

# Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

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Heineken UK Limited

Royal Brewery Manchester  
Denmark Road  
Moss Side  
Manchester  
M15 6LD

**Variation application number**

EPR/BV7796IW/V008

**Permit number**

EPR/BV7796IW

# Royal Brewery Manchester

## Permit number EPR/BV7796IW

### 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 application is the last in a series of applications submitted as part of Heineken's Project Cymbeline. Their intention is to increase the site's production capacity from 3.2 million hectolitres to 5.5 million hectolitres per annum. Applications EPR/BV7796IW/V005 to EPR/BV7796IW/V007 have dealt with the preparatory works for the increase. This includes new fermentation vessels, new control panels and central control room, replacement of yeast vessels, new centralised cleaning in place (CIP) plant, packaging line replacement and the replacement of the roller mill with a new hammer mill. The biomass combined heat and power (CHP) plant and the biogas CHP plant have been removed from the permit.

This application enables the actual capacity increase in the brewhouse with the replacement of the lauter tuns (brewery vessels) with mash filters. This is the primary technical change described in the application, which considers the potential environmental impacts associated with the overall capacity increase. The primary impact is the increase in effluent that will be generated. There is a minor change in the site boundary of the effluent treatment plant (EPR/CP3531GM) to accommodate the storage necessary to facilitate this increase. The site plan is updated to show this.

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.

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application BV7796IW	Duly made 24/02/05	
Request for further information	Received 13/05/05	
Further information supporting application	Received 15/07/05	
Permit BV7796IW Issued	22/12/05	
Variation notice EPR/BV7796IW/V002 (DP3431LK) issued	27/11/06	
Variation notice EPR/BV7796IW/V003 (UP3131UM) issued	22/02/08	
Variation notice EPR/BV7796IW/V004 (SP3736UP) issued	27/06/08	

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Name change (Note: No documents were produced to detail this change)	20/11/09	Operator Name Change from 'Scottish & Newcastle UK Ltd' to 'Heineken UK Limited'
Application EPR/BV7796IW/V005	Duly made 18/09/2012	
Variation notice EPR/BV7796IW/V005 issued	06/11/2012	Variation to upgrade plant for future expansion of production on site.
Variation Application EPR/BV7796IW/V006	Duly made 30/01/2014	Application to alter site layout and equipment including changes to control panels, weigher, yeast vessels, dry goods, blender, kieselguhr handling and filter room and can warehouse. Schedule 1 activity 1.1. A (1) a) i) is also being surrendered.
Additional information received	11/03/14	Further information received on two additional emission points and details on changes to the dry goods area and kieselguhr handling processes.
Additional information received	12/03/14	The information was updated to remove changes to the gypsum dust extraction from this application.
Variation EPR/BV7796IW/V006	26/03/14	Variation issued.
Application EPR/BV7796IW/V007	Duly made 04/06/14	Application to vary the permit to construct a new IBC storage facility for brewhouse additions, replace the CIP for the packaging area, construct a new central control room, replace twin kegging lines with one kegging line, create a new CIP bulk chemical storage location, replace the roller mills with a hammer mill, replace the malt delivery dust extraction system and construct a new centralised brewing CIP plant.
Application EPR/BV7796IW/V007	18/07/14	Schedule 5 response received detailing the assumptions used in the noise assessment of the kegging activity and noise predictions against background from proposed activities at each sensitive receptor.
Application EPR/BV7796IW/V007	30/07/14	Amended schedule 5 response received with revised calculations and predictions at sensitive receptor.
Variation determined EPR/BV7796IW/V007	28/08/14	Variation issued.
Application EPR/BV7796IW/V008 (variation and consolidation)	Duly made 29/08/14	Application to vary (capacity increase) and update the permit to modern conditions.
Additional information received	14/11/14	Response to Schedule 5 Notice detailing the boiler fuels and use of steam, emissions points and site boundary.
Additional information received	02/12/14	Amended site plan.
Variation determined EPR/BV7796IW (Billing reference KP3830WK)	05/12/14	Varied and consolidated permit issued in modern condition format.

<b>Other Part A installation permits relating to this installation</b>		
<b>Operator</b>	<b>Permit number</b>	<b>Date of issue</b>
Ondeo Industrial Solutions Ltd	EPR/CP3531GM	01/04/2009

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/BV7796IW**

### Issued to

**Heineken UK Limited** (“the operator”)

whose registered office is

**3-4 Broadway Park  
South Gyle Broadway  
Edinburgh  
EH12 9JZ**

company registration number **SC065527**

to operate part of a regulated facility at

**Royal Brewery Manchester  
Denmark Road  
Moss Side  
Manchester  
M15 6LD**

to the extent set out in the schedules.

The notice shall take effect from 05/12/2014

Name	Date
<b>Anne Nightingale</b>	<b>05/12/2014</b>

Authorised on behalf of the Environment Agency

## **Schedule 1**

All conditions have been varied by the consolidated permit as a result of the application made by the operator.

## **Schedule 2 – consolidated permit**

Consolidated permit issued as a separate document.

# Permit

## The Environmental Permitting (England and Wales) Regulations 2010

### Permit number

**EPR/BV7796IW**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BV7796IW/V008 authorising,

**Heineken UK Limited** (“the operator”),

whose registered office is

**3-4 Broadway Park  
South Gyle Broadway  
Edinburgh  
EH12 9JZ**

company registration number **SC065527**

to operate part of an installation at

**Royal Brewery Manchester  
Denmark Road  
Moss Side  
Manchester  
M15 6LD**

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

Name	Date
<b>Anne Nightingale</b>	<b>05/12/2014</b>

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 Multiple operator installations**

- 1.5.1 Where the operator notifies the Environment Agency under condition 4.3.1 (a) or 4.3.1 (c), the operator shall also notify without delay the other operator(s) of the installation of the same information.

## **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 (excluding the land edged in blue).

### **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 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.

### **2.4 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 operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table have been completed.

## **3 Emissions and monitoring**

### **3.1 Emissions to water, air or land**

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Total annual emissions from the emission points set out in schedule 3 table S3.1 of a substance listed in schedule 3 table S3.3 shall not exceed the relevant limit in table S3.3.
- 3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

### **3.2 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.
- 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 3.3.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.2 unless otherwise agreed in writing by the Environment Agency.

# **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.

## 4.3 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 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.
- 4.3.7 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 "immediately" or "without delay", in which case it may be provided by telephone.

# Schedule 1 – Operations

<b>Table S1.1 activities</b>		
<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
Section 6.8 Part A (1) (d) (ii) Treatment and processing for the production of food from only vegetable raw materials with a finished product production capacity greater than 300 tonnes per day.	Raw material intake, wort production, fermentation, maturation, yeast processing, beer processing, pasteurisation, packaging and tankering, co product handling.	From raw material intake to finished product dispatch, including waste handling and storage.
<b>Directly Associated Activity</b>		
Steam generation	Steam generation by boilers 1-4 with a total rated thermal input of 45MW	From the receipt, handling and combustion of fuel to steam and transfer of steam to the effluent treatment plant. The fuel is natural gas or natural gas with biogas for the boilers. The use of light fuel oil as an alternative to gas is restricted to interruptions to the gas supply and scenarios outlined in the Operators Fuel Switching Policy which can be found in Document SCBL/EP/003 in the application for a variation received 12/07/06.

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application	Information given in sections B.2.1.1 to B2.2.60 of the application (excluding references to the use of stand-by fuel).	24/02/05
Application (Further Information)	Information given in sections B2.1.1 to B2.2.60 of the application (Further information) (excluding references to the use of stand-by fuel).	15/07/05
Application for variation DP3431LK	Fuel Switching Policy – SCBL/EP003	12/07/06
Application for variation UP3131UM	Information in sections C2.1 and C2.2.1 of the application	23/01/07
Application for variation SP3736UP	Information in sections C2.1 and C2.2 of the application	27/03/08
Application for variation EPR/BV7796IW/V005	Information in sections Parts C2 and C3 of the application and supporting information	18/09/12
Application for variation EPR/BV7796IW/V006	Information in sections Parts C2 and C3 of the application and supporting information section 2 'Proposed changes' and section 3 'Supporting Information' and Figure 2.	20/12/13
Application for variation EPR/BV7796IW/V006	Additional information received - an updated description of the changes proposed, site plan and risk assessment.	12/03/14

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application for variation EPR/BV7796IW/V007	Information in sections Parts C2 and C3 of the application and supporting information section 2 'Proposed changes', section 3 'Supporting Information', Figure 2 and 4 and Appendix 2 Noise Assessment.	09/04/14
Application for variation EPR/BV7796IW/V007	Application for Variation to Environmental Permit addendum- including details on site drainage and a drainage plan, tank and bund capacities, chemicals stored on site, spill incident response procedure and updates to the noise assessment.	04/06/14
Application for variation EPR/BV7796IW/V007	Response to a request for information detailing the review of drainage that will be undertaken.	25/07/14
Application for variation EPR/BV7796IW/V007	Response to a request for information detailing when the review of drainage will be undertaken, tank resistance to the stored substances, controls to prevent overfilling the new packaging CIP tanks and plan showing revised location of the packaging CIP tanks.	01/08/14
Application for variation EPR/BV7796IW/V007	Response to a request for information detailing that all bunds will be resistant to the materials that they are intended to contain.	04/08/14
Application for variation EPR/BV7796IW/V008	Application form Part C3 - Section 3 on Operating Techniques, Table 3 Technical Standards. Application documents: Section II Proposed Changes, Section III Supporting Information, and Appendix 1 Effluent Treatment Plant Risk Assessment (sections 4.1, 5.3 and 5.4) in so far as they are relevant to the brewery operations.	29/08/14
Response to Schedule 5 Notice dated 07/10/14	Response to Schedule 5 Notice detailing the boiler fuels and use of steam, emissions points and site boundary.	14/11/14

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
1 - 9	Completed	
10 - 16	No longer need to be completed as a result of variation EPR/BV7796IW/V006	
17	The operator shall complete HAZOPs prior to commissioning new cleaning in place infrastructure introduced by Application EPR/BV7796IW/V007. The operator shall submit the study to the Environment Agency for approval.	28/02/2015
18	The operator shall develop a noise management plan in line with the Environment Agency's Horizontal Guidance for Noise H3 Part 2 Noise Assessment and Control with particular regard to Section 3.3.4 and Appendix 4. The proposed traffic management plan should also form a part of this plan.	05/06/2015

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
19	<p>Once the mash filters are operating and production is at the increased capacity, the operator shall conduct a noise monitoring survey (in line with current Environment Agency guidance) to quantify the noise on site and, if necessary, identify additional measures to ensure noise levels do not cause pollution outside the site boundary. The operator shall provide a report to the Environment Agency detailing noise survey results and include a timetable for the implementation of any recommendations made as a result of the noise survey.</p> <p>Following this, the operator shall update the Noise Management Plan described in Improvement Requirement 18, which identifies and minimises the risks of pollution from noise and vibration. The operator shall implement the approved noise management plan, from the date of approval by the Environment Agency.</p>	All parts of requirement to be completed within 6 months of normal production at increased capacity.
20	<p>The operator shall carry out an assessment of surfacing, containment measures and subsurface structures and their potential to cause fugitive emissions to surface water and groundwater. The assessment will take into account the requirements of guidance note 'How to Comply' and also include:</p> <ul style="list-style-type: none"> <li>• A full drainage survey (drainage survey report, drain camera work and dye testing).</li> <li>• The establishment of planned preventative maintenance procedures for the drainage system to act on the drainage engineers' recommendations.</li> </ul> <p>A written report summarising the findings shall be submitted to the Environment Agency. Where improvements can be made, the operator shall provide an implementation plan with a timescale agreed with the Environment Agency.</p>	All parts of requirement to be completed within 6 months of completion of Cymbeline capital works.
21	The operator shall complete a waste minimisation audit including reference to the requirements set out in guidance note EPR S6.10. Upon completion of the audit a summary of the document shall be submitted to the Environment Agency in writing.	01/12/15
22	The operator shall complete a water efficiency audit including reference to the requirements set out in guidance note EPR S6.10 and consideration of the potential for re-use of treated effluent within the process. Upon completion of the audit a summary of the document shall be submitted to the Environment Agency in writing.	01/12/15
23	The operator shall carry out an energy efficiency audit including reference to the requirements set out in guidance note EPR S6.10. Upon completion of the audit a summary of the document shall be submitted to the Environment Agency in writing.	01/12/15
24	The operator shall submit a report on the water and energy efficiency and the waste generation following the installation of the mash filters and stabilisation of the production process.	All parts of requirement to be completed within 12 months of normal production at increased capacity.



<b>Table S1.4 Pre-operational measures for future development</b>		
<b>Reference</b>	<b>Operation</b>	<b>Pre-operational measures</b>
1	Prior to the commissioning of the brewery upgrades causing an increased flow or load to the ETP.	The operator shall submit an Interim Management and Commissioning Plan to address any additional or heightened risks presented by the upgrading works at the brewery. Following approval by the Environment Agency, this plan shall be implemented until commissioning is complete, production at the brewery is at the increased capacity and enhanced ETP operation is achieved. The operator shall notify the Environment Agency when each of these stages has been reached.
2	Prior to operation of mash filters with production at the increased capacity.	The operator shall make any updates to the Environmental Management System and associated documents (emergency plans, accident plans, planned preventative maintenance), which shall be made available to the Environment Agency for inspection.
3	Prior to utilising higher levels of biogas within the boilers.	The operator shall undertake a review of the feasibility of utilising biogas as a greater proportion of the boiler fuel and submit a report to the Environment Agency for approval to include anticipated usage, consideration of the emissions to air and their impacts and a review of the techniques applied to ensure that combustion efficiency is optimised and emissions to air remain insignificant.

## Schedule 2 – Waste types, raw materials and fuels

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

## 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)	Ref period	Monitoring frequency	Monitoring standard or method
A1 (a-c) on site plan in Schedule 7	Boilers 1, 2 & 3	Oxides of Nitrogen (expressed as NO <sub>2</sub> ) mg/m <sup>3</sup>	No limit set		Annual (during natural gas combustion)	BS EN 14792
		Oxides of Nitrogen (expressed as NO <sub>2</sub> ) mg/m <sup>3</sup>	No limit set		Annual <sup>1</sup> (during light fuel oil combustion)	BS EN 14792
		Particulate Matter mg/m <sup>3</sup>	No limit set		Annual <sup>1</sup> (during light fuel oil combustion)	BS EN 13284-1
		Oxides of Sulphur (expressed as SO <sub>2</sub> ) mg/m <sup>3</sup>	No limit set		Annual <sup>1</sup> (during light fuel oil combustion)	BS EN 14791
A2 on site plan in Schedule 7	Boiler 4	Oxides of Nitrogen (expressed as NO <sub>2</sub> ) mg/m <sup>3</sup>	No limit set		Annual (during natural gas combustion)	BS EN 14792
		Oxides of Nitrogen (expressed as NO <sub>2</sub> ) mg/m <sup>3</sup>	No limit set		Annual <sup>1</sup> (during light fuel oil combustion)	BS EN 14792
		Particulate Matter mg/m <sup>3</sup>	No limit set		Annual <sup>1</sup> (during light fuel oil combustion)	BS EN 13284-1
		Oxides of Sulphur (expressed as SO <sub>2</sub> ) mg/m <sup>3</sup>	No limit set		Annual <sup>1</sup> (during light fuel oil combustion)	BS EN 14791
A3 on site plan in Schedule 7	Mash mixer (Brewhouse)	No parameters set	No limit set	--	--	--
A4 on site plan in Schedule 7	Mash mixer (Brewhouse)					
A7 on site plan in Schedule 7	Copper (Brewhouse)					
A8 on site plan in Schedule 7	Copper (Brewhouse)					
A9 on site plan in Schedule 7	Whirlpool (Brewhouse)					
A10 on site plan in Schedule 7	Whirlpool (Brewhouse)					

<b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Ref period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A14 on site plan in Schedule 7	Fermentation					
A15 on site plan in Schedule 7	Maturation					
A16 on site plan in Schedule 7	Refrigeration (Denmark road)					
A17 on site plan in Schedule 7	Can filler and buffer tanks (roof)					
A18 on site plan in Schedule 7	Keg buffer tanks (Roof)					
A43 on site plan in Schedule 7	New Fermentation Block					
A44 on site plan in Schedule 7	New Yeast Propagation Vessel					
A45 on site plan in Schedule 7	Gypsum silo					
A46 on site plan in Schedule 7	Kieselguhr silo					
A47 on site plan in Schedule 7	Kieselguhr silo					
A48 on site plan in Schedule 7	Kieselguhr silo					
A49 on site plan in Schedule 7	Kieselguhr silo					
A50 on site plan in Schedule 7	Kieselguhr batch weigher					
A51 on site plan in Schedule 7	Hammer mill malt dust collection system					
A52 on site plan in Schedule 7	Dust extraction system for the malt tanker delivery system					
A53 on site plan in Schedule 7	Mash filter					
<p>Note 1: Monitoring is not required for a boiler that has operated on light fuel oil for less than 96 hours in any reporting period.</p>						

**Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site–emission limits and monitoring requirements**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (incl. Unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
S1 on site plan in Schedule 7 emission to United Utilities Moss Lane east sewer	Uncontaminated surface water	No parameters set	No limit set	--	--	
S2 on site plan in Schedule 7 emission to United Utilities Princess Road sewer	Uncontaminated surface water	No parameters set	No limit set	--	--	
S3 on site plan in Schedule 7 emission to United Utilities Moss Lane east sewer	Uncontaminated surface water	No parameters set	No limit set	--	--	
E1 on site plan in Schedule 7 transfer to Ondeo IS Ltd effluent treatment plant	Brewery effluent discharges	Chemical Oxygen Demand (COD) <sup>1</sup> (kg)	No limit set		Annual <sup>2</sup>	To standards in M18: Monitoring of discharges to water and sewer, or as otherwise agreed in writing.
		Chemical Oxygen Demand (COD) <sup>1</sup> (mg/l)	No limit set	Daily composite sample	Every Month	
		Effluent Volume <sup>1</sup> (m <sup>3</sup> )	No limit set		Annual	Flow monitoring
E2 on site plan in Schedule 7 transfer to Ondeo IS Ltd effluent treatment plant	Packaging effluent discharges	Chemical Oxygen Demand (COD) <sup>1</sup> (kg)	No limit set		Annual <sup>2</sup>	To standards in M18: Monitoring of discharges to water and sewer, or as otherwise agreed in writing.
		Chemical Oxygen Demand (COD) <sup>1</sup> (mg/l)	No limit set	Daily composite sample	Every Month	
		Effluent Volume <sup>1</sup> (m <sup>3</sup> )	No limit set		Annual	Flow monitoring
Note 1: Combined results from E1 & E2						
Note 2: Calculated from twelve monthly results and annual effluent volume.						

<b>Table S3.3 Annual limits</b>		
<b>Substance</b>	<b>Medium</b>	<b>Limit (including unit)</b>
Oxides of nitrogen	Air	120,000 kg (as NO <sub>2</sub> ) in a year

## Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Chemical Oxygen Demand (COD) (mg/l)	E1&E2	Annual	01/01/06
Effluent Volume (m <sup>3</sup> )	E1&E2	Annual	01/01/06
Chemical Oxygen Demand (COD) (kg)	E1&E2	Annual	01/01/06
Oxides of Nitrogen (expressed as NO <sub>2</sub> ) mg/m <sup>3</sup>	A1 (a-c) and A2	Annual	01/01/06
Oxides of Nitrogen (expressed as NO <sub>2</sub> ) (kg/year)	Installation	Annual	01/01/07
Oxides of Sulphur (expressed as SO <sub>2</sub> ) (mg/m <sup>3</sup> )	A1 (a-c) and A2	Annual	01/01/06
Particulate Matter (mg/m <sup>3</sup> )	A1 (a-c) and A2	Annual	01/01/07
Energy (MWh)	Part Installation	Annual	01/01/06
Water use (m <sup>3</sup> )	Part Installation	Annual	01/01/06
Waste return (t)	Part Installation	Annual	01/01/06

Parameter	Units
Production of beer	Hectolitres

Parameter	Frequency of assessment	Units
Chemical Oxygen Demand (COD) kg	Annually	kg/hl
Potable water use (m <sup>3</sup> )	Annually	m <sup>3</sup> /hl
Non potable water use (m <sup>3</sup> )	Annually	m <sup>3</sup> /hl

Media/parameter	Reporting format	Date of form
Air	A2	19/03/14
Effluent Treatment Plant	S2	01/10/06
Energy	E1	01/10/06
Waste Return	R1	01/10/06
Water usage	WU1	01/10/06
Performance indicators	PI1	01/10/06

## 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	

<b>(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</b>	
<b>To be notified within 24 hours of detection</b>	
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>(b) Notification requirements for the breach of a limit</b>	
<b>To be notified within 24 hours of detection unless otherwise specified below</b>	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be	



<b>(b) Notification requirements for the breach of a limit</b>	
<b>To be notified within 24 hours of detection unless otherwise specified below</b>	
taken, to stop the emission	

<b>Time periods for notification following detection of a breach of a limit</b>	
<b>Parameter</b>	<b>Notification period</b>

<b>(c) Notification requirements for the detection of any significant adverse environmental effect</b>	
<b>To be notified within 24 hours of detection</b>	
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.

“daily” means, for sampling purposes, a period of 7 days starting each Monday at 7:30am.

“daily composite sample” means a sample obtained by continually taking a sample of 50 millilitre from the effluent every 5 minutes.

“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.

“year” means calendar year ending 31 December.

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

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

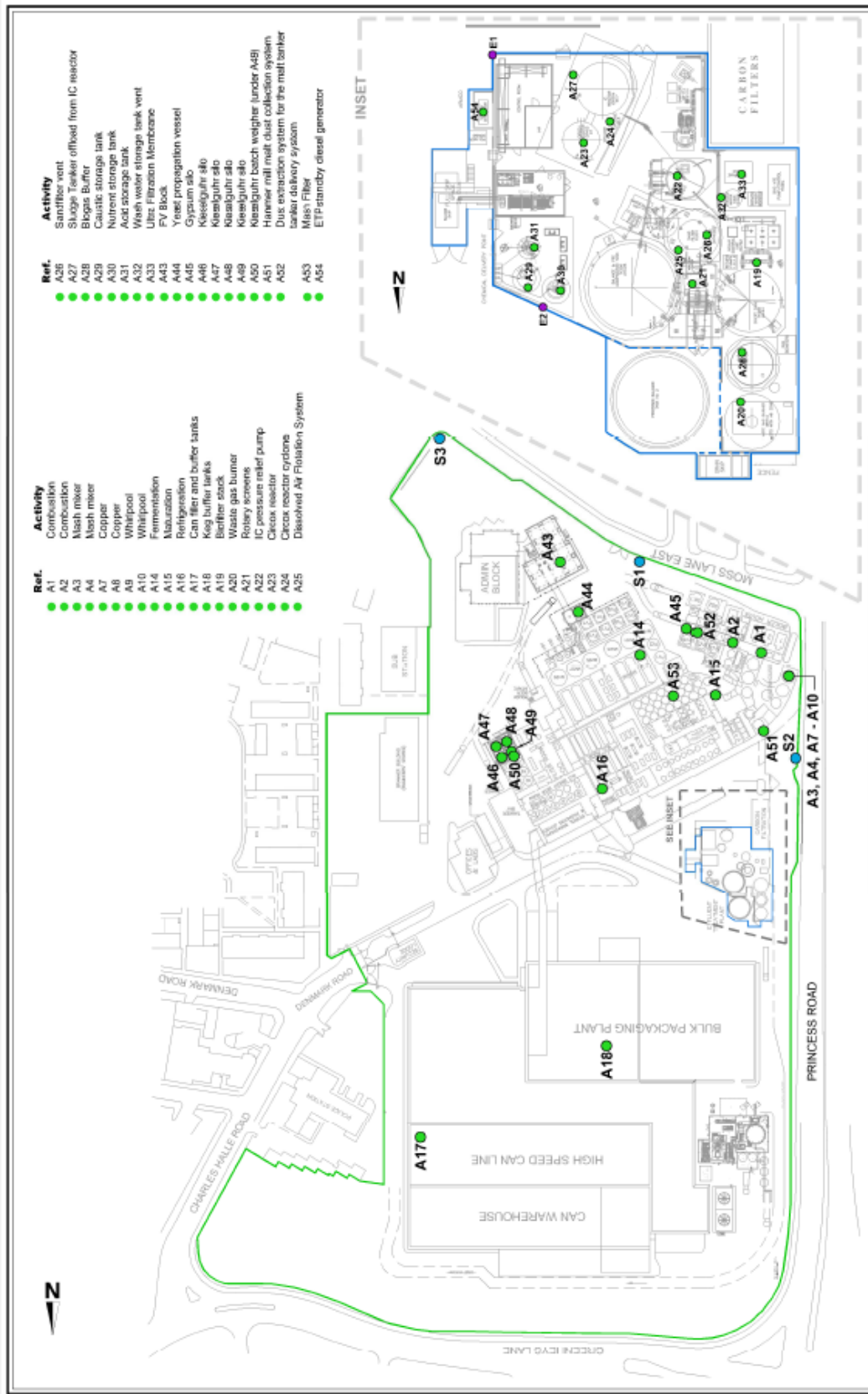
- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such conflict.

# Schedule 7 – Site plan

The land edged in blue is the effluent treatment plant regulated by means of Permit EPR/CP35 31GM

END OF PERMIT



- |             |  |
|-------------|--|
| <b>Ref.</b> | <b>Activity</b>                            |
| A1          | Comminution                                |
| A2          | Comminution                                |
| A3          | Wash mixer                                 |
| A4          | Wash mixer                                 |
| A7          | Copper                                     |
| A8          | Copper                                     |
| A9          | Whirlpool                                  |
| A10         | Whirlpool                                  |
| A11         | Fermentation                               |
| A12         | Fermentation                               |
| A13         | Mauration                                  |
| A14         | Mauration                                  |
| A15         | Mauration                                  |
| A16         | Relief station                             |
| A17         | Can filler and buffer tanks                |
| A18         | Can filler and buffer tanks                |
| A19         | Can filler and buffer tanks                |
| A20         | Can filler and buffer tanks                |
| A21         | Waste gas burner                           |
| A22         | Rotary screens                             |
| A23         | IC pressure relief pump                    |
| A24         | Citric reactor                             |
| A25         | Disolved Air Flotation System              |
| A26         | Sandfilter vent                            |
| A27         | Sludge Tanker offload from IC reactor      |
| A28         | Biogas Buffer                              |
| A29         | Caustic storage tank                       |
| A30         | Nutrient storage tank                      |
| A31         | Acid storage tank                          |
| A32         | Wash water storage tank vent               |
| A33         | Ultra Filtration Membrane                  |
| A34         | FV Block                                   |
| A35         | Yeast propagation vessel                   |
| A36         | Gypsum silo                                |
| A37         | Kieselguhr silo                            |
| A38         | Kieselguhr silo                            |
| A39         | Kieselguhr silo                            |
| A40         | Kieselguhr silo                            |
| A41         | Kieselguhr silo                            |
| A42         | Hammer mill malt dust collection system    |
| A43         | Dust extraction system for the malt tanker |
| A44         | Canter delivery system                     |
| A45         | Mitsi Filter                               |
| A46         | ETP standby diesel generator               |

ROYAL BREWERY MANCHESTER  
APPLICATION FOR VARIATION TO  
ENVIRONMENTAL PERMIT

**FIGURE 1**  
INSTALLATION LAYOUT SHOWING  
PRINCIPAL RELEASE POINTS

PROJECT No. MUR0000  
DRAWN CHAWI  
DATE AUB  
CHECKED BEY  
DATE DECEMBER 2014

SCALE  
CONTINUED



- KEY:**
- Installation Boundary
  - Operational Boundary
  - Emission points to sewer
  - Effluent transfer point
  - A1-E Emission points to air