Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

FBM Zinc Limited

Zinc Oxide Production Facility
Plot E
Humber Gate
Moody Lane
Grimsby
Lincolnshire
DN31 2TT

Permit number

EPR/GP3702PD

Zinc Oxide Production Facility
Permit number EPR/GP3702PD

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

This is a permit for a zinc oxide production facility. The site will operate under Section 4.2 Part A(1)(a)(v) of the Environmental Permitting Regulations (producing inorganic chemicals such as — metal oxides).
The entire process will take place within a building. The plant will receive zinc scrap/dross from various processes. Waste zinc is transferred by hoist/crane to two melting furnaces which will liquidise the metal. The liquidised zinc dross is then transferred to four vapour furnaces and the vapour is extracted and mixed with oxygen to form zinc oxide. The furnaces are heated using burners fuelled by liquefied petroleum gas (LPG). The zinc oxide will be extracted in a closed duct system, collected and sent offsite.
The site will process up to 4,250 tonnes of zinc scrap/dross per annum and up to 300 tonnes of this material will be stored on site at any one time.

The site is located at Humber Gate, Grimsby, grid reference TA 23664 12525 and is approximately 650 m from the Humber Estuary (SAC/SPA/RAMSAR) which is to the north east of the site.

The principle emissions from the process are point source emissions to air, which are emitted via a bag house filtration system, through three 11.5 m high stacks. The site will collect surface water from outside the building in an attenuation tank, along with the clean output from the site amenities, which is treated in an onsite effluent treatment plant. This will be discharged as surface water to an existing facility which serves the industrial estate. There are no direct discharges to surface water or sewer from the permitted process. Potential fugitive emissions include noise and dust however these are mitigated by housing the entire process within the building.

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/GP3702PD/A001	Duly made 14/07/20	Application for a zinc oxide production facility.
Additional information received	15/09/20	Schedule 5 response covering operational performance, best available techniques, emissions assessment, flood risk assessment and climate change risk assessment.
Additional information received	21/10/20	Modelling receptor locations.
Additional information received	26/10/20	Revised site plan and location of surface water and amenity foul discharge.
Additional information received	19/11/20	Schedule 5 and RFI Response covering operational performance, best available techniques, emissions assessment and pre-acceptance.
Additional information received	10/02/21	Justification for increased input material storage.

Status log of the permit		
Description	**Date**	**Comments**
Additional information received	11/02/21	Updated site boundary plan.
Additional information received	17/02/21	Revised application documents with aspects removed that are irrelevant to the application.
Permit determined EPR/GP3702PD (PAS Billing ref. GP3702PD)	22/02/21	Permit issued to FBM Zinc Limited.

Other Part A installation permits relating to this installation		
Operator	Permit number	Date of issue
Blue Star Fibres Company Limited	VP3335LK	23/03/07

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/GP3702PD

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

FBM Zinc Limited ("the operator"),

whose registered office is

5 Beauchamp Court
Victors Way
Barnet
London
EN5 5TZ

company registration number 11996508

to operate an installation at

Zinc Oxide Production Facility
Plot E
Humber Gate
Moody Lane
Grimsby
Lincolnshire
DN31 2TT

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

Name	Date
David Griffiths	**22/02/2021**

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.

1.5 Climate change

1.5.1 The operator shall review and if appropriate update, at least every 4 years, the climate change adaptation risk assessment submitted with the permit application, and shall update the written management system as appropriate.

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.

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 S1.4A 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, S3.2 and S3.3.

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, S3.2 and S3.3;

(b) process monitoring specified in table S3.4;

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 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**
AR1	4.2 Part A1(a)(v)	Producing inorganic chemicals such as - metal oxides.	From receipt of raw materials and waste zinc containing materials to production of zinc oxide through to handling and storage of product prior to despatch offsite. Maximum of 300 tonnes of zinc scrap/dross will be stored on site at any one time. Waste restricted to those in Table S2.2.
	Directly Associated Activity		
AR2	Storage	Storage of raw materials and waste zinc containing materials.	Waste as specified in Table S2.2

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	Application form Part B3 operating techniques Zinc Oxide Production Facility, Moody Lane - Permit App Supporting Info ref 4127-2023-A (version 1.7)	Duly Made 14/07/2020
Response to Schedule 5 Notice dated 13/08/2020	Responses to all questions detailing operational performance, power outages, energy efficiency, process operation, best available techniques, rerouting of the exhaust from LPG burners.	15/09/2020
Additional information response	Site non-process surface water and effluent discharge procedures.	26/10/2020
Response to Schedule 5 Notice dated 15/10/2020 and to RFI dated 23/10/2020	Responses to questions 1, 2,5,6,8,9,10 detailing, operational performance, process operation, best available techniques, monitoring and bag filters.	19/11/2020
Additional information response	Justification for 300 tonnes of input material storage.	10/02/2021

Table S1.4A Pre-operational measures	
Reference	**Pre-operational measures**
1	At least 2 weeks before commencing operation the Operator shall submit a report to the Environment Agency for written approval which outlines an initial monitoring programme to collect: a) Representative emissions data from emission points A1, A2 and A3 for air emissions parameters dust, VOCs, zinc, chromium, copper, manganese, nickel, lead, nitrous oxides (as NO_2) and sulphur dioxide b) Representative extraction and abatement process parameter data including temperature, pressure and flow. The report shall include: • The frequency, duration and amount of monitoring • Programme timescales • The monitoring standards to be applied • A demonstration that the monitoring will meet the requirements of our M monitoring guidance. • A demonstration that the quantity of monitoring data considered is justified and sufficient so as to demonstrate that the results are statistically representative of emissions and process parameters during normal operations. • Demonstrate the programme covers the concentration range and mass emission rate of substances emitted from stacks A1, A2 and A3 and the range of process parameters associated with the extraction and abatement system. The Operator shall implement the monitoring programme in line with the timescales agreed with the Environment Agency.

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1	The Operator shall submit a written report to the Environment Agency for approval. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall also include a review of the performance of the facility against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions and confirm that the Environmental Management System (EMS) has been updated accordingly.	3 months after commissioning
IC2	The Operator shall submit a report to the Environment Agency for written approval which reviews options for a backup electrical supply. The review shall compare each option against the current shut down procedure used in the event of power failure proposed in the application. The report shall compare and assess each option for a backup electrical supply in relation to: • How it ensures the continued/reliable operation of the zinc oxide process during times of power failure • How it minimises waste produced • The cost of system installation and operation • The impact on process efficiency and energy efficiency.	2 month after commissioning

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	The report shall identify and justify the chosen proposal for managing the process in the event of a power failure along with timescales for implementation and shall be submitted to the Environment Agency for written approval. The operator shall implement the approved measures in line with the time scales agreed with the Environment Agency.	
IC3	The Operator shall submit proposals for developing and implementing an ISO accredited Energy Efficiency Management system at the facility to the Environment Agency for written approval. The proposals shall outline details of the Energy Efficiency Management system and timescales for its implementation. The Operator shall implement the ISO accredited Energy Efficiency Management system in line with the timescales agreed with the Environment Agency.	3 month after commissioning
IC4	Using the emissions monitoring data obtained in line with Pre-operational condition 1, the Operator shall submit a report to the Environment Agency for written approval which reviews operational emissions monitoring data emitted via stacks A1, A2 and A3 and compares it against the representative South African plant emission data used in the permit application emissions modelling. The report shall determine whether or not the emissions are reflective of the data inputs used in the application EPR/GP3702PD/A001 air emissions screening and modelling. In the event that the data used for the emissions screening and modelling is found not to be representative of monitored emissions from the permitted facility, the operator shall reassess any emissions that are higher than those predicted in the application and their potential impact. For emissions that are higher than those predicted in the application and which have the potential for significant impact, the report shall review and assess the site's monitoring and control measures and submit proposals for revised BAT monitoring and control measures to the Environment Agency for agreement. The report shall specify timescales for implementation of any additional or alternative BAT control measures. The Operator shall implement the proposed measures within the timescales agreed with the Environment Agency.	6 months after commissioning
IC5	The Operator shall submit a report to the Environment Agency for written approval which reviews the site's process performance against the performance parameters outlined in section 7.17.5 point of the Reference Document on Best Available Techniques (BREF) for the Manufacture of Large Volume Inorganic Chemicals - Solids and Others industry (August 2007) and those process parameters stated in Schedule 5 Response dated 19/11/2020. The report shall determine whether the site's performance reflects the performance parameters stated in the BREF and the Schedule 5	6 months after commissioning

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	response. In the event the site's process performance does not reflect the standards in the BREF or Schedule 5 Response, the operator shall submit a proposal to the Environment Agency for written approval outlining measures to ensure the process can comply with the agreed performance parameters, along with timescales for their implementation. The operator shall implement the proposed measures in line with the timescale agreed with the Environment Agency.	
IC6	Using the emissions and process monitoring data obtained in accordance with Pre-operational condition 1, the Operator shall submit a written report to the Environment Agency for approval, which reviews the monitoring requirements for emissions to air of particulate matter and zinc from emission points A1, A2, A3. The review shall propose and justify, with appropriate evidence: • the frequency of ongoing emissions monitoring to be employed at the installation in order to demonstrate that emissions to air from the process are appropriately monitored and controlled. • the use of continuous process monitoring associated with operation of the abatement plant (e.g. flow rates, temperature and pressure) as an appropriate and robust surrogate for continuous monitoring emissions monitoring. • how the relevant action levels/criteria for the extraction and abatement process monitoring parameters will be determined and implemented in order to ensure the emission abatement system operates effectively and efficiently and inform actions such as the preventative maintenance or replacement of the bag filters The evidence required in the report shall include analysis and interpretation of monitoring results for each substance, and performance against the relevant permit emissions limit. It shall also include a review of the continuous process monitoring data obtained for the extraction and abatement system, in order to demonstrate how it will be used as a surrogate for continuous emission monitoring and control during the ongoing operation of the facility. Consideration must also be given to the impact of operational stability upon monitored emission concentrations and their variability. The operator shall implement the approved monitoring frequency in line with the timescale agreed in writing with the Environment Agency.	6 months after commissioning

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
-	-

Table S2.2 Permitted waste types and quantities for Zinc Oxide production process	
Maximum quantity	4,250 tonnes per annum
Waste code	**Description**
10	**WASTES FROM THERMAL PROCESSES**
10 05	**wastes from zinc thermal metallurgy**
10 05 11	dross and skimmings other than those mentioned in 10 05 10
10 10	**wastes from casting of non-ferrous pieces**
10 10 08	casting cores and moulds which have undergone pouring, other than those mentioned in 10 10 07
11	**WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY**
11 05	**wastes from hot galvanising processes**
11 05 01	hard zinc

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, A2, A3 as show in Facility Layout Plan drawing number 18-532 500 revision F	Emissions from Bag filters	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	-	-	-	-
		Particulate matter	5 mg/m^3	As agreed by the Environment Agency in line with IC6.	As agreed by the Environment Agency in line with IC6.	BS EN 13284-1
		Sulphur dioxide	-	-	-	-
		Zinc and its compounds, expressed as Zn	2 mg/Nm^3 in total as metal	As agreed by the Environment Agency in line with IC6.	As agreed by the Environment Agency in line with IC6.	EN 14385
		VOC	-	-	-	-
		Metals Cr, Cu, Mn, Ni, Pb	-	-	-	-

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 as show in Facility Layout Plan drawing number 18-532 500 revision F. Emission to Blue Star Fibres Company Limited effluent treatment facility under permit EPR/VP3335LK with final discharge to Humber estuary	Clean uncontaminated surface water runoff.	-	-	-	-	-

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. Unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
S1 as show in Facility Layout Plan drawing number 18-532 500 revision F. Emission to Blue Star Fibres Company Limited facility under permit EPR/VP3335LK with final discharge to Humber estuary	Site amenities effluent treatment plant treated discharge.	-	-	-	-	-

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**
Bag filter	Temperature	Continuous	-	-
	Pressure	Continuous	-	-
	Flow	Continuous	-	-

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, A2, A3	As agreed by the Environment Agency in line with IC6.	1 January

Table S4.2: Annual production/treatment	
Parameter	**Units**
Zinc oxide 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

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	22/02/21
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	22/02/21
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	22/02/21
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	22/02/21

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	
Measures taken, or intended to be	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
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, 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, as amended from time to time.

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

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

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“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.

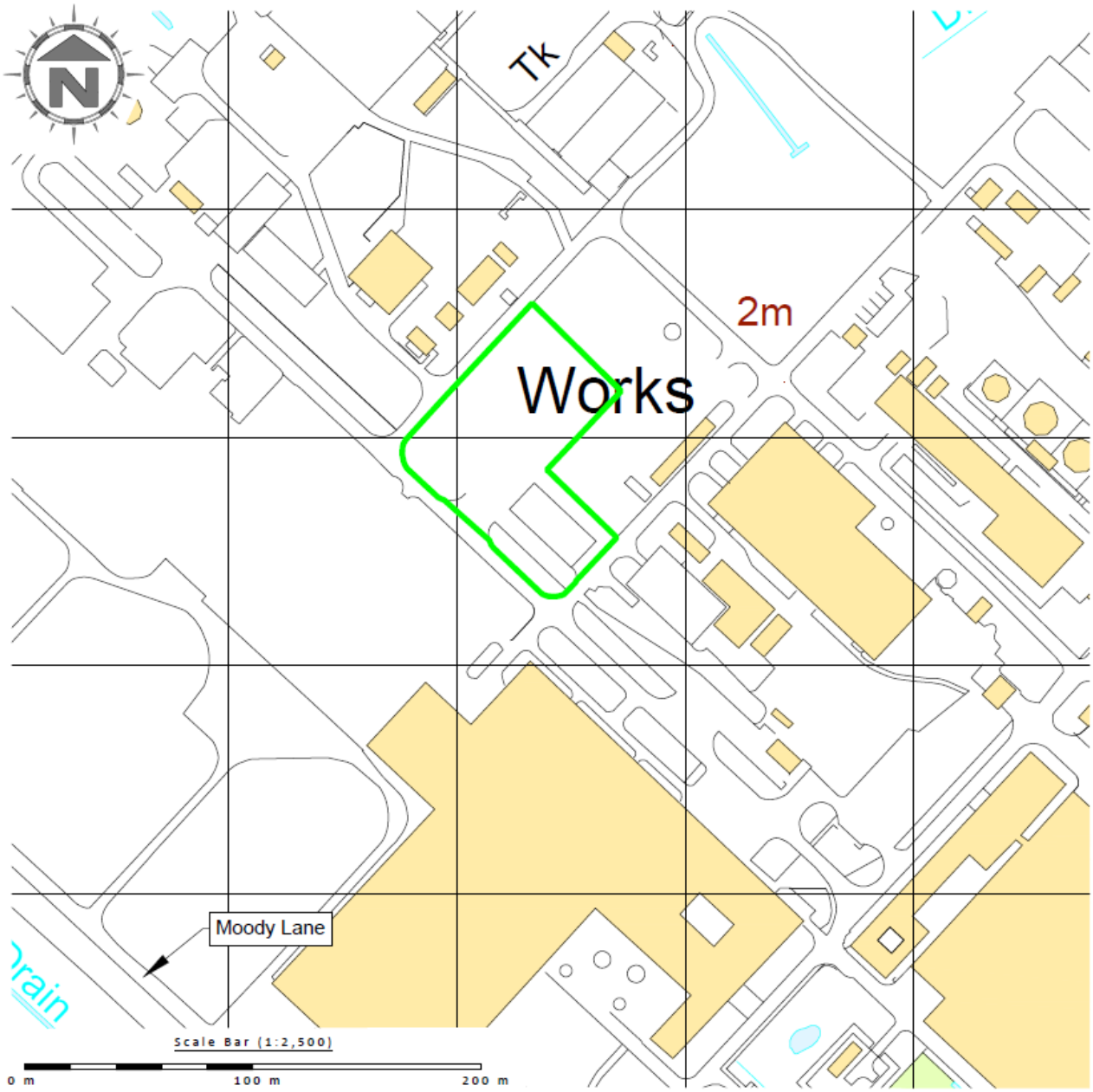
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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.

Schedule 7 – Site plan



END OF PERMIT