

Permitting Decisions- Variation

We have decided to grant the variation for Thornton Park operated by Thorntons Limited.

The variation number is EPR/WP3639QM/V003.

The permit was issued on 24/10/2025.

The variation is for:

- Addition of one new production line and the updating of one other to increase annual production capacity by 113 tonnes per day
- Addition of two 1.01MWth natural gas fired boilers
- Clarification of existing combustion plants and emission points
- Implementation of Medium Combustion Plant Directive (MCPD) for 2030 and relevant conditions and monitoring requirements

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 provides a record of the decision-making process. It summarises the decision-making process to show how the main relevant factors have been taken into account. We have assessed the aspects that are changing as part of this variation, we have not revisited any other sections of the permit.

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

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

Key issues of the decision

Environmental Risk Assessment (ERA):

An ERA has been submitted and assessed with consideration for emissions to air, water, sewer, groundwater and land as applicable and adequately covers all potential emissions and receptors as listed below:

Air Quality Impact Assessment:

The operator submitted an Air Quality Risk Assessment (AQRA) which we have assessed, for both particulates and NOX from the new production lines and boilers. This was undertaken in accordance with our guidance

<https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit>.

The applicant provided an assessment of the impact of emissions to air with the application which is detailed in document: *"Air Emissions Risk Assessment, 30 January 2025"*. The Operator has assessed the installation's nitrogen oxides and particulate matter emissions to air using the Atmospheric Dispersion Modelling System Breeze AERMOD 8 dispersion model (version 18081), which is a commonly used computer model for regulatory dispersion modelling. A single modelled scenario has been accounted for within the assessment. Assuming maximum throughout with plant operating continuously for an entire year.

We have reviewed the applicant's air dispersion model and its selection of input data, use of background data and the assumptions made to inform the assessment. We have also carried out a screening exercise using an air dispersion screening tool developed by the Environment Agency and based on the US EPA AERMOD air dispersion model to confirm the quality of the applicant's model predictions.

The boilers rarely operate at full load over the year therefore, the model emissions have been adapted to allow for comparison with both the long and short term air quality limits:

- Short term: assumes that the boiler is operating at maximum capacity for all hours of the year. This approach is required in order to guarantee that the 'worst' hours of met data are accounted for during the periods of full boiler operation; and
- Long term: assumes that the boiler will operate for a maximum of 3000 hours per year in order to factor the annual mass emission rate in accordance with Environment Agency guidance.

This approach is considered to be precautionary and the 'worst-case scenario'.

When assessing the AQA it was deemed that the emissions screen out as insignificant and is therefore deemed a low-risk application.

Emission points C1.1 through to C7 were deemed not to require further modelling upon assessment. The applicant provided technical details in document: "Best Available Techniques and Operating Techniques, 27 January 2025" which states particulates removed from Ferrero manufacturing facilities are passed firstly through a cyclone followed by a filter, achieving circa 99% filtration. A monitoring system will also be placed on both cyclone and filter and will automatically stop the process if either system is not performing. Upon consultation with AQMAU, these emission points were deemed insignificant to the overall emission level impact of the site and were therefore disregarded via a risk-based decision.

Conclusion:

- The process contributions do not lead to any exceedances of the standards (long-term or short-term) for the protection of human health at any relevant exposure location outside of the Site; and
- The process contribution from the proposed plant is considered to cause 'no likely damage' to the assessed ecological sites.

Habitats Assessment:

We have reviewed the assessment and are satisfied that it has taken into account all relevant ecological and human health receptors.

There are no statutory European designated sites (SAC, SPA, Ramsar) or SSSI's located within the relevant screening distances. The operator has assessed the impact of the plant operations on a number of other sites i.e. non-statutory Local Nature Reserves and Ancient Woodland within the screening distance.

Conclusion:

We agree with the Operator's conclusions that the results of the dispersion modelling indicate the impacts of the pollutant concentrations are not predicted to be significant at any of the sensitive human or ecological receptor locations.

The impacts were assessed on a conservative approach including the assumption that the boiler will be operating at full capacity and emit the maximum concentration of each pollutant throughout an entire year. As such the predicted pollutant concentrations are likely to be an overestimate of actual emissions.

Sewer Discharge:

Despite an increase in discharge to sewer, no new hazardous chemicals are to be included in the discharge, therefore no further assessment was necessary.

The site currently carries out pH balancing on site prior to discharge, and this will continue.

Best Available Techniques (BAT):

The operator provided an assessment of BAT at the site; the table below gives an overview of the techniques used:

BAT ref.	Indicative BAT	Key measures proposed
1	Environmental management system (EMS)	The operator has provided information to support compliance with BATc 1. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 1. The operators' EMS is a combined EEnMS incorporating an ISO14001 certified environmental management system (EMS) and an ISO50001 certified energy management system (EnMS). The new manufacturing activities will be incorporated into these management systems, as required.
2	EMS – inventory of inputs & outputs to increase resource efficiency and reduce emissions.	The operator has provided information to support compliance with BATc 2. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 2. Resource input and outputs are regularly reviewed, along with an inventory of energy consumption using a Carbon Desktop system and supplier invoices. Once again, the new manufacturing activities will be incorporated into this management system, as required,
3	Emissions to water – monitor key process parameters	The operator has provided information to support compliance with BATc 3. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 3. The operator provided evidence and that the effluent is monitored for flow and pH at the point it leaves the installation and that the proposed manufacturing activities will not significantly change the composition of wastewater treated on site.
4	Monitor emissions to water	The operator has provided information to support compliance with BATc 4. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 4. The operator currently monitors the effluent to the frequency given under BATc 4 and in line with the current effluent discharge consent.
5	Monitor channelled emissions to air	BATc 5 sets out air emissions monitoring requirements applicable to specific FDM sub-sectors. None of these monitoring requirements are applicable to this site as the activities undertaken are not specified in the sector and specific processes set out in BATc 5. We are therefore satisfied that BATc 5 is not applicable to this site.

6	Energy efficiency	The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 6. The Installation has implemented an environmental and energy management system as detailed in BATc 1, which includes: Energy audits include the optimisation of energy recovery. Energy Efficient KPIs in place. Energy Efficient Design considered in all new manufacturing. Planned Preventative Maintenance Programme in place. Optimise energy usage using Carbon Desktop system. Optimisation of 2 new boilers used to run confectionary lines. Efficient heat exchangers used on site and monitored regularly. Cogeneration of energy already using the CHP on site. Energy efficient motors and equipment used according to its voltage. Optimised pumping systems, air compressors and electric motors.
7	Water and wastewater minimisation	The operator has provided information to support compliance with BATc 7. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 7. The operator is using the following techniques: • The use of optimised water hoses with trigger nozzles to enable the adjustment of water pressure, control the flow and to prevent hosepipes from being left running when not in use; • Cleaning of equipment in the current mould wash where water is recirculated; • Dry cleaning of process lines where appropriate.
8	Use of harmful substances	The operator has provided information to support compliance with BATc 8. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 8. The chemicals currently in use at the site are subject to a Control of Substances Hazardous to Health assessment (COSHH) and will be used for the cleaning of the proposed manufacturing and process areas. The proposed changes will not result in the introduction of new cleaning chemicals. CIP systems will be installed on the new process, where feasible.
9	Use of refrigerants	BATc 9 sets out the use of refrigerants, detailing their ozone depletion and low global warming potential. None of these requirements are applicable to this site as the activities undertaken do not include the addition of refrigerants. We are therefore satisfied that BATc 9 is not applicable to this site.
10	Resource efficiency	The operator has provided information to support compliance with BATc 10. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 10. The operator is using the following technique:

		Waste segregation and the facility. Waste generated at site sent for recycling, anaerobic digestion, or used for energy related purposes, e.g. incineration with energy recovery. All by-product is sent for re-processing into animal feed. Wastes generated as a result of the proposed changes will be managed in line with the site Waste Management procedures and relevant legislation
11	Emissions to water – wastewater buffer storage	The operator has provided information to support compliance with BATc 11. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 11. Process effluent is subject to simple screening to trap fats and greases, settlement in a final settlement chamber and pH adjustment, if required, prior to consented discharge. An inspection chamber (Flume Chamber) is provided for the sampling of treated effluent prior to the point of discharge into the municipal sewer. The settlement chamber and Flume Chamber will provide buffer storage capacity to enable the adjustment of the effluent quality if required prior to consented discharge to sewer. The proposed changes are estimated to result in an additional 6,740m³ annually (circa 28.9m³/day) of wastewater being discharged to the wastewater treatment system. The treatment system is of a suitable capacity to treat this additional volume. Additionally buffer capacity of the wastewater treatment system is not considered necessary as a result of the proposed changes.
12	Emissions to water - treatment	The operator has provided information to support compliance with BATc 12. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 12. The operator provided evidence and that the effluent is monitored for flow and pH at the point it leaves the installation and that the proposed manufacturing activities will not significantly change the composition of wastewater treated on site.
12 - AELs	Emissions to water – Associated emission limits (AELs)	BATc 12-AELs sets out the BAT AELs for the discharge of direct emissions to a receiving water body. None of these requirements are applicable to this site as only clean uncontaminated surface water runoff is discharged to surface water. The proposed manufacturing activities do not make any changes to the discharge of surface water from the Installation. We are therefore satisfied that BATc 12-AELs is not applicable to this site.
13	Noise – management plan (NMP)	We are satisfied that BATc 13 is not applicable to this Installation. A noise management plan is only required where noise nuisance at sensitive receptors is expected or has been substantiated. There has been one substantiated noise nuisance from the site in 2009, traced to air conditioning plant

		on roof. To fix this acoustic barriers were installed. Therefore, an NMP is not a requirement for this site.
14	Noise minimisation	The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 14. The proposed new production activities will be undertaken within the existing production buildings. All proposed production equipment will be designed in accordance with European noise standards; the equipment will subject to regular preventative maintenance in accordance with the manufacturer's requirements.
15	Odour – management plan (OMP)	The operator has provided information to support compliance with BATc 15. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 15. A qualitative Odour Assessment has been undertaken (410.066170.00001 AERA, December 2024), as presented with this application. This concluded that the likely significance of effects because of odours from site can be considered 'not significant'.

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has not been made.

The decision was taken in accordance with our guidance on confidentiality.

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 confidentiality.

Consultation

The consultation requirements were identified in accordance with the Environmental Permitting (England and Wales) Regulations (2016) and our public participation statement.

The application was publicised on the GOV.UK website.

We consulted the following organisations:

- Citizen Space
- Local Authority – Environmental Health/Environmental Protection department

- Health and Safety Executive
- UK Health Security Agency
- Local sewerage undertaker and/or local water undertaker

No responses were received.

The regulated facility

We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN2 'Defining the scope of the installation'.

The operator has provided the grid reference for the emission points from the medium combustion plants/specified generator.

The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.

The site

The operator has provided a plan which we consider to be satisfactory.

These show the extent of the site of the facility including the discharge points.

The plan is included in the permit.

Nature conservation, landscape, heritage and protected species and habitat designations

We have checked the location of the application to assess if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. The application is within our screening distances for these designations.

We have assessed the application and its potential to affect sites of nature conservation, landscape, heritage and protected species and habitat designations identified in the nature conservation screening report as part of the permitting process.

We consider that the application will not affect any site of nature conservation, landscape and heritage, and/or protected species or habitats identified.

We have not consulted Natural England.

The decision was taken in accordance with our guidance.

Environmental risk

We have reviewed the operator's assessment of the environmental risk from the facility.

The operator's risk assessment is satisfactory.

The assessment shows that, applying the conservative criteria in our guidance on environmental risk assessment or similar methodology supplied by the operator and reviewed by ourselves, all emissions may be screened out as environmentally insignificant.

Operating techniques

We have reviewed the techniques proposed by the operator and compared these with the relevant technical guidance and we consider them to represent appropriate techniques for the facility.

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

General operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

Operating techniques for emissions that screen out as insignificant

Emissions of oxides of nitrogen, carbon monoxide, nitrogen deposition and acid deposition have been screened out as insignificant, and so we agree that the applicant's proposed techniques are Best Available Techniques (BAT) for the installation.

We consider that the emission limits included in the installation permit reflect the BAT for the sector.

National Air Pollution Control Programme

We have considered the National Air Pollution Control Programme as required by the National Emissions Ceilings Regulations 2018. By setting emission limit values in line with technical guidance we are minimising emissions to air. This will

aid the delivery of national air quality targets. We do not consider that we need to include any additional conditions in this permit.

Improvement programme

The following improvement condition has been completed by the operator and as such removed from the permit

Reference	Requirement
IC1	The operator shall undertake a review of pollution prevention measures associated with operation of the external yard areas used for the storage of raw food ingredients and chemicals and submit a report to the Environment Agency for approval, detailing the findings of the review. The review shall give consideration to: • the requirements set-out in Environment Agency guidance on pollution prevention for businesses and controlling and monitoring emissions; • the methodology detailed in CIRIA C736 - Containment Systems for the Prevention of Pollution - Secondary, tertiary and other measures for industrial and commercial premises; • ensuring that only uncontaminated surface water run-off is discharged via surface water drains 2 and 3. The report shall also include proposals for undertaking any remedial action and/or improvements identified by the review to ensure that appropriate pollution prevention measures are implemented within an agreed timeframe.

Updating permit conditions during consolidation

We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide the same level of protection as those in the previous permits.

Emission limits

Emission Limit Values (ELVs) have been added for the following substances:

Oxides of nitrogen NO_x (NO and NO₂ expressed as NO₂) from the two new boilers and three existing boilers on site.

A 250 mg/m³ NO_x ELV has been set in line with Annex II, Part 2, of the Medium Combustion Plant Directive for Boilers A1, A2 and A3, to apply from 01/01/2030.

A 100 mg/m³ NO_x ELV has been set in line with Annex II, Part 2, of the Medium Combustion Plant Directive for Boilers D1 and D2.

We have made these decisions in accordance with MCP technical guidance. This limit is set based on the emission limit the operator confirmed the combustion plant is able to meet in line with the requirements set out in the Medium Combustion Plant Directive.

Monitoring

We have decided that monitoring should be added for the following parameters, using the methods detailed and to the frequencies specified:

Oxides of nitrogen

Carbon monoxide

These monitoring requirements have been included in order for the operator to demonstrate compliance with the emission limits specified in the permit. The operator will carry out monitoring in accordance with the relevant methods specified in our guidance TGN M5.

We made these decisions in accordance with our MCP technical guidance.

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.

Reporting

We have added reporting in the permit for the following parameters:

Oxides of nitrogen

Carbon monoxide

We made these decisions in accordance with our MCP technical guidance.

Management system

We are not aware of any 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.

Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit variation.

Paragraph 1.3 of the guidance says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.