Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for Enfield Bakery operated by Warburtons Limited.

The permit number is EPR/AP3137EM.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Structure of this document

- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses
- Annex 3 emissions data

Key issues of the decision

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.

Air quality assessment

The operator's assessment of emissions to air concluded no significant impact on human or ecological sensitive receptors.

The applicant's assessment of the impact on air quality comprises of:

- H1 environmental assessment tool. NO_2 and CO were entered in to the H1 tool, they did not screen out as insignificant so therefore detailed air dispersion modelling was completed;
- Air Dispersion Modelling Report 1247r4 dated 8 July 2016. The air dispersion modelling looked at impacts of CO, NO_2 and VOC (Ethanol) emissions on human receptors and NOx emissions and nitrogen and acid deposition on ecological receptors. Some data from this has been included in Annex 3.

An improvement condition has been added to the permit requiring the operator to carry out an emission point monitoring programme. See the Improvement Condition section of key issues.

Human receptors

The air dispersion modelling report highlighted 10 potential sensitive receptors. However, using the definition of sensitive receptors in the Ambient Air Directive (AAD) and London Local Air Quality Management Technical Guidance (LLAQM TG16) only receptors R1-R3 (residential dwellings) and R5 (school) needed to be considered when determining the impact of air emissions.

NO_2

For receptor R5 the peak short term Process Contribution (PC) is <10% of the Environmental Quality Standard (EQS) and the peak long term PC was <1% of the EQS so was screened out as insignificant. The impact on R5 did not need to be considered further.

For receptors R1-R3 the peak short term PC is <10% of the EQS but the peak long term PC was not <1% of the EQS so the PC could not be screened out as insignificant. However, both the peak short term and long term predicted environmental outcome (PEC) are <100% of EQS emissions therefore are unlikely to give rise to significant pollution.

CO

For receptors R1-R3 and R5 the peak short term PC was <10% of the EQS so was screened out as insignificant. There is no long term EQS for CO. The impact on the receptors did not need to be considered further.

VOC

The operator has extrapolated measured ethanol concentrations from their Tuscany facility, a similar installation, and have used them for the Enfield facility.

A strain of high gassing yeast is used in the process that is engineered to produce CO2 rather than alcohol, therefore reducing the potential for VOC releases. The potential release of ethanol, as the principal VOC emission from the action of yeast in fermentation, has been assessed and accounted for within the air dispersion model.

Ethanol standards are set for the protection of workers – Workplace Exposure Limits – which are not regulated by the Environment Agency. The WEL for ethanol is 19,200ug/m^3 as a long term annual average. There is no short term standard.

The peak long term PC for ethanol at all sensitive receptors is <1% of the WEL so was screened out as insignificant.

Ecological receptors

As the thermal input of the facility is <20MW the screening distance for ecological receptors was set at 500m from the facility. This is in line with Agency guidance AQTAG14.

Two sites were identified within this radius:

- Chingford Reservoir SSSI (E1);
- Lea Valley LWS (E2).

NOx emissions and nitrogen and acid deposition were considered at both of these sites.

Chingford Reservoir SSSI (Receptor E1)

The SSSI has 2 notifiable features – Great Crested Grebe and Shoveler. The Air Pollution Information System (APIS) lists 2 habitat types which support these species at this site – Littoral sediment and standing open water and canals.

APIS indicates that there is the potential for impact on the notifiable features due to impacts on the supporting habitats. This site has been assessed in the air dispersion modelling.

We have assessed the likelihood of damage to the interest features of the SSSI and have concluded that this application will not increase the likelihood of damage to the site.

Lea Valley LWS (Receptor E2)

NOx, acid deposition and nitrogen deposition

Using the relevant critical levels and critical loads the dispersion modelling predicts that the emissions from the facility will have an insignificant impact on the LWS. The impact on E2 does not need to be considered any further.

Improvement conditions

Two improvement conditions have been added to the permit.

IC1 and 2 - Air emission monitoring programme. The air dispersion modelling submitted with the application was based on a 1 hour sample for each stack, where appropriate. It would not be appropriate to set any emission limits based on this limited monitoring. The operator is required to take further samples to verify the modelling and confirm the conclusions in the report. Emission limit values may be set following the completion and assessment of the monitoring programme where appropriate.

IC3 – Secondary containment. While the bunding on site may meet the requirements for capacity there are potential issues over jetting risks. There is a surface water drain adjacent to the raw materials bunding area. There is potential for raw materials to enter surface water.

The IC requires the operator co conduct a review of their secondary containment and bunding in line with CIRIA guidance and propose any improvements where deficiencies are identified. This also includes a review of their controls on run-off water to prevent contaminating controlled waters.

Annex 1: decision checklist

This document should be read in conjunction with the application and supporting information and permit/ notice.

Aspect considered	Justification / Detail	Criteria met Yes
Consultation		
Responses to consultations and web publicising	The consultation and web publicising responses (Annex 2) were taken into account in the decision. The decision was taken in accordance with our guidance.	✓
Operator		
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator.	✓
European Directives		
Applicable directives	All applicable European directives have been considered in the determination of the application. The Installation will be subject to the requirements of the Industrial Emissions Directive (IED) 2010/75/EU and regulated under the Environmental Permitting (England and Wales) Regulations 2010 (SI 2010 No 675). The IED was transposed in England and Wales by the Environmental Permitting (England and Wales)(Amendment) Regulations 2013 on 27 February 2013.	✓
The site		
Extent of the site of the facility	The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility. A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.	✓
Site condition report	The operator has provided a description of the condition of the site. We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED– guidance and templates (H5).	✓
Biodiversity, Heritage, Landscape and Nature Conservation	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat . A full assessment of the application and its potential to affect the sites species has been carried out as part of the permitting process. We consider that the application will not affect the features of the site. We have not formally consulted on the application. An Appendix 4 has been completed for audit. The decision was taken in accordance with our guidance.	✓
Environmental Risk Assessment and operating techniques		
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory.	✓

Aspect considered	Justification / Detail	Criteria met Yes
Operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The operator has provided details to demonstrate their operating techniques are in line with our guidance on - How to comply with your environmental permit, Additional guidance for: The Food and Drink Sector (EPR 6.10). This includes: • accident management • Energy efficiency • Efficient use of raw materials and water • Avoidance, recovery and disposal of waste • operating techniques • process control • Raw materials • Baking • Cooling/chilling • Cleaning • Emissions	✓
The permit conditions		
Improvement conditions	Based on the information on the application, we consider that we need to impose improvement conditions. We have imposed improvement conditions to ensure that containment measures are sufficient and that the air dispersion modelling data is verified by using additional sample sets. See key issues for further information.	✓
Incorporating the application	We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process. These descriptions are specified in the Operating Techniques table in the permit.	✓
Emission limits	We have decided that emission limits should not be set for the points listed in the permit. The operator's assessment indicated that emissions are insignificant at the relevant sensitive receptors. Additional samples of emissions to air will be taken as part of an improvement condition. This data will be used to validate the air dispersion modelling submitted with the application, following which ELVs may be set if deemed appropriate.	✓
Reporting	We have specified reporting in the permit.	✓
Operator Competence		
Environment management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions. The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Relevant convictions	The National Enforcement Database has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found.	✓
Financial provision	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.	✓

Annex 2: Consultation and web publicising responses

External consultees

- Director of Public Health
- Canal and Rivers trust
- Environmental Health – London Borough of Enfield
- Health and Safety Executive
- Planning Department – London Borough of Enfield
- Public Health England

Response received from
Public Health England
Brief summary of issues raised
Emissions to air of products from combustion
Summary of actions taken or show how this has been covered
"Based solely on the information contained in the application provided, PHE has no significant concerns regarding risk to health of the local population from this proposed activity, providing that the applicant takes all appropriate measures to prevent or control pollution, in accordance with the relevant sector technical guidance or industry best practice." No further action as a result of this consultation response is required. Air quality issues have been considered during determination.

No responses were received for the web publication.

Annex 3 – air emissions data

Table 1

Nitrogen Dioxide	Long term (EQS=40 ug/m^3)				Short term (EQS=200 ug/m^3)			
	Concentration (ug/m^3)		Proportion of EQS (%)		Concentration (ug/m^3)		Proportion of EQS (%)	
	PC	PEC	PC	PEC	PC	PEC	PC	PEC
R1 - Residential	0.83	23.83	2.10	59.60	13.07	59.07	6.50	29.50
R2 - Residential	1.19	24.19	3.00	60.50	13.80	59.80	6.90	29.90
R3 - Residential	1.40	24.40	3.50	61.00	12.22	58.22	6.10	29.10
R5 - School	0.41	23.41	1.00	58.50	3.45	49.45	1.70	24.70

Table 2

Carbon Monoxide	Short term (EQS=10,000 ug/m^3)			
	Concentration (ug/m^3)		Proportion of EQS (%)	
	PC	PEC	PC	PEC
R1 - Residential	129.8	955.8	1.3	9.6
R2 - Residential	165.9	991.9	1.7	9.9
R3 - Residential	184.7	1010.7	1.8	10.1
R5 - School	44.2	870.2	0.4	8.7