

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

L.P.W. Technology Limited

LPW Technology LTD

Dennis Road

Widnes

Cheshire

WA8 0GU

Permit number

EPR/YP3930JF

LPW Technology LTD

Permit number EPR/YP3930JF

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

This installation is permitted under Schedule 2.2 Part A(1)(a) of EPR as a low impact installation to produce non-ferrous metal powders through atomisation of solid ingots. The atomisation process is undertaken in two separate vacuum induction furnaces, known as atomiser 1 and atomiser 2. Atomiser 1 melts bars/ingots and uses argon gas to form powdered metal and is primarily used to produce aluminium alloys. The melt capacity is 152kg per heat and can be operated three times per day. Atomiser 2 melts bars as electrodes under vacuum, with argon gas to produce metal powders and is primarily used to produce titanium alloys. The melt capacity is 175kg per day. Additions of other metals can be conducted at point of melting to provide alloying affects in atomiser 1, but this is not possible in atomiser 2.

Harvesting of the powders is achieved using a cyclone filter and bag filter. These are monitored for pressure differential across the filters. If the filters become blocked or are passing then the production process will halt until the issue has been resolved. These filters are in place as part of the production process and not for the protection of human health and the environment.

The harvested powders are sieved using a mechanical sieve, classified and blended if necessary. The powders are then packed ready for dispatch. The sieving process produces offsize material, which is managed three ways; sale to alternative customers, use as a secondary raw material in the production process or sale to the feedstock supplier to be reformed into bars/ingots.

The emissions from the facility will be particulates from the atomisers, which are vented through emission points A1 for the aluminium atomiser and T1 for the titanium atomiser. Fugitive emissions of dust are minimal as the production processes are fully enclosed in a building, including storage of finished products in sealed containers. Odour from the process is minimal as emissions are only metal particulates. Noise pollution at local residential receptors is minimal as the production process is fully enclosed in a building and the nearest residential receptor is 250m away.

There are two emission points to sewer. One is from the office toilets and is therefore excluded from this permit. The other is surface run-off and rainwater from the roof, which is passed through an interceptor prior to be discharged to the public surface water sewerage system at emission point SW1. Water originating from the production process is disposed of using a licensed waste carrier.

The nearest human health receptor is a caravan park 250m to the north of the site. Industrial units border the site to the east, west and north. Within 10km of the installation is Mersey Estuary (SPA and Ramsar). Within 2km of the installation is Wigg Island (Local Nature Reserve and Local Wildlife Site) and Upper Mersey Estuary Intertidal Areas and Mudflats, Widnes Warth Saltmarsh, Astmoor Saltmarsh and Swamp, St Helens Canal, Upper Mersey Estuary and St Helens Canal Disused (Local Wildlife Sites).

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/YP3930JF/A001	Duly made 02/09/2019	Application for a low impact installation producing powdered non-ferrous metals using two vacuum induction furnaces.
Additional information received	07/10/2019	Provision of drainage plans.

Status log of the permit		
Description	Date	Comments
Additional information received	16/10/2019	Provision of emission points plan.
Permit determined EPR/YP3930JF (PAS Billing ref. YP3930JF)	02/01/2020	Permit issued to L.P.W. Technology Limited.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/YP3930JF

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

L.P.W. Technology Limited (“the operator”),

whose registered office is

**Dennis Road
Widnes
Cheshire
WA8 0GU**

company registration number 06233481

to operate an installation at

**LPW Technology LTD
Dennis Road
Widnes
Cheshire
WA8 0GU**

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

Name	Date
David Griffiths	02/01/2020

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 red on the site plan at schedule 7 to this permit.

2.3 Operating techniques

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

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.

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, S3.2 [,S3.3 etc] 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 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 shall include as a minimum, a review of the results of the actual and anticipated operation of the installation against the low impact criteria issued by the Environment Agency at the time of the review.

4.3 Notifications

- 4.3.1 The Environment Agency shall be notified without delay following the detection of:
- (a) 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;
 - (b) the breach of a limit specified in the permit; or
 - (c) any significant adverse environmental effects.
- 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 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.

4.3.4 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
AR1	Section 2.2 Part A(1)(a)	Producing non-ferrous metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic activities.	From receipt of raw materials to dispatch of finished products. Manufacture of non-ferrous metal powders by atomisation in two induction furnaces under vacuum. Harvesting of the powders in cyclones and bag filters. Use of secondary raw material originating from the production process to supplement the raw material feedstock.
Directly Associated Activity			
AR2	Sizing the powders	Mechanical sizing using sieves	Includes powder storage and packaging.
AR3	Blending the powders	Blending the powders using a V-cone	Includes powder storage and packaging.
AR4	Waste management	Management of wastes arising from the production process	Limited to 1 tonne of non-hazardous waste per day and 10kg of hazardous waste per day, averaged over one year.
AR5	Water management	Management of surface water run-off and rainwater from roofs	Uncontaminated surface water passing through an interceptor into surface water sewer

Table S1.2 Operating techniques		
Description	Parts	Date Received
Response to Not Duly Made Letter	Response to question 1a – Management of by-products. Response to question 2 – Management of cyclone and bag filters.	02/09/2019

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The Operator shall undertake air emission monitoring of particulates from emission points A1 and T1, as defined in table S3.1, using the monitoring method and reference period stated in that table. This monitoring will be for the duration of one melt and shall be repeated for two such melts (totalling 3 melts), and shall include measurement of concentration and efflux velocity.	Within 6 months of issue of the permit

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	<p>The Operator shall submit a written report to the Environment Agency detailing the monitoring undertaken and results obtained, and contain a comparison with, and justification for, the data used in the Operator's original H1 assessment of these emission points.</p> <p>If the monitored emission concentrations are higher than those provided then a revised H1 risk assessment must be provided using the new data and emission limit values proposed, if appropriate.</p>	
IC2	<p>If the revised H1 assessment provided in response to IC1 demonstrates that the emissions do not screen out as insignificant then the Operator must propose methods to use to reduce their emissions to insignificant concentrations, including timescales of implementation.</p>	<p>Within 3 months of completion of IC1</p>

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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Schedule 3 – Emissions and monitoring

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1	Aluminium Atomiser Stack	Particulate matter	No limit set	1 hour period	Annual	BS EN 13284-1
T1	Titanium Atomiser Stack	Particulate matter	No limit set	1 hour period	Annual	BS EN 13284-1

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
SW1	Uncontaminated surface water run-off	Visible oil and grease	None visible	--	Weekly	Visual inspection

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Cyclone Filters	Pressure differential	Continuous	In line with manufacturer's recommendations	--
Bag Filters	Pressure differential	Continuous	In line with manufacturer's recommendations	--

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 & T1	Annual	1 January

Table S4.2: Annual production/treatment	
Parameter	Units
Aluminium based powders produced	tonnes
Titanium based powders produced	tonnes

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Total raw material used	Annually	tonnes
Total secondary raw material used	Annually	tonnes

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	02/01/2020
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	02/01/2020
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	02/01/2020
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	02/01/2020

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 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.

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

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

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

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

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

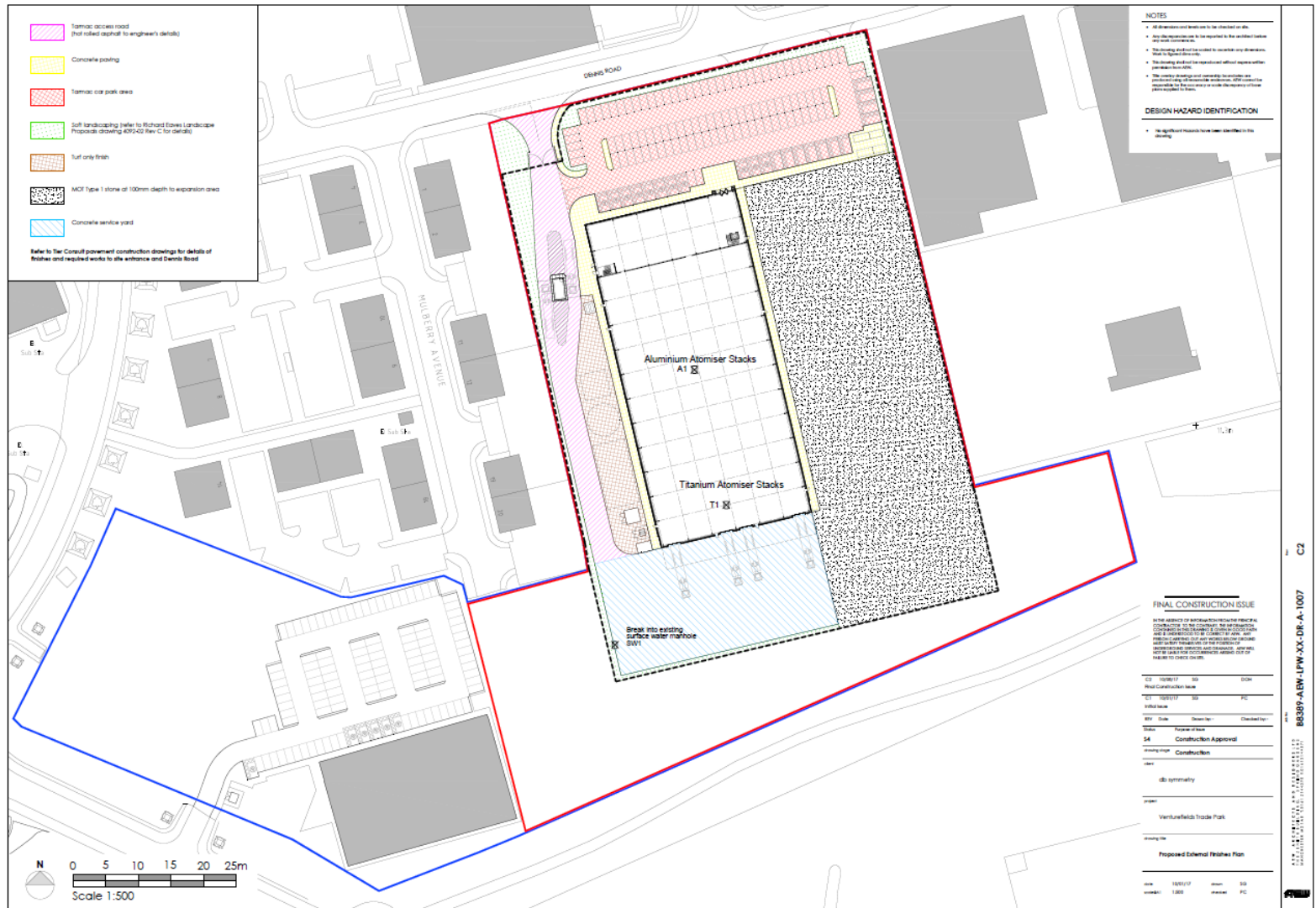
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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.

Schedule 7 – Site plan



END OF PERMIT

Permit number
EPR/YP3930JF