Cyfoeth Naturiol Cymru
Natural Resources Wales

**Natural Resources Wales permitting decisions**

# The First Milk Cheese Company Limited (Haverfordwest Creamery) Decision Document

# Contents

## Variation and Consolidation of a bespoke permit

## The variation number is: EPR/XP3830UR/V005

## The operator is: The First Milk Cheese Company Limited

## The Installation is located at: Haverfordwest Creamery, Pembroke Road, Merlins Bridge, Haverfordwest, Pembrokeshire, SA61 1JN

We have decided to issue the variation for Haverfordwest Creamery operated by The First Milk Cheese Company Limited.

This variation adds one 2.7 MW thermal input natural gas fuelled Combined Heat and Power (CHP) engine within the existing installation boundary. The CHP engine is classed as a new complex bespoke Medium Combustion Plant (MCP) and an excluded Specified Generator (SG). This CHP engine had previously been permitted under a standard rules permit (SR2018 No7) which was granted as part of EPR/XP3830UR/V004 variation. Following revision of the SR2018 No7 standard rules permit on 01 April 2020 the CHP engine can no longer meet the conditions set out in the SR2018 No7 standard rules permit and therefore must be permitted as a bespoke MCP and conditions are added to the installation permit as part of this variation.

This variation and consolidation does the following things:

- Updates the permit into modern format with modern conditions;
- Corrects minor errors in the permit;
- Updates the status of improvement conditions and pre-operational conditions;
- Updates the introductory note of the permit;
- Updates the operating techniques;
- Updates the reporting requirements;
- Addition of conditions relevant to the MCP*;*
- Removes two monitoring parameters (sulphur dioxide and particulate matter) from existing boilers; and
- Consolidates the original permit to reflect changes made through earlier variations.

We consider that, in reaching this 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.

## 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.

# Key issues of the decision

## Receipt of application

### Confidential information

No claim for commercial or industrial confidentiality has been made.

### Consultation

The consultation requirements were identified and implemented. There was no requirement to carry out a consultation as part of this normal variation. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.

### Operator

We are satisfied that the operator is the person who will have control over the operation of the facility after the issue of the variation. There is no change to the operator of the installation as part of this variation. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator.

### The facility

The regulated facility is an installation which comprises the following activities listed in Part 2 of Schedule 1 to the Environmental Permitting Regulations and the following directly associated activities.

- Section 6.8 Part A(1)(e) - Treating and processing milk, the quantity of milk received being more than 200 tonnes per day (average value on an annual basis)
- Section 5.4 Part (A)(1)(i) – Disposal of non-hazardous waste in a facility with a capacity of more than 50 tonnes per day by biological treatment

The installation is also subject to Schedule 25A of EPR – Medium Combustion Plant:

- 1 x 2.7 MW thermal input natural gas fuelled Combined Heat and Power (CHP) engine

The installation is not subject to Schedule 25B of EPR – Specified Generator, as the CHP engine is classed as an excluded generator as it is part of an installation as defined in Chapter II of the Industrial Emissions Directive.

An installation may also comprise ‘directly associated activities’, which at this installation includes:

- Steam and electrical power supply – three natural gas boilers with aggregated thermal input of 24 MW
- Storage and handling of wastes
- Refrigeration
- Odour control unit

This variation will add the Medium Combustion Plant to the listed activities, there are no changes to any of the Schedule 1, Part 2 activities or the directly associated activities as part of this variation.

## Legislation

NRW is satisfied that this decision is compatible 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.

All applicable European directives have been considered in the determination of the application.

## The site

The operator has provided an updated plan which we consider is satisfactory, showing the extent of the site of the facility and the additional air emission point A4, for the CHP engine. The plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary. The site boundary has not changed as part of this variation.

### Site condition report

There was no requirement for a site condition report as part of this variation application as there was is no land being added to the installation.

### Biodiversity, Heritage, Landscape and Nature Conservation

The installation is within the relevant screening distance criteria for protected conservation sites. A full assessment of the application and its potential to affect any

of the sites has been carried out as part of the permit determination process. Natura 2000/Ramsar sites and SSSIs will be discussed in detail separately below.

### Natura 2000/Ramsar sites

The following Natura 2000/Ramsar sites are located within 10 km of the installation:

- SAC Pembrokeshire Marine / Sir Benfro Forol UK0013116
- SAC West Wales Marine / Gorllewin Cymru Forol UK0030397
- SAC Afonydd Cleddau / Cleddau Rivers UK0030074
- SAC Pembrokeshire Bat Sites and Bosherston Lakes / Safleodd Ystlum Sir Benfro a Llynnoed Bosherston UK0014793

An OGN 200 Form 1 (Habitats Regulation Assessment) was completed to assess the potential to affect the Natura 2000/Ramsar sites, this is available on the public register. The assessment concluded the installation is not likely to have a significant effect on any of the Natura 2000/Ramsar sites. The assessment was reviewed by an NRW conservation technical specialist who confirmed agreement with the conclusion.

### SSSI Assessment

The following Sites of Special Scientific Interest (SSSI) are located within 2 km of the installation:

- SSSI Milford Haven Waterway 32WP3
- SSSI Gasworks Lane Section (Haverfordwest) 32WSW
- SSSI Afon Cleddau Gorllewinol / Western Cleddau River 32WML

An Appendix 4 Form (CRoW Act Assessment) was completed to assess the potential to effect the SSSI sites, this is available on the public register. The assessment concluded the installation is not likely to damage any of the features of any of the SSSI sites. The assessment was reviewed by an NRW conservation technical specialist who confirmed agreement with the conclusion.

## Environmental Risk Assessment

### Air

This section of the decision document deals primarily with the dispersion modelling of emissions to air from the stack and its impact on local air quality.

The Applicant has assessed the Installation's potential emissions to air against the relevant air quality standards, and the potential impact upon human health. These assessments predict the potential effects on local air quality from the Installation's stack emissions. The air impact assessments, and the dispersion modelling has been based on the Installation operating continuously at the relevant long-term or short-term emission limit values, i.e. the maximum permitted emission rate. We are in agreement with this approach.

There are a total of four emission points to air within the installation, three points are from existing natural gas boilers, one point is from the new CHP engine. The applicant has assessed the potential emissions to air from the installation including the new CHP engine through the use of the H1 tool. Air dispersion modelling was completed for any parameters that did not screen out as insignificant in line with current NRW guidance.

The applicant completed an air emission risk assessment using the H1 tool which included the parameters: carbon monoxide (CO) and oxides of nitrogen (NO and $NO_2$ expressed as $NO_2$) ($NO_x$). Carbon monoxide screened out as insignificant using the H1 tool. The H1 tool was submitted by the applicant and reviewed by NRW, we are in agreement with the conclusion that carbon monoxide screens out as insignificant and no further assessment is required. Detailed air dispersion modelling was completed for oxides of nitrogen (NOx) as this parameter did not screen out as insignificant through the use of the H1 tool.

The assumptions underpinning the model have been checked and are reasonably precautionary. The way in which the Applicant used dispersion models, its selection of input data, use of background data and the assumptions it made have been reviewed to establish the robustness of the Applicant's air impact assessment. The output from the model has then been used to inform further assessment of health impacts.

There are several residential receptors located close to the installation boundary the closest are situated <10 m west and <20 m south of the installation boundary. There is an Air Quality Management Area (AQMA) located approximately 0.7 km from the installation site in Albert Street in Haverfordwest, this is designated for NOx and has

been included in the assessment. The prevailing wind direction is generally from a westerly direction, therefore blowing away from the closest residential receptors.

The applicant has calculated process contributions (PC) and predicted environmental concentrations (PEC) at locations within the installation boundary and all identified sensitive receptor locations. The modelling results for NOx will be discussed separately below.

### Oxides of nitrogen (NOx)

A long term critical level of 40 µg/m$^3$ (annual) and short term critical level of 200 µg/m$^3$ (hourly) was assumed for NOx. At sensitive receptor locations the maximum predicted long-term PC was >1 % and long-term PEC <70 % of the long-term critical level. Therefore in accordance with NRW guidance the long-term impacts from NOx can be considered as insignificant. At sensitive receptor locations the maximum predicted short-term PC was >10 % and <20 % of the short-term critical level minus twice the long-term background. Therefore in accordance with NRW guidance the short-term impacts from NOx can be considered insignificant. At the AQMA, the long-term PC was <1 % of the long-term critical level and the short-term PC was <10 % of the short-term critical level, therefore impacts of NOx on the AQMA are considered insignificant.

### Emission limits

We have decided that emission limits should be set for the parameters listed in the permit. Emission limit values for the new CHP unit are in line with those contained with the Medium Combustion Plant Directive (MCPD). In line with current internal interim NRW guidance, for individual combustion units at installations subject to the Industrial Emissions Directive (IED) with a thermal input of <15 MW the emission limits values contained within the MCPD are considered indicative Best Available Techniques (BAT).

## Water

There are no changes to emissions to water as part of this variation. Only correction of minor formatting errors in Table S3.2 has been completed.

## Odour

Odour is not expected to be an emission of significant concern for the CHP engine as it is not combusting a malodorous substance, in addition there are no provisions within MCPD to control odour emissions. Permit conditions 3.3.1 and 3.3.2 requires that emissions from the activities are free from odour at levels likely to cause pollution outside the site. We are satisfied this condition will be sufficiently protective for the proposed variation to the installation.

### Noise

A noise risk assessment was completed following the H1 risk assessment methodology by the applicant and assessed by NRW. The risk assessment concluded that it will be unlikely that any additional noise from the CHP unit will be noticeable at locations outside of the installation boundary. Permit conditions 3.4.1 and 3.4.2 requires that emissions from the activities are free from noise and vibration at levels likely to cause pollution outside the site. We are satisfied this condition will be sufficiently protective for the proposed variation to the installation.

### Fugitive emissions

A fugitive emissions risk assessment has been completed following the H1 risk assessment methodology by the operator and assessed by us. The operator has described that the exhaust emissions are captured, controlled and emitted via the dedicated stack therefore fugitive emissions are not considered significant. 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.

### Monitoring

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.

These monitoring requirements have been imposed in order to demonstrate compliance with the emissions limit values (ELV) in the permit, as per the ELV and monitoring frequency requirements specified within the MCPD. The monitoring frequency required by the installation BAT (annually) is more stringent than required

by MCPD (every 3 years), therefore the more stringent requirement will apply in line with current NRW guidance.

For this new Medium Combustion Plant, that is an engine fuelled on natural gas, the monitoring requirements are as follows:

| Pollutant | Type of Medium Combustion Plant | Fuel Type | Emission Limit Value ($mg/Nm^3$) | Monitoring Required |
|---|---|---|---|---|
| NOx | Engine | Natural Gas | 95 | Periodic – annually (MCERTS) |
| CO | Engine | Natural gas | No limit set | Periodic – annually (MCERTS) |

Emission limit values are defined at a temperature of 273.15 K, a pressure of 101.3 kPa and after correction for the water vapour content of the waste gases and at a standardised $O_2$ content of 15 % for engines and gas turbines.

We have removed the annual monitoring requirement of sulphur dioxide and particulate matter from the existing natural gas boilers, these two parameters were a requirement as the boilers formally ran on fuel oil, however they were converted to natural gas in 2015 and now use natural gas as the sole fuel. Therefore in accordance with monitoring requirements for existing MCPs set out in MCPD we have removed monitoring requirements for sulphur dioxide and particulate matter. The cessation of the monitoring of these two parameters was decided in 2016 between the operator and the regulatory compliance officer, documented in CAR_NRW0026409.

The annual monitoring of NOx for the existing natural gas boilers will remain and has not been changed as part of this variation.

For emissions to air, the methods for periodic monitoring are in accordance with the Environment Agency's Technical Guidance Note M2 for monitoring of stack emissions.

Based on the information in the Application and the requirements set in the conditions of the permit we are satisfied that the monitoring techniques, personnel and equipment employed by the Operator will have either MCERTS certification or MCERTS accreditation as appropriate. A condition has been added to the permit stating the first monitoring measurements will be carried out within four months of the issue date of the permit or the date when the MCP is first put into operation whichever is later.

### Reporting

We have specified the reporting requirements in Schedule 4 of the Permit to ensure data is reported to enable timely review by Natural Resources Wales to ensure compliance with permit conditions. We have updated the reporting requirements to include the new MCP.

### Operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The relevant guidance notes for the variation to this installation are:

- How to comply with your environmental permit (October 2014)
- Best Available Techniques (BAT) Reference Document for the Food, Drink and Milk Industries (2019)
- Technical Guidance Note M1: Sampling requirements for stack emission monitoring
- Technical Guidance Note M2: Monitoring stack emissions: techniques and standards for periodic monitoring
- Medium combustion plant and specified generator permits: how to comply (July 2019)

Monitoring of point source emissions to air will be carried out in line with the monitoring requirements outlined in TGN M2 and will have MCERTs accreditation. No further additional controls for monitoring are required.

Current sampling of point source emissions to air are in line with the sampling requirements outlined in TGN M1. No further additional controls for sampling are required.

As the CHP engine is a Medium Combustion Plant (MCP), the site must adhere to the following operating techniques specific for MCP:

- Each MCP must be operated in accordance with the manufacturer's instruction and records must be made and retained to demonstrate this.
- The operator must keep periods of start-up and shut down of each MCP as short as possible.
- There must be no persistent emission of 'dark smoke' as defined in Section 3(1) of the Clean Air Act 1993.

## The permit conditions

### Updating permit conditions during consolidation

We have updated previous permit conditions to those in the new generic permit template as part of permit consolidation. The new conditions have the same meaning as those in the previous permit(s). We have also incorporated a number of new conditions specific to Medium Combustion Plants into the permit. These conditions have been taken from our MCP/SG permit template. We have added a new bespoke condition in relation to annual reporting of the nutrient offset scheme.

The operator has agreed that the new conditions are acceptable.

### Raw materials

We have removed two of the raw materials as they are no longer used at the installation: Heavy fuel oil (HFO) and Processed fuel oil (PFO). There are no other changes to the raw materials as part of this variation.

### Waste types

There are no changes to waste types used at the installation as part of this variation.

### Pre-operational conditions

The status of the pre-operational conditions have been updated as part of the consolidation of the permit. As part of this variation we received site conditions reports relating to POC1, these have been filed on the DMS. No further pre-operational conditions have been posed as part of this variation.

### Improvement conditions

The status of the improvement conditions have been updated as part of the consolidation of the permit. Upon further assessment we were unable to identify if two improvement conditions had been completed (IC3 and IC4). IC3 is going to be revisited as part of the upcoming Bref review and therefore remains ongoing. IC4 was deemed unnecessary by the regulatory compliance officer and therefore has been withdrawn. We are satisfied the fugitive emissions conditions (3.2.1, 3.2.2 and 3.2.3) will be sufficiently protective for the installation.

### 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. As the CHP engine is an MCP, the site must adhere to a number of additional operating techniques these have been specified in the Operating Techniques table in the permit.

### 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

Our Enforcement Database has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found. The operator satisfies the criteria in RGN 5 on Operator Competence.

### 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.

## OPRA

The OPRA score at permit issue is 62, it has not changed as a result of this variation. An additional fixed subsistence fee will be charged for the new MCP.

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