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Natural Resources Wales permitting decisions

Kellogg Company of Great Britain Limited

Variation

The application number is: PAN-001355

The Operator is: Kellogg Company of Great Britain Limited

The Installation is located at: Kellogg's, Bryn Lane, Wrexham Industrial Estate, Wrexham, LL13 9UT

We have decided to issue the variation for Kellogg's operated by Kellogg Company of Great Britain.

The variation number is EPR/BV8016ID/V007.

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

- Table of contents
- Key issues

Table of Contents

Contents

Variation	2
The application number is: PAN-001355	2
The Operator is: Kellogg Company of Great Britain Limited	2
The Installation is located at: Kellogg's, Bryn Lane, Wrexham Industrial Estate, Wrexham, LL13 9UT.....	2
Purpose of this document	2
Structure of this document.....	2
Table of Contents	3
Contents	3
Key issues of the decision.....	4
1 Our decision	4
2 How we reached our decision	5
2.1 Receipt of Application	5
2.2 Consultation on the Application	5
2.3 Requests for Further Information	5
3 The Legal Framework.....	5
4 The Installation	6
4.1 Description of the Installation and related issues	6
4.2 The site and its protection	8
4.3 Operation of the Installation – general issues	10
5 Minimising the Installation's environmental impact.....	10
5.1 Assessment of Impact on Air Quality	10
5.2 Impact on Habitats sites, SSSIs, non-statutory conservation sites etc.....	11
5.3 Assessment of odour impact.....	12
5.4 Assessment of impact to surface and ground water	12
5.5 Emissions to sewer	13
5.6 Fugitive emissions	13
5.7 Noise Assessment	13
6 Setting ELVs and other Permit conditions	13
6.1 Translating BAT into Permit conditions	13
6.2 Monitoring	14

Key issues of the decision

1 Our decision

We consider that, in reaching that decision, we have taken into account all relevant considerations and legal requirements and that the permit will ensure that a high level of protection is provided for the environment and human health.

This Application is to operate an installation which is subject principally to the Industrial Emissions Directive (IED).

The permit contains many conditions taken from our standard Environmental Permit template including the relevant Annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the Environmental Permitting Regulations and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the permit, we have considered the Application and accepted the details are sufficient and satisfactory to make the standard conditions appropriate.

2 How we reached our decision

2.1 Receipt of Application

The Application was received on 07 March 2017 and was accepted as Duly Made on 28 March 2017. This means we considered it was in the correct form and contained sufficient information for us to begin our determination, but not that it necessarily contained all the information we would need to complete that determination.

2.2 Consultation on the Application

This is a normal variation so no external consultation on the Application is required in accordance with the EPR, our statutory Public Participation Statement (PPS).

2.3 Requests for Further Information

Further information was requested from the applicant on 05 July 2017 including the thermal capacity of the new dryers, abatement methods for the four new emission points and their current Odour Management Plan (OMP). All of the information was provided by 08 July 2017.

A Schedule 5 Notice requiring detailed modelling of the potential impacts of the new emission points was issued. The Schedule 5 Notice was sent on 26 July 2017 with a response date of 11 August 2017. The Applicants response to the Schedule 5 Notice was provided on 03 August 2017. The additional information supplied satisfied the requirements of the Schedule 5 Notice.

A copy of the information notice and e-mails requesting further information have been placed on our public register as have the responses received.

3 The Legal Framework

The variation will be issued, under Regulation 20 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal

requirements for activities falling within its scope. In particular, the regulated facility is:

- an *installation* as described by the IED;

We address the legal requirements directly where relevant in the body of this document. NRW is satisfied that this decision is consistent with its general purpose of pursuing the sustainable management of natural resources in relation to Wales, and applying the principles of sustainable management of natural resources. In particular, NRW acknowledges that it is a principle of sustainable management to take action to prevent significant damage to ecosystems. We consider that, in issuing the variation, a high level of protection will be delivered for the environment and human health through the operation of the Installation in accordance with the permit conditions.

4 The Installation

4.1 Description of the Installation and related issues

4.1.1 The permitted activities

The Installation is subject to the EPR because it carries out activities listed in Part 2 of Schedule 1 of the EPR:

- Section 6.8 A(1)(d)(ii) – Treating and processing materials intended for the production of food products from vegetable raw materials at plant with a finished product production capacity of more than 300 tonnes per day.
- Section 1.1 A(1)(a) – Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.
- Section 5.4 A(1)(a)(i) – Disposal of non-hazardous waste in a facility with a capacity of more than 50 tonnes per day by biological treatment.

An installation may also comprise “directly associated activities”, which at this Installation includes

- Yard and roof water collection and discharge to surface water

Together, these listed and directly associated activities comprise the Installation.

4.1.2 The Site

The site is located in Wrexham Industrial Site approximately 3.5km east of Wrexham. The operator has held an Environmental Permit for the facility since 2005.

4.1.3 What the Installation does

The plant operates 24 hours a day, 7 days a week producing ready to eat cereal and products derived from these, on four processing lines. A further process produces a range of snack bars. The annual production of the site is in the region of 220 million packets of breakfast cereals. Associated activities of the manufacturing process also include sampling of raw materials and storage of finished goods.

The raw materials used in the processes are principally a wide range of grains which are then cooked, dried, formed and toasted prior to packing. Other ingredients such as sugars, fruit and honey may also be added depending on the production type. The majority of raw materials are delivered to site and stored in silos. Ingredients are weighted into cookers, where the grains are cooked with malt flavouring under pressure. Once cooked, the product is transferred to a dryer to reduce the moisture content of the cooked material to a level where it can be formed into a flake, cake bar or shred depending on the product type. After forming, the product is then toasted to create a crisp flake. Further through the process, other ingredients such as fruits, coating and vitamins are added as necessary.

4.1.4 Key Issues in the Determination

The operator is proposing to install a new extrusion production line. It will be similar to the existing production lines and will consist of raw material weighing, two new extruders, a dryer and coating plant and packing of the final product. This will result in four new emission points to air.

Through asset rationalisation the site has removed three packing lines over the past couple of years and it is proposed that a new one will be installed in the place of one

of the removed lines. A new palletiser will also be installed which will take products from both the new and an existing production line.

All of the bulk raw materials for the new production line will be supplied into existing silos. The existing glucose and malt tank will be utilised. In addition there are plans to install two new chocolate bulk storage tanks at the front of the building. The remainder of the raw materials required will be delivered to site in the non-bulk format i.e. taybags and IBC's for some liquids.

The existing site building is to be extended to accommodate the proposed chocolate storage tanks. There will be no change in the site boundary.

The new production line will operate 352 days a year, however it is capable of operating 365 days a year, having a maximum through put of 75 tonnes per day. This equates to 17 million kilos per annum.

4.2 The site and its protection

4.2.1 Proposed site design: potentially polluting substances and prevention measures

The new chocolate storage tanks, each with a capacity of 30,000 litres will be constructed in a bunded area designed to ensure that it holds a minimum of 110% of one of the tanks. The containment system will be designed in line with the CIRIA C736 guidance.

As part of their routine patrols, security staff who are on site 24/7 will check the chocolate storage tank area to ensure no leaks are detected. An annunciator alarm will be installed that will indicate if the levels of chocolate fall dramatically. The operator is also looking to install CCTV within the area which would be linked to the security lodge.

As part of their accredited ISO 14001:2004 environmental management system the operator has a documented procedure which includes monthly tank integrity checks of all external tanks on site. The new tanks will be incorporated into these monthly

checks. Furthermore, a procedure will be developed and relevant personnel trained to ensure that the drain in the bund is always locked. If a leak of chocolate occurred within the bund then no raw materials could drain directly to the effluent treatment plant. Only trained personnel would be able to unlock the drains if required. In the unlikely event of a spill the area would be cleaned out appropriately, minimising the release of chocolate to the effluent treatment plant.

Four new emission points to air are to be added, three on the main process roof and one on the tank floor roof, which will be as a result of an upgrade to a current ventilation system.

The emissions points are:

EP120 – Dry dust collector serving extruders, coating system and general conveyors

EP121 – Wet dust collector serving coater dryer

EP122 – Wet dust collector serving extruder and base dryer

EP73 – LEV dust extraction serving packaging area

Each emission point has an abatement system:

EP120 - Cartridge filtration

EP121 – Rotoclone wet abatement system

EP122 – Rotoclone wet abatement system

EP73 – Fabric filtration

How to comply with your environmental permit additional guidance for the Food and Drink Sector (EPR 6.10) details abatement options for specified pollutants. The applicant was asked to justify why their chosen abatement on emission points EP121 and EP122 were not those listed in the guidance. They provided a response via email on 08 July 2017 and we are satisfied with their use of Rotoclone systems, which is already used for a number of the existing emission points on site.

4.3 Operation of the Installation – general issues

4.3.6 Operating techniques

The applicant has an existing Environment Management System (EMS) which is certified to ISO14001. It is subject to regular review and is to be updated to reflect the production line. The Non-Technical summary provided with the application has been incorporated into the operating techniques table within the permit.

4.3.7 Energy efficiency

We are satisfied that the Applicant will ensure that energy is used in the most efficient way possible.

The new dryers will have the following thermal capacities, base dryer 300kw and coating dryer 265kw and will be fuelled by natural gas. The gas supply to the dryers will have a dedicated meter and be actively managed to improve energy efficiency.

The proposed production line will not impose any additional thermal load to the existing boiler plant, which has spare capacity.

5 Minimising the Installation's environmental impact

Regulated activities can present different types of risk to the environment, these include odour, noise and vibration; accidents, fugitive emissions to air and water; as well as point source releases to air, discharges to ground or groundwater and generation of waste. All these factors are discussed in this and other sections of this document.

5.1 Assessment of Impact on Air Quality

The Applicant has assessed the potential effect of emissions from the four new emission points to air against the relevant air quality standards. The air impact assessment has been based on the assumption of the new production line being in continuous operation. Emission rates for Particulate (PM₁₀), Carbon Monoxide (CO) and Nitrogen Oxides (NO_x) are based on anticipated loading and the typical performance standards of the abatement technology provided by the suppliers.

5.2 Impact on Habitats sites, SSSIs, non-statutory conservation sites etc.

Screening of the local area shows the following designated sites within the relevant distances.

European Protected Sites (within 10km)

Ramsar - Midland Meres & Mosses Phase 2 - 4km away

SAC - River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid - 3.6km away

SAC - Johnstown Newt Sites - 8.2km away

There are no designated SSSIs within a 2km radius of the site.

Wildlife sites (within 2km)

Wrexham Industrial Estate – three separate areas the nearest being 0.6km away, others 0.8km and 1km away

Cefn park 1.7km away

Ancient woodland

Six areas have been identified within a 2km radius, the nearest being 1km away.

A full assessment of the application and its potential to affect the sites listed above has been carried out as part of our determination process.

The Air Emission Risk Assessment provided with the application showed that potential impacts of NO_x emissions from EP121 and EP122 were greater than 10% of the 24-hour NO_x Critical Level for ecological receptors. Current guidance for Air emissions risk assessment for your environmental permit states that you do not need to calculate the PEC for short term targets for ecological receptors. If the short-term PC exceeds the screening criteria, detailed modelling is required. Potential long term impacts screened out. A Schedule 5 Notice was sent to the applicant on 26 July 2017 requesting detailed modelling to be carried out on the potential short term impacts of NO_x.

Detailed modelling was provided for potential short and long term impacts of NO_x from the two emission points. The short term PC is less than 10% of the 24 hour C_{LE} and long term PC less than 1% of the C_{LE}. The impacts are therefore considered insignificant.

The PC is less than 1% of the lower Critical Load (C_{Lo}) for Nutrient Nitrogen and Acid deposition. The impacts are therefore considered insignificant.

We do not consider that the proposed changes at the facility will adversely affect the features of the designated sites. An OGN Form 1, habitats assessment, has been completed and forwarded onto our internal Natural Resource Management team for consultation. No response was received. The form was also sent to Natural England as the River Dee and Lake Bala SAC also lies in England, within the 10km screening distance. A response was received on 02 October 2017, and they agree with our conclusion that there is unlikely to be any significant effect on the site as a result of the proposed changes at Kelloggs. The form is available from our public register.

5.3 Assessment of odour impact

The new production line and products to be produced are the same as at other Kelloggs sites and odour is not considered to be an issue. An Odour Management Plan is already in place and is subject to regular review.

5.4 Assessment of impact to surface and ground water

There are two existing emission points for surface water drainage in the permit. Surface water drainage is collected in two balancing ponds, before being discharged via interceptors to the Is Y Coed Brook, a tributary of the River Dee. The operator is required to take weekly monitoring of Biochemical Oxygen Demand (BOD) and suspended solids.

Surface water drainage from the extension of the building will connect to the existing surface water line on site.

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent pollution of ground and surface water.

5.5 Emissions to sewer

Process water from site currently goes to an on-site Effluent Treatment Plant (ETP), which then discharges to a Welsh Water Sewage Treatment Plant. The applicant has carried out an impact assessment of the new plant on the ETP and wash-down from cleaning. It concluded that there shouldn't be any treatment issues but that sampling should be carried out on commissioning of the new plant.

The drain within the bunded chocolate storage tank area will drain to the ETP but as detailed in section 4.2.1 the drain will be kept locked and only opened by trained staff when necessary.

5.6 Fugitive emissions

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent or where that is not practicable to minimise fugitive emissions and to prevent pollution from fugitive emissions.

5.7 Noise Assessment

The site has an existing Noise Management Plan (NMP) which is subject to regular review. Silencers will be fitted on all external outlets/exhaust points. Any new external fan units will be fitted with invertors/variable speed drives.

6 Setting ELVs and other Permit conditions

6.1 Translating BAT into Permit conditions

Article 14(3) of IED states that BAT conclusions shall be the reference for permit conditions. Article 15(3) further requires that under normal operating conditions; emissions do not exceed the emission levels associated with the best available techniques as laid down in the decisions on BAT conclusions.

The current permit has no emission limits to air. We have included a limit for particulate emissions from the four new emission points in line with EPR 6.10 for the Food and Drink sector.

6.1.1 National and European EQSs

As detailed in section 5.1, the environmental impact of the installation has been assessed against relevant EQSs, at the level of performance required by IED. The installation will not result in the breach of any EQSs. We accept that the applicant's proposals are indicative BAT.

6.2 Monitoring

We have included monitoring for particulate emissions to air. The methods are in accordance with the Environment Agency's Guidance M2 for monitoring of stack emissions to air.