

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Bakelite Synthetics UK Limited

**Barry Thermosets Plant
Sully Moors Road
Sully
Penarth
Wales
CF64 5YU**

Permit number
EPR/PP3238LX

Barry Thermosets Plant

Permit number EPR/PP3238LX

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

Barry Thermosets Plant is located in Barry South Wales, and manufactures a range of phenolic resins, ace hardeners, furans and styrenated phenols.

The activities carried out at the installation are:

- Polymers (various grades of phenolic resin) manufacture as defined in S4.1 Part A(1)(a)(viii)
- Styrenated phenol manufacture as defined in S4.1 Part A(1)(a)(ii)
- Biological treatment of non-hazardous waste (effluent treatment) as defined in S5.4 Part A(1)(a)(i)
- 9.72 MW thermal input combustion plant for steam raising
- 2x 1.2 MW thermal input emergency generators for continuity of power supply to the safety critical controls

Activities are production of phenolic resins, cashew nut shell liquor resins, esterified resole production and Ace hardener. The plant is also able to produce styrenated resins.

The Barry Thermosets Plant operates an Environment Management System which is certified to ISO14001. The Operator has a Climate Change Levy Agreement with DEFRA. The installation is classified under the COMAH Regulations 2015 as 'Upper Tier' site.

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 PP3238LX	29/03/06	
Additional information requested	29/08/06	Received 11/09/06
Additional information received	28/07/06	In response to improvement condition 8.36 from variation CA4145 to IPC authorisation AJ9075.
Permit determined EPR/PP3238LX	15/12/06	
Agency variation determined EPR/PP3238LX/V002	22/03/13	Agency variation to implement the changes introduced by IED
Application EPR/PP3238LX/V003	17/01/22	Administrative variation requested to change company name from 'Hexion UK Ltd' to 'Bakelite Synthetics UK Ltd'
Variation determined	25/03/22	Permit varied, company name changed

EPR/PP3238LX/V003		to Bakelite Synthetics UK Ltd
Application EPR/PP3238LX/V004 (variation and consolidation)	Duly made 14/12/2022	Variation to add 2No. emergency generators to permit.
Variation determined EPR/PP3238LX/V004	13/02/2023	Varied and consolidated permit issued.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number
EPR/PP3238LX

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/PP3238LX/V004 authorising,

Bakelite Synthetics UK Limited (“the operator”),

whose registered office is

Sully Moors Road
Sully
Penarth
Wales
CF64 5YU

company registration number **00867053**

to operate an installation at

Barry Thermosets Plant
Sully Moors Road
Sully
Penarth
Wales
CF64 5YU

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

Signed	Date
<i>Holly Noble</i>	13/02/2023

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”).
- 2.1.2 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 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 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.
- 2.3.5 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.
- 2.3.6 For the following activities referenced in schedule 1, table S1.1 (AR5) the activities shall be operated using the techniques and, in the manner, described in schedule 1, table S1.2A.

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 and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Total annual emissions from the emission point(s) set out in tables schedule 3 S3.1 and S3.2 of a substance listed in schedule 3 table S3.3 shall not exceed the relevant limit in table S3.3.
- 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.
- 3.1.5 For the following activities referenced in schedule 1, table S1.1 (AR5) Limited Operating Hours MCPs shall:
- (a) not exceed 500 hours operation in a 12-month period as a rolling average over a 3-year period for new MCP, and thereafter assessed annually.
 - (b) Not operate for more than 750 hours in any single year

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.

3.5 Monitoring

- 3.3.1 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 S3.4;
- 3.3.2 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.
- 3.3.3 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.
- 3.3.4 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.
- 3.3.5 For the following activities referenced in schedule 1, table S1.1 (AR5) the first monitoring measurements shall be carried out
- (a) For new MCP within four months of the issue date of the permit or the date when the MCP is first put into operation, whichever is later

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.

- 4.1.3 For the following activities referenced in schedule 1, table S1.1 (AR5) the operator shall maintain a record of the type and quantity of fuel used and the total annual hours of operation for each MCP and/or Specified Generator.

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.

4.3 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 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.

4.3.7 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	Limits of specified activity
AR1	S4.1 A1 (a) (viii)	Polymer manufacture (various grade of phenolic resin)	From receipt of raw materials to production of finished products.
AR2	S4.1 A1 (a) (ii)	Styrenated phenol manufacture	From receipt of raw materials to production of finished products.
AR3	S5.4 A1 (a) (i)	Biological treatment of non-hazardous waste (effluent treatment)	From receipt of effluent to discharge to controlled water.

Directly Associated Activity

AR4	Steam generation	Steam raising boiler plant (9.72 MW thermal input) fired on natural gas or oil	From receipt of fuel to release of combustion products including oil receipt and storage.
AR5	Schedule 25A – Medium Combustion Plant as detailed in Schedule 8 and Schedule 25B Specified Generator that is excluded	Emergency generators for provision of emergency electrical power. 2x 1.2 MWth input gas oil fuelled generators (new Medium Combustion Plant)	Use limited to routine testing operations and in the event of loss of site power to enable safe shut-down of operations. Operating hours limited as per condition 3.1.5

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	Sections 2.2.1.2, 2.2.1.3, 2.2.2.2, 2.2.5 and 2.74	29/03/06
Application EPR/PP3238LX/V004	Document Title: Barry Thermosets Plant Environmental Permit Variation Application EPR/PP3238LX/V002 Bakelite Synthetics UK Limited, dated: September 2022 Section 3 Operating Techniques	02/11/2022
E-mail from operator	All – confirmation of monitoring of styrene in air and water emissions	26/01/2023

Table S1.2A Operating techniques for Medium Combustion Plant as detailed in Schedule 8

Description
Each MCP must be operated in accordance with the manufacturer's instructions and records must be made and retained to demonstrate this
The operator must keep periods of start-up and shut-down of each MCP as short as possible
There must be no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993
A Limited Operating Hours MCP which is an excluded generator may only be operated for the sole purpose of maintaining power supply to a site during an on-site emergency and it may not participate in any balancing services
A Limited Operating Hours MCP which is an excluded generator may only be operated for the sole purpose of testing no more than 50 hours per year

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC1	The Operator shall provide a correlation report for COD and BOD ₅ in the effluent discharge from point W1 to enable re-assessment of environmental impact. The analytical methods to be used shall be submitted to the Agency for approval before commencement of the study.	01/07/07 Complete
IC2	The Operator shall prepare a site closure plan having regard to Section 2.2.11 of the Agency Guidance Note for the Speciality Organic Chemicals Sector S4.02. The plan shall be submitted to the Agency for approval.	01/07/07 Complete
IC3	The Operator shall complete a revised environmental assessment for air emissions from emissions points A1, A2, A3 and A5 having regard to the Environment Agency's guidance document H1 Environmental Assessment and Appraisal of BAT, or similar, following proposed plant closures. A written report summarising the findings shall be submitted to the Agency for approval.	01/08/07 Complete
IC4	<p>The Operator shall carry out an optimisation study for the operation of the installation effluent treatment plant. This shall include but not be limited to:</p> <ul style="list-style-type: none"> • Completion of a revised environmental assessment for water emissions having regard to the Environment Agency's guidance document H1 Environmental Assessment and Appraisal of BAT, or similar, following proposed plant closures; • Investigation of methods to reduce formaldehyde levels in effluent emitted via W1. • Development of a procedure to carry out regular inspection of sludge build up in the clean lagoon, including removal of sludge, and determine an upper threshold to protect emission limit values applied to releases from W1; • Prevention of spillage. <p>A report shall be submitted to the Agency detailing findings and a timetable for the implementation of any improvements identified. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the proposals. The proposed measures shall be implemented by the Operator from the date of approval in writing by the Agency.</p>	<p>Revision of Environmental Assessment 01/08/07</p> <p>Completion of improvement condition 01/10/07</p> <p>Complete</p>
IC5	The Operator shall investigate methods of reducing oxides of nitrogen emissions to air via A2 whilst burning natural gas to the benchmarks outlined in 'PG 1/3(95) Boilers and Furnaces, 20-50 MW Net Rated Thermal Input'. A report shall be submitted to the Agency detailing the findings and a timetable for the implementation of any improvements identified. The proposed measures shall be implemented by the Operator from the date of approval in writing by the Agency.	01/10/07 Complete
IC6	The Operator shall undertake an assessment of subsurface structures and their potential to cause fugitive emissions to surface water and groundwater. The assessment shall take into account the requirements of section 2.2.5 of the Agency Guidance Note Guidance for the Speciality Organic Chemicals Sector S4.02. A written report summarising the findings shall be submitted to the Agency for approval including a timescale for implementation of any improvements identified. The proposed measures shall be implemented by the Operator from the date of approval in writing by the Agency.	01/11/07 Complete

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC7	The Operator shall investigate improvements to the diesel storage tank offloading and fill points having regard to Section 2.2.5 of Environment Agency Guidance Note S4.02. A report shall be submitted to the Agency detailing the findings and a timetable for the implementation of any improvements identified. The proposed measures shall be implemented by the Operator from the date of approval in writing by the Agency.	01/02/08 Complete
IC8	The Operator shall develop a written procedure for recording quantity, nature, origin and fate of all waste arising from activities carried out at the installation. The procedure shall be submitted to the Agency for approval and implemented from the date of approval in writing by the Agency. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.	01/04/08 Complete
IC9	The Operator shall investigate methods of reducing, recovering or recycling contaminated scrap metal and liquid resins which are currently disposed of to landfill. The results of the investigation shall be submitted to the Agency with a timetable for any proposed measures to be carried out. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The proposed improvements shall be implemented by the Operator from the date of approval in writing by the Agency.	01/06/08 Complete
IC10	The Operator shall carry out a direct toxicity assessment of the effluent discharged from W1 and submit the results to the Environment Agency in writing.	01/06/08 Complete
IC11	A written procedure shall be submitted to the agency detailing the measures to be used so that monitoring equipment, personnel and organisations employed for the emissions monitoring programme shall have either MCERTS certification or accreditation in accordance with condition 3.6.3. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the procedure. The procedure shall be implemented by the Operator from the date of approval in writing by the Agency	01/02/10 Complete

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels

Raw materials and fuel description	Specification
Diesel oil	Less than 0.1% sulphur content

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:B1 and A1:B2 [Points A1:B1 and A1:B2 on site plan in Schedule 7]	Boiler Plant	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	180 mg/m ³ when firing on natural gas	Periodic	Annually	ISO 10849
			220 mg/m ³ when firing on oil	Periodic	Annually	
		Carbon monoxide	140 mg/m ³	Periodic	Annually	ISO 12039
A2 [Point A2 on site plan in Schedule 7]	Reactor R1, R6 and R10 vents and Reactor R3 via fume scrubber	Phenol	10 mg/m ³	Periodic	Every 3 months	BS13649/NIOSH 2546
		Formaldehyde	2 mg/m ³	Periodic	Every 3 months	BS13649/NIOSH 2541
		Styrene ^{Note 1}	No limit set	Periodic	Every 3 months	BS13649/NIOSH 1501
A3 [Point A3 on site plan in Schedule 7]	Reactor 10 solids charging system exhaust	No parameter set	No limit set	-	-	-
A5 [Point A5 on site plan in Schedule 7]	Station blender transfer blower (B1020 outlet) via bag filters	No parameter set	No limit set	-	-	-
A8, A9, A10, A16 [as described in Table 2.2.4-1 Potential Fugitive Emissions to Air]	Tank vents	No parameter 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
A20 [Point A20 on site plan in Schedule 7]	Emergency generator 1	Carbon monoxide	No limit set	In line with web guide: Monitoring stack emissions: low risk MCPs and specified generators	After 3 times the maximum average annual operating hours have elapsed and no less frequent than every 5 years	In line with web guide: Monitoring stack emissions: low risk MCPs and specified generators
A21 [Point A21 on site plan in Schedule 7]	Emergency generator 2	Carbon monoxide	No limit set	In line with web guide: Monitoring stack emissions: low risk MCPs and specified generators	After 3 times the maximum average annual operating hours have elapsed and no less frequent than every 5 years	In line with web guide: Monitoring stack emissions: low risk MCPs and specified generators
A22 [Point A22 on site plan in Schedule 7]	Local exhaust ventilation outlet from IBCs and drums	No parameters set	No limit set	-	-	-

Note 1: monitoring of styrene required when styrene is in use at the installation

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 (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 [Point W1 on site plan in Schedule 7] emission to Severn Estuary via pipeline on site plan in	Effluent Treatment Plant	Maximum volume of effluent discharged under dry conditions determined by no significant rainfall over the previous 48 hours on the Barry	6800 m ³ /day	Instantaneous	Daily	As agreed with Natural Resources Wales

Schedule 7

site.				
Maximum volume of effluent discharged	15,900 m ³ /day	Instantaneous	Daily	
Flow	0.19 m ³ /s	Instantaneous	Daily	
Monohydric phenol	10 mg/l	24-hour flow proportional sample	Weekly	SCA Blue Book Method
Total suspended solids	150 mg/l	24-hour flow proportional sample	Weekly	BS EN 872
Chemical oxygen demand	1000 mg/l	24-hour flow proportional sample	Weekly	BS ISO 15705:2002, BS 6068-2.80:2002
Methanol	50 mg/l	24-hour flow proportional sample	Weekly	BS EN ISO 15680:2003, BS 6068-2.85:2003
Free formaldehyde	10 mg/l	24-hour flow proportional sample	Weekly	As agreed with Natural Resources Wales
Styrene ^{Note 1}	No limit set	24-hour flow proportional sample	Weekly	As agreed with Natural Resources Wales
pH	Minimum 6, maximum 9	Instantaneous	Continuous reported as daily average	BS 6068-2.50

Note 1: monitoring of styrene required when styrene is in use at the installation

Table S3.3 Annual limits

Substance	Medium	Limit (including unit)
Monohydric phenol	Water	10950 kg/year
Methanol	Water	43800 kg/year
Free formaldehyde	Water	10950 kg/year

Table S3.4 Process monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
E1 [Point E1 on site plan in Schedule 7] emission from BAFF treatment plant	Suspended solids	Weekly	None specified	None
	Free formaldehyde (mg/m ³)	Weekly	None specified	None
	Monohydric phenol (mg/m ³)	Weekly	None specified	None
	Methanol (mg/m ³)	Weekly	None specified	None
	Chemical oxygen demand	Weekly	None specified	None

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
Emissions to air Parameters as required by condition 3.5.1.	A1:B1 and A1:B2 and A2	Every 12 months	1 January
Emissions to air Parameters as required by condition 3.5.1.	A20 and A21	After 3 times the maximum average annual operating hours have elapsed and no less frequent than every 5 years	1 January
Emissions to water Parameters as required by condition 3.5.1	W1	Every 3 months	1 January, 1 April, 1 July, 1 October
Emissions to lagoon Parameters as required by condition 3.5.1	E1	Every 3 months	1 January, 1 April, 1 July, 1 October

Table S4.2: Annual production/treatment	
Parameter	Units
Total production	tonnes

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

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Form air 1 and air 2 or other forms as agreed in writing by Natural Resources Wales	Air 1 13/02/2023 Air 2 13/02/2023
Water and Land	Form water 1 or other form as agreed in writing by Natural Resources Wales	13/02/2023
Water usage	Form water usage 1 or other form as agreed in writing by Natural Resources Wales	13/02/2023
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	13/02/2023
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	13/02/2023

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 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 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.

“*annually*” means once every year.

“*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.

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

“*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..

“*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.

“*gas oil*” in relation to the MCP includes diesel and is defined in Article 3(19) of the MCPD.

“*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

“*limited operating hours MCP*” means an MCP that meets the requirements of paragraph 7 (existing MCP) or paragraph 8 (new MCP) of Part 2 of Schedule 25A of the EP Regulations.

“*medium combustion plant*” or “*MCP*” means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW.

“*Medium Combustion Plant Directive*” or “*MCPD*” means Directive 2015/2193/EU of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from medium combustion plants.

“*new MCP*” means an MCP first put into operation on or after 20/12/2018.

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

“*operating hours*” in relation to the MCP means the time, expressed in hours, during which a combustion plant is operating and discharging emissions into the air, excluding start-up and shut-down periods.

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

“*specified generator*” has the meaning given in paragraph 2(1) of Schedule 25B of The EP Regulations.

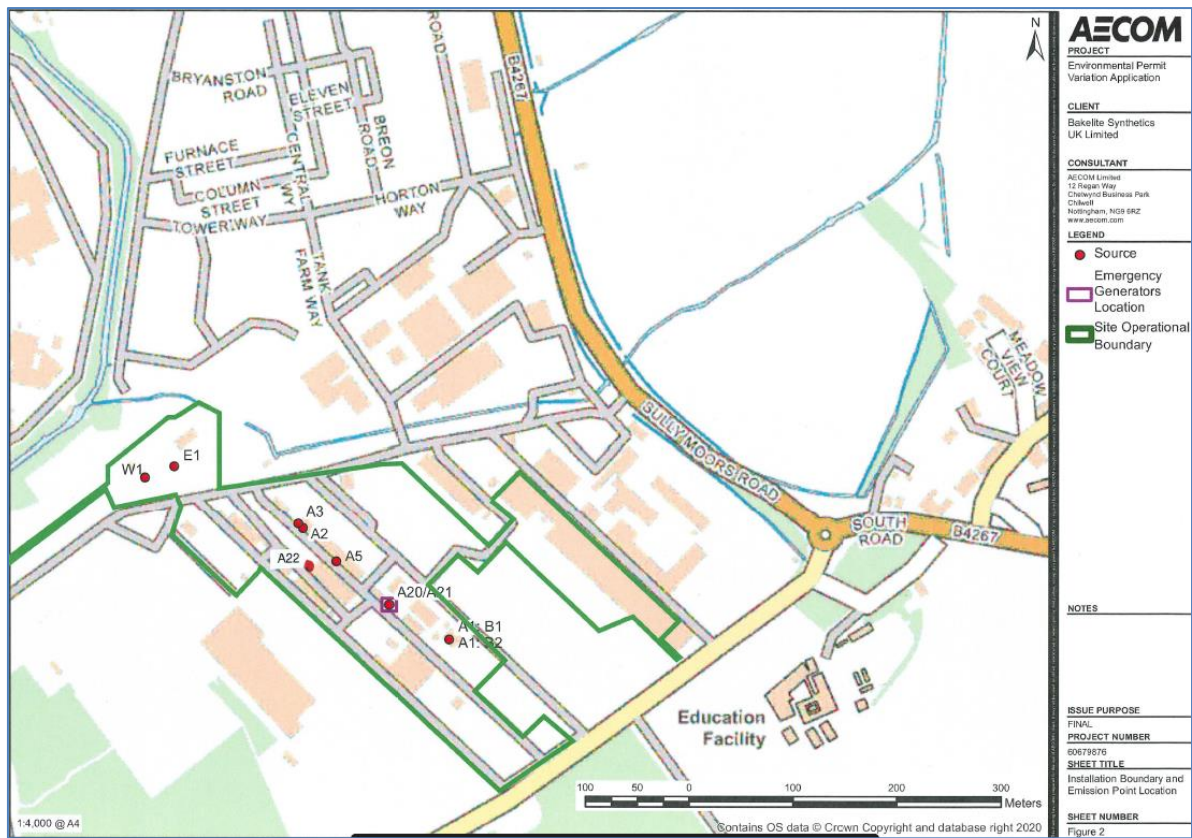
“*year*” means calendar year ending 31 December.

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.

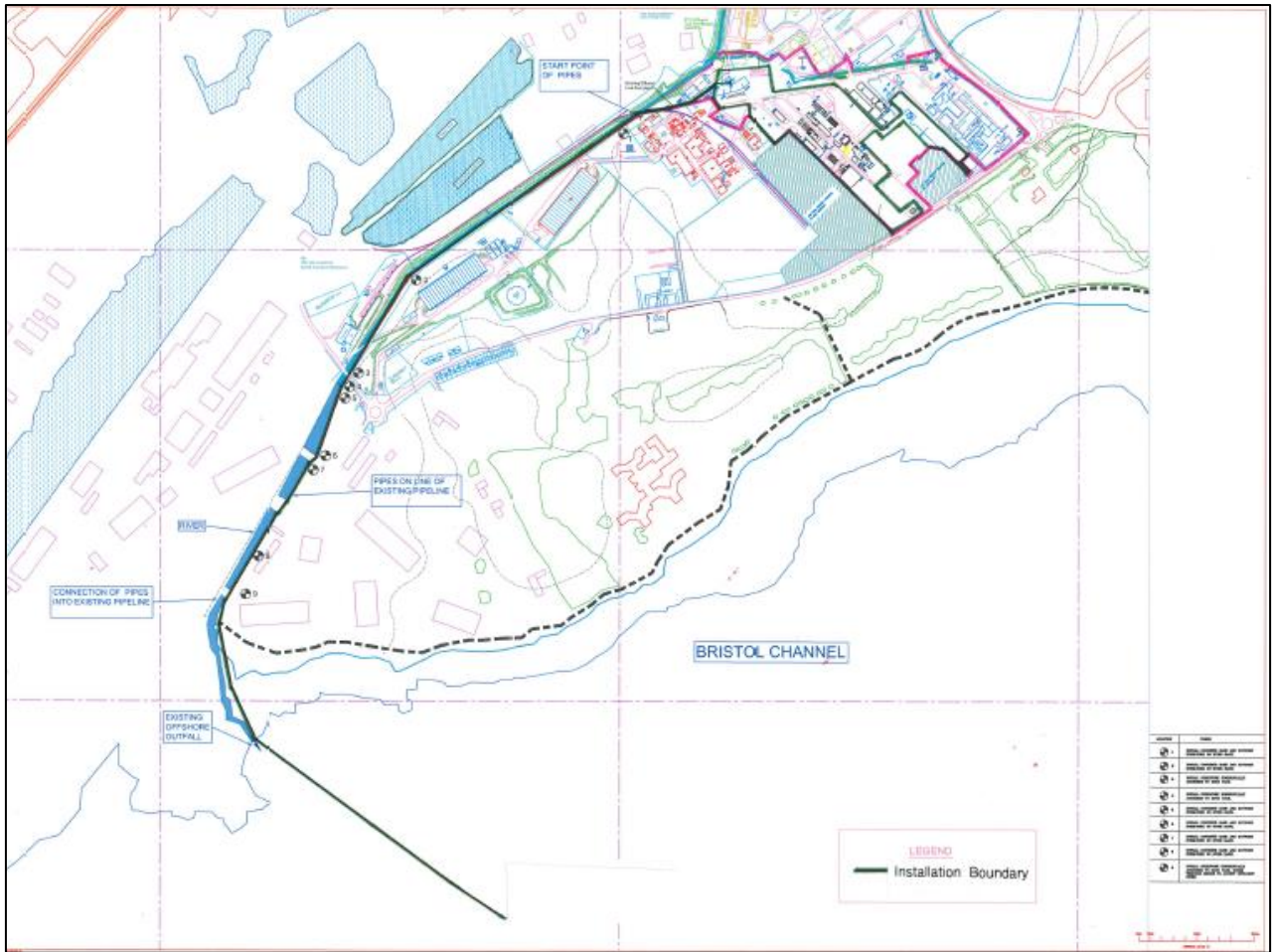
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- (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



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Schedule 8 – Annex I of MCPD

1. Rated thermal input (MW) of the medium combustion plant.	Each 1.2 MWth input
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Diesel engine (both)
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Gas oil, 100 % (both)
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	01/10/2021
5. Sector of activity of the medium combustion plant or the facility in which it is applied (NACE code).	C20.1.4
6. Expected number of annual operating hours of the medium combustion plant and average load in use.	10 annual operation hours Load in use – 30 % for monthly testing, 110 % for annual testing
7. Where the option of exemption under Article 6(3) or Article 6(8) is used, a declaration signed by the operator that the medium combustion plant will not be operated more than the number of hours referred to in those paragraphs.	Declaration complete
8. Name and registered office of the operator and, in the case of stationary medium combustion plants, the address where the plant is located.	Bakelite Synthetics UK Limited Barry Thermosets Plant Sully Moors Road Sully Penarth Wales CF64 5YU

END OF PERMIT