

Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for Jacobs Bakery operated by United Biscuits (UK) Limited.

The permit number is EPR/DP3033AW

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.

Description of the main features of the Installation

The installation is located in the Aintree area of Liverpool and produces a range of crackers, snacks, biscuits and cakes. It has been operating for 100 years and now requires an environmental permit because of the 2013 update to the Environmental Permitting Regulations that implemented the Industrial Emissions Directive and extended the scope of installation activities to include some new food & drink facilities:

Section 6.8 Part A(1)(d)(iii)(bb)

The treatment and processing of animal and vegetable raw materials (other than milk only), both in combined and separate products, with a finished product production capacity in tonnes per day greater than $300 \cdot (22.5 \times A)$, where 'A' is the proportion of animal material in percent of weight of the finished product production capacity.

The operations undertaken within the installation include the receipt and storage of ingredients, weighing, mixing/machining, baking in ovens and cooling. There is also the addition of fillings, flavours/seasoning and chocolate before the products are packed and distributed.

Emissions to air will result from combustion activities on-site, comprising the operation of baking ovens, steam boilers and heating equipment. There are no point source emissions to water, with all process effluent and site drainage being discharged to the public sewer for treatment at Liverpool Wastewater Treatment Works. There is an on-site effluent treatment plant to provide pre-treatment to some of the process effluent prior to disposal to sewer.

The site is committed to waste minimisation and has not sent anything to landfill for the past three years. The site is also committed to a reduction in energy consumption.

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

Key issues of the decision

The application contains a number of supporting documents that describe the operating techniques at the installation, referencing the best available technique (BAT) requirements in:

- How to comply with your environmental permit (Version 6, June 2013)
- How to comply with your environmental permit - Additional guidance for: The Food and Drink Sector (EPR 6.10) (March 2009)
- Integrated Pollution Prevention and Control Reference Document on Best Available Techniques in the Food, Drink and Milk Industries (August 2006)

The application provides information on how the installation meets the requirements or proposes improvements where necessary. This is explored in the following sections.

Management

The site operates an Environmental Management System (EMS) certified to ISO 14001:2004, which was audited and re-certified in October 2014. This includes sections on training, control of spillages, monitoring, management of environmental non-conformances and records maintenance. The site adheres to procedures for the monitoring and measuring of key environmental aspects associated with the facility's operations. Key Performance Indicators (KPIs) are used for waste statistics, water, gas & energy use, CO₂ emissions and production efficiency. Planned Preventative Maintenance (PPM) is carried out on-site and is controlled via a software programme that automatically raises work orders for relevant PPM tasks. There is also provision for any reactive maintenance necessary.

The applicant recognises that the requirements of the EPR permit will need to be built into their EMS, with training for all relevant staff. The permit will include an improvement condition for the operator to address any training requirements associated with compliance with the EPR Permit.

Odour

The installation has been a food manufacturing site for 100 years. Housing was developed in the vicinity in the 1980s. The frequency, intensity and duration of the odour generated by the facility are well known and recognised by the operator and the local community. The odour is classified at the top of the pleasant scale according to its hedonic score. The operator maintains a record of all complaints – none have been received regarding odour. The application contains information on the control measures that the site employs: containment and minimising storage of wastes; high standards of housekeeping; filters on local exhaust ventilation systems; activities/storage takes place inside buildings; elevated flues promote dispersion; complaints procedure and community involvement. Although there is only a low risk that odorous emissions will cause pollution beyond the site boundary, the permit will include an improvement condition for the operator to develop an Odour Management Plan, as these are usually a requirement for the Food & Drink sector.

Noise

As with odour, the local community are familiar with noise from the installation. Two noise surveys have been carried out in recent years (2006 and 2008) and the application includes a list of noise sources at the installation. The 2006 report concluded that noise levels generated by the site are unlikely to lead to complaints from neighbouring properties. The 2008 report concluded that noise levels at the site boundary were irregular and erratic and could be at levels likely to give rise to complaints. Since these surveys, the external silos closest to residential properties have been removed, as have the cooling towers to the south of the site. No noise complaints have been received in the past three years.

The application contains information on the control measures that the site employs: selection of low noise/vibration appliances; speed limits on vehicle movements; instructions to turn off engines; delivery vehicles must have low noise blowers or silencers; planned preventative maintenance; majority of the activities take place inside buildings; external processes provided with enclosures where feasible; management controls on timing of noisy operations; complaints procedure and community involvement.

There is some uncertainty regarding the impact from the remaining noise sources and the applicant has committed to updating their quantitative information on actual noise levels. As such, the permit will include an improvement condition for the operator to carry out a noise survey and submit a report of the findings. A further improvement condition will require them to build on this work and develop a noise management plan.

Monitoring

There is no stack monitoring for point source emissions to air. There are a number of combustion activities (ovens and boilers), which total 21.4MW with no individual appliances exceeding 3MW. The burners in all ovens with package burners have been upgraded to low NO_x burners. We are satisfied that the impacts from the combustion sources are not likely to cause pollution. The emissions will already be included in the estimated background air pollution maps¹, which show an annual mean NO₂ concentration of 22.5 µg/m³ at this location. This is within the statutory air quality limit of 40 µg/m³ as an annual mean. However, in order for the operator to complete the environmental risk assessment for emissions to air, the permit will include an improvement condition to undertake stack emissions monitoring. This is important, as Liverpool City is designated as an Air Quality Management Area (AQMA) for NO₂.

Each of the four discharges to sewer are fitted with a time-proportional sampling system, which collects a composite sample over 24 hours. United Utilities undertake tests at least once per month and provide the site with the sample analysis reports. The operator should consider undertaking their own monitoring of the effluent and various process effluents for variations in composition to understand the wastewater loadings, ensure effective

¹ <http://uk-air.defra.gov.uk/data/laqm-background-home>

operation of the effluent treatment plant and promote resource efficiency. This will be addressed with an improvement condition.

Energy Efficiency

The operator measures and records energy consumption on a weekly basis and it is reviewed against the budget and production plans. There is also an online energy monitoring system to allow usage to be viewed in real time. Natural gas is used as the fuel for combustion in boilers, baking ovens, heating appliances and automatic wash equipment. The combustion efficiency is monitored and PPM is carried out on all energy consuming plant. There are physical measures in place to insulate all heated pipework and tanks, return condensate for boiler feed, seals on ovens to prevent heat loss and separation of areas requiring heating/cooling. Two of the boilers in Block C are due to be replaced by lower power steam generating models. The applicant will provide a report to confirm that these have been successfully commissioned and are operating in line with BAT.

There is currently no heat recovery undertaken on site, although the operator commits to reviewing this as part of an updated energy efficiency plan. This requirement will be included as an improvement condition in the permit.

Cooling is provided by chiller units that operate via a closed loop chilled water system. Leak testing for units containing refrigerant gases is carried out three or four times per year. Ammonia is not used in the cooling systems.

Water Use

The site has implemented a range of measures for the minimisation, re-use and recycling of water. This includes: dry cleaning; trigger mechanisms and high-pressure/low-volume nozzles on hoses; monitoring to ensure blow down on boilers only when necessary; upgrade of steam traps to minimise steam losses; condensate return systems on steam boilers; production planning to minimise the need for clean downs between different product batch runs and re-circulation of water in mixer jackets, belt-wash unit and tray wash, mould wash and bin wash machines. There is no sub-metering of water consumption or discussion of the re-use of treated effluent. The need to consider these options will be included as an improvement condition in the permit.

Wastewater management

Dry cleaning is used preferentially on-site, with measures to ensure efficient cleaning and minimisation of the volume of wastewater sent to the effluent treatment plant. The site has grease traps and gratings to prevent sewer blockages. The operator has reviewed the chemical properties of their cleaning chemicals and confirmed that none contain Priority Substances and Certain Other Pollutants and they have minimised their use of EDTA. We are satisfied that the disposal to sewer following a certain amount of pre-treatment on-site is BAT for this installation. However, it is unlikely that the effluent treatment plant meets the BAT requirement for a diversion tank and the operator will be required to review this through an improvement condition.

Waste

The site is committed to waste minimisation and have not sent anything to landfill for the past three years. The site has a 'Lean Manufacturing' approach to minimise waste and continually improve production yields and efficiencies. Control of production losses are a key part of this approach. The operator re-uses materials to minimise waste. Dough cuttings are recycled back into the mix and crackers, Club biscuits and Twiglets can be ground and reworked back into the ingredient mixing stage. Any food waste from the site is sold to a contractor for incorporation into animal feed. This makes up 89% of the waste stream. Wooden pallets and empty intermediate bulk containers (IBCs) are sent for re-use and a number of other wastes are recycled. Having followed the waste hierarchy, any other wastes that can't be prevented, re-used or recycled are sent for incineration with energy recovery.

Waste is stored so as to minimise pollution, the majority being stored internally, within covered containers or in IBCs. The operator has committed to carrying out a review of liquid waste storage arrangements on site as certain wastes are currently stored outside in IBCs without secondary containment. This will be included as an improvement condition in the permit.

Storage and containment

Storage arrangements are designed to provide containment should leakage occur, with automated and manual checks to monitor storage levels. Automated controls on bulk liquid storage tanks include high level alarms, auto-transfer systems to alternative tanks and automated shut-off valves. Dry bulk storage silos are also provided with high level alarms, which automatically shut off the transfer of material from a tanker if the alarm is triggered during delivery. An online system calls for ingredients from bulk storage and is able to identify the increase in the receiving bin when calling from bulk. This allows self-monitoring of transfer efficiency and identification of potential issues in transfer systems.

The application includes an inventory of all storage vessels and the secondary containment and surfacing at each. There are some instances of the bund capacity or integrity being unproven, so the permit will contain an improvement condition requiring the operator to review all secondary containment, including the waste IBCs mentioned above.

Annex 1: decision checklist

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

Aspect considered	Justification / Detail	Criteria met
		Yes
Receipt of submission		
Confidential information	A claim for commercial or industrial confidentiality has not been made.	✓
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential. The decision was taken in accordance with our guidance on commercial confidentiality.	✓
Consultation		
Scope of consultation	The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements. For this application we consulted the following bodies: <ul style="list-style-type: none"> • Liverpool City Council (Environmental Health and Planning departments) • Health and Safety Executive • United Utilities PLC 	✓
Responses to consultation and web publicising	The web publicising and consultation 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 site		
Extent of the site of the facility	The operator has provided a plan which we consider is satisfactory, showing the extent of the installation including emission points. A plan is included in the permit and the operator is required to carry on the permitted activities within the installation boundary.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Site condition report	<p>The operator has provided a description of the condition of the site.</p> <p>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).</p>	✓
Biodiversity, Heritage, Landscape and Nature Conservation	<p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat. There are no SSSIs within 2km of the installation. The following European sites are found within 10km:</p> <p>Sefton Coast SAC – 5.9km Dee Estuary SAC – 6.1km Mersey Estuary SPA and Ramsar – 9.4km Mersey Narrows & North Wirral Foreshore SPA and Ramsar – 5.3km Ribble & Alt Estuaries SPA and Ramsar – 5.9km Liverpool Bay SPA – 6.1km</p> <p>An assessment of the application and its potential to affect the sites has been carried out as part of the permitting process. We consider that the application will not affect the features of the sites.</p> <p>For releases to air, even when aggregated, the combustion processes at the installation are less than 50MW in total, so are not considered to be relevant using our guidance on screening distances for combustion activities. For processes of 20 – 50MW, we only consider European sites with 2km. All of the sites are at least 5km from the installation so are not relevant to the assessment.</p> <p>The release to foul sewer is not considered ‘relevant’ under this assessment. These releases are considered when the discharge from the sewage treatment works itself is assessed.</p> <p>We have not formally consulted on the application with regards to habitats sites. The decision was taken in accordance with our guidance.</p>	✓

Aspect considered	Justification / Detail	Criteria met Yes
Environmental Risk Assessment and operating techniques		
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is unsatisfactory and requires additional assessment to make up the shortfall. There is no stack monitoring for point source emissions to air. The operator will address this through an improvement condition requiring them to carry out a programme of monitoring and complete the H1 risk assessment. This is also the case for Noise. We are satisfied that the impacts are not likely to cause significant pollution in the meantime. (See Key Issues for further detail.)</p> <p>Otherwise, we are satisfied that applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant.</p>	✓
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes:</p> <ul style="list-style-type: none"> • How to comply with your environmental permit (Version 6, June 2013) • How to comply with your environmental permit - Additional guidance for: The Food and Drink Sector (EPR 6.10) (March 2009) • Integrated Pollution Prevention and Control Reference Document on Best Available Techniques in the Food, Drink and Milk Industries (August 2006) <p>The application provides information on how the installation meets the requirements or proposes improvements where necessary. This is explored in the Key Issues section.</p> <p>Emissions have been screened out as insignificant, and so we consider that the proposed techniques included in the installation permit reflect the BAT for the sector. Where these depart from the guidance we have considered the operators proposed improvements and imposed conditions to ensure that the operator addresses all requirements. (See Improvement conditions.)</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
The permit conditions		
Use of conditions other than those from the template	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template, which was developed in consultation with industry having regard to the relevant legislation.	✓
Improvement conditions	<p>Based on the information on the application, we consider that we need to impose improvement conditions.</p> <p>We have imposed improvement conditions to ensure that:</p> <ul style="list-style-type: none"> ➤ appropriate environment management systems are in place and that staff are trained to ensure compliance with all the permit conditions. ➤ the appropriate containment and surfacing measures are in place to prevent fugitive emissions. ➤ the appropriate measures are in place to prevent pollution from odour. ➤ the appropriate measures are in place to prevent pollution from noise and vibration. ➤ the operator has the information necessary to complete an assessment of point source emissions to air the impacts. ➤ appropriate measures are in place to prevent accidental discharges from overloading or damaging the effluent treatment plant. ➤ appropriate measures are in place to ensure that energy is used efficiently. ➤ appropriate measures are in place to ensure the efficient use of water. ➤ appropriate measures are in place such that waste production will be avoided as far as possible, and where waste cannot be recovered it will be disposed of using a disposal method that avoids or reduces any impact on the environment. <p>See Key Issues for further discussion.</p>	✓
Incorporating the application	<p>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.</p> <p>These descriptions are specified in the Operating Techniques table in the permit.</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Emission limits	We have decided that emission limits should not be set in the permit.	✓
Monitoring	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>These monitoring requirements have been imposed in order to ensure that the operator maintains an understanding of their emissions to sewer and on annual water/energy/refrigerant usage and waste production. We made these decisions in accordance with EPR 6.10. (See Key Issues.)</p>	✓
Reporting	We have specified reporting in the permit. The frequencies are annual, except for emissions to sewer, which is every 6 months. These frequencies ensure that we can maintain an appropriate overview of the site's operations.	✓
Operator Competence		
Environment management system	There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓
Relevant convictions	<p>The National Enforcement Database has been checked to ensure that all relevant convictions have been declared.</p> <p>Relevant convictions were found and declared in the application. We considered relevant convictions as part of the determination process. These relevant convictions were spent after one year and these sites are no longer operated by United Biscuits. We concluded that the operator satisfies the criteria in RGN 5 on Operator Competence.</p>	✓
Financial provision	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓

Annex 2: Consultation and web publicising responses

Summary of responses to consultation and web publication and the way in which we have taken these into account in the determination process. (Newspaper advertising is only carried out for certain application types, in line with our guidance.)

No responses have been received from:

- Liverpool City Council (Environmental Health and Planning departments)
- Health and Safety Executive
- United Utilities PLC