

# Permit with introductory note

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

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Warburtons Limited  
Enfield Bakery  
Delta Park  
112 Millmarsh Lane  
Enfield  
London  
EN3 7XG

**Permit number**

EPR/AP3137EM

# Enfield Bakery

## Permit number EPR/AP3137EM

### Introductory note

#### **This introductory note does not form a part of the permit**

The main features of the permit are as follows.

The Industrial Emissions Directive (IED) was transposed in England and Wales by the Environmental Permitting (England and Wales) (Amendment) Regulations 2013 on 27 February 2013. This application implements the changes brought about by the IED for “existing facilities operating newly prescribed activities” and completes the transition of this to an IED Installation.

Warburtons Limited operate a bakery in Enfield, London (NGR TQ 36644 97159). It is set on an industrial estate with a mixture of commercial units. As this is an existing site and has the capacity to produce up to 379 tonnes of bread products per day Warburtons Limited have applied for a new bespoke permit for a scheduled listed activity - *Section 6.8 Part A(1) (d)(ii) Treatment and processing, other than exclusively packaging, of the following raw materials, whether previously processed or unprocessed, intended for the production of food or feed (where the weight of the finished product excludes packaging) - only vegetable raw materials with a finished product production capacity greater than 300 tonnes per day or 600 tonnes per day where the installation operates for a period of no more than 90 consecutive days in any year.*

There are 5 production lines at the bakery; 2 bread lines and 3 crumpet lines. This includes a new crumpet line which is due to be constructed at the end of 2016.

Raw materials are received on site, mixed, divided, proved, baked, cooled, packaged and despatched off-site.

There are several ovens, burners and boilers on site that use natural gas and there are numerous emission points to air. There are no other types of fuel used for combustion. The main point source emissions identified are NO<sub>x</sub>, CO and ethanol with the potential for fugitive emissions of odour, noise, dust from flour silos and surface run-off.

The total thermal input for all the plant on site is 13.208 MW.

There is an effluent treatment plant on site which discharges to public foul sewer. The effluent treatment plant settles and doses effluent before being discharged. The discharge to the sewer is controlled under a trade effluent consent granted by Thames Water Services. As the effluent treatment plant has the capacity to treat greater than 50 tonnes per day it is also a scheduled listed activity - *S 5.4 Part A(1) (a)(ii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving one or more of the following activities and excluding activities covered by Council directive 91/271/EEC concerning urban waste water treatment – (ii) physic-chemical treatment.*

Surface water run-off is discharged via an interceptor to the Lee Valley Navigation.

There are 2 ecological sensitive receptors within 500m of the installation; Lee Valley Navigation LWS and Chingford Reservoir SSSI. There are human sensitive receptors to the west of the installation, mainly residential areas and schools.

The status log of the 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 EPR/AP3137EM/A001	Duly made 24/03/15	Application for new bespoke permit for bakery.
Additional information received	15/04/16	Additional information from applicant in relation to additional crumpet line: <ul style="list-style-type: none"> <li>• Updated Appendix E – Site Layout Plan;</li> <li>• Updated Appendix F – Air Dispersion Modelling Report;</li> <li>• Updated Appendix G – Air Emission Points;</li> <li>• Additional supporting information.</li> </ul>
Additional information received	14/06/16	Information received in response to request made 06/06/16: <ul style="list-style-type: none"> <li>• Additional supporting information processes and operations;</li> <li>• Updated consent to discharge trade effluent to sewer;</li> <li>• Effluent treatment schematic;</li> <li>• Additional information on meeting EPR 6.10.</li> </ul>
Additional information received	12/07/16	Information received in response to request made 23/06/16: <ul style="list-style-type: none"> <li>• Updated H1 tool;</li> <li>• Updated Air dispersion Modelling Report;</li> <li>• Modelling files;</li> <li>• Information on VOCs.</li> </ul>
Additional information received	27/01/17	Information received in response to request made 04/01/17: <ul style="list-style-type: none"> <li>• Revised air emissions plan – W/109/300 Rev. D, dated 27/01/17</li> <li>• Confirmation of thermal inputs;</li> <li>• Confirmation of space heaters;</li> <li>• Confirmation of point source emission to air references.</li> </ul>
Permit determined EPR/AP3137EM (Billing ref. AP3137EM)	28/02/17	Permit issued to Warburtons Limited.

End of introductory note

# Permit

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

### Permit number

**EPR/AP3137EM**

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010

**Warburtons Limited** (“the operator”),

whose registered office is

**Back O' Th' Bank House  
Hereford Street  
Bolton  
Lancashire  
BL1 8HJ**

company registration number 0178711

to operate an installation at

**Enfield Bakery  
Delta Park  
112 Millmarsh Lane  
Enfield  
London  
EN3 7XG**

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

<b>Name</b>	<b>Date</b>
<b>Rebecca Warren</b>	<b>28/02/2017</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.

## **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 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

- (a) the nature of the process producing the waste;
- (b) the composition of the waste;
- (c) the handling requirements of the waste;
- (d) the hazardous property associated with the waste, if applicable; and
- (e) the waste code of the waste.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

### **2.4 Improvement programme**

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

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

## **3 Emissions and monitoring**

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

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.

- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

## **3.2 Emissions of substances not controlled by emission limits**

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
  - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

## **3.3 Odour**

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
  - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

## **3.4 Noise and vibration**

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
  - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

## **3.5 Monitoring**

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1, S3.2 and S3.3.
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2 and S3.3 unless otherwise agreed in writing by the Environment Agency.

## **3.6 Pests**

- 3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.6.2 The operator shall:
- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
  - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

# **4 Information**

## **4.1 Records**

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
  - (b) be made as soon as reasonably practicable;
  - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
  - (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
    - (i) off-site environmental effects; and
    - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

## 4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
  - (b) the annual production /treatment data set out in schedule 4 table S4.2; and
  - (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
  - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and
  - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

## 4.3 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:
- (c) any change in the operator's name or address; and
  - (d) any steps taken with a view to the dissolution of the operator.
- In any other case:
- (e) the death of any of the named operators (where the operator consists of more than one named individual);
  - (f) any change in the operator's name(s) or address(es); and
  - (g) 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", in which case it may be provided by telephone.

# Schedule 1 – Operations

<b>Table S1.1 activities</b>			
<b>Activity reference</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
A1	S6.8 Part A(1) (d)(ii) Treatment and processing, other than exclusively packaging, of the following raw materials, whether previously processed or unprocessed, intended for the production of food or feed (where the weight of the finished product excludes packaging) - only vegetable raw materials with a finished product production capacity greater than 300 tonnes per day or 600 tonnes per day where the installation operates for a period of no more than 90 consecutive days in any year.	Food processing	From receipt of raw materials to despatch of finished product.  Production of up to 376 tonnes of baked goods per day.
A2	S 5.4 Part A(1) (a) (ii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving one or more of the following activities and excluding activities covered by Council directive 91/271/EEC concerning urban waste water treatment – (ii) physic-chemical treatment.	Treatment of effluent	From receipt of effluent into the onsite effluent treatment plant for treatment involving settlement and the pH adjustment of effluent prior to discharge to sewer or despatch off-site.  Treatment and discharge of up to 140m <sup>3</sup> of effluent per day from utensil and equipment cleaning, basket washers, boiler blowdown, Cleaning-in-Place (CIP) cleaning activities.
<b>Directly Associated Activity</b>			
A3	Raw materials	Storage of raw materials including those for production of baked goods, cleaning and effluent treatment	From receipt of raw materials to despatch to processing.
A4	Ovens and hotplates	Operation of bread ovens, provers and crumpet hotplates for production of baked goods	Combustion of natural gas in 2 bread ovens, provers and 3 crumpet hotplates with a combined thermal input not exceeding 9.390 MW.
A5	Combustion plant	Operation of central combustion plant to generate steam and hot water	Combustion of natural gas in 3 boilers and 2 water heaters with a combined thermal input not exceeding 2.657 MW.
A6	Cooling of baked products	Operation of boilers utilising hot and cold water to cool baked goods	Combustion of natural gas in closed loop cooling system not exceeding 80 kW to cool baked products prior to slicing.

<b>Table S1.1 activities</b>			
<b>Activity reference</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
A7	Basket wash	Operation of 4 stage basket wash process	From receipt of baskets for washing to despatch for re-use.  Combustion of natural gas in the basket wash burner and 3 water heaters with an aggregated thermal input not exceeding 346 kW.
A8	Space heaters	Operation of space heaters	Combustion of natural gas to power 7 space heaters with an aggregated thermal input of 735 kW
A9	Chiller units	Operation of glycol fed chiller units	From receipt of baked product to despatch for packaging.
A10	Cleaning in place (CIP)	Cleaning activities during and after production runs	From receipt of cleaning chemicals to despatch for treatment of effluent.
A11	Waste and by-product storage	Storage of waste and by-products from the production of baked goods	From receipt of waste and by-products to despatch off-site.

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application	Part B3 Section 3a – Technical Standards (refers to ERP 6.10)  Inclusive of section 4 (Operating techniques) from the additional supporting information received 15/04/16	24/3/15
Additional information received	Information received in response to request made 06/06/16: <ul style="list-style-type: none"> <li>• Additional supporting information processes and operations;</li> <li>• Additional information on complying with EPR 6.10.</li> </ul>	14/06/16
Additional information received	Information received in response to request made 04/01/17: <ul style="list-style-type: none"> <li>• Revised air emissions plan – W/109/300 Rev. D, dated 27/01/17;</li> <li>• Confirmation of thermal inputs;</li> <li>• Confirmation of space heaters;</li> <li>• Confirmation of point source emission to air references.</li> </ul>	27/01/17

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	<p>The operator shall submit a written plan to the Environment Agency for approval that includes proposals to undertake representative monitoring of point source air emissions listed in table S3.1 to obtain 4 rounds of samples.</p> <p>The proposals shall include the following monitoring requirements:</p> <ul style="list-style-type: none"> <li>• The emission points to be monitored;</li> <li>• Monitoring for oxides of nitrogen, carbon monoxide and volatile organic compounds;</li> <li>• Monitoring frequency of once every 6 months;</li> <li>• Reference period of 1 hour average; and</li> <li>• Methods to be used.</li> </ul> <p>Monitoring shall be either MCerts certification or MCerts accreditation, where available, and test standards shall be standards referenced in Technical Guidance note (monitoring) M2 Monitoring of stack emissions to air.</p>	28/06/17
IC2	<p>The operator shall submit a report to the Environment Agency for approval that includes:</p> <ul style="list-style-type: none"> <li>(i) Updated air dispersion modelling that includes the point source air emissions data obtained in IC1 above; and</li> <li>(ii) Proposals for appropriate measures to mitigate the impact of the emissions where the air dispersion modelling determines they are significant, including emission limits and monitoring frequencies and methods, and dates for implementation of individual measures.</li> </ul>	31/08/19
IC3	<p>The Operator shall review the adequacy and suitability of existing bund provisions, unloading points and containment at the installation, with reference to <i>CIRIA Containment systems for the prevention of pollution (C736) - Secondary, tertiary and other measures for industrial and commercial premises</i>.</p> <p>A report of the review shall be submitted to the Environment Agency for approval which includes, as a minimum, details of:</p> <ul style="list-style-type: none"> <li>• bunds;</li> <li>• any deficiencies identified, including jetting risks;</li> <li>• control measures on surface water run-off discharged to controlled water, including proposals for continuous monitoring of the quality of the run-off and options for auto-isolation prior to discharge where appropriate; and</li> <li>• improvements proposed and timescales for implementation.</li> </ul>	28/08/17

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

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
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## Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. <sup>1</sup>	Source	Parameter <sup>2</sup>	Limit (incl. unit) <sup>3</sup>	Reference period <sup>3</sup>	Monitoring frequency <sup>4</sup>	Monitoring standard or method <sup>4</sup>
A1-A7	Space heaters	NOx	--	--	--	--
		CO	--	--		
A8	Hot plate 2 gas burner	NOx	--	--	--	--
A9	Hot plate 2 gas burner	CO	--	--		
A10	Hot plate 2 gas burner	VOC	--	--		
A11	Hot plate 1 gas burner	NOx	--	--	--	--
A12	Hot plate 1 gas burner	CO	--	--		
A13	Hot plate 1 gas burner	VOC	--	--		
A14i	Boiler – HP wash room	NOx	--	--	--	--
A14ii	Boiler – HP wash room	CO	--	--		
A14iii	Boiler – HP wash room		--	--		
A15	Basket wash burner	NOx	--	--	--	--
		CO	--	--		
A16	Basket wash steam extract	Steam	--	--	--	--
A17	Cooler smaller boiler	NOx	--	--	--	--
A18	Cooler smaller boiler	CO	--	--		
A19	Oven burners BP1	NOx	--	--	--	--
A20	Oven burners BP1	CO	--	--		
A21	Oven burners BP1	VOC	--	--		
A22	Prover BP1 gas burner	NOx	--	--	--	--
A23	Prover BP2 gas burner	CO	--	--		
		VOC	--	--		
A24	Oven burners BP2	NOx	--	--	--	--
A25	Oven burners BP2	CO	--	--		
A26	Oven burners BP2	VOC	--	--		
A27i	Water heater	NOx	--	--	--	--
A27ii	Water heater	CO	--	--		
A28	Boiler 1	NOx	--	--	--	--
A29	Boiler 2	CO	--	--		
A30	Boiler 3		--	--		
A31	Industrial washer (external wash room)	Steam	--	--	--	--
A32	Industrial washer (external wash room)	Steam	--	--	--	--
A33i	Flour silo 1 intake filter	--	--	--	--	--

<b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements</b>						
<b>Emission point ref.<sup>1</sup></b>	<b>Source</b>	<b>Parameter<sup>2</sup></b>	<b>Limit (incl. unit)<sup>3</sup></b>	<b>Reference period<sup>3</sup></b>	<b>Monitoring frequency<sup>4</sup></b>	<b>Monitoring standard or method<sup>4</sup></b>
A33ii	Flour silo 2 intake filter	--	--	--	--	--
A33iii	Flour silo 3 intake filter	--	--	--	--	--
A33iv	Flour silo 4 intake filter	--	--	--	--	--
A33v	Flour silo 5 intake filter	--	--	--	--	--
A33vi	Flour silo 6 intake filter	--	--	--	--	--
A33vii	Flour silo 7 intake filter	--	--	--	--	--
A33viii	Flour silo 8 intake filter	--	--	--	--	--
A34i	Flour silo 1 explosion vent	--	--	--	--	--
A34ii	Flour silo 2 explosion vent	--	--	--	--	--
A34iii	Flour silo 3 explosion vent	--	--	--	--	--
A34iv	Flour silo 4 explosion vent	--	--	--	--	--
A34v	Flour silo 5 explosion vent	--	--	--	--	--
A34vi	Flour silo 6 explosion vent	--	--	--	--	--
A34vii	Flour silo 7 explosion vent	--	--	--	--	--
A34viii	Flour silo 8 explosion vent	--	--	--	--	--
A35	BP2 oven infeed hood	VOC	--	--	--	--
A36	BP2 oven outfeed hood	VOC	--	--	--	--
A37	BP1 oven infeed hood	VOC	--	--	--	--
A38	BP1 oven outfeed hood	VOC	--	--	--	--
A39	Hot plate 3 gas burner	NOx	--	--	--	--
A40	Hot plate 3 gas burner	CO	--	--		
A41	Hot plate 3 gas burner	VOC	--	--		

<sup>1</sup> Point source emissions to air are shown on drawing W/109/300 Revision D, dated 27/01/17.  
<sup>2</sup> NOx = Oxides of nitrogen (expressed as NO<sub>2</sub>) in mg/m<sup>3</sup>  
CO = Carbon monoxide in mg/m<sup>3</sup>  
VOC = Volatile organic compounds (expressed as carbon) in mg/m<sup>3</sup>  
<sup>3</sup> Limits and reference to be confirmed following completion of monitoring programme as per IC1.  
<sup>4</sup> Monitoring frequency and standards to be reviewed following completion of monitoring programme as per IC1.

<b>Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements</b>						
<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>
W1 on site plan in schedule 7 emission to Lee Valley Navigation.	Uncontaminated surface water run-off from via interceptor	Visible oils, fats and grease	Non Visible	--	Monthly	Visual inspection

**Table S3.3 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 Thames Water Services' Deephams Wastewater Treatment Works	Site effluent treatment plant	--	--	--	--	--

## Schedule 4 – Reporting

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

<b>Table S4.1 Reporting of monitoring data</b>			
<b>Parameter</b>	<b>Emission or monitoring point/reference</b>	<b>Reporting period</b>	<b>Period begins</b>
--	--	--	--

<b>Table S4.2 Annual production/treatment</b>	
<b>Parameter</b>	<b>Units</b>
Baked goods produced (finished products)	tonnes
Waste dough despatched off site	tonnes

<b>Table S4.3 Performance parameters</b>		
<b>Parameter</b>	<b>Frequency of assessment</b>	<b>Units</b>
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Total raw material used	Annually	tonnes
Waste disposed	Annually	tonnes

<b>Table S4.4 Reporting forms</b>		
<b>Media/parameter</b>	<b>Reporting format</b>	<b>Date of form</b>
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	28/02/17
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	28/02/17
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	28/02/17

# 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	

<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>	
Measures taken, or intended to be 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.

“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.

“Pests” means Birds, Vermin and Insects.

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

“year” means calendar year ending 31 December.



**Permit Number: EPR/AP3137EM**

**Operator: Warburtons Limited**

**Facility: Enfield**

**Form Number: Water Usage 1 / 28/02/17**

**Reporting of Water Usage for the year**

<b>Water Source</b>	<b>Usage (m<sup>3</sup>/year)</b>	<b>Specific Usage (m<sup>3</sup>/unit output)</b>
Mains water		
<b>TOTAL WATER USAGE</b>		

Operator's comments:

Signed .....

Date.....

(authorised to sign as representative of Operator)

**Permit Number: EPR/AP3137EM**

**Operator: Warburtons Limited**

**Facility: Enfield**

**Form Number: Energy 1 / 28/02/17**

**Reporting of Energy Usage for the year**

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity *	MWh		
Natural Gas	MWh		
TOTAL	-		

\* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments:

Signed .....

Date.....

(Authorised to sign as representative of Operator)

**Permit Number: EPR/AP3137EM**

**Operator: Warburtons Limited**

**Facility: Enfield**

**Form Number: Performance 1 / 28/02/17**

**Reporting of other performance indicators for the period DD/MM/YYYY to DD/MM/YYYY**

<b>Parameter</b>	<b>Units</b>
Total raw material used	tonnes
Waste disposed	tonnes

Operator's comments:

Signed .....

Date.....

(Authorised to sign as representative of Operator)