

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

BPB United Kingdom Limited
Saint-Gobain Isover
Whitehouse Industrial Estate
Runcorn
Cheshire
WA7 3DP

Variation application number

EPR/FP3536ZC/V003

Permit number

EPR/FP3536ZC

Saint-Gobain Isover

Permit number EPR/FP3536ZC

Introductory note

This introductory note does not form a part of the notice.

The following notice gives notice of the variation and consolidation of an environmental permit.

This permit controls the activity of manufacturing glass wool using an electric furnace.

The relevant listed activity from Schedule 1 to the Environmental Permitting Regulations is Section 3.3 A(1)(a).

This variation consolidates previous variations to environmental permit EPR/FP3536ZC and incorporates necessary changes implemented by the Industrial Emissions Directive (IED) issued in 2010. This Notice introduces the BAT conclusions from the BREF Review published in March 2012.

A Notice under Regulation 60 of the Environmental Permitting Regulations 2010 (EPR) was issued to the Operator on 20th December 2013 seeking the operator's confirmation of how the requirements of the BAT Conclusions document will be implemented in their facility. A response, dated 29th May 2014 is incorporated into the permit by Schedule 1, table S1.2.

The permit includes two sets of emission limits, the existing limit and the IED AEL which becomes effective from 8th March 2016.

The main purpose of the activity at the installation is:-

Manufacturing phenolic resin bonded glass fibre insulation products, principally for thermal insulation, in a plant with a production capability up to 55,000 tonnes per annum. The manufacturing process involves batch mixing, glass melting, binder mixing, fiberising, curing, cooling, cutting and packaging.

The glass is made from batch materials (sand, soda ash, dolomite, limestone, and minerals containing boron and alumina), internal cullet and external cullet. Internal cullet is generated when it is not possible to fiberise the molten glass.

External cullet is processed glass recycled from various sources for example bottles, automotive glass or domestic glass. Batch materials are delivered by road tanker and pneumatically transferred to storage silos. These batch materials are blended in the batch plant and pneumatically transferred to storage silos in the furnace building.

The external cullet is delivered to the site by road tanker and off loaded using a pneumatic conveying system to a storage silo. The batch materials are blended with internal and external cullet and transported to two silos located in the melter building using sealed screw conveyors. All the silos are fitted with filtration systems and vented within the melter or batch building.

The blended batch and cullet is transferred to the electrically heated cold top furnace. A stream of molten glass flows from the furnace along the forehearth and through several orifices into specially designed rotary centrifugal spinners. These spinners produce fine glass fibres, which are sprayed with a binder imparting strength and shape to the product.

The resin coated fibres are drawn under suction onto a moving conveyor to form a mat of fibres. This mat passes through a gas fired curing oven at approximately 250°C, which dries the product and cures the binder. The product is then air cooled and cut to size before packaging.

The releases from the process to air are via the 55m main stack. The releases from the melter are passed through a bag filter system to minimise particulate releases, arising from the melting process.

The releases to the 55m main stack arise from the fiberising and curing operations, and consist of water vapour, particulate matter, phenol, formaldehyde, ammonia and other mixed volatile organic compounds. Air is also drawn through the cured glass fibre mat in order to cool it.

Water sprays in the curing oven ducting prevent the build up of binder condensate, which pose a fire risk, and will impinge some pollutants. The releases from fiberising are treated by water scrubbing followed by cyclones, and the oven releases are treated in venturi scrubbers which vent to cyclones. This water is recycled into the process water system where the glass fibre is filtered and the water used as recycled binder dilution water.

Alarms fitted to the water sprays sound if the flow of water reduces to a level at which the removal efficiency of the separator falls.

Bulk liquid raw materials are delivered by road tanker and stored in contained areas.

Waste product and edge trims are granulated for use as blowing wool. A licensed contractor disposes of waste arising from scrapped product and filtration off site.

The process utilises a large amount of water for cooling and cleaning purposes. This water is filtered and reused as far as possible, with some make up from the town's main. Storm water drains discharge to Keckwick Brook.

The schedules specify the changes made to the permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application BM0419	23/07/2002	
Request for commercial confidentiality	Determined 30/07/2002	Production information
Request for additional information	4/12/2002	
Additional information response	25/02/2003 & 16/04/2003	
Permit determined BM0419	16/05/2003	Original permit issued to British Gypsum-Isover Limited
Variation BV8539	22/09/2003	
Variation MP3931SH	30/11/2005	
Application EPR/FP3536ZC/T001 (full transfer of permit EPR/MP3931SH)	Duly made 13/03/2013	Application to transfer the permit in full to BPB United Kingdom Limited

Status log of the permit		
Description	Date	Comments
Transfer determined EPR/FP3536ZC	18/03/2013	Full transfer of permit complete
Application EPR/FP3536ZC/V002	Duly made 18/04/2013	Application to implement an improved binder system
Additional information	31/05/2013	Response to technical queries (biocide containment and abatement of VOCs)
Additional information	24/06/2013	Response to technical queries (cullet specification and sodium nitrate dosing)
Additional information	25/06/2013	Request to retain emission point A1
Variation determined EPR/FP3536ZC	04/07/2013	Varied permit issued
Regulation 60 Notice issued	20/12/2013	
Regulation 60 Notice Response	29/05/2014	
Additional Response to Regulation 60 Notice	28/11/2014, 18/12/14 and 12/01/2015	
Agency Initiated Variation EPR/FP3536ZC/V003 determined	30/03/2015	Varied and consolidated permit issued in modern condition format EPR/FP3536ZC.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies and consolidates

Permit number

EPR/FP3536ZC

Issued to

BPB United Kingdom Limited (“the operator”)

whose registered office is

**Saint-Gobain House
Binley Business Park
Coventry
CV3 2TT**

company registration number 00734396

to operate a regulated facility at

**Saint-Gobain Isover
Whitehouse Industrial Estate
Runcorn
Cheshire
WA7 3DP**

to the extent set out in the schedules.

The notice shall take effect from 30/03/2015

Name	Date
Anne Nightingale	30/03/2015

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/FP3536ZC

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/FP3536ZC/V003 authorising,

BPB United Kingdom Limited (“the operator”),

whose registered office is

**Saint-Gobain House
Binley Business Park
Coventry
CV3 2TT**

company registration number 00734396

to operate an installation at

**Saint-Gobain Isover
Whitehouse Industrial Estate
Runcorn
Cheshire
WA7 3DP**

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

Name	Date
Anne Nightingale	30/03/2015

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 During a period of “abnormal operation” relating to the bag filter, the furnace shall be operated on the minimum practicable throughput when the “abnormal operation” exceeds 36 hours in any one year or any single by-pass event is longer than 12 hours.

2.3.5 During maintenance periods of the bag filter the operator shall notify the Environment Agency at least 48hrs prior to by-pass operation, or in the case of an emergency immediately.

2.3.6 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.

2.4 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, S3.2 and S3.3.

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

- 3.1.3 Where a substance is specified in schedule 3 table S3.2 or S3.3 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.
- 3.1.4 Total annual emissions from the emission points set out in tables schedule 3 S3.1, S3.2 and S3.3 of a substance listed in schedule 3 table S3.4 shall not exceed the relevant limit in table S3.4.
- 3.1.5 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;
- 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 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1; the Continuous Emission Monitors shall be used such that:
- (a) the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed the following percentages:
- | | |
|---|-----|
| • Carbon monoxide | 10% |
| • Sulphur dioxide | 20% |
| • Oxides of nitrogen (NO & NO ₂ expressed as NO ₂) | 20% |
| • Particulate matter | 30% |
| • Total organic carbon (TOC) | 30% |
| • Hydrogen chloride | 40% |
- (b) valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods) from the measured values after having subtracted the value of the confidence intervals in condition 3.5.4(a);
- (c) where it is necessary to calibrate or maintain the monitor and this means that data are not available for a complete half-hour period, the half-hourly average shall in any case be considered valid if measurements are available for a minimum of 20 minutes during the half-hour period. The number of half-hourly averages so validated shall not exceed 5 per day;
- (d) daily average values shall be determined as the average of all the valid half-hourly average values within a calendar day. The daily average value shall be considered valid if no more than five half-hourly average values in any day have been determined not to be valid;
- (e) no more than ten daily average values per year shall be determined not to be valid.
- 3.5.5 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2 and S3.3 unless otherwise agreed in writing by 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 performance parameters set out in schedule 4 table S4.2 using the forms specified in table S4.3 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 S4.3 ; 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.

4.3 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 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where 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 operator shall inform the Agency in writing 48 hours in advance of the bag filter being operated on by-pass or as soon as practicable in the case of an emergency.
- 4.3.5 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.
- 4.3.6 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.
- 4.3.7 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.8 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
 - (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", 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
A1	S3.3 A1(a)	Manufacture of glass wool using an electric arc furnace	From receipt of raw materials to emission of exhaust gas and disposal of waste arising.
Directly Associated Activity			
A2		Waste handling and storage	Handling and storage of various solid and liquid wastes from the process
A3		Discharge to foul sewer	Discharges of process waste from installation
A4		Water discharge to controlled water	Discharges of site drainage from the installation. Clean and uncontaminated from the site surface water drainage system

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to questions 2.3 given in section B2.3 of the application	23 July 2002
Noise restriction	The response to question 2.9 given in section B2.9 of the application and response to question 3 in the response to Schedule 4 part 1 Notice	23 July 2002
Response to Schedule 4 Part 1 Notice	Response to questions 1, 2, 4, 7 and 8	26 February 2003
Application for variation	The information given in response to question C2.1 and C2.2.	27 June 2005
Further information	Letter	11 November 2005
Application for variation	Application form Part C3 - Section 3 on Operating Techniques, Table 3 Technical Standards and documents: BPB_R225_Response to C3; BPB_Appendix 2_Oven; BPB_Appendix 3_scanner; BPB_Appendix 4_blast air coolers; and BPB_Appendix 5_Biocide Management.	18 April 2013
Additional information	Responses to question 1 on biocide containment and question 4 on abatement of VOCs.	31 May 2013
Additional information	Response to queries on cullet specification and sodium nitrate dosing.	24 June 2013
Response to Regulation 60 notice served 20 th December 2013	Full Submission	29 May 2014
Additional response to Regulation 60 notice.	E-mail response on the 28 Novemeber 2014	28 November 2014
Additional response to Regulation 60 notice.	E-mail response on the 18 December 2014	18 December 2014

Table S1.2 Operating techniques		
Description	Parts	Date Received
Additional response to Regulation 60 notice.	Two E-mail responses on the 12 January 2015	12 January 2015

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1 (9.1)	A report shall be sent to the Agency on establishing an Environmental Management System having regard to section 2.1 of the relevant IPPC Technical Guidance. The report shall include any proposals to implement such a programme.	Complete
IC2 (9.2)	The operator shall develop and implement a noise management plan for the installation having regard to section 2.9 of the relevant IPPC Technical Guidance and the IPPC Horizontal Guidance for Noise.	Complete
IC3 (9.3)	The operator shall develop and implement an odour management plan for the installation having regard to section 2.2.6 of the relevant IPPC Technical Guidance and the IPPC Horizontal Guidance for Odour.	Complete
IC4 (9.4)	The operator shall submit a proposal, for approval by the Agency, to control fugitive releases from the exit and entry to the curing oven. The operator shall carry out the proposal within six months of the Agency giving written approval of the proposal.	Complete
IC5 (9.5)	The operator shall carryout a detailed appraisal of the availability of recycled or recovered batch raw materials including cullet, having regard to BAT. The appraisal shall consider, but not be limited to, the availability of potential sources in the current and future marketplace, the potential impact upon production, and the potential impact upon the environment. A summary of the appraisal shall be submitted to the Agency.	Complete
IC6 (9.6)	The operator shall develop and implement a water efficiency audit for the installation having regard to section 2.4.3 of the relevant IPPC Technical Guidance.	Complete
IC7 (9.7)	The operator shall submit a proposal, for approval by the Agency, to: (a) measure and quantify the emission rate and concentration from emission point A1 of: <ul style="list-style-type: none"> • metals (BREF group 1 and 2), and • gaseous fluorides (expressed as HF). (b) evaluate sampling methods consistent with section 2.10 of the relevant IPPC Technical Guidance from emission points A1 and A2. The operator shall carry out the proposal and submit the results to the	Complete

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	Agency within six months of the Agency giving written approval of the proposal.	
IC8 (9.8)	<p>The operator shall carry out a written review of the design of the emergency batch feed system and the emergency stack (A3). The review shall consider but not be limited to;</p> <ul style="list-style-type: none"> • the means of supply and control of air / compressed air, • the means of cooling the base of the feeder, • the effectiveness of the stack, • the external height of the stack. <p>The review shall include a justification that the current measures are BAT or proposals for improvements.</p> <p>The operator shall submit a summary of the review including proposals for improvements to the Agency.</p>	Complete
IC9 (9.9)	<p>The operator shall provide the Agency with a written proposal to either remove or replace the 'chinese hat' on the emergency stack (A3).</p> <p>The operator shall carry out the proposal within six months of the Agency giving written approval of the proposal.</p>	Complete
IC10 (9.10)	<p>The Operator shall provide the Agency with a written proposal to fit a continuous emissions monitor for Oxides of Nitrogen to the emissions from the melter released via A1 or A2c.</p> <p>The operator shall carry out the proposal within three months of the Agency giving written approval of the proposal.</p>	Complete
IC11 (9.11)	<p>The Operator shall carry out a study into the potential to transfer internal cullet from the forming drop chute to the internal cullet silo within the melter building. The study shall consider reducing the potential for possible noise and dust releases from mechanical handling.</p> <p>The Operator shall submit a summary of the study including proposal with timescales.</p>	Complete
IC12 (9.12)	<p>Nitrates are used as an oxidising agent in batch formulations with high levels of external cullet (in particular bottle cullet) to compensate for the presence of organic material contained in the cullet. When nitrates are used in the batch formulation for glass wool production, BAT (BAT conclusion 58) is to reduce NOX emissions by optimising the nitrate dosage rate in the batch formulation while maintaining the quality requirements of the final product.</p> <p>The operator shall provide the Agency with a written report on optimising nitrate dosing rates in batch formulations containing various levels of organic contamination with a view to reducing NOx emissions.</p>	1 September 2015

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC13 (9.13)	The Operator shall fit bag breakage detectors and pressure drop sensors to the external bag filter systems on the two new external cullet storage silos.	Complete
IC14 (9.14)	The operator shall update the Site's Environmental Management System (EMS) to include the new binder process, reflecting changes to the curing oven, density scanner and cooling systems and the biocide management system.	30 April 2015
IC15	The operator shall undertake a risk assessment identifying the potential impacts of placing the bag filter on by-pass for a maximum of 36 hours in a year. A copy of the risk assessment must be submitted to the Environment Agency for written approval, together with justification to continue operating with the filter bag on by-pass for 36hours per year.	8 March 2016
IC16	<p>The operator shall submit a report, to the Environment Agency, on the techniques BPB United Kingdom Limited propose to use on site, to reduce Boron emissions from the furnace. As a minimum these should include:-</p> <ul style="list-style-type: none"> • Reduction of volatile components by raw material selection • Operation of a filter system at a suitable temperature to enhance the separation of boron compounds in the solid state • Use of dry or semi-dry scrubbing • Use of wet scrubbing <p>The report shall identify any improvements required on site, together with a proposed timetable for their implementation. The report will be submitted for written approval, by the Environment Agency, before any of the proposed actions are undertaken by the Operator.</p>	27 February 2016

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Fuel Oil	Less than 0.1% sulphur.

Table S2.2 Permitted waste types following activities referenced in schedule 1 table S1.1 (A1-4)	
Maximum quantity	None specified
10	WASTES FROM THERMAL PROCESSES
10 11	wastes from manufacture of glass and glass products
10 11 12	waste glass
15	WASTE PACKAGING, ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
15 01 07	glass packaging
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 05	glass
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions
20 01 02	glass

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 A1 on site plan in schedule 7]	27m Melter emergency stack	None	No limits set – emergency release only			
A2a [Point A2a on site plan in schedule 7]	Oven inlet to 55m Main Stack	Particulate matter	20 mg/m ³	Periodic	Half yearly ^[Note b]	BS EN 13284-1
		Ammonia	100mg/m ³ until 8 th March 2016	Periodic	Half yearly ^[Note b]	BS EN 14791
			60mg/m ³ after 8 th March 2016			
		Phenol	5mg/m ³	Periodic	Half yearly ^[Note b]	BS EN 13649
		Formaldehyde	5mg/m ³	Periodic	Half yearly ^[Note b]	US EPA Method 316
		Volatile Organic Compounds (as carbon) VOC	30mg/m ³ until 8 th March 2016	Periodic	Half yearly ^[Note b]	BS EN 14791
10mg/m ³ after 8 th March 2016						
A2b [Point A2b on site plan in schedule 7]	Forming inlet to 55m Main Stack	Particulate matter	20 mg/m ³	Periodic	Half yearly ^[Note b]	BS EN 13284-1
		Ammonia	50mg/m ³	Periodic	Half yearly ^[Note b]	BS EN 14791
		Phenol	10mg/m ³	Periodic	Half yearly ^[Note b]	BS EN 13649
		Formaldehyde	5mg/m ³	Periodic	Half yearly ^[Note b]	US EPA Method 316
		Volatile Organic Compounds (as carbon) VOC	30mg/m ³	Periodic	Half yearly ^[Note b]	BS EN 14791

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	
A2c [Point A2c on site plan in schedule 7]	Melter inlet to 55m Main Stack	Particulate matter	15 mg/m ³	Daily Average	Continuous	Principles of BS EN 14181 ^(Note c)	
			20 mg/m ³	Half Hour Maximum ^[Note a]			
		Oxides of Nitrogen (as NO ₂)	700 mg/m ³	Daily Average	Continuous		BS EN 15267-3 ^[Note c]
		Oxides of Sulphur (as SO ₂)	20mg/m ³	Periodic	Half yearly ^[Note b]		BS EN 14791
		Gaseous Fluorides as HF	5 mg/m ³ after 8 th March 2016	Periodic	Half yearly ^[Note b]		ISO15713:2006
		As, Co, Ni, Cd, Se, Cr _{VI} and their compounds (total)	1 mg/m ³ after 8 th March 2016	Periodic	Half yearly ^[Note b]		BS EN 14385 and MID
		As, Co, Ni, Cd, Se, Cr _{VI} , Sb, Pb, Cr _{III} , Cu, Mn, V, Sn and their compounds (total)	2 mg/m ³ after 8 th March 2016	Periodic	Half yearly ^[Note b]		BS EN 14385 and MID
		Gaseous Chloride as HCl	10 mg/m ³	Periodic	Half yearly ^[Note b]		BS ISO 15713
A3 [Point A3 on site plan in schedule 7]	Melter emergency vent	None	No limits set – emergency release only				

Notes

- (a) not more than one half hour period during any rolling 24 hour period shall exceed the half hour maximum emission limit.
- (b) minimum interval between monitoring shall be 4 months.
- (c) Continuous Emission Monitoring systems shall be quality assured using the following general principles in BS EN 14181: functional tests with traceable gases or surrogates, and verification with parallel tests using a standard reference method.

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	Clean and uncontaminated water from the site surface water drainage system	-	-	-	-	-

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	Surge Pond System	-	None	-	-	-

Table S3.4 Annual limits		
Substance	Medium	Limit (including unit)
Particulate	Air	60 tonnes
Phenol	Air	7.5 tonnes
Formaldehyde	Air	15 tonnes
Ammonia	Air	175 tonnes

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
Particulates mg Nm ⁻³	A2c	Every 3 months for continuous monitoring data against limits in Table S3.2	1 July
	A2a and A2b	Every 6 months	1 July
Oxides of Nitrogen (as NO ₂) mg Nm ⁻³	A2c	Every 3 months for continuous monitoring data against limits in Table S3.2	1 July
Oxides of Sulphur (as SO ₂) mg Nm ⁻³	A2c	Every 6 months	1 July
Gaseous Chlorides (as HCl) mg Nm ⁻³	A2c	Every 6 months	1 July
Phenol mg Nm ⁻³	A2a and A2b	Every 6 months	1 July
Formaldehyde mg Nm ⁻³	A2a and A2b	Every 6 months	1 July
Ammonia mg Nm ⁻³	A2a and A2b	Every 6 months	1 July
Volatile Organic Compounds (as Carbon) mg Nm ⁻³	A2a and A2b	Every 6 months	1 July
Gaseous Fluoride (as HF) mg Nm ⁻³	A2c	Every 6 months	1 July
As, Co, Ni, Cd, Se, Cr _{VI} and their compounds (total) mg Nm ⁻³	A2c	Every 6 months	1 July
As, Co, Ni, Cd, Se, Cr _{VI} , Sb, Pb, Cr _{III} , Cu, Mn, V, Sn and their compounds (total) mg Nm ⁻³	A2c	Every 6 months	1 July

Table S4.2 Performance parameters		
Parameter	Frequency of assessment	Units
Water usage	Annually	m ³
Energy usage	Annually	MWh

Table S4.3 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY

Table S4.3 Reporting forms		
Media/parameter	Reporting format	Date of form
Sewer	Form sewer 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Performance 1	Form performance 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY

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 immediately	
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 immediately	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified immediately	
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

“*abnormal operation*” means the non-operation or the failure of Bag filter equipment (planned or unplanned)

“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.

“background concentration” means such concentration of that substance as is present in:

- for emissions to surface water, the surface water quality up-gradient of the site; or
- for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge

“daily average” for releases of substances to air means the average of valid half-hourly averages over a calendar day during normal operation.

CEM – means continuous emissions monitoring.

Certification to the MCERTS performance standards indicates compliance with BS EN 14181 Continuous Emission Monitoring equipment shall be calibrated gases or surrogates utilised and verified with parallel tests using a standard reference method and an applicable international standard.

“emissions to land” includes emissions to groundwater.

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

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

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

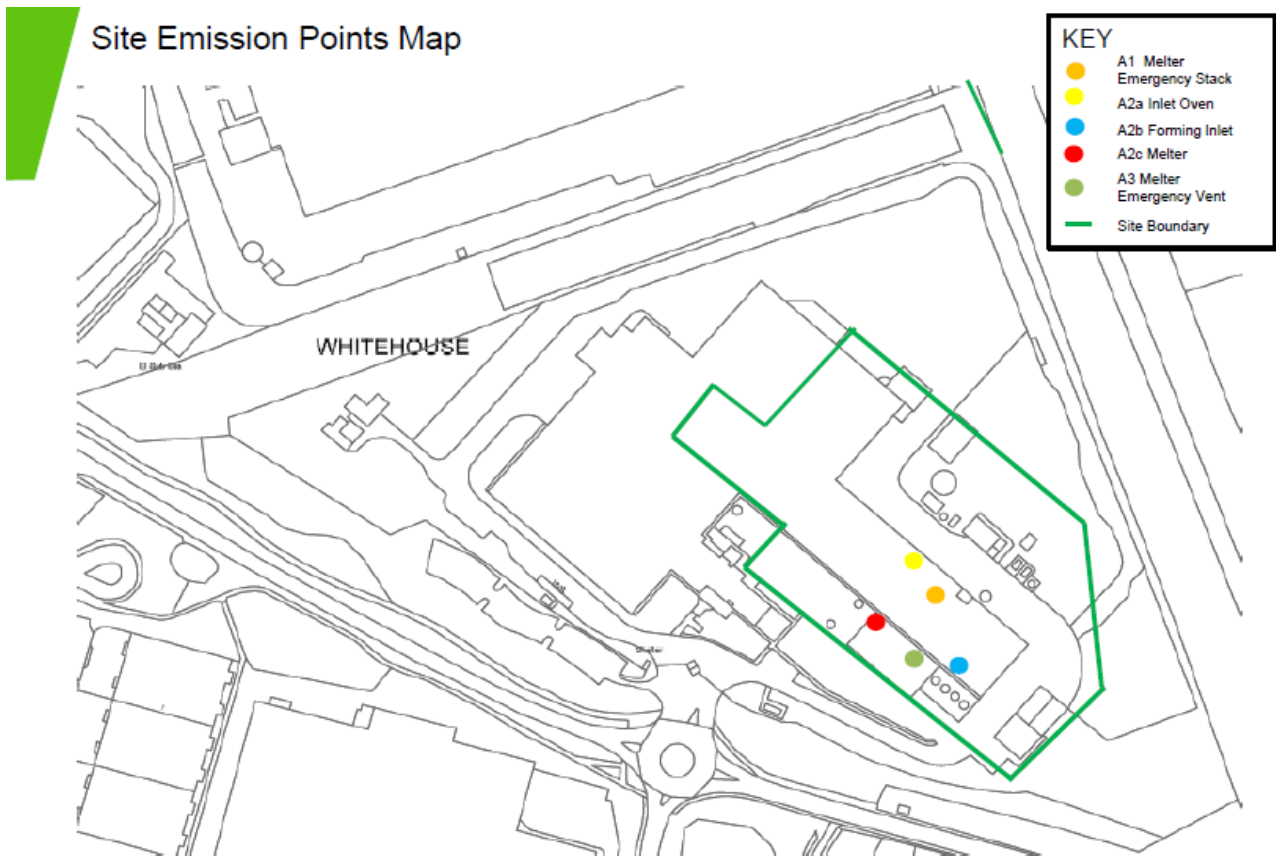
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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

- in relation to gases from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with no correction for oxygen; 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