

## **Environment Agency permitting decisions**

### **Bespoke permit**

We have decided to grant the permit for Cereal Partners UK, Bromborough operated by Nestle UK Ltd and General Mills Canada Holding Three Corporation.

The permit number is EPR/QP3836AM.

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**

- Description of main features of the installation
- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

### **Description of the main features of the Installation**

The installation is located in a predominately industrial area of Bromborough, Merseyside and has been used for the manufacture of cereal products since 1959, with expansion onto a neighbouring site in 2003. The installation now requires an environmental permit because of the 2013 update to the Environmental Permitting Regulations that implemented the Industrial Emissions Directive and redefined permit thresholds for the food & drink sector to those based on the maximum theoretical capacity of the installation, rather than the actual manufacturing production capacity:

Section 6.8 Part A(1)(d)(ii)

The treatment and processing of 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.

In 2014, the installation produced 52,516 tonnes of cereal.

The operations undertaken within the installation include mixing and cooking of the raw ingredients, toasting, drying, cooling and packaging. Steam for the process is generated by a Combined Heat and Power (CHP) plant, which has an ultra-low NO<sub>x</sub> burner to reduce NO<sub>x</sub> emissions. Particulate emissions to air from the processes are controlled at source and are abated with the use of jet bag filters and dust cyclones on emission points, which also reduce the potential for release of odour. The cleaning of plant and equipment employs Cleaning in Place (CIP) procedures and the drains in the process areas are fitted with catchpots. Process water and wastewater from raw material and waste storage areas are directed to an on-site effluent treatment plant (ETP), which provides some pre-treatment prior to disposal to sewer. The site has initiatives for waste reduction and resource efficiency, sending 97.8% of their waste for recycling in 2014. The environmental management system for the site is certified to the requirements of ISO14001.

The Mersey Estuary is approximately 500 metres east of the site and is designated as a Special Protection Area (SPA), Site of Special Scientific Interest (SSSI) and a Ramsar site. The nearest residential properties are approximately 20 metres southwest of the site, along Port Causeway Road.

## Key issues of the decision

### Air Quality Assessment

There are a number of emission points to air on site, with the main concerns being combustion emissions from the CHP plant and particulate matter from the manufacturing processes. The applicant used the H1 Annex F methodology to carry out an assessment of the impacts, which found that they could not be screened out as insignificant. Therefore, they have used detailed dispersion modelling to more accurately assess the impacts of the emissions.

The predicted maximum off-site impacts for NO<sub>2</sub> are:

Pollutant	AQS ( $\mu\text{g}/\text{m}^3$ )	PC ( $\mu\text{g}/\text{m}^3$ )	PC / AQS	Screened as Insignificant?	BC ( $\mu\text{g}/\text{m}^3$ )	PEC / AQS	Screened as Not Significant?
Nitrogen Dioxide (hourly average as 99.8 <sup>th</sup> percentile)	200	18.8	9%	Yes	-	-	-
Nitrogen Dioxide (annual average)	40	0.7	2%	No	20.5	53%	Yes

We have used our Screening Tool to audit the impacts for NO<sub>2</sub>. We have used the peak emissions values provided in the application and included the CHP building as the main building. The tool has used grid receptors to predict the greatest concentration:

Pollutant	Averaging Time	Percentile	X (m)	Y (m)	Distance (m)	Model PC Conc $\mu\text{g} / \text{m}^3$	Model PC / AQS	Model PEC / AQS	Environmental Risk
NO <sub>2</sub>	1 hr	99.79	335106	383936	251	7.9	0.04	0.24	LOW
NO <sub>2</sub>	1 Year	Annual Mean	335070	384008	311	1.1	0.03	0.54	MEDIUM

PC = Process Contribution  
 PEC = PC + Background

We are satisfied that the Air Quality Standards for NO<sub>2</sub> are not likely to be exceeded as a result of emissions from the installation.

It has not been possible to use the screening tool to assess the impacts from particulate matter as there are 12 emission sources and the tool can only assess up to five. However, as our NO<sub>x</sub> assessment broadly agreed with the conclusions of the applicant's air dispersion modelling, we are satisfied that the findings of that modelling for particulate matter are also valid. We recognise that a number of assumptions have been made regarding the emissions and that a precautionary approach has been used (max emission rates, all as PM<sub>10</sub>). As such, the Air Quality Standards for particulates are not likely to be exceeded as a result of emissions from the installation.

The emissions from the site have been part of the local air quality for decades, with no standards being exceeded. As such, they are effectively double counted in the modelling as both an input and a part of the existing background concentration. The applicant made a number of assumptions in their modelling and used some very conservative inputs. Although we are satisfied that this presents a worst-case scenario, the permit will include an improvement condition requiring the applicant to undertake a programme of stack emissions monitoring and to validate their risk assessment.

## **Odour**

The applicant recognises that odour can be produced throughout the cereal manufacturing process but notes that it is usually pleasant in nature. They have received two complaints in the past two years, so the application includes details of the measures on site to prevent odorous emissions (dust cyclones and extractors, deliveries of raw materials inside buildings, ETP covered with a filter on the vent). The site has a written procedure for dealing with complaints.

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**

The site undertook a noise monitoring survey in August 2011 and no noise complaints have been received in recent years. The risk assessment includes measures to manage noise on site (processing equipment located inside and maintained regularly, silencers on the boiler house, slower fans) and the site has a written procedure for dealing with complaints.

However, full detail of noise management is not provided and items of plant such as the chiller units have the potential to cause pollution beyond the site boundary. 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. Permit condition 3.4.2 will enable us to require the operator to develop a noise management plan if necessary.

## **Energy efficiency**

The site has recently installed a Combined Heat and Power (CHP) unit, which was designed in terms of thermal efficiency and produces low emissions. In addition, meter readings are taken across the site and preventative maintenance covers equipment with the potential for losses. Energy minimisation projects (e.g. compressed air efficiency, plant optimisation, behavioural changes) are monitored within the site's Energy Activity Tracker, which will be used to manage the energy efficiency obligations under the Environmental Permit.

## **Water use**

The site has four water meters, which track water usage throughout the year, with logging on a weekly basis. The operator has used this information to determine which operations are particularly water intensive and will continue to strive to reduce the water used per tonne of product produced. We will require this parameter to be reported to us annually.

Process water is reused in the cleaning processes where possible.

**Minimising the use of raw materials**

Where possible, all raw materials are used within the process to produce the end product. Food waste from the process that is not deemed fit for human consumption is transferred offsite for reuse in the animal feed industry.

**Storage and containment**

The site's risk assessment includes consideration of leaks or spills from containerised storage and secondary containment. Measures to reduce the risk include: containers of appropriate construction within secondary containment and/or on hardstanding; daily inspections; spills kits throughout the site; staff trained to manage spills; and colour-coded site drainage. The central waste storage area is paved with concrete and is provided with a sump which discharges to the on-site Effluent Treatment Plant.

## 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
<b>Receipt of submission</b>		
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.	✓
<b>Consultation</b>		
Scope of consultation	<p>The consultation requirements were identified and implemented. The decision was taken in accordance with our Public Participation Statement and our Working Together Agreements.</p> <p>For this application we consulted the following bodies:</p> <ul style="list-style-type: none"> <li>• Local authority environmental protection department</li> <li>• Local authority planning department</li> <li>• Sewerage undertaker</li> <li>• Health and Safety Executive</li> </ul>	✓
Responses to consultation and web publicising	<p>The web publicising and consultation responses (Annex 2) were taken into account in the decision.</p> <p>The decision was taken in accordance with our guidance.</p>	✓
<b>Operator</b>		
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 our guidance on what a legal operator is.	✓
<b>European Directives</b>		
Applicable directives	All applicable European directives have been considered in the determination of the application.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>The site</b>		
Extent of the site of the facility	<p>The operator has provided plans which we consider are satisfactory, showing the extent of the site of the facility including discharge points.</p> <p>A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.</p>	✓
Site condition report	<p>The operator has provided a description of the condition of the site. We requested further information on:</p> <ul style="list-style-type: none"> <li>• visual / olfactory evidence of contamination on site.</li> <li>• the condition of existing pollution prevention measures.</li> <li>• whether baseline reference data will be established for the site.</li> </ul> <p>The operator updated their SCR and we now 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.</p> <p>The Mersey Estuary is approximately 500 metres east of the site and is designated as a Special Protection Area (SPA), Site of Special Scientific Interest (SSSI) and a Ramsar site. Other sites within the appropriate screening distances include New Ferry SSSI, Dibbinsdale SSSI/Local Nature Reserve, The Dee Estuary SAC/SPA/Ramsar and a number of Local Wildlife Sites and Ancient Woodlands.</p> <p>The air dispersion modelling includes predicted impacts at the habitat receptors:</p> <ul style="list-style-type: none"> <li>• The annual average NO<sub>x</sub> process contributions are less than 1% of the critical level.</li> <li>• The daily average NO<sub>x</sub> process contributions are less than 10% of the critical level.</li> </ul>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<ul style="list-style-type: none"> <li>• Nutrient nitrogen deposition from the site is less than 1% of the critical load.</li> <li>• Acid deposition from the site is less than 1% of the critical load.</li> </ul> <p>We are satisfied that these impacts are insignificant.</p> <p>In terms of emissions to water, there are no direct discharges to surface waters – process wastewater and run-off is discharged to sewer (via an on-site effluent treatment plant) under a trade effluent consent with United Utilities. We are satisfied that this meets BAT and will minimise any impacts on the receiving watercourse (Mersey Estuary) and any protected species (migratory fish).</p> <p>Furthermore, 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>An assessment of the application and its potential to affect the sites and species has been carried out as part of the permitting process. We consider that the application will not affect the features of the sites and species.</p> <p>We have not formally consulted on the application. The decision was taken in accordance with our guidance.</p>	
<b>Environmental Risk Assessment and operating techniques</b>		
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 satisfactory.</p> <p>The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant.</p> <p><u>Point source emissions to air, Odour and Noise</u> See Key Issues for details.</p>	✓



Aspect considered	Justification / Detail	Criteria met
		Yes
	<p><u>Point source emissions to water</u></p> <p>There are no direct emissions to surface waters – process wastewater and run-off is discharged to sewer (via an on-site effluent treatment plant) under a trade effluent consent with United Utilities. We are satisfied that this meets BAT and will minimise any impacts on the receiving watercourse (Mersey Estuary).</p>	
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes.</p> <p>The application refers to Guidance for the Food and Drink Sector (EPR 6.10) and the BREF for Food, Drink and Milk Industries (August 2006) and notes BATs such as:</p> <ul style="list-style-type: none"> <li>• Dry cleaning prior to washing and hoses are trigger controlled to minimise water wastage.</li> <li>• Drainage throughout all process areas subject to washing down procedures are fitted with catchpots for removal of solid materials from the wastewater streams.</li> <li>• Water consumption is monitored by one of four meters located throughout the installation and is reviewed as a Key Performance Indicator (KPI).</li> <li>• The majority of dust emission points are controlled through the use of cyclones and the installation can meet the benchmark of 50mg/Nm<sup>3</sup> for particulates.</li> <li>• The CHP unit incorporates a Heat Recovery Steam Generator (HRSG)</li> </ul> <p>Emissions of NO<sub>2</sub> and particulate matter cannot be screened out as insignificant. The Environment Agency has therefore assessed whether the proposed techniques are BAT. We are satisfied with the dust control measures in place (cyclones, dust collection units and bag filters) and the ultra-low NO<sub>x</sub> burner on the gas turbine used in the CHP plant.</p> <p>The proposed techniques/emission levels for priorities for control are in line with the benchmark levels contained in the Guidance for the Food and Drink Sector (EPR 6.10) and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with the BREF for Food, Drink and Milk Industries (August 2006).</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>The permit conditions</b>		
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"> <li>➤ the operator carries out an appropriate baseline investigation.</li> <li>➤ the appropriate measures are in place to prevent pollution from odour.</li> <li>➤ the appropriate measures are in place to prevent pollution from noise and vibration.</li> <li>➤ the operator has the information necessary to validate their assessment of point source emissions to air.</li> <li>➤ the appropriate containment and surfacing measures are in place to prevent fugitive emissions.</li> </ul>	✓
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>	✓
Emission limits	<p>We have decided that emission limits should be not set in the permit (except for a total daily volume of discharge to sewer).</p>	✓
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 annual water/energy/refrigerant usage and waste production. We made these decisions in accordance with EPR 6.10.</p> <p>Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate.</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Reporting	<p>We have specified reporting in the permit.</p> <p>These frequencies ensure that we can maintain an appropriate overview of the site's operations.</p> <p>We made these decisions in accordance with EPR 6.10.</p>	✓
<b>Operator Competence</b>		
Environment management system	<p>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 our guidance on what a competent operator is.</p> <p>The site is certified to the requirements of ISO 14001.</p>	✓
Relevant convictions	<p>The Case Management System and National Enforcement Database have been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found.</p>	✓
Financial provision	<p>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 our guidance on what a competent operator is.</p>	✓

## 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.

Response received from
United Utilities PLC (Sewerage Undertaker)
Brief summary of issues raised
That it has no objection to the application and that the discharges to foul sewer specified in the application will be contained within the TE consents issued to the site.  That adequate sewerage and sewage treatment facilities exist, no significant pollution is caused by acceptance of the trade effluent and that treatment of the trade effluent in admixture with domestic sewage represents BAT.
Summary of actions taken or show how this has been covered
None required.

No responses have been received from:

- Wirral Borough Council (Environmental Health and Planning departments)
- Health and Safety Executive