulate, oxides of nitrogen, sulphur dioxide, Volatile Organic Compounds (VOC's), Benzo[a]Pyrene (BaP) and some metals notably lead, antimony and copper. A combination of management techniques and physical controls are used to minimise emissions and impacts. Two of these substances released to air, particulate matter and oxides of nitrogen have high background concentration primarily dominated by traffic sources. There are no releases to groundwater and a minimal release to sewer comprised of wet scrubber effluent and cooling water blowdown from the new graphitisation furnace air abatement system. The only discharge to controlled waters is uncontaminated surface water 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 VP3339PD (EPR/VP3339PD/A001)	Duly made 11/03/2004	
Additional Information Received	Requested 04/08/2004	Received 27/08/2004, 20/09/2004
Permit determined VP3339PD (EPR/VP3339PD/A001)	06/05/2005	
Regulation 16 Notice* Application	14/06/2005	
Regulation 16 Notice Determined	05/07/2005	

Status log of the permit

Description	Date	Comments
Variation application EP3533LE (EPR/VP3339PD/V002)	Duly made 30/10/2005	
Variation determined EP3533LE (EPR/VP3339PD/V002)	05/01/2006	
Variation application EP3536LY (EPR/VP3339PD/V003)	Duly made 05/06/2006	
Variation determined EP3536LY (EPR/VP3339PD/V003)	04/09/2006	
Variation application CP3331MX (EPR/VP3339PD/V004)	Duly made 21/12/2006	
Variation determined CP3331MX (EPR/VP3339PD/V004)	04/05/2007	
Variation application EPR/VP3339PD/V005	Duly Made 04/03/2011	
Variation determined EPR/VP3339PD/V005	17/06/2011	
Agency variation determined EPR/VP3339PD/V006	04/03/2013	Agency variation to implement the changes introduced by IED
Part Surrender application EPR/VP3339PD/S007	Duly Made	Part surrender of non-process areas of the site
Additional information received	31/05/2016	Plan showing new installation boundary
Part Surrender determined EPR/VP3339PD/S007	18/07/2016	Part surrender issued
Regulation 60 Notice dated 25/07/16 (Notice requiring information for statutory review of permit)	Response received 14/12/2016	Technical standards detailed in response to the information notice. Information to demonstrate that relevant BAT conclusions are met for non-ferrous metal production
Variation application EPR/VP3339PD/V008	Duly Made 24/01/2017	
Application EPR/ EPR/VP3339PD/V008 (Variation and Consolidation)	03/04/2017	Variation and consolidation following the implementation of IED. In addition, a normal variation to add a new LMC and extruder process has been completed.
Variation application EPR/VP3339PD/V009	Duly Made 12/02/2018	

Status log of the permit

Description	Date	Comments
Application EPR/ EPR/VP3339PD/V009 (Variation and Consolidation)	23/03/2018	Normal variation to make several changes within the LMC process.
Variation application EPR/VP3339PD/V010	Duly Made 29/10/2018	Application to move site waste handling and review sites discharge to sewer.
Variation determined EPR/VP3339PD/V010	30/11/2018	Variation determined
Part Surrender application EPR/VP3339PD/S011	Duly Made 06/08/2019	Application to surrender the permit in part – to surrender areas of non-process.
Part Surrender determined EPR/VP3339PD/S011	23/10/2019	Part surrender issued
Variation application EPR/VP3339/V012	Duly Made 08/02/2021	Application to change abatement and stack height at emission point A15
Variation determined EPR/VP3339/V012	18/06/2021	Variation issued to Morganite Electrical Carbon Limited
Part Surrender application EPR/VP3339PD/S013	Duly Made 25/11/2021	Application to surrender the permit in part - to surrender the land of the former RMPU Building
Part Surrender determined EPR/VP3339PD/S013	28/01/2022	Part surrender and consolidated permit issued to Morganite Electrical Carbon Limited
Confidentiality decision following objection notice received from operator on 31/01/2024	04/07/2024	Decision to accept the objection notice received from the operator in relation to specified information received as part of the application.
Application PAN-024653 EPR/VP3339PD/V014 (variation and consolidation)	Duly made 14/08/2024	Application to vary the permit to add new graphitisation furnace, inspection table and standby generator. Removal of LMC & Theta Process air emission points.
Additional information requested	16/10/2024	Schedule 5 Notice
Additional information received	04/11/2024	Clarification of Benzo[a]Pyrene modelling and Critical Level used for assessment of oxides of nitrogen at ecological receptors.
Variation determined EPR/VP3339PD/V014	24/02/2025	Varied and consolidated permit issued.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/VP3339PD

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/VP3339PD/V014 authorising,

Morganite Electrical Carbon Limited (“the operator”),

whose registered office is

Upper Fforest Way

Morrison

Swansea

West Glamorgan

SA6 8PP

company registration number 01034653

to operate an installation

Electrical Carbon, Swansea

Upper Fforest Way

Morrison

Swansea

West Glamorgan

SA6 8PP

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

Name	Date
Holly Noble	24/02/2025

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 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR6.) 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 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR6.) 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 green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1 (a) For the following activities referenced in schedule 1, table S1.1 (AR1 to AR6.) 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 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 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.

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, S3.2 and S3.3.

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

3.1.3 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR6.) Where a substance is specified in schedule 3 table 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.
- 3.3.2 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 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, S3.2 and S3.3;
- 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, S3.2, and S3.3, 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 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR6.) 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.

4.3 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.

- 4.3.7 Where the operator has entered into a climate change agreement with the Government, Natural Resources Wales shall be notified within one month of:
- (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement;
and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

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
AR1	6.2 A(1)(a) Carbon Activities	Production of carbon by means of graphitisation	Receipt of raw materials, operation of cooling circuits, treatment and release of process gases to air, to despatch of finished product.
AR2	4.2 A(1)(c)(vi) Inorganic chemicals	Manufacturing activity involving the use of Lead	Receipt of raw materials to despatch of finished product.

Directly Associated Activities

AR3	Unlisted Directly Associated Activity	1 x 0.77 MWth Standby generator	Provision of emergency power to site. Fired on diesel Used for ≤50 hours testing and maintenance per year.
AR4	Unlisted Directly Associated Activity	Discharge of process effluent to sewer	Cooling water and Wet Scrubber blowdown from graphitisation furnace and associated plant
AR5	Unlisted Directly Associated Activity	Operation of systems for the receipt and storage of raw materials	Delivery and storage of raw materials to be used in the process
AR6	Unlisted Directly Associated Activity	Operation of systems and facilities for the storage, handling and disposal of all process wastes and by-products.	From point of arising through to despatch or disposal/use

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.1 and 2.2 and given in section 2.3 of the application	11/03/2004
Variation	Variation Application CP3331MX and response to Sch7 Notice	21/12/2006
Variation	Variation Application VP33339PD/V005 Non-technical summary	23/02/2011
Response to Regulation 60 notice	The response and supporting information requested by NRW and submitted by email	14/12/2016
Variation	Variation Application VP33339PD/V008 Non-technical summary	24/01/2017
Variation	Variation Application VP33339PD/V008 Air Quality Assessment	24/01/2017
Variation	Variation Application VP33339PD/V008 Application Document P2703/R003	24/01/2017
Variation	Non-Technical Summary v4	02/02/2018

Table S1.2 Operating techniques

Description	Parts	Date Received
Variation	IPPC Morgan Carbon Site Emissions Point to Air, Drawing No – SITEMISS01/I	02/02/2018
Variation	Variation Application VP3339PD/V010 Application Document Minor Technical Variation 2010-10	16/10/2018
Variation	Variation Application VP3339PD/V012 <ul style="list-style-type: none">• Document Reference: VP3339PD/V012/A15• Appendix 3 HDB Vessel Information	08/02/2021
Variation	Variation Application VP3339PD/V014 <ul style="list-style-type: none">• Application Supporting Information (AtkinsRéalis V2 January 2024):<ul style="list-style-type: none">- Section 1.11 “Raw Materials”- Section 2.9 “Raw Material Handling and Storage”- Section 3 “Techniques for Process and Emissions Control and BAT Assessment”- Section 4.10 “Risk Assessments Summary”- Section 5 “Proposed Monitoring and Controls”- Appendix E “Accident Scenarios and Mitigation”	31/01/2024

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
12	<p>Following successful completion of proposed works and establishment of routine steady operation, the operator shall undertake noise monitoring at the site boundary. This shall include:</p> <ul style="list-style-type: none"> • A full noise monitoring survey and assessment meeting the BS4142:2014 standard • 1/3rd octave and narrow band (FFT) measurements to identify any tonal elements or low frequency noise • Reference to the World Health Organisation guidelines for community noise <p>Upon completion of the work, a written report shall be submitted to Natural Resources Wales. The report shall make reference to the predictions in the report produced in accordance with PO5. If rating levels likely to cause complaints at sensitive receptors are detected, the report shall include an assessment of the most suitable abatement techniques, an estimate of the cost and a proposed timetable for their installation.</p>	Completed
13	<p>The operator shall submit, for approval by Natural Resources Wales, a report setting out progress to achieving the BAT Conclusions and BAT-AEL's where BAT is currently not achieved, but will be achieved by the 30th June 2020. The report shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> 1) Current performance against the BAT Conclusions and BAT-AEL. 2) Methodology for reaching the AELs. 3) Associated targets / timelines for reaching compliance by 30th June 2020. <p>The report shall address all of the relevant BAT Conclusions</p>	Completed
14	<p>Please provide a full justification including monitoring results of the input material to demonstrate that the BAT-AEL's cannot be breached. Begins June 2020, an annual report will be required to show compliance.</p>	Superseded
15	<p>The operator shall test relevant metal emissions (Tin, Copper and Silver) to authorised emission point A63. If the emissions are shown to be significant, the operator will propose suitable abatement.</p> <p>A report shall be submitted to NRW for approval.</p>	Completed
16	<p>Following successful commissioning and establishment of routine operation¹ of the graphitisation furnace, associated inspection table and standby diesel generator, the Operator shall undertake noise monitoring at Receptors AL01, AL02 and AL03 (identified in the Enzygo Noise Impact Assessment report (Final 2024)). The purpose of this monitoring is to ensure that actual impacts from the graphitisation furnace, associated inspection table and standby diesel generator do not exceed those predicted in the Enzygo report.</p> <p>This work shall include:</p> <ul style="list-style-type: none"> • An assessment of whole site noise against a background sound level that does not include the existing site: and • A full noise monitoring survey and assessment meeting the BS4142:2014 + A1:2019 standard; following the guidance set out in Noise and Vibration Management: Environmental Permits and Method Implementation Document (MID) for BS4142. <p>Upon completion of the work, a written report shall be submitted to</p>	Within 3 months of the start of graphitisation furnace operation

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
	Natural Resources Wales for approval. The report shall make reference to the predictions in the Final 2024 Enzygo report. If rating levels likely to cause adverse and/or significant adverse impact at sensitive receptors are detected, the report shall include an assessment of the most suitable abatement techniques, an estimate of the cost and a proposed timetable for their installation.	
	1: Routine steady operation is defined as "normal operation". Consists of any operation of the plant not including shutdown and abnormal operation, unless additional definitions are agreed in writing with Natural Resources Wales.	

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
A02 on Site Boundary and Emissions Point Plan in Schedule 7	Production Line 1	-	-	-	-	-
A08 on Site Boundary and Emissions Point Plan in Schedule 7	Production Line 4, G building	-	-	-	-	-
A09 on Site Boundary and Emissions Point Plan in Schedule 7	Metal Spraying	-	-	-	-	-
A15 on site plan in schedule 7	Production Line 1	Total Particulates	4 mg/Nm ³	Hourly Average	Annual	BS ISO 13284-1
		BaP	0.005 mg/Nm ³	Average value of three consecutive measurements of at least 30 minutes each, unless otherwise stated ⁽¹⁾		ISO 11338 Parts 1 and 2
A19 on Site Boundary and Emissions Point Plan in Schedule 7	Production Line 4, G building	Total Particulate	5 mg/Nm ³	Hourly Average	Annual	BS ISO 13284-1

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
A27 on Site Boundary and Emissions Point Plan in Schedule 7	Production Line 1	Sulphur Dioxide	500 mg/Nm ³	24 Hourly Average	Annual	EN 14791
		Oxides of Nitrogen (expressed as NO ₂)	150 mg/Nm ³			BS ISO 14792:
		Total Particulate	10 mg/Nm ³	Hourly Average		BS ISO 13284-1
		BaP	0.01 mg/Nm ³	Average value of three consecutive measurements of at least 30 minutes each, unless otherwise stated ⁽¹⁾		ISO 11338 Parts 1 and 2
A28 on Site Boundary and Emissions Point Plan in Schedule 7	Production Line 1	Sulphur Dioxide	500 mg/Nm ³	24 Hourly Average	Annual	EN 14791
		Oxides of Nitrogen (expressed as NO ₂)	150 mg/Nm ³			BS ISO 14792
		Total Particulate	10 mg/Nm ³	Hourly Average		BS ISO 13284-1
		BaP	0.01 mg/Nm ³	Average value of three consecutive measurements of at least 30 minutes each, unless otherwise stated ⁽¹⁾		ISO 11338 Parts 1 and 2
A39 on Site Boundary and Emissions Point Plan in Schedule 7	EHT, G building	-	-	-	-	-

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
A61 on Site Boundary and Emissions Point Plan in Schedule 7	Production Line 1	Sulphur Dioxide	500 mg/Nm ³	24 hourly average	Annual	EN 14791
		Oxides of Nitrogen (expressed as NO ₂)	150 mg/Nm ³			BS ISO 14792
		Total Particulate	10 mg/Nm ³	Hourly average		BS ISO 13284-1
		BaP	0.01 mg/Nm ³	Average value of three consecutive measurements of at least 30 minutes each, unless otherwise stated ⁽¹⁾		ISO 11338 Parts 1 and 2
A64 on Site Boundary and Emissions Point Plan in Schedule 7	Ceramic and zinc spray booth	-	-	-	-	-
A70 on Site Boundary and Emissions Point Plan in Schedule 7	Slot Furnace	Sulphur Dioxide	100 mg/Nm ³	24 hourly average	Annual	EN 14791
		Total Particulate	5 mg/Nm ³	Hourly average		BS ISO 13284-1
		Total Volatile Organic Compounds (TVOC)	40 mg/Nm ³			EN 12629
		BaP	0.01 mg/Nm ³	Average value of three consecutive measurements of at least 30 minutes each, unless otherwise stated ⁽¹⁾		ISO 11338 Parts 1 and 2
A71 on Site Boundary and Emissions Point Plan in Schedule 7	Standby Generator	No parameters set	No limit set	-	-	-
A72 on Site Boundary and Emissions Point Plan in Schedule 7	Inspection Table Dust Extraction	Total Particulate	5 mg/Nm ³	Hourly average	Annual	BS ISO 13284-1
A73 on Site Boundary and Emissions Point Plan in Schedule 7	2 x Nitrogen Storage Tank Pressure Release Valves	No parameters set	No limit set	-	-	-

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
Notes:						
(1) For batch processes, the average of a representative number of measurements taken over the total batch time or the result of a measurement carried out over the total batch time can be used.						

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 – Settling tank and 'stive pit' system	Uncontaminated surface water	No Parameter set	No Limit Set	-	-	-

Table S3.3 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 –on Site Boundary and Emissions Point Plan in Schedule 7	Cooling water and Wet Scrubber blowdown from graphitisation furnace and associated plant	No Parameters set	No Limit Set	-	-	-

Schedule 4 – Reporting

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.	A15, A19, A27, A28, A61, A70, A72	Every 12 months	01/01/2025

Table S4.2 Annual production/treatment

Parameter	Units
No limits set	N/A

Table S4.3 Performance parameters

Parameter	Frequency of assessment	Units
Energy usage	Annually	MWh
Waste disposal and/or recovery	Annually	tonnes

Table S4.4 Reporting forms

Media/parameter	Reporting format	Date of form
Air	Form air1 (A1) or other form as agreed in writing by Natural Resources Wales	24/02/2025
Energy usage	Form energy1 (E1) or other form as agreed in writing by Natural Resources Wales	01/05/2005
Waste Return	Form waste return (W1) or other form as agreed in writing by Natural Resources Wales	01/05/2005
Other performance indicators	Form performance1 (P1) or other form as agreed in writing by Natural Resources Wales	01/05/2005

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/VP3339PD
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	
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	
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.

“emissions to land” includes emissions to groundwater.

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

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

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

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

“year” means calendar year ending 31 December.

“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.

“hazardous property” has the meaning given in Schedule 3 of the Hazardous Waste (England and Wales) Regulations 2005 No.894 and the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138).

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

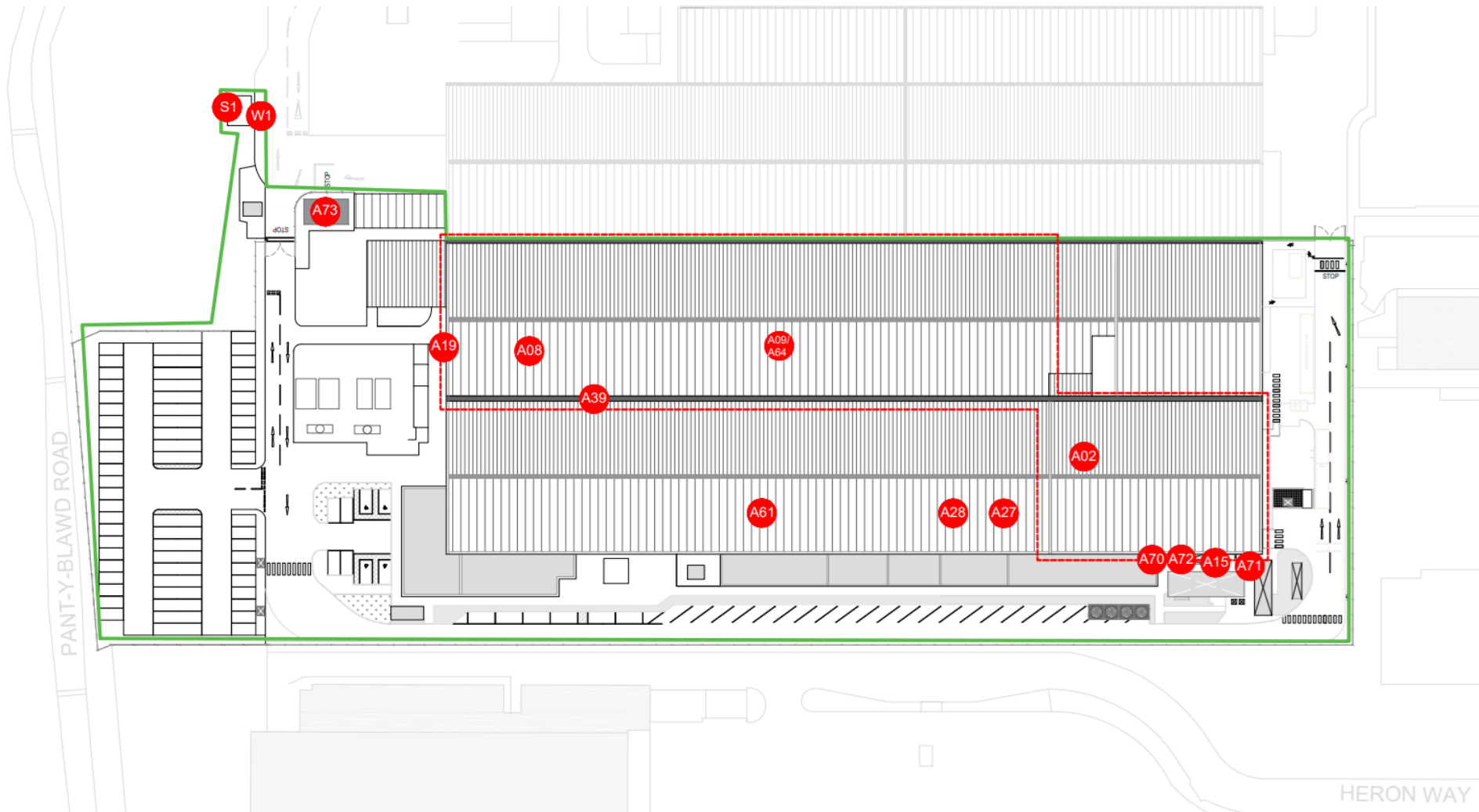
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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

Site Boundary and Emissions Point Plan



End of Permit