

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Altium Metals Ltd
Altium Metals Ltd
Unit 2
Plymbridge House
Estover Road
Plymouth
PL6 7PY

Permit number

EPR/AP3728SG

Altilium Metals Ltd

Permit number EPR/AP3728SG

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

The purpose of this facility is to produce Cathode Active Material (CAM), which is regulated under the following sections of the Environmental Permitting (England and Wales) Regulations 2016:

- Section 4.2 A(1)(a)(iii) producing inorganic chemicals such as bases;
- Section 4.2 A(1)(a)(iv) producing inorganic chemicals such as salts; and
- Section 4.2 A(1)(a)(v) producing inorganic chemicals such as non-metals, metal oxides, metal carbonyls or other inorganic compounds.

The facility imports 'black mass' as a waste product, which is purified through acid dissolution, precipitation and solvent extraction. The purified raw materials are then mixed together and heated through a calciner to form the CAM. Up to 100 tonnes of black mass will be processed every year and 40 tonnes can be stored in bags onsite. All activities are conducted inside a building but the deliveries of black mass may take place in the external car park.

The activities emit acids, solvents, metals, particulate matter, sulphur dioxide, oxides of nitrogen and ammonia to air through three abated stacks. Abatement includes an alkali scrubber, carbon filter and HEPA filter. There are no process emissions to water or sewer, however there is a surface water run-off to sewer from the roof and onsite car park.

The site is located on an industrial estate approximately 5.5km to the north-east of central Plymouth. The site is bounded on all sides by industrial units. The nearest residential receptors are 360m to the north-east of the site. Directly adjacent to the south-west of the site is Plymbridge Lane and Estover Road SSSI; its feature of interest is a rare species of pear tree (Plymouth Pear). Within 10km there are the following SACs: South Dartmoor Woods, Plymouth Sound and Estuaries and Dartmoor, SPAs: Tamar Estuaries Complex. Within 5km there are; three Local Nature Reserves, four Local Wildlife Sites and four Ancient Woodlands.

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 EPR/AP3728SG/A001	Duly made 13/09/2024	Application for a black mass processing and production facility.
Additional information received	29/01/2025	Revised BAT assessment.
Additional information received	04/02/2025	Revised operating techniques document.
Additional information received	07/04/2025	Emissions point plan, site condition report, H1 technical note, amenity and accident risk assessment, dust and emissions management plan
Additional information received	28/05/2025	Drainage plan
Additional information received	30/05/2025	Extended site boundary plan
Additional information received	03/06/2025	Air quality dispersion report and modelling files, H1 technical note, operating techniques, H1 tool
Additional information received	04/06/2025	Updated emission points plan

Status log of the permit		
Description	Date	Comments
Additional information received	19/09/2025	Updated Amenity and Accident Risk Assessment V3.0
Additional information received	12/12/2025	Updated H1 technical note
Additional information received	17/12/2025	Site condition report V3.0 and updated H1 tool
Additional information received	02/01/2026	Air dispersion modelling and air quality assessment V5
Additional information received	07/01/2026	Updated information on emissions
Additional information received	13/02/2026	Details on expected VOCs from emission points A1 and A2
Additional information received	18/02/2026	Updated registered office address
Additional information received	02/04/2026	Confirmation of ammonia emissions
Additional information received	27/04/2026	Updated air emissions risk assessment and process flow diagram
Permit determined EPR/AP3728SG	08/09/2026	Permit issued to Altilium Metals Ltd.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/AP3728SG

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Attilium Metals Ltd ("the operator"),

whose registered office is

2 Western Wood Way

Langage Business Park

Plymouth

PL7 5BG company registration number 12863419

to operate an installation at

Attilium Metals Ltd

Unit 2

Plymbridge House

Estover Road

Plymouth

PL6 7PY

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

Name	Date
Sandra Cavill	08/09/2026

Authorised on behalf of the Environment Agency

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 green 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 using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency 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 the Environment Agency.
- 2.3.3 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 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2 table S2.2; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.5 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.
- 2.3.6 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.

Hazardous waste storage and treatment

- 2.3.7 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.

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

2.5 Pre-operational conditions

- 2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4 have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 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 the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency 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 the Environment Agency.
- 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 the Environment Agency, 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 the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency 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 the Environment Agency.

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 the Environment Agency, 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 the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency 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 the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

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

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 the Environment Agency.

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

3.6 Fire prevention

3.6.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.6.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;
- (b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

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 the Environment Agency, 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 the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) 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 the Environment Agency, 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 the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter, if during that quarter the total amount accepted exceeds 100 tonnes of non-hazardous waste or 10 tonnes of hazardous waste.

4.3 Notifications

4.3.1 In the event:

- (a) 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 the Environment Agency,
 - (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) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) 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 the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency 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) the Environment Agency 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 The Environment Agency 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 and waste types
AR1	S4.2A(1)(a)(iv) – Producing inorganic chemicals such as salts	Acid leaching R4: Recycling/reclamation of metals and metal compounds	Receipt of raw materials to despatch of intermediate to AR2 and byproducts offsite. Waste types and tonnages as specified in Table 2.2. Discharge of emissions to air via scrubber.
AR2	S4.2A(1)(a)(iii) – Producing inorganic chemicals such as bases	Neutralisation and precipitation	Receipt of raw materials and intermediate product from AR1 to despatch of intermediate to AR10 and byproducts offsite. Discharge of emissions to air via scrubber.
AR3	S4.2A(1)(a)(iv) – Producing inorganic chemicals such as salts	Solvent extraction	Receipt of raw materials and intermediate product from AR10 to despatch of intermediate to AR4 and AR7. Discharge of emissions to air via scrubber.
AR4	S4.2A(1)(a)(iv) – Producing inorganic chemicals such as salts	Solvent extraction	Receipt of raw materials and intermediate product from AR3 to despatch of intermediate to AR5 and AR7. Discharge of emissions to air via scrubber.
AR5	S4.2A(1)(a)(iii) – Producing inorganic chemicals such as bases	Alkaline precipitation	Receipt of raw materials and intermediate product from AR4 to despatch of intermediate to AR7 and AR16. Discharge of emissions to air via scrubber.
AR6	S4.2A(1)(a)(iv) – Producing inorganic chemicals such as salts	Precipitation	Receipt of raw materials and intermediate product from AR17 to despatch offsite for further processing. Discharge of emissions to air via scrubber.
AR7	S4.2A(1)(a)(iv) – Producing inorganic chemicals such as salts	Precipitation (NMC Co-Prep or P-CAM)	Receipt of raw materials and intermediate product from AR3, AR4 and AR5 to despatch of intermediate to AR8. Discharge of emissions to air.
AR8	S4.2A(1)(a)(v) – Producing inorganic chemicals such as non-metals, metal oxides, metal carbonyls or other inorganic compounds	Pre-calcination	Receipt of raw materials and intermediate product from AR7 to despatch of intermediate to AR14. Discharge of emissions to air.

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity and waste types
AR9	S4.2A(1)(a)(v) – Producing inorganic chemicals such as non-metals, metal oxides, metal carbonyls or other inorganic compounds	Calcination	Receipt of raw materials and intermediate product from AR14 to despatch of final product. Discharge of emissions to air.
	Directly Associated Activity		
AR10	Directly associated activity	Cementation (precipitation)	Receipt of raw materials and intermediate product from AR2 to despatch of intermediate to AR3 and byproducts offsite. Discharge of emissions to air via scrubber.
AR11	Directly associated activity	Raw material handling and storage (including black mass) R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	From receipt of raw materials to dispatch into production activities.
AR12	Directly associated activity	Waste handling and storage	From receipt of wastes generated onsite to dispatch offsite.
AR13	Directly associated activity	Production of de-ionised water	From receipt of water to use of de-ionised water in production activities.
AR14	Directly associated activity	Surface water collection and discharge	From collection of surface water run-off to discharge into storm water sewer.
AR15	Directly associated activity	Air pollution collection and abatement systems	From collection of gases from permitted activities, treatment in abatement systems and discharge to air.
AR16	Directly associated activity	Reverse osmosis	From receipt of intermediate product from AR4, going into AR17.
AR17	Directly associated activity	Precipitation (sodium sulphate)	From receipt of intermediate product from AR16 going into AR5 and byproducts offsite.
AR18	Directly associated activity	Blending	Receipt of raw materials and intermediate product from AR8 to despatch of intermediate to AR9

Table S1.2 Operating techniques		
Description	Parts	Date Received
Response to Schedule 5 Notice dated 18/02/2025	Dust and Emissions Management Plan, dated November 2024 Operating techniques document, V3, April 2025: - Waste Acceptance, Section 2.2 and Appendix 1 - Black Mass Processing and Treatment, Section 3 - Visual/Olfactory Assessment, Section 8.1.1	07/04/2025
Additional information	Amenity and Accident Risk Assessment, V3.0, dated September 2025	19/09/2025
Additional information	Air Quality Assessment V0.6 April 2026. Section 3.5 limiting operating hours to 18 Monday to Friday	27/04/2026

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The Operator shall submit a written report to the Environment Agency for technical assessment and written approval. The report must contain: - Results of monitoring on three separate occasions during normal operations from the emission points listed in table S3.1 and using the monitoring methods and reference periods detailed in that table. - An updated air emissions risk assessment, which must be in line with the online guidance 'Air emissions risk assessment for your environmental permit'. This is only required if the emitted concentrations are above the concentrations used in the air emissions risk assessment. - Detailed air dispersion modelling where the emissions do not screen out within the revised air emissions risk assessment. - A proposal of the method(s) and/or emission limits to be taken to reduce or abate emissions where detailed modelling shows likely breaches of EALs, critical loads or critical levels at the receptors, including timescales for completion. The Operator shall implement any agreed method(s) and/or emission limits identified within the report in accordance with the Environment Agency's written approval and within the approved timescales.	9 months from the date of issue of permit EPR/AP3728SG/A001
IC2 PFAS Characterisation, and Mass Balance	The Operator shall provide a per- and polyfluoroalkyl substances (PFAS) mass balance methodology to the Environment Agency for technical assessment and written approval. The methodology shall include: - Identification of PFAS (speciated where possible) to be included in an assessment including justification for their inclusion; - Identification of all relevant process inputs, intermediate process streams, outputs, products, residues, waste streams and emissions to be assessed; - Methodology for quantifying and assessing PFAS entering, leaving, being recovered, emitted, transformed, destroyed or potentially accumulating	3 months from the date of issue of permit EPR/AP3728SG/A001

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	within the process. The methodology should also include a sampling and monitoring programme, sampling locations, monitoring frequencies, analytical methods and limits of detection d) Timescales for implementing the methodology. The Operator shall implement the methodology to timescales agreed with the Environment Agency	
IC3a PFAS Environmental Risk Assessment	The Operator shall provide a risk assessment to the Environment Agency for technical assessment and written approval, based on the findings of IC2. The risk assessment shall include: a) assessment of the environmental risks to air, land and water associated with PFAS throughout the permitted operations; b) identification of any uncertainties, limitations or data gaps relevant to the assessment; c) proposals for any further monitoring or investigation; d) proposals for control measures necessary to minimise environmental risk including timescales for their implementation The Operator shall implement the proposals to timescales agreed with the Environment Agency.	3 months from completion of IC2
IC3b PFAS Management Plan	The Operator shall provide a PFAS Management Plan to the Environment Agency for assessment and written approval. The Plan shall include proposals for the frequency at which the emissions inventory and mass balance shall be reviewed and other criteria where changes would trigger a review. These changes shall include but not be limited to: • feedstock composition • process operation • performance of abatement systems • monitoring results that indicate an adverse trend in emissions • regulatory requirements The PFAS Management Plan shall form part of the Environmental Management System and shall be used to demonstrate the ongoing identification, characterisation and control of PFAS emissions, transfers and accumulation within the installation.	1 month from completion of IC3a
IC4	The Operator shall submit a written report to the Environment Agency for assessment and approval. The report must contain: • Results of monitoring on three separate occasions during normal operations from emission points A1 and A2 for tetrachloroethylene and hexamethyltrisiloxane using CEN TS 13649 or US EPA Method 18 or CEN TS 17337 or other suitable method to be agreed with the Agency. • If these substances are present above the limits of detection, then the report must also contain an updated air emissions risk assessment, which must be in line with the online guidance 'Air emissions risk assessment for your environmental permit'.	6 months from the date of issue of permit EPR/AP3728SG/A001

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	- Detailed air dispersion modelling where the emissions do not screen out within the revised air emissions risk assessment. - A proposal of the method(s) and/or emission limits to be taken to reduce or abate emissions where detailed modelling shows likely breaches of EALs, critical loads or critical levels at the receptors, including timescales for completion. The Operator shall implement any agreed method(s) and/or emission limits identified within the report in accordance with the Environment Agency's written approval and within the approved timescales.	

Table S1.4 Pre-operational measures	
Reference	Pre-operational measures
PO1	Plymouth Pear Baseline Survey Prior to commencement of operations authorised by this permit the operator shall submit a baseline ecological survey of the Plymouth Pear Tree and its immediate habitat within the Plymbridge Lane and Estover Road SSSI. The report must contain a reference dataset against which future environmental monitoring results can be compared and must capture information on tree condition, tree health, habitat context and potential stressors. Photographic records sufficient to document the tree condition and surrounding habitat with location and viewing direction recorded should be included. The survey report shall be submitted to the Environment Agency for information before operations authorised by this permit commence.

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
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Table S2.2 Permitted waste types and quantities for activity AR1	
Maximum quantity	Maximum quantity 100 tonnes per year. Maximum storage limit of 40 tonnes.
Waste code	Description
16	Wastes not otherwise specified in the list
16 03	off-specification batches and unused products
16 03 03*	inorganic wastes containing hazardous substances – limited to off specification 'black mass' from the manufacture of lithium ion batteries only
16 03 04	inorganic wastes other than those mentioned in 16 03 03 – limited to off specification 'black mass' from the manufacture of lithium ion batteries only
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 11*	other wastes (including mixtures of materials) from mechanical treatment of waste containing hazardous substances – limited to lithium ion battery derived 'black mass' only

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 1 on site plan in Schedule 7]	Scrubber serving AR1 – AR3 and AR7	Sulphuric acid	5 mg/m ³	Average over the sampling period	Annual (note 1)	US EPA Method 8
		Hydrogen fluoride	1 mg/m ³	Average over the sampling period	Monthly (note 1 and note 5)	CEN TS 17340
		Nickel	0.1 mg/m ³	Average over the sampling period	Once every 6 months (note 1 and note 4)	EN 14385
		Particulate matter	No limit set	Average over the sampling period	Annual (note 1 and note 3)	EN ISO 23210
		Total VOCs expressed as mg C/Nm ³)	3 mg/m ³	Average over the sampling period	Once every 6 months (note 1 and note 2)	EN 12619
		Per- and polyfluoroalkyl substances (PFAS) (note 6)	No limit set	Average over the sampling period	Note 6	US EPA OTM-45, US EPA OTM-50, or other standard as agreed by the Environment Agency.
A2 [Point 2 on site plan in Schedule 7]	Carbon filter serving AR4 – AR6	Sulphuric acid	5 mg/m ³	Average over the sampling period	Annual (note 1)	US EPA Method 8
		Total VOCs (expressed as mg C/Nm ³)	3 mg/m ³	Average over the sampling period	Once every 6 months (note 1 and note 2)	EN 12619
A3 [Point 4 on site plan in Schedule 7]	In-line fabric filter and HEPA filter serving AR8 – AR10	Carbon monoxide	No limit set	Average over the sampling period	Once every 6 months (note 1 and note 2)	EN 15058
		Nickel and its compounds	0.1 mg/m ³	Average over the sampling period	Once every 6 months (note 1 and note 4)	EN 14385
		Manganese	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
		Cobalt dihydroxide	0.06 mg/m ³	Average over the sampling period	Once every 6 months (note 1)	EN 14385
		Lithium carbonate and lithium hydroxide as lithium	0.05mg/m ³	Average over the sampling period	Once every six months (note 1)	EN 14385
		Sulphur dioxide	0.3 mg/m ³	Average over the sampling period	Once every 6 months (note 1 and note 2)	EN 14791
		Particulate matter	No limit set	Average over the sampling period	Annual (note 1 and note 3)	EN ISO 23210
		Dust	2.5 mg/m ³	Average over the sampling period	Annual (note 1 and note 3)	EN 13284-1
		Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	0.1 mg/m ³	Average over the sampling period	Once every 6 months (note 1 and note 2)	EN 14791
		Ammonia	2 mg/m ³	Average over the sampling period	Monthly (note 1 and note 5)	EN 21877
P1S1_PRV1 A	Heater supply and return pressure relief valves (P1)	No parameters set	No limit set	--	--	--
P1S1_PRV1 B		No parameters set	No limit set	--	--	--
P1S1_PRV2	Cooler HX pressure relief valve (P1)	No parameters set	No limit set	--	--	--
P1S2_PRV1	Boiler pressure relief valve	No parameters set	No limit set	--	--	--
P3_PRV1 A	Evaporator heater pressure relief valves	No parameters set	No limit set	--	--	--
P3_PRV1 B		No parameters set	No limit set	--	--	--
P3_PRV2 A	Heater supply and return pressure relief valves (P3)	No parameters set	No limit set	--	--	--
P3_PRV2 B		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
P3_PRV3	Cooler HX pressure relief valve (P3)	No parameters set	No limit set	--	--	--
P3_PRV4 A	Precipitator pressure relief valves	No parameters set	No limit set	--	--	--
P3_PRV4 B		No parameters set	No limit set	--	--	--
Gen_PRV1 A	Compressor pressure relief valves	No parameters set	No limit set	--	--	--
Gen_PRV1 B		No parameters set	No limit set	--	--	--
Gen_PRV1 C		No parameters set	No limit set	--	--	--
Gen_PRV1 D		No parameters set	No limit set	--	--	--
Note 1. To the extent possible, the measurements are carried out at the highest expected emission state under normal operating conditions.						
Note 2. The minimum monitoring frequency may be reduced to once every year or once every 3 years if the emission levels are proven to be sufficiently stable						
Note 3. The minimum monitoring frequency may be reduced to once every 3 years if the emission levels are proven to be sufficiently stable						
Note 4. The minimum monitoring frequency may be reduced to once every year if the emission levels are proven to be sufficiently stable						
Note 5. The minimum monitoring frequency may be reduced to once every 6 months if the emission levels are proven to be sufficiently stable						
Note 6. Monitoring frequency to be determined depending upon the outcome of IC3a						

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 on site plan in schedule 7 emission to River Plym	Uncontaminated surface water runoff from car park	--	--	--	--	--

Table S3.3 Process monitoring requirements			
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method
PFAS Emissions Inventory	PFAS Mass Balance	On a frequency to be agreed with the Environment Agency following completion of IC3b	Approved PFAS Management Plan as set out in the response to Improvement Condition IC3b

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
Point source emissions to air Parameters as required by condition 3.5.1	A1, A2, A3	Every 6 months	1 January, 1 July
Process monitoring Parameters as required by condition 3.5.1	PFAS Emissions Inventory	On a frequency to be agreed with the Environment Agency following completion of IC3b	1 January

Table S4.2: Annual production/treatment	
Parameter	Units
Cathode active material	Tonnes per tonne of black mass processed

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

Table S4.4 Reporting forms		
Parameter	Reporting form	Form version number and date
Point source emissions to air	Emissions to Air Reporting Form, or other form as agreed in writing by the Environment Agency	version 2, February 2026
Process monitoring	Process Monitoring Form, or other form as agreed in writing by the Environment Agency	version 2, February 2026
Water usage	Water Usage Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021
Energy usage	Energy Usage Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021

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 malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
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 limit	
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	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
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) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) Notification requirements for the detection of any significant adverse environmental effect	
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.

“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 the Environment Agency 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.

“average over sample period” means three samples of at least 30 minutes sampling duration during normal operating conditions.

“dust” means total particulate matter (in air). Unless specified otherwise, dust includes PM_{2.5} and PM₁₀.

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

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

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

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste.

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

“particulate matter” means PM_{2.5} and PM₁₀.

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

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

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:

- 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

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 “year” means calendar year ending 31 December.

When the following terms appear in the waste code list in Schedule 2, table 2.2 for that table, they have the meaning given below:

'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

'heavy metal' means any compound of antimony, arsenic, cadmium, chromium (VI), copper, lead, mercury, nickel, selenium, tellurium, thallium and tin, as well as these materials in metallic form, as far as these are classified as hazardous substances

'PCBs' means

- polychlorinated biphenyls
- polychlorinated terphenyls
- monomethyl-tetrachlorodiphenyl methane, Monomethyl-dichloro-diphenyl methane, Monomethyldibromo-diphenyl methane
- any mixture containing any of the above mentioned substances in a total of more than 0,005 %by weight

'transition metals' means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified as hazardous substances

'stabilisation' means processes which change the hazardousness of the constituents in the waste and transform hazardous waste into non-hazardous waste

'solidification' means processes which only change the physical state of the waste by using additives without changing the chemical properties of the waste

'partly stabilised wastes' means wastes containing, after the stabilisation process, hazardous constituents which have not been changed completely into non-hazardous constituents and could be released into the environment in the short, middle or long term

Schedule 7 – Site plan



END OF PERMIT

Emissions to Air Reporting Form

Permit number: [EPR/AB1234CB]

Operator: [A Company Name Limited]

Facility name: [Unit A, Anytown]

Emissions to Air Reporting Form: version 2, February 2026

Reporting of emissions to air for the period from [DD/MM/YY] to [DD/MM/YY]

Emission point	Substance / parameter	Emission Limit Value	Reference period	Test method ¹	Result ²	Sample dates and times ³	Measurement uncertainty ⁴
[e.g. A1]	[e.g. Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)]	[e.g. 200 mg/m ³]	[e.g. daily average]	[e.g. BS EN 14181]	[State result]	[State relevant dates and time periods]	[State % uncertainty at 95% confidence interval]

Signed: [Name] Date: [DD/MM/YY]

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.

Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

¹ Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.

² Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.

³ For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.

⁴ Give the uncertainty associated with the quoted result at the 95% confidence interval. State any confidence intervals that are not 95%.

Process Monitoring Form

Permit number: [EPR/AB1234CB]

Operator: [A Company Name Limited]

Facility name: [Unit A, Anytown]

Process Monitoring Form: version 2, February 2026

Reporting of process monitoring for the period from [DD/MM/YY] to [DD/MM/YY]

Monitoring point description or source	Parameter	Reference period	Test method ¹	Result ²	Sample dates and times ³	Measurement uncertainty ⁴
[e.g. Condenser V 2345]	[e.g. cooling water outlet temperature]	[e.g. instantaneous]	[if applicable]	[State result]	[State relevant dates and time periods]	[if applicable]

Operator's comments

Signed: [Name]

Date: [DD/MM/YY]

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.

Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

¹ Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.

² Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.

³ For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.

⁴ Give the uncertainty associated with the quoted result at the 95% confidence interval. State any confidence intervals that are not 95%.

Water Usage Reporting Form

Permit number: *[EPR/AB1234CB]*

Operator: *[A Company Name Limited]*

Facility name: *[Unit A, Anytown]*

Water Usage Reporting Form: version 1, 08/03/2021

Reporting of water usage for the year *[YYYY]*

Water source	Water usage (m ³)	Specific water usage (m ³ /unit)
Mains water	<i>[insert annual usage in m³ where mains water is used]</i>	<i>[insert annual usage in m³/unit where mains water is used]</i>
Site borehole	<i>[insert annual usage in m³ where water is used from a site borehole]</i>	<i>[insert annual usage in m³/unit where water is used from a site borehole]</i>
River abstraction	<i>[insert annual usage in m³ where abstracted river water is used]</i>	<i>[insert annual usage in m³/unit where abstracted river water is used]</i>
Other – <i>[specify other water source where applicable. Add extra rows where needed]</i>	<i>[insert annual usage in m³ where applicable]</i>	<i>[insert annual usage in m³/unit where applicable]</i>
Total water usage	<i>[insert total annual water usage in m³]</i>	<i>[insert total annual water usage in m³/unit]</i>

Operator's comments

Signed: *[Name]*

Date: *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your annual water usage.

Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Add additional rows as necessary.

Energy Usage Reporting Form

Permit number: [EPR/AB1234CB]

Operator: [A Company Name Limited]

Facility name: [Unit A, Anytown]

Energy Usage Reporting Form: version 1, 08/03/2021

Reporting of energy usage for the year [YYYY]

Energy source	Energy consumption / production (MWh)	Specific energy consumption (MWh/unit) ²
Electricity imported as delivered - source [specify source, e.g. supplied from the national grid]	[insert annual consumption in MWh where electricity is imported]	[insert annual consumption in MWh/unit where electricity is imported]
Electricity imported as primary energy 1 – conversion factor of [specify conversion factor used to convert electricity delivered to primary energy]	[insert annual consumption in MWh where electricity is imported]	[insert annual consumption in MWh/unit where electricity is imported]
Natural gas	[insert annual consumption in MWh where natural gas is used]	[insert annual consumption in MWh/unit where natural gas is used]
Gas oil – conversion factor of [specify conversion factor used to convert tonnes to MWh]	[insert annual consumption in MWh where gas oil is used]	[insert annual consumption in MWh/unit where gas oil is used]
Imported heat	[insert annual consumption in MWh where heat is imported]	[insert annual consumption in MWh/unit where heat is imported]
Other – [specify other energy source and conversion factors where applicable, e.g. renewable fuel. Add extra rows where needed]	[insert annual consumption in MWh where applicable]	[insert annual consumption in MWh/unit where applicable]
Electricity exported	[insert annual production in MWh where electricity is exported]	Not applicable
Heat exported	[insert annual production in MWh where heat is exported]	Not applicable

Operator's comments

Signed: [Name] Date:

[DD/MM/YY]

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your annual energy usage.

Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Add additional rows as necessary.

¹ Multiply delivered electricity by 2.4 to convert to primary energy where the electricity is supplied from the national grid. If the electricity is supplied from another source, specify the conversion factor used. Add additional rows as needed if electricity is imported from multiple sources.

² Divide energy consumption by an appropriate unit of raw material processed or product output.