Determination of an Application for an Environmental Permit under the Environmental Permitting (England & Wales) Regulations 2016

Decision document recording our decision making process

The Permit Number is:	EPR/BN6137IK/V013
The Applicant / Operator is:	Dairy Crest Limited
The site is located at:	Davidstow Creamery, Davidstow

What this document is about

This is a decision document, which accompanies a permit.

It explains how we have considered the Applications and how we have reviewed the permit for this Installation against the BAT Conclusions for the Food, Drink and Milk Industries published on 4th December 2019 in the Official Journal of the European Union

It explains how we have reviewed and considered the techniques used by the Applicant in the operation and control of the plant and activities of the installation. It is our record of our decision-making process and shows how we have considered all relevant factors in reaching our position.

As well as considering the review of the operating techniques used by the Applicant for the operation of the plant and activities of the installation, the permit considers and brings together in a single document all previous variations that relate to the original permit issue. Where this has not already been done, it also modernises the entire permit to reflect the conditions contained in our current generic permit template.

The introduction of new template conditions makes the permit consistent with our current general approach and with other Permits issued to Installations in this sector. Although the wording of some conditions has changed, while others have been deleted because of the new regulatory approach, it does not reduce the level of environmental protection achieved by the permit in any way. In this document, we therefore address only our determination of substantive issues relating to the new BAT Conclusions.

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Glossary of acronyms used in this document

AMP	Accident Management Plan
AQS	Air Quality Strategy
BAT	Best Available Technique(s)
BAT-AEL	BAT Associated Emission Level
BATC	BAT conclusions
BREF	Best Available Techniques (BAT) Reference Documents for Food Drink and Milk
CIP	Clean-in-place
CROW	Countryside and rights of way Act 2000
DAF	Dissolved Air Flotation
DAA	Directly associated activity – Additional activities necessary to be carried out to allow the principal activity to be carried out
DWP	Demineralised Whey Powder
ELV	Emission limit value
EMS	Environmental Management System
EPR	Environmental Permitting (England and Wales) Regulations 2016 (SI 2016 No. 1154) as amended
EQS	Environmental Quality Standard
EWC	European waste catalogue
FDM	Food Drink and Milk
GOS	Galacto Oligosaccharide
GWP	Global Warming Potential
IED	Industrial Emissions Directive (2010/75/EU)
MCERTS	Monitoring Certification Scheme
MCP	Medium combustion plant
NMP	Noise Management Plan

OCU	Odour control unit
OMP	Odour Management Plan
PPS	Public participation statement
RO	Reverse Osmosis
RGN	Regulatory Guidance Note
SAC	Special Area of Conservation
SSSI(s)	Site(s) of Special Scientific Interest
SWP	Sweet Whey Powder
UKHSA	UK Health Security Agency
WHO	World Health Organisation
WPF	Water Processing Facility

Preliminary information

We have incorporated four variations within the variation notice:

- Environment Agency–initiated Variation (V010)
- Variation applied for by the Applicant (V011)
- Statutory review due to the implementation of BAT requirements (V012)
- Variation applied for by the Applicant (V013)

Changes Introduced by the Environment Agency Variation (V010)

Permit Variation V010 was initiated by the Environment Agency due to concerns about the impact of treated effluent on the River Inny, following the introduction of a new manufacturing process permitted in 2014 (EPR/BN6137IK/V007).

In September 2025, the Environment Agency was informed that the manufacturing process permitted in 2014 had ceased operations. This activity has been removed from the varied permit. See section 5.2 of this decision document.

This Environment Agency Variation reviewed the existing monitoring requirements and emission limit values (ELVs). It originally proposed additional ELVs for the following parameters: total iron, total sodium, total potassium, and total anions.

However, since the manufacturing process permitted in 2014 has ceased production, the nature of the effluent has changed. As a result, the varied permit does not include additional ELVs.

Changes introduced by the Applicant's variation (V011)

The Applicant Variation (V011) introduced the following changes at the site:

- 4-hour clean-in-place (CIP)
- Milk protein standardisation
- Milk fat standardisation
- Whey protein concentration
- Cheese capacity growth phase 3

These improvements will maximise process efficiencies and milk utilisation at the site, leading to an increase in cheese production capacity from 9.6 tonnes per hour to 11.4 tonnes per hour.

Additionally, the Applicant has applied for permission to make changes and improvements at the Water Processing Facility (WPF). The main changes include:

- A new contingency lagoon with extraction to an odour control unit (OCU)
- Two new dissolved air flotation (DAF) units
- Covering and extraction of balance tank 1 and the divert tank to a new OCU
- Extension of the site boundary at the WPF to accommodate a new raw material store
- New aeration pumps for Balance Tank 2

- Installation of acoustic fencing at the WPF and noise monitoring equipment
- Installation of a perimeter containment wall to the downgradient portion of the WPF
- Upgraded outfall pipework from the WPF to the River Inny
- Installation of a third reverse osmosis (RO) plant
- Installation of a fourth membrane bioreactor (MBR) loop
- Installation of an ultrafiltration / RO flow attenuation tank
- Enclosure of sludge centrifuges and trailer at the WPF

Changes introduced the statutory review (V012)

A full review has been undertaken against the Best Available Techniques (BAT) conclusions for the Food, Drink and Milk Industries, published on 4 December 2019 in the Official Journal of the European Union.

Our assessment of the BAT conclusions is provided in Annex 1.

Changes introduced by the Applicant's variation (V013)

De-rating of MCP.

Links to guidance documents

The list below provides links to the key guidance documents referred to in this document. The links were correct at the time of producing this document.

- Risk assessments for your environmental permit - GOV.UK
- Food Drink and Milk Industries BAT Conclusions

1 Our decision

We have decided to grant the varied permit to the Applicant. This will allow the Operator to continue to operate the Installation, subject to the conditions in varied permit

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

The varied permit contains conditions, including the relevant Annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the Environmental Permitting Regulations (EPR) 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 that the details provided are sufficient and satisfactory to make use of the standard condition acceptable and appropriate.

2 How we reached our decision

2.1 Requesting information and receipt of applications

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 24/03/2022 requiring the Operator to provide information to demonstrate where the operation of their installation currently meets, or how it will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

The Notice required that where the revised standards are not currently met, the operator should provide information that:

- describes the techniques that will be implemented before 4 December 2023, which will then ensure that operations meet the revised standards, or

- justifies why standards will not be met by 4 December 2023, and confirmation of the date when the operation of those processes will cease within the Installation or an explanation of why the revised BAT standards are not applicable to those processes, or

- justifies why an alternative technique will achieve the same level of environmental protection equivalent to the revised BAT standards described in the BAT Conclusions.

Where the Operator proposed that they were not intending to meet a BAT standard that also included a BAT Associated Emission Level (BAT-AEL) described in the BAT Conclusions Document, the Regulation 61 Notice required that the Operator make a formal request for derogation from compliance with that BAT-AEL (as provisioned by Article 15(4) of IED). In this circumstance, the Notice identified that any such request for derogation must be supported and justified by sufficient technical and commercial information that would enable us to determine acceptability of the derogation request.

The Regulation 61 Notice response from the Operator was received on 22/07/2022.

We considered it was in the correct form and contained sufficient information for us to begin our determination of the permit review but not that it necessarily contained all the information we would need to complete the determination.

Applications V011 and V013 were duly made on 13 April 2023 and 31 October 2024, respectively. This means we considered each application to be in the correct form and to contain sufficient information for us to begin our determination.

2.2 Confidential information

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

2.3 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.

2.4 Consultation on the application

We carried out consultation on the Application in accordance with the EPR, our statutory Public Participation Statement (PPS) and our own internal guidance RGN 6 for Determinations involving Sites of High Public Interest. RGN 6 was withdrawn as external guidance, but it is still relevant as Environment Agency internal guidance.

We consider that this process satisfies and frequently goes beyond the requirements of the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, which are directly incorporated into the Industrial Emissions Directive (IED), which applies to the regulated facility and the Application. We have also taken into account our obligations under the Local Democracy, Economic Development and Construction Act 2009 (particularly Section 23). This requires us, where we consider it appropriate, to take such steps as we consider appropriate to secure the involvement of representatives of interested persons in the exercise of our functions, by providing them with information, consulting them or involving them in any other way. In this case, we consider that our consultation already satisfies the requirements of the 2009 Act.

2.5 Engagement

We advertised the Application via a notice published on our website, which included all information required under the IED, including details of where and when the public could view a copy of the Application.

In addition, advertisements containing the same information were placed in the *London Gazette* and *Western Morning News* on 15 May 2023, and in the *Cornish Guardian* on 17 May 2023.

A press release was issued to notify the public about the consultation, followed by weekly reminders via the Environment Agency's social media channels.

The consultation remained open for six weeks, from 15 May 2023 to 27 June 2023 (inclusive).

We made a copy of the Application and all other documents relevant to view on our Online Consultation Portal.

We made a copy of the Application and all other documents relevant to our determination available to view on our Public Register Anyone wishing to see these documents could do so via the advertisement on GOV.UK.

We sent copies of the Application to the following bodies, which includes those with whom we have “Working Together Agreements”:

- UK Health Security Agency (UKHSA) formerly known as Public Health England
- Health & Safety Executive
- Director of Public Health
- Cornwall Council Environmental Health and Public Health
- South West Water

These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly. Note, under our Working Together Agreement with Natural England, we only inform Natural England of the results of our assessment of the impact of the regulated facility on designated Habitats sites.

Further details along with a summary of consultation comments and our response to the representations we received can be found in Section 10. We have taken all relevant representations into consideration in reaching our determination.

2.6 Requests for further information

Although we considered the Regulation 61 Notice response generally satisfactory upon receipt, we required additional information to complete our permit review assessment. Accordingly, we issued a further information request on 01/08/2023. This request sought clarification and supplementary details regarding BATc 4, 6, 8, 9, and 11, as well as the relevant hazardous substances assessment. A response was received on 05/09/2023, and both the request and the response have been placed on our public register.

Although Application (V011) was considered duly made, additional information was required in order to complete our determination. As a result, we issued an information notice on 1 August 2023. A copy of this notice was placed on our public register.

The following information was subsequently received in response to our request:

- Schedule 5 Questions response
- Revised Odour Management Plan (OMP)
- Revised Noise Assessment
- Further information clarifying the Regulation 61 response

All of these documents were placed on the public register.

Finally, we have consulted on our draft decision from 16 January 2026 to 27 February 2026 (inclusive). A summary of the consultation responses and how we have considered all relevant representations is shown in Section 11.

3 The legal framework

The varied permit is 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
- subject to aspects of other relevant legislation which also must be addressed.

We address some of the major legal requirements directly where relevant in the body of this document. Other requirements are covered in Section 9 towards the end of this document.

We consider in granting the permit, it will ensure that the operation of the regulated facility complies with all relevant legal requirements and that a high level of protection will be delivered for the environment and human health.

We explain how we have addressed specific statutory requirements more fully in the rest of this document.

4 Key issues in the determination

The key issues arising during determination of the Application were:

- Water and treated effluent quality
- Odour
- Noise
- Use of Best Available Techniques

We will describe how we determined these issues in greater detail in the body of this document.

Annex 1 provides the decision checklist regarding the BAT review.

5 The regulated facility

We considered the extent and nature of the facilities at the site in accordance with RGN2 ‘Understanding the meaning of regulated facility’, Appendix 2 of RGN2 ‘Defining the scope of the installation’, Appendix 1 of RGN2 ‘Interpretation of Schedule 1’.

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

5.1 Management

The Applicant is the sole Operator of the regulated facility.

We are satisfied that the Applicant is the person who will have control over the operation of the regulated facility after the issuing of the variation; and that the Applicant will be able to operate the Installation to comply with the conditions included in the permit.

5.2 The permitted activities

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

Processing of raw whole milk and production of cheese, whey powder and whey butter

- 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)

Biological treatment of trade effluent at the WPF

- Section 5.4 Part A(1)(a)(i): Disposal of non-hazardous waste in a facility with a capacity exceeding 50 tonnes per day by biological treatment

The varied permit adds 2 new activities

Physico-chemical treatment of trade effluent at the WPF

- Section 5.4 Part A1(a)(ii): Disposal of non-hazardous waste in a facility with a capacity exceeding 50 tonnes per day by physico-chemical treatment

Waste wood and biomass boilers

- Section 5.1 Part B(a)(v) (SWIP) and 25A (MCP)

The varied permit removes 2 activities

Waste wood and biomass boilers

- Section 5.1 Part A1(b): The incineration of non-hazardous waste in a waste incineration plant or waste co-incineration plant with a capacity exceeding 3 tonnes per hour.

Processing of whey concentrate and vegetable oils and production of whey based powder and demineralised whey

and

Processing lactose derived from milk with enzymes to produce a prebiotic syrup.

Section 6.8 Part A(1)(d)(i):

- Section 6.8 Part A(1)(d)(i): Treating and processing materials intended for the production of food products from animal raw materials (other than milk) at a plant with a finished product production capacity of more than 75 tonnes per day

An installation may also comprise “directly associated activities”(DAA). At this installation, these include:

- Oil-fired boilers
- Raw material storage and handling
- Use of refrigerants
- Storage and use of chemicals and oils
- Waste storage and handling
- Water recovery
- Surface water drainage

These activities comprise one installation, because these activities are successive steps in an integrated activity.

5.3 The site’s location

The site is located in north Cornwall, approximately 4 km northeast of Camelford. The main process building is centred on National Grid Reference (NGR) SX13825 86588, while the WPF is situated 860 m east of the main site at NGR SX14846 86543.

Treated effluent is discharged to the River Inny, which lies to the east of both the site and the effluent treatment plant. The discharge point is located 1.8 km due east of the WPF at NGR SX16889 86663. The River Inny subsequently joins the River Tamar approximately 32 km downstream from the facility.

The site is situated in a predominantly rural area, where the primary land use is agricultural. The nearest villages are Trewassa, Davidstow, and Tremail. In addition to these named villages, there are several isolated dwellings in the surrounding area.

The applicant has submitted a site plan that we consider satisfactory, showing the location and extent of the installation. This plan is included in Schedule 7 of the permit. The Applicant is required to carry out all permitted activities within the defined site boundary.

5.3.1 Off-site conditions

We do not consider that any off-site conditions are necessary.

The Environment Agency enhanced monitoring programme will continue for at least a year, or until an extended period of low flow has been experienced and monitored in the river. This will comprise:

- Monthly sampling of river water quality for a range of determinands at eight sites on the River Inny, and at the discharge outfall itself. Three sites are located upstream of the Davidstow Creamery discharge and five are located downstream.

- Continuous in situ river water quality monitoring using sondes located upstream and downstream of the discharge. These will record conductivity, temperature, ammonium, turbidity, pH and dissolved oxygen at fifteen minute intervals.

- A further sonde will remain positioned downstream of the effluent treatment works, the WPF, to monitor for any leaks or spills from the works. This monitoring will continue until all improvement works are completed in early summer 2026.

- Walkover surveys during low flow conditions to examine ecological and physical indicators in the Upper River Inny catchment.

Figure 1 downstream sonde monitoring location

5.4 Operation of the regulated facility

5.4.1 Processes carried out

The primary activity at the main Creamery site is the processing of raw whole milk, which is pasteurised and processed to produce cheese. Whey from the cheese-making process is then used to produce whey cream.

Wastewater from all onsite processes is treated at the WPF.

Ancillary processes include the operation of onsite boilers (fuelled by kerosene and biomass), refrigeration, odour control (at the main creamery and the WPF), recovery of process water, chemical and oil storage, raw material storage, and washing and cleaning.

The Applicant proposes the following changes to the site (Variation V011):

- Implementation of a new CIP set to enable 4-hour turnaround times for the cleaning of the cheese department.

- Milk protein standardisation which involves concentration of a small portion of the raw milk to increase fat, protein and milk solids.

- Milk fat standardisation which is a new processing solution to allow skimmed milk to be separated and blended in-line in a continuous process.

- Cheese capacity growth phase 3 comprising a number of process changes to increase hourly curd production capacity.

The combined effect of the proposed creamery projects is to maximise process efficiencies and enhance the utilisation of milk at the site. If the variation is granted, cheese production is expected to increase from 9.6 tonnes per hour to 11.4 tonnes per hour.

Whilst preparing the draft decision, the Applicant informed the Environment Agency that production of Demineralised Whey Powder (DWP) had ceased, with operations reverting to the production of Sweet Whey Powder (SWP). As a result, the calcium phosphate removal plant has been taken out of service.

In addition, the Galacto Oligosaccharide (GOS) plant has also ceased production.

The cessation of these three processes means that site activities have returned to a configuration like that which existed prior to 2016.

Considering the Applicant's submission and the cessation of DWP and GOS production, the following changes to the site are proposed:

1. New contingency lagoon with extraction to an OCU (note this is physically located at the Creamery but has been developed as part of the redevelopment of the WPF).
- Two DAF units.
- Covering and extraction of existing Balance Tank (BT1) and Divert Tank to a new OCU.
- New raw material store.
- New aeration pumps for BT1 and Divert Tank.
- Installation of acoustic fencing.
- Installation of noise monitoring equipment.
- Provision of floating discs on Balance Tank 2 (BT2).
- Upgrade to activated filter media (AFM) filtration tanks.
- Installation of a perimeter containment wall to the downgradient portion of the WPF.
- Upgraded outfall pipework from the WPF to the River Inny.
- Installation of a third RO plant.
- Installation of a fourth membrane bioreactor (MBR) loop.
- Installation of an ultrafiltration / RO flow attenuation tank.
- Replacement of W2 v notch sampling point with a MCERTs flume.
- Implementation of tertiary filters downstream of tank ST2 and prior to W2.
- Enclosure of sludge centrifuges and trailer.
- Installation of an automated forward / divert solution for effluent from cheese production.

The applicant has not applied for any further activities to be added to their permit.

As part of the Applicant's Variation (V013), we have taken the opportunity to correct the permit. The previously listed Section 5.1 Part A(1)(b) activity has been replaced with Schedule 1 Part 2 5.1 Part B (SWIP) and 25A (MCP), which permits the incineration of treated waste wood at a capacity of up to 3 tonnes per hour. The waste wood must not contain halogenated compounds or heavy metals as a result of treatment.

There are no changes to the emissions profile from the site's existing boilers as a result of this variation.

5.4.2 Environmental management system

We are satisfied that appropriate management systems and management structures will be in place for this regulated facility, and that sufficient resources are available to the Applicant to ensure compliance with all the permit conditions.

Our decision was taken in accordance with the guidance on Applicant competence and how to develop a management system for environmental Permits.

5.5 Management plans

5.5.1 Accident management plan (AMP)

The Applicant has an existing AMP, which has been reviewed as part of this determination. The plan outlines potential incidents that could occur on site, including spillages of various substances and fire.

The AMP relevant to this variation is incorporated within the Environmental Risk Assessment, submitted as Appendix C of the application.

5.5.6 Environmental risk

Medium Combustion Plant (MCP)

The derating of the MCP does not alter the risk profile of the installation.

Increase in Cheese Production – Emissions to Water

We carried out an assessment of the impact that effluent from the increased cheese production may have on water quality in the River Inny.

Further details are provided in Section 7.2 of this document.

Noise

We did not agree with the Applicant's noise assessment. The Environment Agency's own assessment concluded that there is a risk of *significant adverse impacts* at sensitive receptors surrounding the facility.

Further details are provided in Section 7.3 of this document.

Odour

We agreed with the Applicant's odour assessment and also conducted our own evaluation of ambient air quality.

Further details are provided in Section 7.4 of this document.

5.6 Operating techniques

Through permit Condition 2.3.1 and Table S1.2 of the permit, we have specified that the Applicant must operate the Installation in accordance with the documents submitted as part of the Application.

5.6.2 Assessment of BAT (Food, Drink and Milk Bref Review)

A full assessment of BAT against the Food, Drink and Milk (FDM) BREF has been undertaken as part of the permit review variation (V012), detailed in Annex 1 of this document.

In summary, the Applicant has demonstrated compliance or future compliance with all relevant FDM BAT conclusions.

The documents listed in Table S1.2 of the permit describe the techniques to be employed in the operation of the Installation. These techniques have been assessed by the Environment Agency as BAT and are incorporated into the permit under Condition 2.3.1 and Table S1.2 of the permit Schedules.

5.6.3 Assessment of BAT (WPF)

As part of the applied-for variation (V011), the Applicant submitted a *Wastewater BAT Options Appraisal*, which outlines the demonstration of BAT in relation to the operation of the WPF.

A Microsoft Teams call was held on 7 October 2025 between the Environment Agency and the Applicant to discuss production changes at the site. The Applicant explained that demineralisation and other processes had ceased in September 2025, and that the production of SWP had recommenced.

The change in product portfolio, represents BAT Option F, in the Applicants *Wastewater BAT Options Appraisal,* document.

The demineralisation process is the primary contributor to potassium concentrations in the effluent stream, with approximately 80% of the potassium load associated with this process.

The Applicant provided measured effluent emissions, after the cessation of the demineralisation process, demonstrating significant improvements, in effluent quality, as outlined in the BAT appraisal assessment.

We agree the production changes on site and the cessation of demineralisation process is BAT. Further details can be found in Section 7.2.7 of this document.

In response to the second consultation, we carried out a detailed review of the recent isolated minor non-compliances referred to in Section 8.5 of this decision document. These were classified as Category 3 and therefore associated with minor impacts on human health, quality of life or the environment. We considered the identified root causes in the context of the proposed increase in production and the resulting increase in load on the ETP.

While the current arrangements are considered sufficient to support permit issue, we have identified that further development of process control monitoring would provide greater assurance that the ETP will continue to operate effectively as production increases. This is consistent with BAT 1, which requires an effective management system supported by appropriate monitoring and control of key process parameters.

We have therefore set a pre-operational measure (PO1). See Section 8.1 of this decision document.

This condition requires the operator to review and, where appropriate, improve process monitoring across the ETP, including influent, process effluent and final effluent. The aim is to ensure that suitable equipment and procedures are in place to identify changes in performance and respond to potential issues at an early stage, supporting ongoing effective operation in line with BAT 1.

5.6.4 Raw materials

There are no changes to controls on raw material or fuels.

5.6.5 Waste types

There are no changes to waste streams entering the plant.

6 Nature conservation, protected species and habitat designations

The Conservation of Habitats and Species Regulations 2017, widely known as the Habitats Regulations, covers sites of European importance such as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Ramsar sites, classified under the Ramsar convention of 1971, are classed as having the same protection as European sites We screen for potential effects on the ecological integrity of a European site when considering any proposal. These regulations enshrine the precautionary principle in law.

We screen for Sites of Special Scientific Interest (SSSI) as covered by The Wildlife and Countryside Act 1981 (WCA81), The Countryside and Rights of Way Act 2000 (CRoW Act) subsequently amended and strengthened this act, and the Natural Environment and Rural Communities Act 2006 (NERC06). We also screen for Marine Conservation Zones (MCZ).

Screening is also carried out for protected species, national nature reserves (NNR), local nature reserves (LNR), local wildlife sites (LWS), and non-statutory sites such as national landscapes and heritage sites.

Our screening criteria are based on the risks posed by the proposed activities and the sensitivity of the receptor. We have checked the location of the proposed permission to ascertain if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage, protected species and habitat designations. The application is within our screening distances for these designations.

6.1 Sites considered

The following Special Areas of Conservation (SAC), are located within 10 km of the regulated facility:

- Special Areas of Conservation (SAC)
    - River Camel 686m
    - Crowdy Marsh 2,512m
    - Tintagel-Marsland-Clovelly Coast 6,011m
    - Bristol Channel Approaches 6,252m
- Special Areas of Conservation (SAC) Wales
    - Bristol Channel Approaches 6,252m

The following SSSIs are located within 2 km of the regulated facility:

- River Camel Valley and Tributaries 686m
- Bodmin Moor, North 822m

The following local wildlife site is located within 2 km of the regulated facility:

- North Bodmin Moor 870m

6.2 Habitats assessment

Under the applied for variations (V011 and V013) there are no changes to the emissions to air.

Whilst there is a proposed increase in cheese production from 9.6 to 11.4 tonnes per hour, likely resulting in more effluent being generated and sent to the WPF for treatment and recovery, there is no proposed increase in the volume of treated effluent discharged to the River Inny.

However, the concentration of the effluent is likely to increase due to a higher proportion being recovered by the WPF for reuse within the production process.

Furthermore, the revised ELVs under Agency Variation V010 are based on the principle of no deterioration of the receiving water. As such, the calculated ELVs discussed above offer greater protection to the receiving watercourse.

Although the discharge location is not within any European designations, the River Inny forms part of the migratory route for Atlantic Salmon, which includes the area covered by the Dartmoor SAC. As such, the River Inny is considered functionally linked to the Dartmoor SAC. The features within the SAC are noted as follows:

- Atlantic Salmon
- Blanket bog*
- European dry heaths
- Northern Atlantic wet heaths with Erica tetralix
- Old sessile oak woods with Ilex and Blechnum in the UK
- Otter
- Southern damselfly

With the exception of the Atlantic Salmon migratory route, potential effects on the Dartmoor SAC from pollutants can be ruled out due to the distance between the discharge location on the River Inny and the designated area of the Dartmoor SAC. Consequently, no other features of the Dartmoor SAC were considered in this assessment.

The assessment undertaken as part of the applied-for variation (V011), which evaluates whether effluent from the installation may affect the Atlantic Salmon feature, is considered conservative. It also accounts for any secondary effects that may occur to functionally linked Otter populations, which rely on fish for a significant proportion of their diet.

Atlantic Salmon return to spawn in their natal watercourses. A potential pathway exists when the species migrate up the River Tamar from Plymouth Sound, as the River Inny is hydrologically connected to the River Tamar. The Tamar, in turn, is linked to the River Lyd, a feature of the Dartmoor SAC, which also flows into the Tamar. The only potential impact pathway for salmon, where the River Inny is not their natal watercourse, is during upstream migration through the River Tamar and subsequently the River Lyd to reach their spawning grounds.

It is considered that the discharge will have a negligible impact on the water quality of the European habitat, the Dartmoor SAC, and the aforementioned species at the point of discharge. Therefore, it is not expected to affect water quality within the River Tamar, which lies a significant distance downstream.

The River Inny joins the River Tamar at Dunterue Wood, approximately 28 km downstream of the discharge point. The level of dilution in the lower reaches of the River Inny and the River Tamar, combined with the emission limits in the permit, will ensure that changes in nutrient levels, siltation, toxic contamination, and turbidity are unlikely to significantly impact Atlantic Salmon.

A more direct pathway exists when Atlantic Salmon migrate from Plymouth Sound into the River Inny to spawn, given the hydrological continuity between the River Inny, the River Tamar, and the River Lyd, which enters the Dartmoor SAC and also drains into the Tamar.

The effluent is treated via an advanced treatment facility incorporating physical, chemical, and biological processes. Emission limits included in the permit have been reviewed under the Agency-Initiated Variation (V010) to ensure adequate protection of the receiving watercourse and, ultimately, the flora and fauna it supports.

Given the considerable distance between the Dartmoor SAC and the discharge point, it is unlikely that the discharge from the installation would have a significant impact on the designated site.

A full Stage 1 Habitats Risk Assessment has been completed by the Environment Agency and submitted to Natural England, marked as ‘for information only’, in accordance with our Working Together Agreement with Natural England.

7 Minimising the regulated facility'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, global warming potential (GWP) and generation of waste and other environmental impacts. Consideration may also have to be given to the effect of emissions being subsequently deposited onto land (where there are ecological receptors). All these factors are discussed in this and other sections of this document.

The next sections of this document explain how we have approached the critical issue of assessing the likely impact of the emission from the regulated facility on human health and the environment and what measures we are requiring the Applicant to take to ensure a high level of protection.

7.1 Emissions to air

There are no changes to emissions to air.

The ELVs for the combustion plant are taken from the MCP and Environmental permitting technical guidance PG5/1(21).

New monitoring requirements and ELVs have been included in the varied permit. Section 8.4 has further details.

7.1.1 Consideration of local factors

A monitoring exercise was conducted by the Environment Agency's Ambient Air Monitoring Team between 11 May 2023 and 13 September 2023 (Study of Ambient Air Quality at Davidstow Report – AAM/TR/2023/11). The objectives of the monitoring were to identify local sources of air pollution and to quantify the environmental impact of emissions from these sources on the surrounding area and local community.

The monitoring assessed measured levels of various particulate matter (PM) size fractions; Total Suspended Particulate (TSP), PM_{10}, and $PM_{2.5}$, as well as methane (CH_4) and hydrogen sulphide (H_2S).

These measurements were compared against the objectives of the UK Air Quality Strategy (AQS).

Monitoring was carried out at a residential property driveway in the village of Trewassa, located due north of the WPF and east of the main Creamery site.

The results indicated that the mean concentration of methane (CH_4) was 1.34 mg/m³, slightly elevated compared to the northern hemisphere background concentration of 1.30 mg/m³.

Data for PM_{10} and $PM_{2.5}$ showed that concentrations at the monitoring location met their respective AQS objectives. When compared against the new annual UK Environment Act target, $PM_{2.5}$ levels did not exceed the threshold.

According to the Defra Air Quality Index, PM_{10} and $PM_{2.5}$ levels remained primarily within the low banding throughout the study period, with PM_{10} reaching moderate banding on one day due to a Saharan dust event.

Hydrogen sulphide (H_2S) concentrations were compared against World Health Organisation (WHO) guidelines and were found to be within the specified health limits.

7.2 Emissions to water

7.2.1 Emissions to surface waters

Davidstow Creamery discharges into waterbody GB108047007760 (Upper River Inny) at NGR SX 16891 86664. This waterbody is currently (2022) classed as moderate status overall, with the physio-chemical parameters of ammonia and Dissolved Oxygen (DO) as high status and phosphate as good status.

The varied permit intends as a minimum to maintain the status of the waterbody and contribute to improving the classification to good status overall.

There are four sample points used for classification purposes: 91241146 River Inny at Two Bridges NGR SX 27072 81738; 91241162 River Inny at St. Clether Bridge NGR SX 20578 84143; 91241191 River Inny at Davidstow NGR SX 15446 87010; and 91241166 River Inny at Treglasta Bridge NGR SX 18007 85948. These are shown below on **Error! Reference source not found.**.

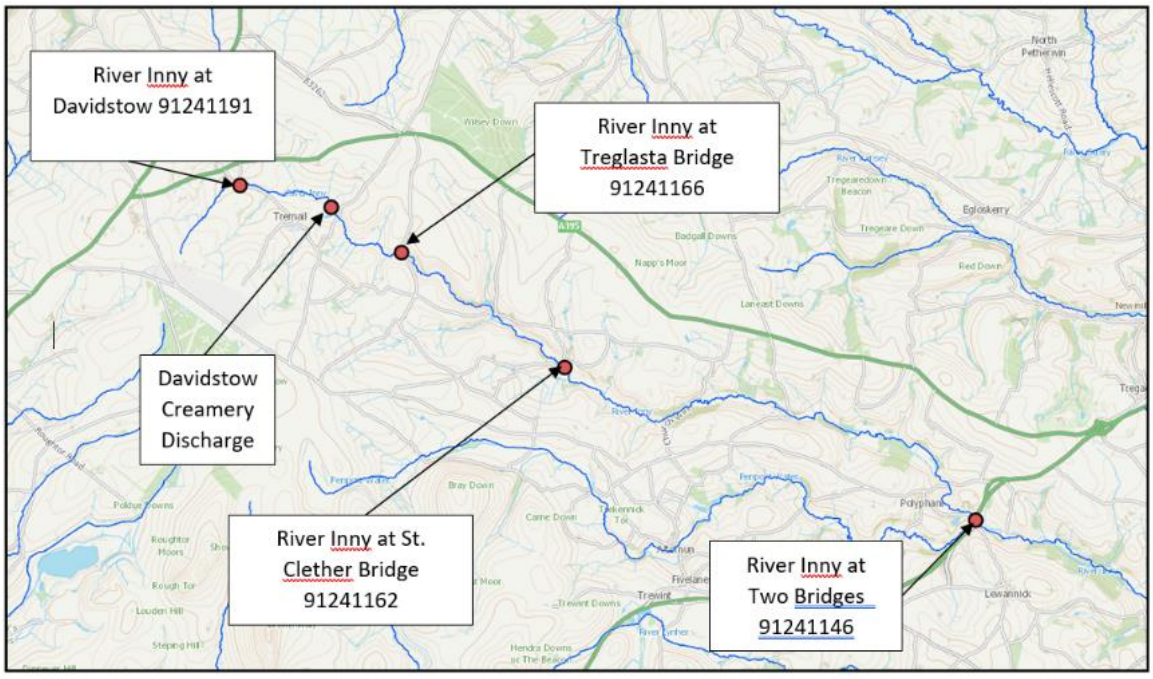


Figure 2 Location of monitoring points

The water quality GIS screening carried out for this discharge identified:

- Plymouth Sound & Estuaries SAC (Special Areas of Conservation).
- Tamar-Tavy Estuary SSSI (Site of Special Scientific Interest) and Tamar Estuary Sites MCZ (Marine Conservation Zone).

- Greenscombe Wood, Luckett SSSI.
- The migratory route for European Eel and Atlantic Salmon; and
- Protected species – European Eel, Atlantic Salmon, Unidentified lamprey and Brook Lamprey.

The migratory route data was looked at further in the Environment Agency Easimap2 GIS tool on 8 November 2022. This showed for European Eel there are no links with any SACs, Ramsar sites or SSSIs where these species are features. For Atlantic Salmon, this migratory route is associated with Dartmoor SAC and South Dartmoor SSSI.

Further assessment of these features at these sites has been undertaken in the form of a Habitats Risk Assessment – Stage 1 and submitted to Natural England for information only.

7.2.2 Discharge description

In 2014, the Applicant applied for a variation (V007) to the permit, allowing the introduction of a new process at the site: the processing and production of demineralised whey (referred to as Demin).

Since the commencement of this process, the Environment Agency has identified elevated levels of certain substances in the treated effluent discharged to the River Inny.

According to the Applicant's Emissions Management Plan and Regulation 61 response, the whey demineralisation process contributes approximately:

- 80% of the potassium (K),
- 60% of the chloride (Cl^-), and
- 30% of the sodium (Na)

in the treated effluent discharged to the River Inny.

As a result of these process changes, the composition of the effluent was altered, and the existing permit conditions no longer provided sufficient protection for the water quality of the River Inny.

Consequently, the Environment Agency's area compliance team has initiated a variation to review and update the permit limits.

During a meeting with the Applicant in October 2025, the Environment Agency was informed that the whey demineralisation process and other associated operations had ceased production as of September 2025.

The Applicant, provided measured effluent emissions data, demonstrating significant improvements, including a significant reduction of potassium, chloride and sodium.

7.2.3 Summary of modelling approach taken

Our assessment was carried out before it was known the whey demineralisation process was taken out of service.

Our assessment considered the following:

- The impact of the discharge activity on river quality, including a comparison against river quality targets. The analysis showed that the discharge is contributing to pollution and causing river quality targets to be exceeded in the downstream watercourse. It also quantified the percentage of environmental deterioration caused by the discharge.
- A comparison between the modelled impact of the discharge activity and observed downstream river quality concentrations. This demonstrated that the modelling outputs closely align with the actual polluting impact the discharge is having on river water quality.

7.2.4 Summary of potassium, sodium and chloride (electrolyte) toxicity

Potassium

An Environmental Quality Standard (EQS) for the protection of aquatic life is not currently available for potassium. Therefore, available toxicity data has been reviewed to provide an indication of a potential threshold for potassium in freshwater.

Potassium may occur in various salts, including potassium carbonate and potassium chloride. Much of the toxicity data relates specifically to potassium chloride, which has been reviewed.

The available data suggests that potassium exhibits low toxicity to the studied species of algae, invertebrates, and fish.

Short-term exposure effect concentrations were reported in the range of 177–1,337 mg/l, for potassium chloride.

Only one study was found regarding long-term exposure, which reported an effect concentration of 130 mg/l, for potassium chloride.

Sodium

Sodium was evaluated alongside chloride and sulphate during EQS development.

In 1990, a threshold of 170 mg/l was proposed based on available data. However, a revised report published in 2002 concluded that a separate EQS for sodium was not necessary when sodium is present alongside chloride and sulphate. This conclusion was based on studies indicating that sodium toxicity is not significant compared to chloride and sulphate when these ions are present together, and that sodium contributes minimally to overall toxicity in such conditions.

Therefore, where sodium co-occurs with either chloride or sulphate, a separate EQS for sodium is considered unnecessary.

Chloride

An operational EQS for chloride is available, set at 250 mg/l (expressed as an annual average) for freshwater. This value was originally derived by the National Rivers Authority (NRA) in 1990 and reviewed in 2002. The threshold was established based on available toxicity data, including field

studies. Observations from these studies indicated that molluscs were the most sensitive species, with a maximum tolerance of 250 mg/l. This value was subsequently adopted as the EQS threshold.

7.2.5 Summary of electrolyte impacts on river quality (DWP production)

Table 1, below, presents the impact of the discharge, when the whey demineralisation process was in operation, and compares it against downstream river quality targets for the relevant parameters.

Parameter	EA data upstream mean (mg/l)	EA discharge data mean (mg/l)	Saputo discharge data mean (mg/l)	EA data downstream mean (mg/l)	EA published Annual Average EQS (mg/l)
Potassium (k)	6.09	756.48 (dissolved)	919.03 (total)	99	
Sodium (Na)	27.94	2537.26	2464.95	343.35	
Chloride (Cl^-)	41.66	3175.01	3556.63	455.57	250 (AA)
Total anions (mg/l) ([1])	57.39	3772.70	-	552.87	250 (AA)

Table 1 River quality and discharge data comparison against river quality target

Table 1 shows that the discharge caused significant deterioration in river water quality downstream, whilst the whey demineralisation process was operational.

7.2.6 Modelling for the setting of permit limits

Following Operational Instruction LIT 13134, this is considered an existing discharge.

By treating this as an existing discharge, the modelling calculates permit limits to meet the river quality target downstream. This approach allows all the available headroom in the watercourse to be used when setting the permit limit.

River quality targets are listed in Table 2 below

Determinand	**River quality target mg/l**
Potassium	13 maximum
Sodium	170 mean
Chloride	250 mean
Sulphate	400 mean
Ammoniacal nitrogen	0.2 90th percentile
Biological oxygen demand	3mg/l 90th percentile
Iron	1 mean
Total anions	250 mean

Orthophosphate	0.039 mean

Table 2 River quality targets

Total sodium, total potassium and chloride (electrolytes)

Table 3, below, presents the permit limits for each parameter, as specified by Environment Agency Operational Instruction LIT 13134, for installations and wastewater treatment works.

	Installations calculated limit		**Wastewater Treatment Works calculated limits**		
Determinand	**Reference period**	**Maximum concentration mg/l**	**Reference period**	**95th percentile concentration mg/l**	**Maximum concentration mg/l**
Total Sodium as Na	24-hour flow composite sample	3480	Spot	1795	4600
Total Potassium as K	24-hour flow composite sample	50	Spot	31	78
Total anions (including chloride)	24-hour flow composite sample	5145	Spot	2670	7170

Table 3 Calculated permit limits set in accordance with Environment Agency operational instruction LIT 13134

In evaluating water quality, chloride is considered within the total anion assessment, a parameter regarded as more representative.

No limits for electrolytes have been set. See Section 7.2.7 for further details.

Sulphate

Modelling showed that sulphate complies with the 80% deterioration rule and the 50% rule, as set out in Operational Instruction LIT 13134, so no numeric limit is required.

Ammoniacal Nitrogen

A permit limit of 1.7 mg/l as a maximum is required to achieve the river quality target of 0.2 mg/l.

Iron

Using the guidance on the control of chemicals used for dosing at wastewater treatment works, a limit of 2.9 mg/L would be set. However, the site is an installation and not a wastewater treatment works, and emissions of iron are consistently much lower than the calculated limit, generally less than 0.5 mg/L.

No monitoring requirement or limit has been set in the varied permit.

Orthophosphate

A permit limit of 0.3 mg/l as a maximum, for total phosphorus, is required to achieve the river quality target of 0.039 mg/l.

Biological oxygen demand, suspended solids and pH

The assessment showed that the current permitted limits are appropriate to maintain water quality.

Temperature

Emissions and river flow data were assessed using the Environment Agency's RQP software (v6.0). A maximum limit of 33 °C with an annual 95th percentile limit of 28 °C has been set.

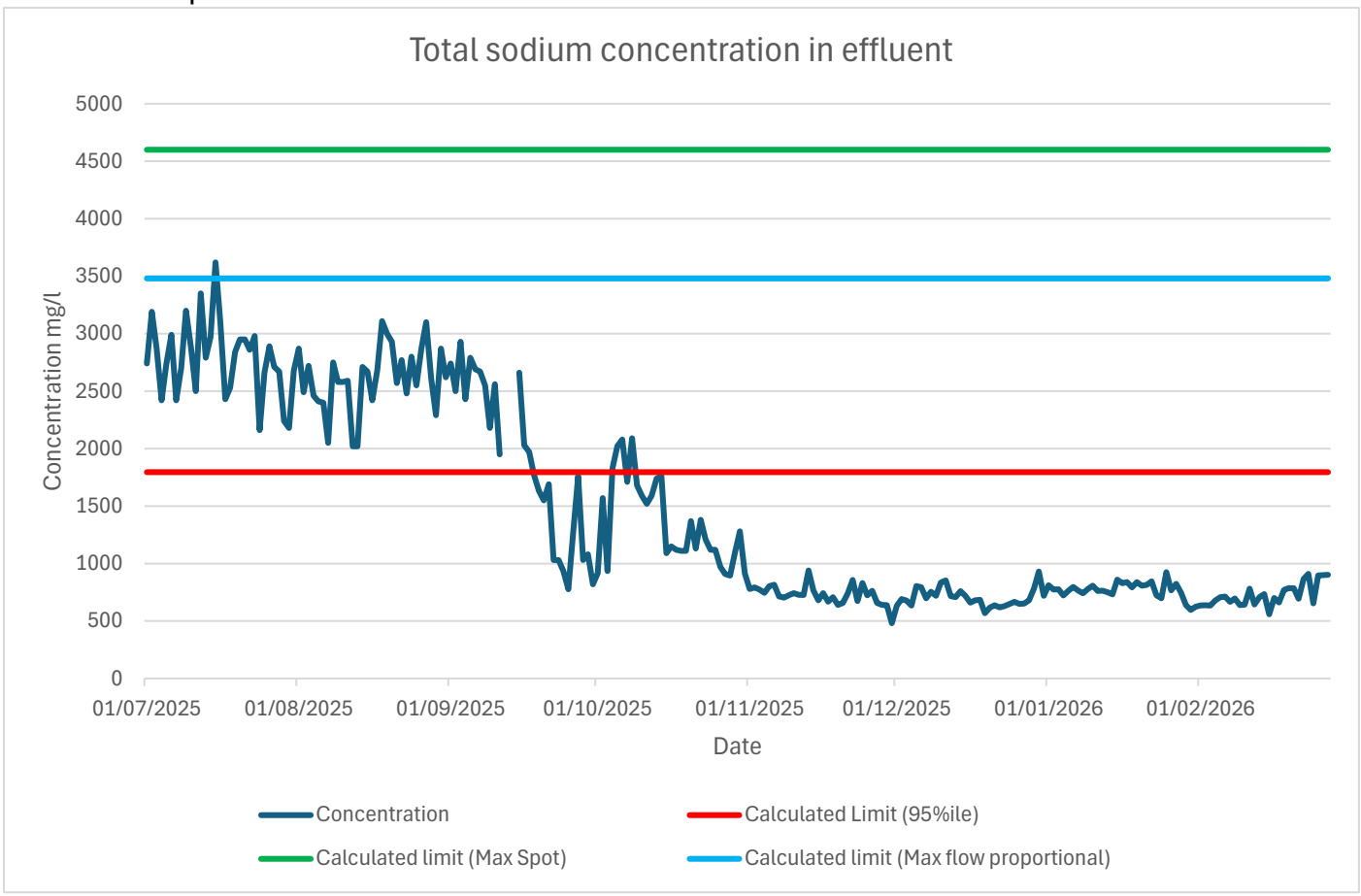
7.2.7 Electrolyte concentrations after whey demineralisation cessation

The whey demineralisation process accounts for most electrolytes, as set out in Section 7.2.2 of this document.

In November 2025, two months after the whey demineralisation process ceased operation, the operator provided the Environment Agency with effluent monitoring data.

In response to the second consultation the operator provided further monitoring data extended to the end of February 2026.

The data are presented below in



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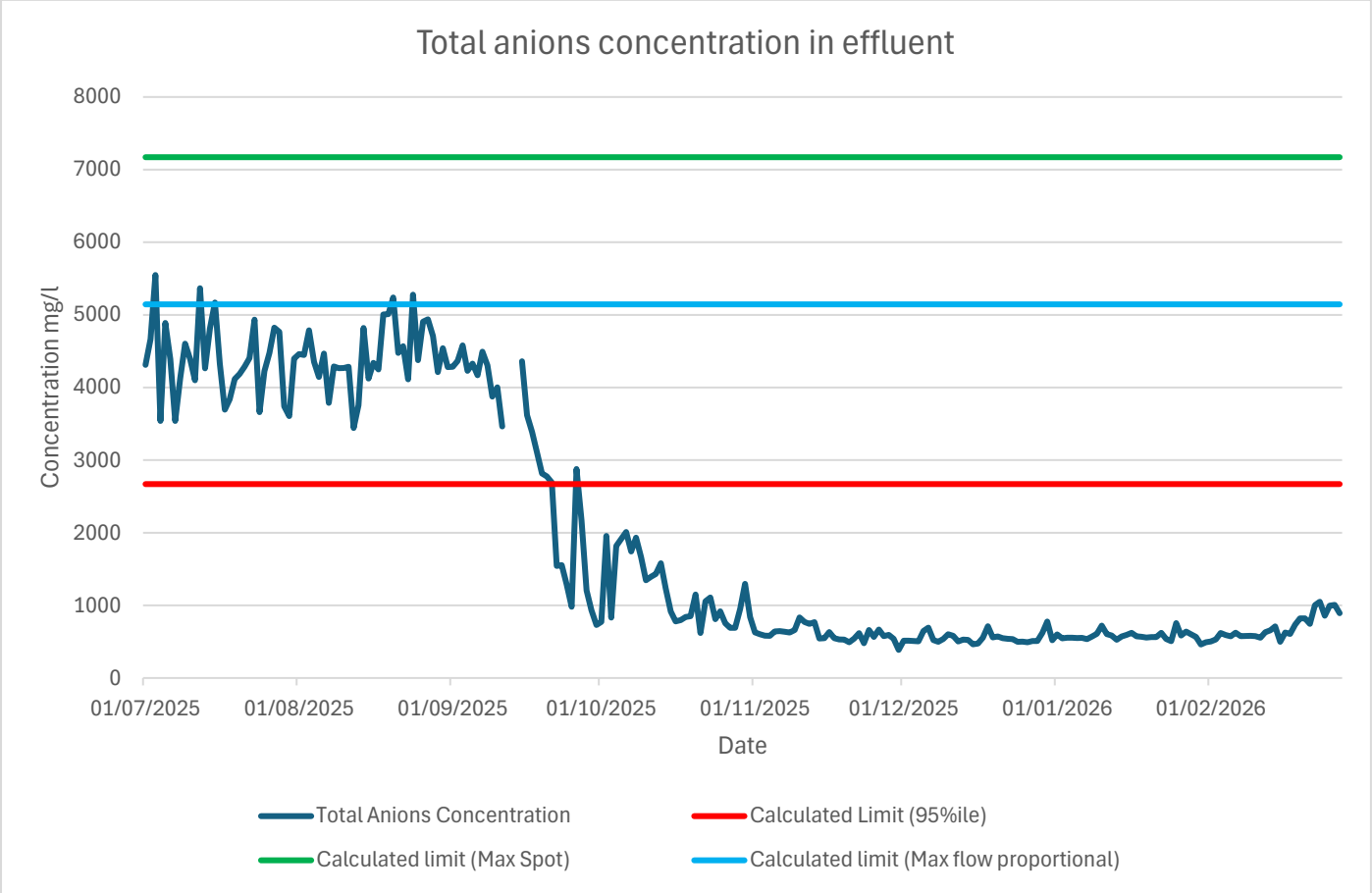

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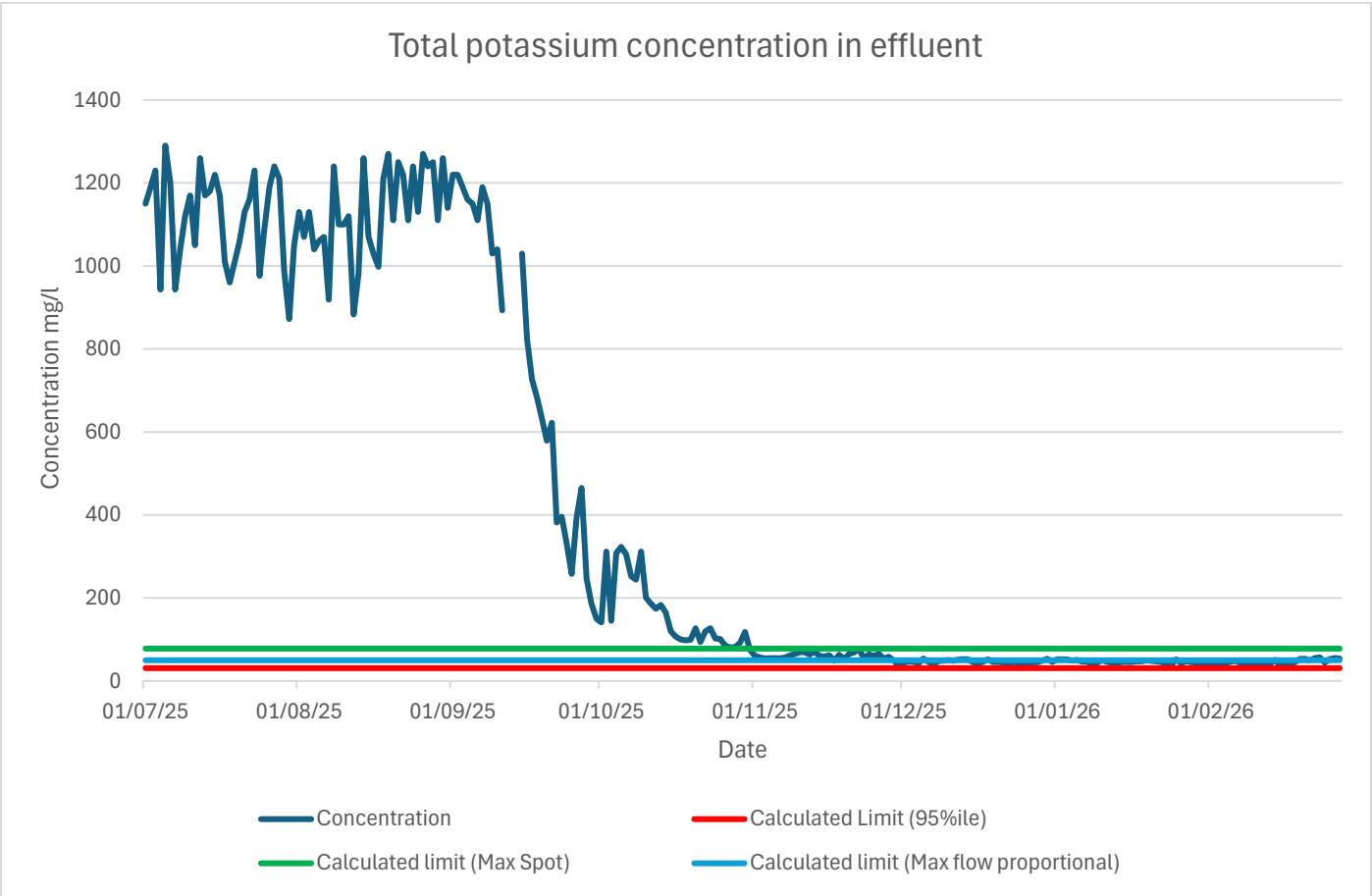

Figure 5.

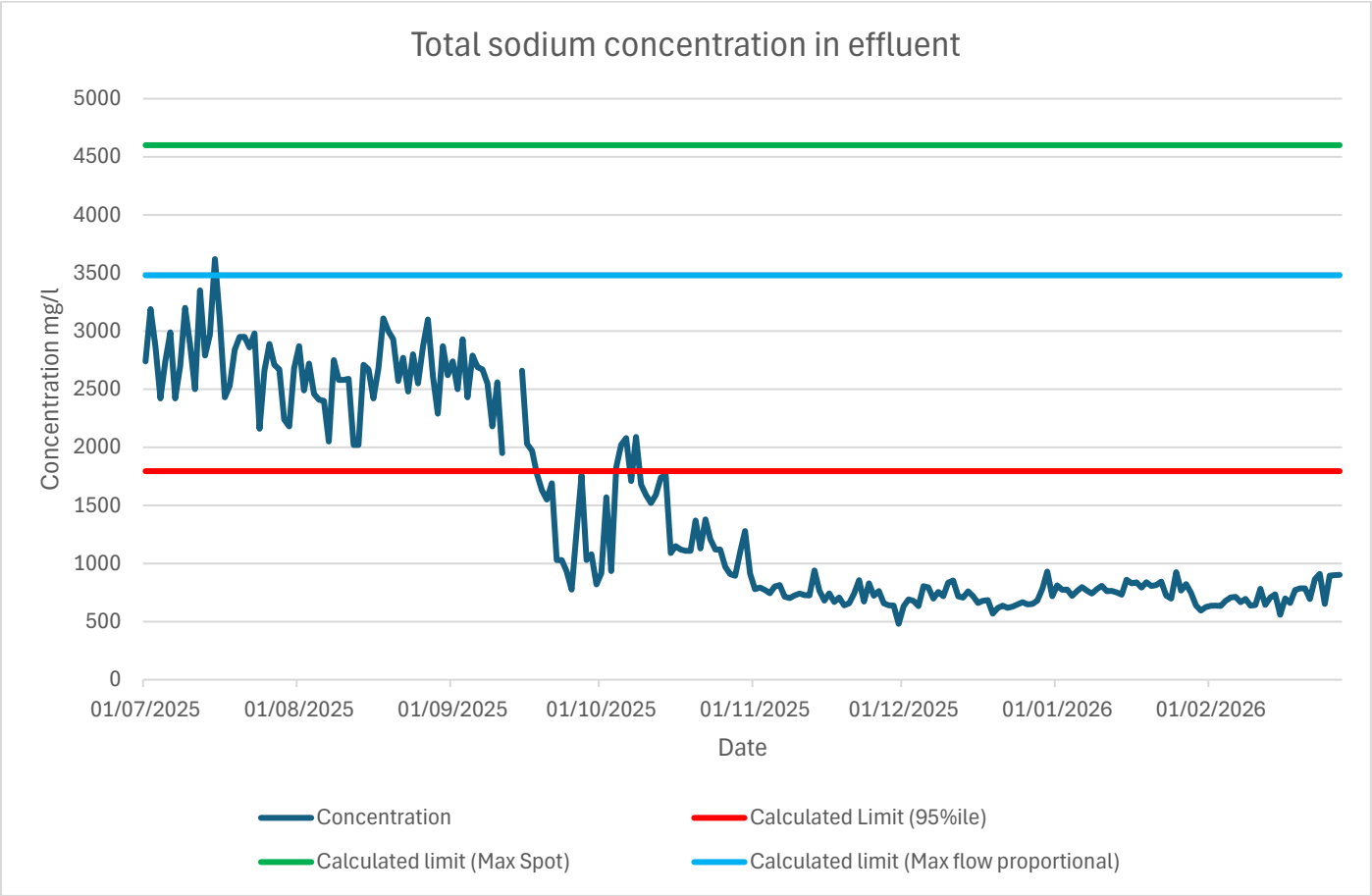

Figure 3 Total sodium concentration in effluent and calculated limits

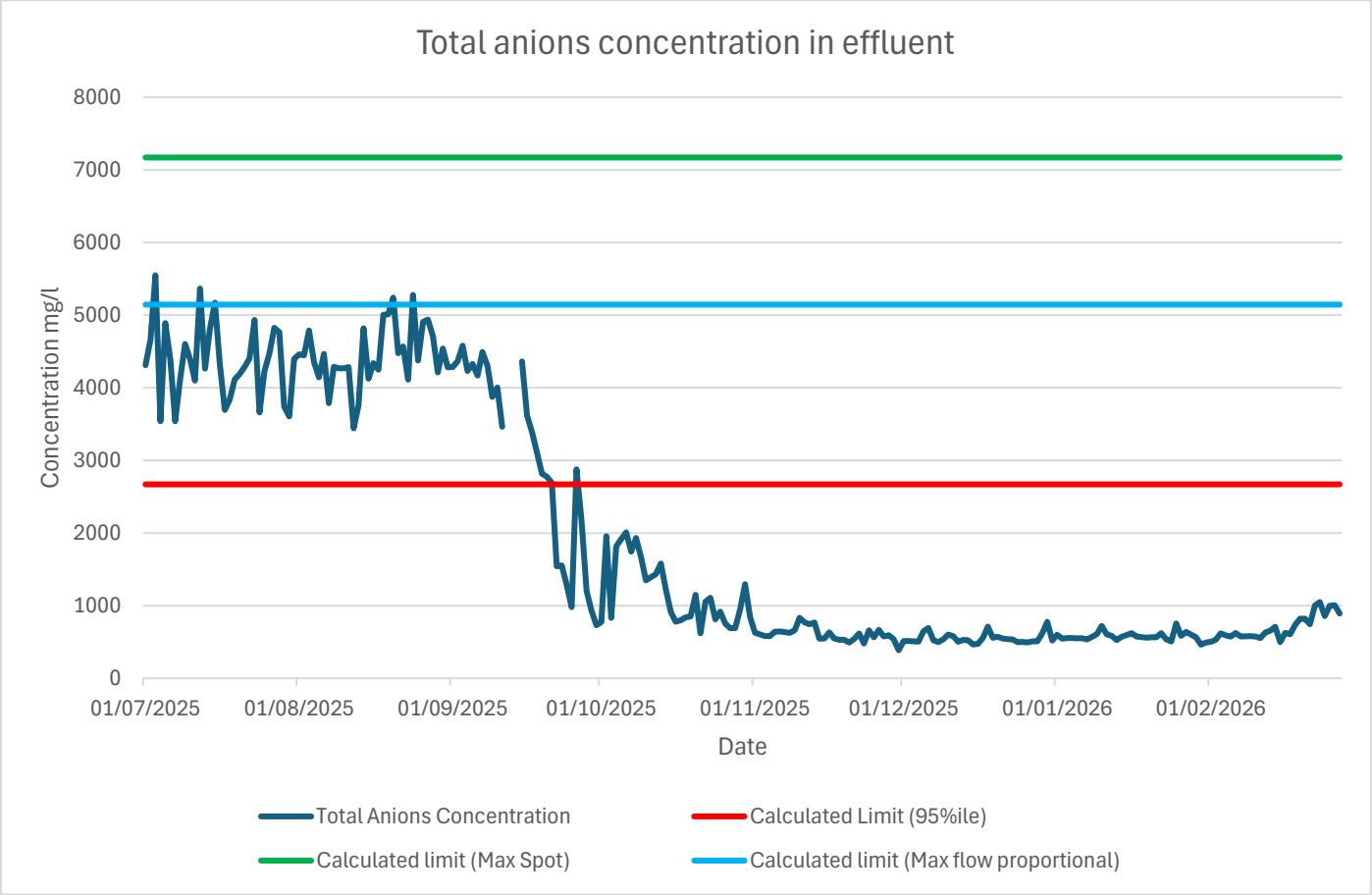

Figure 4 Total anion concentration in effluent and calculated limits

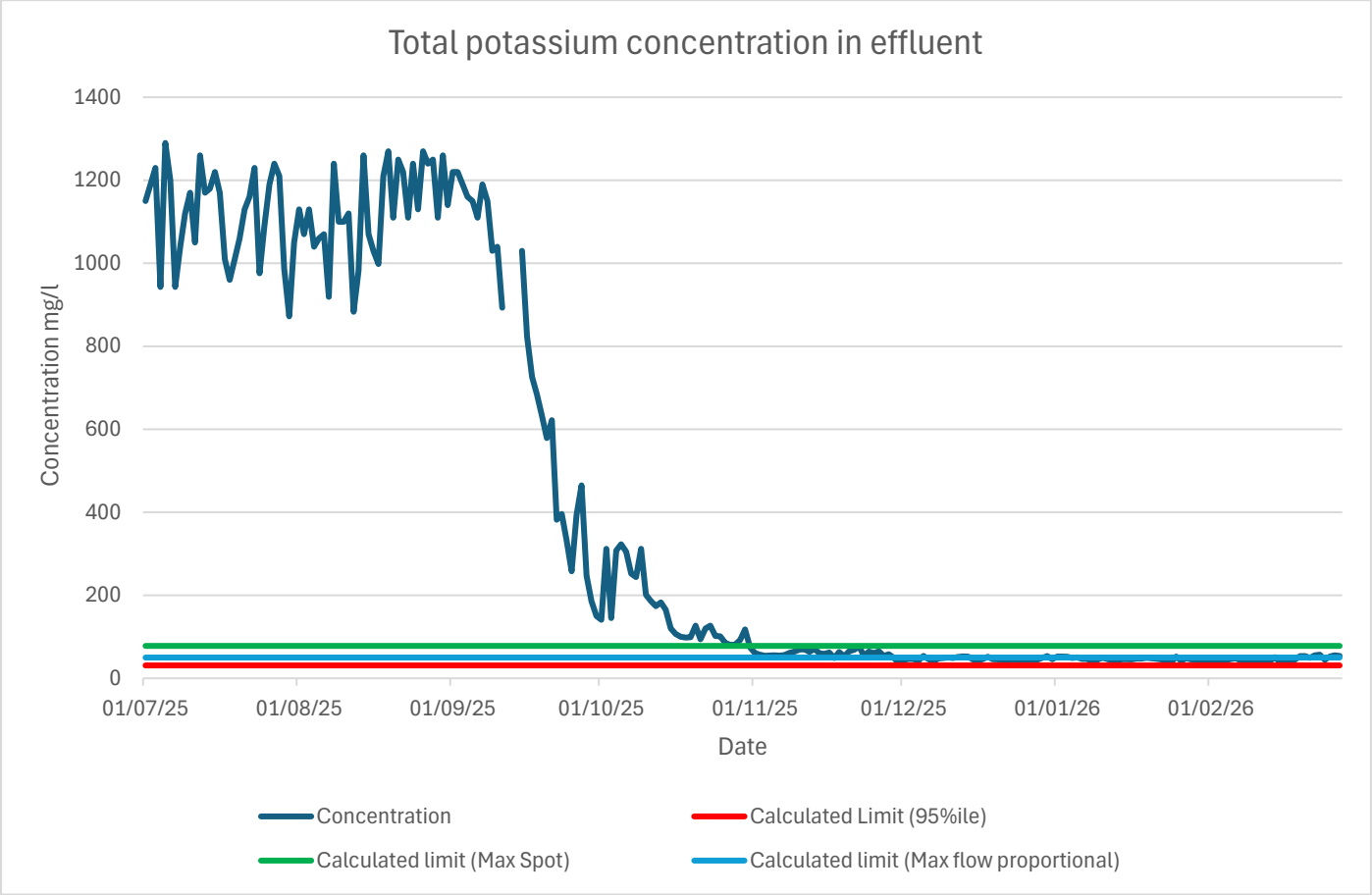

Figure 5 Total potassium concentration in effluent and calculated limits

All figures above show a significant decrease in effluent electrolyte concentrations compared to the modelled values.

Total sodium and total anions

Total anions include chloride and sulphate.

The concentrations of total sodium and total anions have fallen below the lowest calculated limit for wastewater treatment works, based on the 95th percentile. The concentrations are significantly lower than the calculated maximum limits for both wastewater treatment works and installations.

No monitoring requirements or limits for total sodium or total anions have been included in the varied permit.

Total potassium

There has been a more than tenfold decrease in total potassium in the effluent discharged.

The concentration has fallen below the maximum calculated limit for wastewater treatment works. Although the levels remain slightly above the installations maximum calculated limit and above the calculated wastewater treatment works 95th percentile limit, they compare favourably with the exposure concentrations (for potassium chloride) reported in the studies described in Section 7.2.4 of this document.

Considering there is no published limit for potassium, and the derived target is based on studies using potassium chloride (which is considered more toxic than potassium) as a surrogate, a limit has not been set for total potassium.

As total potassium levels remain close to the calculated limits, the varied permit maintains the monitoring requirement.

7.3 Noise and vibration management

7.3.1 Noise modelling

A revised noise impact assessment was received by the Environment Agency on 4 September 2023 in response to the Schedule 5 Notice issued on 1 August 2023. Following an internal review of the revised assessment, several concerns remained regarding the presentation of the data.

The primary concern was the inclusion of noise contributions from the site within the background sound level. This approach does not align with Environment Agency guidance or the requirements of BS4142:2014+A1:2019, which stipulate that noise impact assessments must be based on background sound levels excluding any contribution from the site being assessed.

Including site-generated noise in the background level calculations could artificially reduce the perceived impact of the site on the surrounding environment.

A Microsoft Teams call was held on 5 October 2023 between representatives of the Environment Agency and the Applicant to discuss the noise assessment in further detail. The purpose of the call was to agree on a way forward to address the key concerns identified during the Environment Agency's audit of the noise report.

Subsequently, the Applicant collected additional background data between 15 May and 22 May 2024 and submitted a revised noise assessment (Environmental permit Variation – Noise Assessment, dated July 2024) on 7 August 2024.

The revised assessment was audited internally by the Environment Agency. A summary of the key findings is provided below:

- Higher rating levels were identified by the Environment Agency compared to those reported by the Applicant.
- The discrepancies were primarily due to incorrect source data used in the Applicant's acoustic model. Specifically, the consultant incorrectly modelled background sound pressure levels as sound power levels for the DAF 2 and DAF 3 sound sources.
- The Applicant asserted that contextual factors reduced the noise impact from a significant adverse impact to a low impact. However, the Environment Agency disagrees with this conclusion due to:
    - The high numerical impact values observed
    - A history of noise complaints received from the local community

- The Applicant's application of context not aligning with Environment Agency guidance (Noise and vibration management: environmental permits - GOV.UK)

The Environment Agency concluded that there is a risk of 'significant adverse impacts' at sensitive receptors surrounding the facility and that the applicant should propose further mitigation measures to reduce noise impacts at these locations.

This conclusion was supported by ongoing noise complaints received by the Agency.

In February 2025, the applicant engaged a consultant to conduct a noise monitoring exercise. The results indicated that, following the implementation of additional mitigation measures at the effluent treatment plant, there had been a marginal improvement in overall noise levels. The report concluded that there remains a risk of 'significant adverse impact' at Trewassa.

Throughout 2025, the applicant completed further mitigation measures to reduce noise impact. This included the replacement and relocation of Aerzen blowers within a building fitted with acoustic mitigation.

The Environment Agency observed that these works resulted in a noticeable reduction in noise.

Considering the recent improvement works and the submission of an NMP (see section 7.3.2), we are satisfied that the applicant is preventing noise and, where not practicable, minimising it, and is not causing significant pollution.

This conclusion is supported by the fact that no noise complaints have been received by the Agency since mid-August 2025.

7.3.2 Noise Management Plan

As part of the determination a revised NMP was not provided.

The Environment Agency did not request that a NMP be provided as part of the application due to the ongoing noise issues associated with the site.

On 5 June 2025, the Environment Agency's local Regulatory Team required the applicant to develop an NMP for approval, in accordance with Environment Agency guidance. The applicant submitted the NMP on 24 December 2025.

The NMP includes plans for further mitigation measures and routine noise monitoring.

The NMP will be approved, if appropriate, by the local Regulatory Team.

7.3.3 Noise impact on habitats

At present, the Environment Agency is not aware of sufficient evidence-based criteria for assessing noise disturbance on designated ecological sites and their features.

In the absence of such criteria, or a clear site-specific indication that noise impacts will occur, we must conclude that the designated features would not be affected by noise generated from the proposed permitted activities.

The operations are located more than 500 metres from the designated SSSI and LWS, and the proposed activities are not considered novel within the wider area. Therefore, no visual disturbance is anticipated from site operations or the movement of plant and vehicles.

The site is situated between two Areas of Outstanding Natural Beauty (AONB): one located approximately 2.1 km northwest of the main creamery building, and the other approximately 3.3 km to the southeast. Refer to Figure 2 in Section 7.2.1.

Based on this information, we are confident that noise emissions from the site will not have any significant impact on the aforementioned habitats.

7.4 Odour management

7.4.1 Odour Management Plan

The Applicant submitted an OMP as part of the supporting documentation for variation V011.

During the determination process, the OMP was revised to include additional details on odour sources, control measures, and reporting protocols. The Environment Agency also requested further technical information regarding the OCUs used at the site, the type of covers to be installed on both the Balance Tank and Divert Tank, and the monitoring of effluent within these tanks to ensure it remains under aerobic conditions.

The revised OMP has been reviewed for compliance with our guidance document *Environmental permitting: H4 odour management - GOV.UK*.

The OMP is referenced in Table S1.2 of the permit as part of the Operating Techniques. It outlines the methods employed at the site, including onsite monitoring and contingency measures to prevent, control, and minimise odour pollution.

Measured hydrogen sulphide (H_2S) levels, as reported in Section 7.1.1 of the OMP, exceeded the odour nuisance threshold for 1.5% of the monitoring period. However, we are confident that the improvements made to the WPF, specifically the installation of OCUs for the lagoon, Balance Tank 2, and Anoxic Tanks 2 and 3, will reduce H_2S emissions from the site.

We are satisfied that the measures outlined in the OMP effectively mitigate odour emissions.

A standard odour condition has been included in the permit, allowing the Environment Agency to request a revised OMP should odour concerns arise in the future.

7.4.2 Odour assessment

The site is located in close proximity to human receptors and is a known source of odour complaints.

The Environment Agency's approach is that BAT embed a hierarchy of preventing, minimising, capturing, and treating odours to ensure the Applicant takes all reasonable steps to reduce the risk of odour pollution.

The application of BAT, alongside the implementation of a robust management system and OMP, ensures that odour risks are minimised as far as reasonably practicable.

As part of the applied-for variation (V011), the Applicant submitted a revised assessment of odour impacts from the site. The Odour Impact Assessment, referenced as Appendix F in the application, focuses on a number of projects undertaken since the last permit variation in 2014, several of which have already been implemented.

The assessment addresses relevant changes at both the creamery and the WPF, with the WPF being the primary focus. These changes include:

- Installation of a new contingency lagoon with extraction to an OCU, physically located at the creamery but forming part of the WPF redevelopment
- Two new DAF units
- Covering and extraction of air from the existing balance tank (BT1) and divert tank to a new OCU
- Upgrade to activated filter media filtration tanks
- Enclosure of sludge centrifuges and trailer
- Installation of an automated forward/divert solution for both cheese/whey and Demin/GOS processes

Frequent and recurring odour complaints have been received from residents, primarily from Trewassa (northeast of the creamery and northwest of the WPF), Treworra (north-northeast of the WPF), and to a lesser extent, Tremail (east of the WPF).

The redevelopment measures, particularly the covering and extraction of air from BT1 and the divert tanks, are expected to reduce odour emissions from the WPF.

The odour assessment aimed to evaluate ground-level odour concentrations in the local area, including Trewassa and Treworra, following the implementation of improvements at the WPF.

It was conducted using atmospheric dispersion modelling, five years of hourly sequential meteorological data, and odour emissions data from baseline surveys carried out between 2019 and 2021. The results were compared to a previous odour survey conducted in 2017, prior to the improvement works, which serves as the baseline assessment.

In accordance with the Environment Agency's Horizontal Guidance H4 – Odour Management, the following benchmark exposure levels were used to assess the potential for unacceptable odour pollution. These benchmarks are based on the 98th percentile of hourly average odour concentrations, measured in European odour units per cubic metre (OUE/m^3), modelled over a year at the site boundary:

- **1.5 OUE/m³ – Most offensive**: Processes involving decaying animal or fish remains, septic effluent or sludge, biological landfill odours
- **3 OUE/m³ – Moderately offensive**: Intensive livestock rearing, fat frying (food processing), sugar beet processing, well-aerated green waste composting
- **6 OUE/m³ – Less offensive**: Brewery, confectionery, coffee roasting

Given the nature of the processes carried out at the site, falling between the moderately and most offensive categories, and the history of odour complaints, the appropriate benchmark for assessment has been set at **1.5 OUE/m³**, modelled as the 98th percentile at the nearest identified sensitive receptor.

This aligns with the Environment Agency's guidance for 'most offensive' odours.

This benchmark equates to an odour concentration of 1.5 OUE/m³ not being exceeded for more than 2% of the time, or 175 hours per year, at any receptor location outside the permitted boundary.

7.4.3 Odour modelling

The odour monitoring survey was conducted at the main creamery and the WPF by a third-party contractor over a three-day period, from 20 to 22 April 2021. The survey assessed the effects of various improvement works that form the basis of Variation V011, specifically those completed in 2020, including:

- A new contingency lagoon with extraction to an OCU (located at the creamery but forming part of the WPF redevelopment).
- Two new DAF units.
- Covering and extraction of the existing balance tank (BT1) and divert tank to a new OCU.
- Partial enclosure of sludge centrifuges and trailer.

Data from previous odour surveys conducted in March 2019 and May 2020 was also used. The survey results were used to derive odour emission estimates for each source, which were then combined with details of their dimensions, physical characteristics, and operational parameters to estimate emissions across the creamery and WPF. These data provided a breakdown of odour emissions from each aspect of the process under current operational conditions. A summary of the odour emission sources can be found in Table 4 below, reproduced from the Odour Impact Assessment submitted with application V011.

Area	Stage of Treatment	Source	Nature of odorous material / level of enclosure	Frequency / duration of release	Number of samples (each year)
WPF	Preliminary	Inlet well	Influent / open well	Continuous	3
		DAF units 1-3	Partially treated effluent / open units within buildings *		2 per unit
		Balance Tank 2	Partially treated effluent / open tank		3
	Primary	Anoxic Tanks 1-3	Partially treated effluent / open tanks		3 per tank (Tanks 2 & 3)
		Aeration Tanks 1a, 1b, 2 & 3	Aerated effluent / open tanks		2 per tank
		RAS / WAS Chambers	Sludge / open wells		n/a**
	Sludge treatment & handling	Bottom sludge pit	Sludge / open chamber		n/a^
		Top sludge pit	Sludge / open pit		3
		Sludge conveyor	Dewatered sludge / agitation	19 hours per day	n/a^^
		Sludge trailer	Dewatered sludge / open trailer	Continuous	3
	Odour Control	OCU (Balance Tank 1 & Divert tanks)	Treated emissions / vertical stack		3 at OCU outlet (based on 2021 survey)***
Main creamery (Calcium Phosphate Plant)	Primary	Open top buffer tank	Partially treated effluent / open tanks	Continuous	3 (2021 only)
	Sludge treatment & handling	Flocculation tank	Partially treated effluent / open tanks		3 (2021 only)
		Sludge conveyor	Dewatered sludge / agitation	19 hours per day	n/a^^
		Sludge trailer	Dewatered sludge / open trailer	Continuous	3 (2021 only)
	Odour control	OCU (storage lagoon)	Treated emissions / vertical stack		3 at OCU outlet (2021 only)

* DAF unit 3 not operational prior to 2021 survey and not currently enclosed but will be housed as part of improvement works associated with permit variation. DAF 2 doors were open during survey period. Discussion held between WSP and Saputo Dairy to confirm that doors will be closed as part of ongoing operation. Therefore, emissions from DAF 2 & 3 are assumed to be equivalent to DAF 1 as measured in 2021 survey for purposes of this study.
** Returned Activated Sludge (RAS) and Waste Activated Sludge (WAS) chambers assumed to be equivalent to the emissions rate from Anoxic tank 2 (Olfasense UK, July 2021)
*** Based on 2021 survey, due to installation of acceleration cone in October 2020 and wet scrubber additive dosing system to the OCU in November 2020
^ Surveyed emissions from 'Top sludge pit' used as proxy for bottom pit at WPF
^^ Reference data taken from other facilities by Olfasense UK, 2021 report

Table 4 Summary of odour sources included in 2019-2021 surveys

The modelling used the latest version of Atmospheric Dispersion Modelling System (ADMS) (v5.2). This model was developed by Cambridge Environmental Research Consultants Ltd (CERC) and is widely used throughout the UK for air quality assessments associated with permitted activities.

ADMS is an advanced steady-state Gaussian atmospheric dispersion model that evaluates the impacts of emissions to air from industrial installations. It can simulate the effects of buildings, complex terrain, coastlines, and variations in surface roughness on dispersion.

The model also allows emissions to be represented from different source types, including point sources (e.g., stacks), line sources, area sources, and volume sources, either at ground level or elevated above ground.

The modelled domain covered an area of 5 km × 3 km, encompassing the creamery and WPF as well as locally sensitive areas such as Trewassa, Treworra, Davidstow, and Tremail. In addition to the gridded domain, a total of 42 discrete receptor locations were included, comprising residential dwellings in proximity to the Dairy Crest creamery and WPF.

Particular attention was given to receptors referenced in odour complaint logs held by the Applicant. Details of the discrete receptors are provided in Table 4-2 of the Odour Impact Assessment (V011).

All discrete and gridded receptor locations were modelled at 1.5 m above ground level (agl) to represent average breathing height.

Odour emission rates for each identified source are reproduced from Table 4-3 of the Odour Impact Assessment in Table 5, below.

Area	Source	Model Source Type	Dimensions (agl – above ground level)	Odour Emission Rate (Area $OU_E/m^2/s$; Vol. $OU_E/m3/s$; Point OU_E/s)
WPF	Inlet well	Area	30m^2; Ground level	29.5
	Balance Tank 2	Area	262m^2; 6m agl	45.1
	DAF 1	Volume	684m^3; building height = 4.5m agl	0.2
	DAF 2	Volume	531m^3; building height = 4.5m agl	0.3
	DAF 3*	Volume	482m^3; building height = 4.5m agl	0.3
	Anoxic Tank 1	Area	50m^2; 6m agl	1.4
	Anoxic Tank 2	Area	28m^2; 1m agl	1.4
	Anoxic Tank 3	Area	28m^2; 1m agl	14.7
	Aeration Tank 1a	Area	492.5m^2; 6m agl	0.4
	Aeration Tank 1b	Area	492.5m^2; 6m agl	0.9
	Aeration Tank 2	Area	706m^2; 5.6m agl	0.4
	Aeration Tank 3	Area	227m^2; 9m agl	0.9
	Sludge Pit **	Area	53.5m^2; 1m agl	159.3
	Sludge Trailer & Conveyor *	Volume	68m^3 ; 4m agl	11.0
	RAS / WAS chambers	Area	7m^2; Ground level	2.3
	OCU (Balance Tank 1 & Divert Tank)	Point [A]	0.25m diameter; 10m agl	1970
	Settlement Tank 1 ^	Area	154m^2; 3.5m agl	0.7
	Settlement Tank 2 ^	Area	234 m^2; 3.5m agl	0.5
Main creamery (Calcium Phosphate Plant)	Open top buffer tank	Area	28 m^2; 6m agl	3.1
	Flocculation tank	Area	5m^2 ; 4.5m agl	113
	Sludge Conveyor	Area	8.5m^2; 3.5m agl	2.7
	Sludge Trailer	Area	35m^2; 2.5m agl	16
	OCU (storage lagoon)	Point [B]	0.6m diameter; 4m agl	2017
	Filtrate Tank^	Area	2.8m^2; 1m agl	20.8
	Filtrate Lamella^	Area	7.6m^2; 3.8m agl	20.8

* Modelled within proposed building as part of improvement works. DAF 3 odour emissions assumed to be equivalent to DAF 1.
** Accounts for both top and bottom sludge pits.
^ Assumed to be as per source parameters reported in 2017 assessment, in absence of more recent monitoring data.
[A] Flow rate = 1.1 m^3/s; Exit velocity = 22.4 m/s; Temperature = 17.8 ^{o}C
[B] Flow rate = 0.4 m3 /s; Exit velocity = 1.4 m/s; Temperature = 14.3 oC

Table 5 Odour emission rates for all modelled odour sources

7.4.4 Odour modelling limitations and assumptions

The modelling is based on the assumption that all emission sources identified in Table 5, above, operate continuously within the creamery and WPF. The rates listed in Table 5 have been applied to each hour of the modelled year. Given that improvement works at the Creamery and WPF were gradually implemented prior to 2021, the odour emission rates applied in this assessment are primarily based on sampling undertaken during separate three-day periods in March 2019, May

2020, and April 2021. Natural seasonal fluctuations in odour emissions are expected, particularly due to ambient temperature changes. Other variations include changes in wastewater flow from the Creamery and the age of the sludge. Accordingly, the odour emission rates listed in Table 5, above, are based on an average of the surveyed emissions from each year (2019–2021).
Additional assumptions applied to the modelling of odour emissions from the WPF are outlined below:

- **DAF units:** DAF unit 3 was not operational prior to the 2021 survey and is not currently enclosed, but it will be housed as part of the improvement works associated with the permit variation (V011). During the 2021 survey, the doors of the DAF 2 building were open, resulting in anomalously high surveyed odour emissions. It has been confirmed that the DAF 2 doors will remain closed during ongoing operations. Therefore, emissions from DAF 2 and DAF 3 are assumed to be equivalent to those from DAF 1, based on the 2021 odour survey.

- **OCU emissions:** Following the installation of an acceleration cone in October 2020 and a wet scrubber additive dosing system in November 2020 at the WPF OCU, odour emissions from the OCU are based solely on the 2021 survey.

- **Sludge trailer:** The sludge trailer is currently only partially enclosed, but under the permit variation (V011) it will be fully housed as part of the improvement works. For the purposes of this assessment, this source has been modelled as a volume source.

- **Sludge pits and tanks:** Surveyed emissions from the top sludge pit have been used as a proxy for the bottom pit, based on all surveys completed between 2019 and 2021. Similarly, surveyed emissions from anoxic tank 2 over the same period are assumed to be equivalent to those from the RAS/WAS chambers.

7.4.5 Odour assessment results

The results of the modelling assessment demonstrated that the benchmark criterion of 1.5 OUE/m³ is not predicted to be exceeded at any location during any of the five modelled years (2015–2019). At one location, R31 (Greenwood Cottage, Trewassa), the odour concentration equalled the benchmark of 1.5 OUE/m³; for all other years, the odour concentration was modelled as being below the benchmark. This receptor represents the closest residential property to the WPF site and is situated 205 m northwest of the WPF.
The modelling assessment indicated that, with the exception of receptors R31–R34 (located within Trewassa, northwest of the WPF), all other receptors are not predicted to experience a C98th concentration above 1 OUE/m³ in any of the modelled years. The results of the dispersion modelling verify that the highest odour concentrations occur at receptors within the Trewassa (R31–R38) and Treworra (R12 and R39) areas. This correlates with the majority of odour complaints received between 2016 and 2020, demonstrating that the dispersion model has performed well.

7.4.6 Comparison to 2017 baseline odour modelling study

When compared to the odour assessment undertaken in 2017, which represents the baseline prior to the proposed improvements, it is evident that the improvements at the main creamery site and the WPF are expected to reduce odour emissions and associated impacts. This conclusion is further supported by the reduction in the number of substantiated complaints received by the Environment Agency since the application (V012) was submitted in July 2022.

The 2017 odour assessment showed that all receptors within Trewassa exceeded both the benchmark criterion of 1.5 OUE/m³ and the 3 OUE/m³ criterion, with the majority of properties within the hamlet also exceeding 5 OUE/m³ as the C98th value. At the equivalent location for receptor R31 in Trewassa, the modelled concentration was close to 10 OUE/m³ on the provided odour contour plots. The benchmark criteria were also exceeded in Treworra and parts of Davidstow.

The results of the current odour assessment demonstrate that odour concentrations at sensitive receptors within Trewassa and across the wider modelled area are predicted to remain below the 1.5 OUE/m³ benchmark, or at worst equal to the benchmark at receptor R31 (Greenwood Cottage, Trewassa) when considering the relative worst-case meteorological year (2019).

7.4.7 Comparison to 2017 baseline odour modelling study

The results of the dispersion modelling indicate that the improvement works already undertaken at the Creamery and WPF, together with the proposed works, are expected to significantly reduce odour emissions at the identified sensitive receptors when compared to the 2017 baseline assessment. The 2017 baseline assessment demonstrated that all properties within Trewassa, Treworra, and parts of Davidstow exceeded the benchmark criterion, with receptors in Trewassa experiencing levels between 5 OUE/m³ and 10 OUE/m³.
When considering both the completed and proposed improvements, the current assessment demonstrates that all sensitive receptors are predicted to experience odour levels below the benchmark, or at worst equal to the benchmark at the nearest receptors to the WPF under the worst-case dispersion criteria.

Having reviewed the submitted odour assessment as part of the applied variation (V011), we are satisfied that the modelling is representative of sources on site. We agree with the conclusions of the report that odour concentrations will remain below the benchmark for all sensitive receptors within the modelled area, or at worst equal to the benchmark for those closest to the WPF.

8 Permit conditions, competence, monitoring and reporting

8.1 Pre-operational measures

Based on a review of recent compliance notifications, we consider that a pre-operational condition is required. See Section 5.6.3 of this decision document for further details.

Once the pre-operational measure has been completed the operator can increase the production of cheese from 9.6 tonnes per hour to 11.4 tonnes per hour.

Reference	Pre-operational measure
PO1	**Cheese production capacity increase** Prior to the increase in cheese production, the operator shall submit a written report to the Environment Agency for assessment and written approval. The report shall include: • A review of existing monitoring and control arrangements for influent, process and final effluent, together with proposals to improve these arrangements where necessary, including: o monitoring of influent and process effluent to detect changes in load, composition and treatment performance

	○ process indicators to detect abnormal operation, including risk of overflow or effluent escape • Proposals for near real time monitoring of final effluent, capable of providing early warning of deterioration in treatment performance and potential emission limit breaches, not limited to COD, BOD (or an appropriate BOD equivalent method), suspended solids and conductivity, or justification for their omission • Documented procedures for investigation, root cause analysis and implementation of corrective actions, not limited to containment or diversion of off-spec effluent, and shutdown where necessary • Arrangements for recording and logging of: ○ alarms and trigger events ○ monitoring and process control data ○ actions taken • An implementation programme for the proposals, including timescales for full implementation The operator shall implement any proposals in the report in line with timescales agreed with the Environment Agency.

8.2 Improvement programme

Based on the information in the Application, we consider that we need to include an improvement programme. These improvements will be required by conditions, and they are set out below, justifications for these are provided at the relevant section of the decision document. These conditions require the Applicant to provide us with necessary details that are to be established or confirmed proposals after the permit is issued.

IC12	**PM10 & PM2.5** The operator shall submit a written report to the Environment Agency for assessment and written approval. The report shall include, but should not be limited to, the following: • Results of emissions monitoring from the spray drier (A3) • Identification of the fractions of PM_{10} and $PM_{2.5}$ • Evidence the monitoring is MCERTS accredited • Evidence the monitoring has been carried out under representative monitoring conditions The operator shall implement any proposals in the report in line with timescales agreed with the Environment Agency.	24 months from date of issue of Variation BN1371IK/V013

IC13	**Relative hazardous substance risk assessment and site baseline report** The operator shall submit a written report to the Environment Agency for assessment and written approval. The report should be carried out in accordance with, EC Commission Guidance 2014/C 136/-3 The report shall include, but should not be limited to, the following: • A stage 3 relative hazardous risk assessment • A plan for soil and ground water monitoring, for substances that have not been screened in the Stage 3 assessment • Submission of a revised baseline report The operator shall implement the plan in line with timescales agreed with the Environment Agency	12 months from date of issue of Variation BN1371IK/V013
IC14	**Containment** The Operator shall undertake a survey of the primary, secondary and tertiary containment at the site (including the WPF and associated storage areas) and review measures against relevant standards including: • CIRIA Containment systems for the prevention of pollution (C736) – Secondary, tertiary and other measures for industrial and commercial premises, • EEMUA 159 - Above ground flat bottomed storage tanks The operator shall submit a written report, summarising the survey, to the Environment Agency for assessment and written approval. The report shall include, but should not be limited to, the following: • Current containment measures • Any deficiencies identified in comparison to relevant standards, • Improvements proposed • Time scale for implementation of improvements. The operator shall implement any proposals in the report in line with timescales agreed with the Environment Agency	12 months from date of issue of Variation BN1371IK/V013

8.3 Emission limits and monitoring

Air

Monitoring and ELVs have been updated where appropriate, taking into account BAT, the MCPD and SWIP guidance. The monitoring and associated limits are presented in Table 6, below.

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan in Schedule 7]	Boiler 1: 11.5 MWth gas oil (kerosene) boiler (New MCP)	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	200 mg/Nm^3	Average over sampling period	Every 3 years	EN 14792
		Carbon monoxide	No limit	Average over sampling period	Every 3 years	EN 15058
A2 [Point A2 on site plan in Schedule 7]	Boiler 2: 10.5 MWth gas oil (kerosene) boiler (New MCP)	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	200 mg/Nm^3	Average over sampling period	Every 3 years	EN 14792
		Carbon monoxide	No limit	Average over sampling period	Every 3 years	EN 15058
A3 [Point A3 on site plan in Schedule 7]	Spray Drier for drying of concentrated whey powder including demineralised whey via bag filter	Dust	10 mg/Nm^3	Average over sampling period	Annually	EN 13284-1
A7 [Point A7 on site plan in Schedule 7]	Boiler 3: 10.5 MWth gas oil (kerosene) boiler (New MCP)	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	200 mg/Nm^3	Average over sampling period	Every 3 years	EN 14792
		Carbon monoxide	No limit	Average over sampling period	Every 3 years	EN 15058
A8 [Point A8 on site plan in Schedule 7]	Boiler 4: 4.9 MWth biomass boiler (MCP & SWIP) Fired on biomass (non-waste)	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	1000 mg/Nm^3	Average over sampling period	Annually	EN 14792
			650 mg/Nm^3 ([1])			
		Dust	200 mg/Nm^3	Average over sampling period	Annually	BS EN 13284-1
			50 mg/Nm^3 ([1])			
		Carbon monoxide	No limit	Average over sampling period	Annually	EN 15058
	Boiler 4:	Dark Smoke	No visible dark smoke	-	Daily when in operation	Ringelmann Chart Shade 1.

	4.9 MWth biomass boiler (MCP & SWIP) Fired on waste wood	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/Nm^3	Average over sampling period	Annually	EN 14792
		Carbon monoxide	225 mg/Nm^3	Average over sampling period	Annually	EN 15058
		Dust	50 mg/Nm^3	Average over sampling period	Annually	EN 13284-1
		TVOC	30 mg/Nm^3	Average over sampling period	Annually	EN 12619
		HCN ([2])	7.5 mg/Nm^3	Average over sampling period	Annually	US EPA OTM29 CEN TS 17337
		Formaldehyde ([3])	7.5 mg/Nm^3	Average over sampling period	Annually	CEN TS 17638 CEN TS 18040 CEN TS 17337
A9 [Point A9 on site plan in Schedule 7]	Boiler 5: 4.9 MWth biomass boiler (MCP & SWIP) Fired on biomass (non-waste)	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	1000 mg/Nm^3 650 mg/Nm^3 ([1])	Average over sampling period	Annually	EN 14792
		Dust	200 mg/Nm^3 50 mg/Nm^3 ([1])	Average over sampling period	Annually	BS EN 13284-1
		Carbon monoxide	No limit	Average over sampling period	Annually	EN 15058
	Boiler 5: 4.9 MWth biomass boiler (MCP & SWIP) Fired on waste wood	Dark Smoke	No visible dark smoke	-	Daily when in operation	Ringelmann Chart Shade 1.
		Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/Nm^3	Average over sampling period	Annually	EN 14792
		Carbon monoxide	225 mg/Nm^3	Average over sampling period	Annually	EN 15058
		Dust	50 mg/Nm^3	Average over sampling period	Annually	EN 13284-1
		TVOC	30 mg/Nm^3	Average over sampling period	Annually	EN 12619

		HCN ([2])	7.5 mg/Nm^3	Average over sampling period	Annually	US EPA OTM29 CEN TS 17337
		Formaldehyde ([3])	7.5 mg/Nm^3	Average over sampling period	Annually	CEN TS 17638 CEN TS 18040 CEN TS 17337
A10 [Point A10 on site plan in Schedule 7]	Odour control unit at Creamery (contingency lagoon)	No parameters set	No limit	--	--	--
A11 [Point A11 on site plan in Schedule 7]	Odour control unit at WPF (BT1 and Divert tanks)	No parameters set	No limit	--	--	--
A12 [Point A12 on site plan in Schedule 7]	Odour control unit at WPF (BT2 / Anoxics)	No parameters set	No limit	--	--	--
([1]) Limit applies from 1 January 2030 ([2]) Only applicable when firing on melamine faced woods ([3]) Only applicable when firing plywood and chipboard						

Table 6 Emissions to air, monitoring and emission limit values

Water

Monitoring and ELVs have been updated where appropriate, taking into account BAT and water quality. The monitoring and associated limits are presented in,

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 [Point W1 on site plan in Schedule 7] discharge to River Inny	Uncontaminated surface water drainage from interceptor and attenuation pond	pH	6 minimum 9 maximum	Spot sample	Monthly	BS ISO 10523
W2 [Point W2 on site plan in Schedule 7] discharge to River Inny	Treated process effluent arising from Creamery operations	Volume	2,600 m^3/day	24 hour (total daily volume)	Continuous	MCERTS self-monitoring of effluent flow scheme
		pH	6 minimum 9 maximum	Instantaneous	Continuous	BS ISO 10523
		Ammoniacal nitrogen (expressed as N)	1.7 mg/l	24 hour (flow proportional composite sample)	Daily	BS EN ISO 11732 BS ISO 15923 – 1

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
		Biochemical oxygen demand	13 mg/l	24 hour (flow proportional composite sample)	Daily	BS EN 1899-1
		Total suspended solids (TSS)	20 mg/l	24 hour (flow proportional composite sample)	Daily	EN 872
		Total Phosphorus (TP)	0.3 mg/l	24 hour (flow proportional composite sample)	Daily	EN ISO 6878 EN ISO 15681-1 EN ISO 15681 -2 EN ISO 11885)
		Chemical oxygen demand (COD)	125 mg/l	24 hour (flow proportional composite sample)	Daily	BS ISO 15705
		Total nitrogen (TN)	30 mg/l	24 hour (flow proportional composite sample)	Daily	EN 12260 EN ISO 11905-1
		Total Potassium	No limit	24 hour (flow proportional composite sample)	Monthly	BS EN ISO 11885 EN ISO 17294-2
		Chloride	No limit	24 hour flow proportional composite	Monthly	BS EN ISO 10304-1 BS EN ISO 15682 BS ISO 15923 – 1
		Temperature	28 ^{O}C (^{1,2}) Annual 95th percentile 33 ^{O}C (^{1,2})	Instantaneous	Continuous	Traceable to national standard

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
			maximum			
([1]) Limit applies 3 years after permit (EPR/BN6137IK/V013) issue date ([2]) Temperature can be measured at the point of discharge or after effluent treatment before entering the pipeline						

Table 7, below.

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 [Point W1 on site plan in Schedule 7] discharge to River Inny	Uncontaminated surface water drainage from interceptor and attenuation pond	pH	6 minimum 9 maximum	Spot sample	Monthly	BS ISO 10523
W2 [Point W2 on site plan in Schedule 7] discharge to River Inny	Treated process effluent arising from Creamery operations	Volume	2,600 m^3/day	24 hour (total daily volume)	Continuous	MCERTS self-monitoring of effluent flow scheme
		pH	6 minimum 9 maximum	Instantaneous	Continuous	BS ISO 10523
		Ammoniacal nitrogen (expressed as N)	1.7 mg/l	24 hour (flow proportional composite sample)	Daily	BS EN ISO 11732 BS ISO 15923 – 1
		Biochemical oxygen demand	13 mg/l	24 hour (flow proportional composite sample)	Daily	BS EN 1899-1
		Total suspended solids (TSS)	20 mg/l	24 hour (flow proportional composite sample)	Daily	EN 872
		Total Phosphorus (TP)	0.3 mg/l	24 hour (flow proportional	Daily	EN ISO 6878 EN ISO 15681-1 EN ISO 15681 -2

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
				composite sample)		EN ISO 11885)
		Chemical oxygen demand (COD)	125 mg/l	24 hour (flow proportional composite sample)	Daily	BS ISO 15705
		Total nitrogen (TN)	30 mg/l	24 hour (flow proportional composite sample)	Daily	EN 12260 EN ISO 11905-1
		Total Potassium	No limit	24 hour (flow proportional composite sample)	Monthly	BS EN ISO 11885 EN ISO 17294-2
		Chloride	No limit	24 hour flow proportional composite	Monthly	BS EN ISO 10304-1 BS EN ISO 15682 BS ISO 15923 – 1
		Temperature	28 ^{O}C ([1,2]) Annual 95th percentile	Instantaneous	Continuous	Traceable to national standard
			33 ^{O}C ([1,2]) maximum			

([1]) Limit applies 3 years after permit (EPR/BN6137IK/V013) issue date

([2]) Temperature can be measured at the point of discharge or after effluent treatment before entering the pipeline

Table 7 Emissions to water, monitoring and emission limit values

Further details on monitoring requirements and limits can be found in Section 7.2 of this document.

Volume, pH & BOD

BAT monitoring and limits associated with water quality have been retained.

Ammoniacal Nitrogen

Monitoring has been retained. A revised limit associated with water quality has been included.

Total Suspended Solids

BAT monitoring requirements have been retained. A lower limit, consistent with BAT, has been set.

Chemical Oxygen Demand and Total Nitrogen

Monitoring and limits associated with BAT have been included. The limits have been set at the top of the BAT range, based on abatement efficiencies exceeding 95% for chemical oxygen demand and 80% for total nitrogen, respectively.

Total Phosphorus

BAT monitoring requirements have been retained.

The limit for phosphorus is at the lower end of the BAT range to protect water quality.

Chloride

BAT monitoring requirements have been retained. The monitoring frequency has been reduced, consistent with BAT.

Potassium

Monitoring has been retained. The frequency has been reduced to match that of chloride.

Temperature

The monitoring requirement has been retained. The limit is required to protect water quality.

The limit will apply three years after the varied permit is issued. Temperature can be measured at the point of discharge or after effluent treatment, before entering the effluent pipeline.

Three years allows one summer to assess temperature rises and the following two summers to assess any improvements that have been implemented.

The limit has been set as percentile to allow for temperature variations. On an annual basis 95% of the continuous instantaneous measurements must be below 28 ^{o}C.

8.4 Reporting

The permit requires the reporting of all measured parameters listed Table 6and

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 [Point W1 on site plan in Schedule 7] discharge	Uncontaminated surface water drainage from interceptor and attenuation pond	pH	6 minimum 9 maximum	Spot sample	Monthly	BS ISO 10523

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
to River Inny						
W2 [Point W2 on site plan in Schedule 7] discharge to River Inny	Treated process effluent arising from Creamery operations	Volume	2,600 m^3/day	24 hour (total daily volume)	Continuous	MCERTS self-monitoring of effluent flow scheme
		pH	6 minimum 9 maximum	Instantaneous	Continuous	BS ISO 10523
		Ammoniacal nitrogen (expressed as N)	1.7 mg/l	24 hour (flow proportional composite sample)	Daily	BS EN ISO 11732 BS ISO 15923 – 1
		Biochemical oxygen demand	13 mg/l	24 hour (flow proportional composite sample)	Daily	BS EN 1899-1
		Total suspended solids (TSS)	20 mg/l	24 hour (flow proportional composite sample)	Daily	EN 872
		Total Phosphorus (TP)	0.3 mg/l	24 hour (flow proportional composite sample)	Daily	EN ISO 6878 EN ISO 15681-1 EN ISO 15681 -2 EN ISO 11885)
		Chemical oxygen demand (COD)	125 mg/l	24 hour (flow proportional composite sample)	Daily	BS ISO 15705
		Total nitrogen (TN)	30 mg/l	24 hour (flow proportional composite sample)	Daily	EN 12260 EN ISO 11905-1
		Total Potassium	No limit	24 hour	Monthly	BS EN ISO 11885

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
				(flow proportional composite sample)		EN ISO 17294-2
		Chloride	No limit	24 hour flow proportional composite	Monthly	BS EN ISO 10304-1 BS EN ISO 15682 BS ISO 15923 – 1
		Temperature	28 ^{O}C ([1,2]) Annual 95th percentile	Instantaneous	Continuous	Traceable to national standard
			33 ^{O}C ([1,2]) maximum			
([1]) Limit applies 3 years after permit (EPR/BN6137IK/V013) issue date ([2]) Temperature can be measured at the point of discharge or after effluent treatment before entering the pipeline						

Table 7, above.

8.5 Previous performance

We have assessed Applicant competence. We have noted the past poor performance of Dairy Crest Limited, owned by Saputo Dairy UK.

Since the site changed production to focus on whey processing, particularly to produce powder used in baby milk and other products, the effluent being discharged into the River Inny has been more challenging to treat. This has resulted in unacceptable pollution of the local river, which is a tributary of the River Tamar, causing significant harm to fish and other aquatic wildlife.

Dairy Crest pleaded guilty to 21 of 27 charges brought by the Environment Agency. For committing this catalogue of offences, the firm was fined £1.52 million at the crown court on 23 June 2022. It had already agreed to pay costs of £272,747.

The Applicant has successfully stabilised the effluent treatment processes, resulting in consistent and controlled plant operations. Since 2023 the site has sustained a high level of compliance with the existing permit limits for the effluent discharged to the river aside from isolated instances of non-compliance.

Public complaints of odour from the effluent plant have reduced following significant investment in additional measures including improved aeration, the containment of open topped tanks and installation of odour treatment systems.

Whilst noise pollution complaints have continued. The Applicant has completed a series of mitigation measures to reduce noise levels and are required to actively explore additional opportunities for improvement through the production of a NMP.

Taking this into account, we do have concerns about Applicant competence but we have considered this and on balance we have decided to grant the variation to the permit.

We take compliance with our permits very seriously. We will be monitoring the site, and if performance is poor, then appropriate enforcement action will be taken, and we will reconsider the Applicant's suitability to hold a permit.

9 Other legal requirements

In this section we explain how we have addressed other relevant legal requirements, to the extent that we have not addressed them elsewhere in this document.

9.1 The EPR 2016 and related Directives

The EPR delivers the requirements of a number of assimilated and national laws.

9.1.1 Schedules 1 and 7 to the EPR 2016 – IED Directive

We address the requirements of the IED in the body of this document above and the specific requirements of Chapter IV in Annex 1 of this document.

There is one requirement not addressed above, which is that contained in Article 5(3) IED. Article 5(3) requires that "In the case of a new installation or a substantial change where Article 4 of Directive 85/337/EC (now Directive 2011/92/EU) (the EIA Directive) applies, any relevant information obtained or conclusion arrived at pursuant to articles 5, 6 and 7 of that Directive shall be examined and used for the purposes of granting the permit."

Article 5 of EIA Directive relates to the obligation on developers to supply the information set out in Annex IV of the Directive when making an application for development consent.

Article 6(1) requires Member States to ensure that the authorities likely to be concerned by a development by reason of their specific environmental responsibilities are consulted on the Environmental Statement and the request for development consent.

Article 6(2)-6(6) makes provision for public consultation on applications for development consent.

Article 7 relates to projects with transboundary effects and consequential obligations to consult with affected Member States.

The grant or refusal of development consent is a matter for the relevant local planning authority.

9.1.2 Schedules22 to the EPR 2016 – Water Framework and Groundwater Directives

To the extent that it might lead to a discharge of pollutants to groundwater (a “groundwater activity” under the EPR 2016), the permit is subject to the requirements of Schedule 22, which delivers the requirements of EU Directives relating to pollution of groundwater. The permit will require the taking of all necessary measures to prevent the input of any hazardous substances to groundwater, and to limit the input of non-hazardous pollutants into groundwater so as to ensure such pollutants do not cause pollution and satisfies the requirements of Schedule 22.

No releases to groundwater from the regulated facility are permitted. The permit also requires material storage areas to be designed and maintained to a high standard to prevent accidental releases.

9.1.3 Directive 2003/35/EC – The Public Participation Directive

Regulation 60 of the EPR 2016 requires the Environment Agency to prepare and publish a statement of its policies for complying with its public participation duties. We have published our PPS.

This Application is being consulted upon in line with this statement, as well as with our guidance RGS6 on Sites of High Public Interest, which addresses specifically extended consultation arrangements for determinations where public interest is particularly high. This satisfies the requirements of the Public Participation Directive.

Our decision in this case has been reached following a programme of extended public consultation, on the original application The way in which this has been done is set out in Section 2.5. A summary of the responses received to our consultations and our consideration of them is set out in Section 10.

9.2 National primary legislation

9.2.1 Environment Act 1995

Section 4 (Pursuit of Sustainable Development)

We are required to contribute towards achieving sustainable development, as considered appropriate by Ministers and set out in guidance issued to us. The Secretary of State for Environment, Food and Rural Affairs has issued The Environment Agency’s Objectives and Contribution to Sustainable Development: Statutory Guidance (December 2002).

This document; “provides guidance to the Agency on such matters as the formulation of approaches that the Agency should take to its work, decisions about priorities for the Agency and the allocation of resources. It is not directly applicable to individual regulatory decisions of the Agency.”

In respect of regulation of industrial pollution through the EPR, the Guidance refers in particular to the objective of setting permit conditions “in a consistent and proportionate fashion based on Best Available Techniques and taking into account all relevant matters…”. The Environment Agency considers that it has pursued the objectives set out in the Government’s guidance, where relevant, and that there are no additional conditions that should be included in this permit to take account of the Section 4 duty.

(i) Section 5 (Preventing or Minimising Effects of Pollution of the Environment)

We are satisfied that our pollution control powers have been exercised for the purpose of preventing or minimising, remedying or mitigating the effects of pollution.

(ii) Section 6(1) (Conservation Duties with Regard to Water)

We have a duty to the extent we consider it desirable generally to promote the conservation and enhancement of the natural beauty and amenity of inland and coastal waters and the land associated with such waters, and the conservation of flora and fauna which are dependent on an aquatic environment.

We consider that no additional or different conditions are appropriate for this permit.

(iii) Section 6(6) (Fisheries)

We have a duty to maintain, improve and develop fisheries of salmon, trout, eels, lampreys, smelt and freshwater fish.

We consider that no additional or different conditions are appropriate for this permit.

(iv) Section 7 (General Environmental Duties)

This places a duty on us, when considering any proposal relating to our functions, to have regard amongst other things to any effect which the proposals would have on sites of archaeological, architectural, or historic interest; the economic and social well-being of local communities in rural areas; and to take into account any effect which the proposals would have on the beauty or amenity of any rural or urban area or on any such flora, fauna, features, buildings, sites or objects.

We considered whether we should impose any additional or different requirements in terms of our duty to have regard to the various conservation objectives set out in Section 7 but concluded that we should not.

(v) Section 39 (Costs and Benefits)

We have a duty to take into account the likely costs and benefits of our decisions on the applications (‘costs’ being defined as including costs to the environment as well as any person).

This duty, however, does not affect our obligation to discharge any duties imposed upon us in other legislative provisions.

In so far as relevant we consider that the costs that the permit may impose on the applicant are reasonable and proportionate in terms of the benefits it provides.

9.2.2 Section 108 Deregulation Act 2015 – Growth duty

We 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. Paragraph 1.3 of the statutory guidance issued by the Department of Business, Energy and Industrial Strategy in March 2017 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 promotes growth amongst legitimate Applicants because the standards applied to the Applicant are consistent across businesses in this sector and have been set to achieve the required legislative standards. It also ensures that any pollution that may arise from the regulated facility does not adversely affect local businesses.

9.2.3 Legislative and Regulatory Reform Act 2006

In accordance with Section 21 of this Act, when making this decision we have had regard to the need to be transparent, accountable, proportionate and consistent, and the need to target action where it is needed.

In accordance with Section 22 of the Act we have had regard to the Regulators’ Code; in particular the need to base our decision on environmental risk, and to support the applicant to comply and grow, so that burdens have only been imposed where they are necessary and proportionate.

9.2.4 Human Rights Act 1998

We have considered potential interference with rights addressed by the European Convention on Human Rights in reaching our decision and consider that our decision is compatible with our duties under the Human Rights Act 1998. In particular, we have considered the right to life (Article 2), the right to a fair trial (Article 6), the right to respect for private and family life (Article 8) and the

right to protection of property (Article 1, First Protocol). We do not believe that Convention rights are engaged in relation to this determination.

9.2.5 Countryside and Rights of Way Act 2000 (CROW 2000)

Section 85 of this Act imposes a duty on Environment Agency to seek to further the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty (AONB).

The site is situated between two Areas of Outstanding Natural Beauty (AONB): one located approximately 2.1 km to the northwest of the main creamery building, and the other approximately 3.3 km to the southeast, as shown in Figure 3 below. Based on the available information, we are satisfied that operations from the installation will not have any significant impact on the features of either AONB.

9.2.6 Wildlife and Countryside Act 1981

Under Section 28G of the Wildlife and Countryside Act 1981 the Environment Agency has a duty to take reasonable steps to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which a site is of special scientific interest. Under Section 28I the Environment Agency has a duty to consult Natural England in relation to any permit that is likely to damage SSSIs.

We have assessed the application and concluded that the installation will not adversely affect the special features of any SSSI. Appendix 4 from the previous determination remains valid for this variation, as there are no proposed changes to air emissions.

9.2.7 Natural Environment and Rural Communities Act 2006

Section 40 of the Natural Environment and Rural Communities Act 2006 has been amended with effect from 1 January 2023 to require consideration as to what action we can properly take, consistently with the proper exercise of our functions, to further the general biodiversity objective, which is to further the conservation and enhancement of biodiversity and having considered, determined such policies and specific objectives as we consider appropriate for taking action to further the general biodiversity objective, and take such action as we consider appropriate, in the light of those policies and objectives, to further that objective.

Section 40(2A) states that in complying with the duty in Section 40(1) and (1A) we must have particular regard to any relevant local nature recovery strategy and species protection strategy or protected sites strategy.

We have, also, considered the general biodiversity objective when carrying out our permit application determination and, consider that no different or additional conditions are required in the permit.

9.2.8 Countryside Act 1968

Section 11 imposes a duty on the Environment Agency to exercise its functions relating to any land, having regard to the desirability of conserving the natural beauty and amenity of the

countryside including wildlife. We have done so and consider that no different or additional conditions in the permit are required.

9.2.9 National Parks and Access to the Countryside Act 1949

Section 11A and Section 5(1) imposes a duty on the Environment Agency when exercising its functions in relation to land in a National Park, to further the purposes of conserving and enhancing the natural beauty, wildlife and cultural heritage of the areas, and of promoting opportunities for the understanding and enjoyment of National Parks by the public.

There is no National Park which could be affected by the regulated facility.

9.2.10 Environment Act 2021

Section 110(10) requires that we must have regard to a protected site's strategy, which Natural England has prepared and published in relation to improving the conservation and management of a protected site, and managing the impact of plans, projects or other activities (wherever undertaken) on the conservation and management of the protected site, where relevant to exercise of our duties under Conservation of Habitats and Species Regulations 2017, Sections 28G to 28I Wildlife and Countryside Act 1981 or Marine and Coastal Access Act 2009.

We have had regard to this in our assessments.

9.3 National secondary legislation

9.3.1 Conservation of Habitats and Species Regulations 2017

We have assessed the Application in accordance with our guidance and concluded that there will be no likely significant effects on any European Site.

The Habitats Regulations Assessment is summarised in greater detail in Section 6 of this document. A copy of the Habitats Regulations Assessment can be found on the public register.

We have also considered our general duties under Regulation 9(3) to have regard to the requirements of the Habitats Directive in the exercise of our powers and under Regulation 10 in relation to wild bird habitat to take such steps in the exercise of their functions as they consider appropriate so far as lies within our powers to secure preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds.

We considered whether we should impose any additional or different requirements in the permit in terms of these duties but concluded that we should not.

9.3.2 Water Environment (Water Framework Directive) Regulations 2017

Consideration has been given to whether any additional requirements should be imposed in terms of the Environment Agency's duty under regulation 3 to secure compliance with the requirements of the Water Framework Directive, Groundwater Directive and the EQS Directive through, amongst other things, environmental permits, and its obligation in regulation 33 to have regard to the river basin management plan (RBMP) approved under regulation 31 and any supplementary

plans prepared under regulation 32. However, it is felt that existing conditions are sufficient in this regard and no other appropriate requirements have been identified.
We are satisfied that granting this application with the conditions proposed would not cause the current status of the water body to deteriorate.

The introduction of more stringent ELVs and parameters under the Agency-Initiated Variation (V010) is expected to further enhance the water quality of the receiving watercourse, the River Inny, downstream of the discharge point.

9.4 Other relevant legal requirements

9.4.1 Duty to Involve

Section 23 of the Local Democracy, Economic Development and Construction Act 2009 require us where we consider it appropriate to take such steps as we consider appropriate to secure the involvement of interested persons in the exercise of our functions by providing them with information, consulting them or involving them in any other way. Section 24 requires us to have regard to any Secretary of State guidance as to how we should do that.

The way in which the Environment Agency has consulted with the public and other interested parties is set out in Section 2.4 of this document. The way in which we have taken account of the representations we have received is set out in Section 10. Our public consultation duties are also set out in the EP Regulations, and our statutory PPS, which implement the requirements of the Public Participation Directive. In addition to meeting our consultation responsibilities, we have also taken account of our guidance in Environment Agency Guidance Note RGS6.

10 Consultation Reponses

10.1 Advertising and Consultation on the Application

The Application has been advertised and consulted upon in accordance with the Environment Agency's PPS. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our decision is summarised in this Section. Copies of consultation responses have been placed on the Environment Agency public register.

The Application was advertised on Citizen Space from 15 May 2023 to 27 June 2023 (inclusive). In addition, an advert was placed in the following publications: London Gazette 15 May 2023, Western Morning News 15 May 2023 and the Cornish Guardian 17 May 2023. A QR code was also included in the advert linking to the consultation on Citizen Space (except for the London Gazette).

The following statutory and non-statutory bodies were consulted: -

- UK Health Security Agency (UKHSA) formerly known as Public Health England
- Health & Safety Executive
- Director of Public Health
- Cornwall Council Environmental Health and Public Health

- South West Water

The consultation responses received were wide ranging and a number of the issues raised were outside the Environment Agency's remit in reaching its permitting decisions. Specifically, questions were raised which fall within the jurisdiction of the planning system, both on the development of planning policy and the grant of planning permission.

Guidance on the interaction between planning and pollution control is given in the National Planning Policy Framework. It says that the planning and pollution control systems are separate but complementary. We are only able to consider those issues which are relevant to our determination.

10.1.1 Consultation Responses from Statutory and Non-Statutory Bodies

Response Received from UKHSA	
Brief summary of issues raised:	Summary of action taken / how this has been covered
General Concerns Regarding Odorous Emissions from the WPF	Issues regarding odour are addressed in Sections 7.4 and 8.5 of this decision document. Public complaints of odour from the effluent plant have reduced following investment and improvement works. We are satisfied the completed improvements and proposed improvements will prevent or where that is not practicable minimise odours and prevent pollution from odour at the nearest receptors to the WPF under the worst-case dispersion criteria.
The odour survey conducted from 21 to 23 April 2023 was not of sufficient duration to capture the full range of operational and meteorological variability.	Full details of the odour surveys and the subsequent modelling are provided in Section 7.4 of this decision document. Odour surveys have been undertaken on three occasions following the implementation of improvement works designed to reduce odour emissions. The results from surveys were combined and modelled using five years of meteorological data. We consider the surveys were of sufficient duration and that we have sufficient information to inform our decision. Following our review of the odour assessment, we are satisfied that the surveys are representative of the odour sources present on site.

The surveys conducted in March 2019 and May 2020 were limited in scope to the WPF and did not span a sufficient time period to be considered representative.	Full details of the odour surveys and the subsequent modelling are provided in Section 7.4 of this decision document. Odour surveys were undertaken over a three-day period, from 20 to 22 April 2021, and included assessment of the main creamery. The results of two additional odour surveys, which were limited to the WPF, were combined with the April 2021 survey and subsequently modelled using five years of meteorological data. Following our review of the odour assessment, we are satisfied that the surveys are representative of the odour sources present on site and span a sufficient time period.
An appropriate OMP must be in place to mitigate odorous emissions beyond the site boundary and to ensure that any complaints are thoroughly investigated and appropriately addressed.	Issues regarding odour are addressed in Section 7.4 of this decision document. As part of the permit variation, the Applicant has submitted a revised OMP. The plan has been reviewed in accordance with the Environment Agency's odour management guidance and is deemed to constitute appropriate measures based on the information currently available. Consequently, the plan has been approved. Approval of the OMP should not be interpreted as confirmation that the measures outlined will be suitable for all circumstances throughout the duration of the permit. The Applicant is required to keep the plan under continuous review and revise it annually, or sooner if complaints arise from site operations or if operational circumstances change. We are satisfied with the measures for dealing with any complaints that may be received.

10.1.2 Representations from local MPs, assembly members, councillors and parish/town community councils

Representations were received from Davidstow Parish Council. The key issues raised are shown below. Where an issue has already been covered above it is not necessarily repeated below.

Brief summary of issues raised:	**Summary of action taken / how this has been covered**

The application should be deferred until the programme of works addressing issues related to odour and noise has been completed.	The determination of the variation includes the permitting of improvement works intended to prevent or where that is not practicable minimise odour and noise emissions from the site. A revised OMP has been reviewed in accordance with our guidance and approved. We are confident that the on-site improvements, in conjunction with the revised OMP, has reduce the impact of odorous emissions on nearby sensitive receptors. Public complaints of odour have reduced following investment and improvement works. See Section 7.4 and 8.5 of this decision document for further details concerning odour. Works to reduce noise have been carried out. On 5 June 2025, the Environment Agency's local Regulatory Team required the applicant to develop an NMP for approval, in accordance with Environment Agency guidance. The applicant submitted the NMP on 24 December 2025. The NMP includes plans for further mitigation measures and routine noise monitoring. There have been no public complaints of noise since mid-August 2025. See Section 7.3 of this decision document for further details concerning noise. We are satisfied that we have sufficient information to vary the permit and that there are no reasons to defer doing so.

10.1.3 Representations from community and other organisations

Representations were received from Endsleigh Fishing Club, Fish Legal, Launceston Anglers Association, Tamar and Tributaries Fisheries Association, Angling Trust, Tamar Farms, and Westcountry Rivers Trust.

They key issues raised are shown below. Where an issue has already been covered above it is not necessarily repeated below.

Brief summary of issues raised:	**Summary of action taken / how this has been covered**

Concerns that the proposed redevelopment of the WPF may not deliver adequate environmental protection.	The applied variation (V011) authorises a series of improvements to the existing WPF, which will improve the quality of the effluent. The measures will deliver a high level of protection for the environment and prevent any significant pollution. These improvements include: • **Increased storage capacity** through the use of a contingency lagoon • **Enhanced phosphate control** via the installation of two new DAF plants • **Reduction in suspended solids** through the implementation of tertiary filtration systems In addition to the Applicant's upgrades to the WPF, the Environment Agency has carried out extensive modelling of both the discharge and the receiving watercourse. Table S1.1 excludes the production DWP. This is the product that significantly contributed to the electrolyte emissions, into the River Inny. Monitoring and ELVs have been set to protect the River Inny. For further details on the water quality assessment, refer to Sections 7.2 and 8.3 of this decision document.
Further consideration should be given to the proposed BAT options outlined in the BAT Appraisal document.	We have assessed the BAT Appraisal document. Refer to Sections 5.6.2 and 5.6.3 of this decision document for further details. The applicant informed the Environment agency of production changes in line to BAT Option F. We are satisfied the change in portfolio of products manufactured in combination with the effluent techniques represent BAT.
Determination of the applications should be delayed until ongoing investigations have been fully concluded.	Investigations have been concluded
Concern over the increase in waste produced by the WPF as a result of the changes.	Changes made to the site including WPF upgrades are summarised in Section 5.4.1 of this decision document. The upgraded WPF will increase the recovery of solids from the treatment process. The recovered solids will continue to be collected and managed by appropriately licensed waste contractors, in accordance with regulatory requirements.

Concern of over the emissions of hydrogen sulphide	A monitoring exercise was conducted by the Environment Agency between 11 May 2023 and 13 September 2023. The monitoring included hydrogen sulphide. Hydrogen sulphide (H_2S) concentrations were compared against World Health Organisation (WHO) guidelines and were found to be within the specified health limits. See Section 7.1.1 of this decision document for further details.

10.1.4 Representations from individual members of the public

A number of responses were received from individual members of the public.

Many of the issues raised were the same as those considered above. Where an issue has already been covered above it is not necessarily repeated below.

Brief summary of issues raised:	**Summary of action taken / how this has been covered**
Concerns regarding odour emissions from both the WPF and the creamery building.	We are satisfied that the site improvements, including the covering of the balance tanks, the installation of additional OCUs, and the use of a scrubber, will effectively reduce the impact of odorous emissions. We are confident that the proposed increase in production will not result in a significant rise in odour emissions. Further details regarding odour management are provided in Section 7.4 of this decision document.
Concerns about noise from the WPF and creamery building.	Works to reduce noise have been carried out. On 5 June 2025, the Environment Agency's local Regulatory Team required the applicant to develop an NMP for approval, in accordance with Environment Agency guidance. The applicant submitted the NMP on 24 December 2025. The NMP includes plans for further mitigation measures and routine noise monitoring. There have been no public complaints of noise since mid-August 2025. See Section 7.3 of this decision document for further details concerning noise.
Concerns about the impact on water quality (River Inny).	The Environment Agency has undertaken extensive modelling of the discharge and the receiving watercourse.

	Table S1.1 excludes the production DWP. This is the product that significantly contributed to the electrolyte emissions, into the River Inny. Emissions limits have been assessed and calculated, where appropriate. We are satisfied the emission limits will protect the River Inny. See Section 7.2 and 8.3 of this decision document for further details.
Concerns regarding the site's historical compliance record and previous breaches of permit conditions.	We have assessed Applicant competence. We have noted the past poor performance of Dairy Crest Limited, owned by Saputo Dairy UK. We are satisfied that appropriate management systems and management structures will be in place for this regulated facility, and that sufficient resources are available to the Applicant to ensure compliance with all the permit conditions. See Sections 5.6.2, 8.5, and Annex 1 Section 4 of this decision document for further details.

10.1.5 Representations on issues that do not fall within the scope of this Permit determination

Brief summary of issues raised:	Summary of action taken / how this has been covered
Concerns have been raised regarding vehicle access to the installation and the potential increase in traffic movements on local roads.	Traffic movements to and from the installation may be a relevant consideration in the context of planning permission but do not form part of the Environmental permit decision-making process. An exception may apply where there are established high background concentrations contributing to poor air quality, and where increased traffic levels could have a significant impact. That is not the case here.
Concern over the impact of light pollution	Pollution from light is primarily a concern for considering visual impacts and as such generally covered by the planning process.
Comments supporting the site because they employ a number of local people and work with local producers and businesses.	While some of these issues may be relevant to the granting of planning permission, our remit is limited to assessing whether the site can operate in an environmentally acceptable manner.

Restricting the applicant's operation would have a detrimental effect on the local economy	We have not restricted the applicant's operation. Production capacities and products allowed by the permit are the same as what the applicant has applied for.

11.1 Advertising and Consultation on the Draft Decision

This section reports on the outcome of the public consultation on our draft decision carried out between 16/01/26 to 27/02/26.

In some cases, the issues raised in the consultation were the same as those raised previously and already reported in section 10.1 of this Annex and so have not been repeated in this section.

Also, some of the consultation responses received were on matters which are outside the scope of the Environment Agency's powers under the EPR. Our position on these matters is as described previously.

11.1.1 Consultation Responses from Statutory and Non-Statutory Bodies

Response Received from UKHSA	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
Consideration should be given to the off-site impacts from combustion plant emissions.	Emissions from the combustion plant were assessed as part of the original permitting of the biomass boilers. There are no proposals to introduce new emission points or to increase emissions. For this reason, emissions have not been quantitatively assessed.

11.1.2 Representations from community and other organisations

Representations were received from Launceston Anglers Association, Westcountry Rivers Trust and Tamar Farms.

Brief summary of issues raised:	Summary of action taken / how this has been covered
Concerns that low flows in the River Inny have not adequately been considered, for example drought conditions.	Flow data from 01/01/1991 to 12/31/2019 were used to calculate the Q95 flow. Q95 gives a low river flow that happens often enough to matter for routine permitting, and it provides a protective dilution assumption for continuous discharges. Modelling of the potential impact the effluent could have on the River Inny was carried out at the Q95 flow rate.

	Flows lower than Q95 can be less reliable and can increase uncertainty without always improving environmental protection in a proportionate way. The Environment Agency enhanced monitoring programme will continue for at least a year, or until an extended period of low flow has been experienced and monitored in the river. See Section 5.3.1 of this Decision Document.
An increase in cheese production should not occur until after a period of probation. (A length of time without significant water pollution incidents) and after impacts when the River Inny is at low flow.	The last significant water pollution incident was 2023. We have assessed impacts at low flow, by using the River Inny's Q95 flow and the operators effluent flow data for the calculation of permit limits. See Sections 5.6.3 and 8.5 of this decision document for further details. We have included a pre-operational condition relating to process monitoring. This pre-operational condition must be completed before the production of cheese can increase. See Section 8.1 of this decision document
Consideration to keeping the sondes in the River Inny with monitoring data publicly available.	Monitoring of the River Inny including sondes will be kept in the River Inny for a period of time. See Section 5.3.1 of this decision document Monitoring data can be requested by contacting the Environment Agency and making a Freedom of Information request. Live monitoring data can also be viewed online at Hydrology Data Explorer - INNY_DS DAIRY CREST TW_E_201606 We have added pH to the data since we consulted on the draft decision.
Concerns that fish and invertebrate populations have declined in the River Inny.	Historical releases have caused significant harm to fish and other aquatic wildlife. The environment agency have assessed fish populations in the River Inny and other local watercourses. The evidence shows that fish population declines, particularly for salmon, are occurring across the wider area, including the River Inny, the Penpont Water, and other nearby rivers.

	These declines cannot be attributed solely to the Davidstow Creamery discharge. The site immediately downstream of the discharge shows distinct local changes in fish populations, including increases in pollution tolerant species and slightly suppressed trout parr, suggesting a localised influence. Overall, wider regional and catchment scale pressures appear to be the main drivers of fish population decline, with the discharge potentially contributing to local effects rather than being the primary cause The varied permit removes the demineralised whey process, which was the major contributor to elevated levels of pollutants. Emissions have been modelled. The permit includes appropriate monitoring and limits to protect the River Inny ecology, including fish and invertebrate populations. See Sections 6.2 and 7.2 of this decision document.
Piping the effluent to sea.	The operator has partially assessed a pipeline. The assessment was made relating to the emissions from the demineralised whey plant. The cessation of the demineralised whey plant means the operator will not have effluent that will result in the exceedance of water quality standards. A pipeline is a (BAT) measure that must be assessed, if water quality standards cannot be met.
The emission limits should be set lower.	Emission limits have been set in line with BAT. Lower limits have been set where BAT limits would not protect the River Inny. Other emission limits have been set at a level to protect the River Inny.
Not enough emissions data has been gathered since the demineralised whey process has been stopped.	The applicant provided additional monitoring data after the draft decision was published. In total, more than five months of data have been collected since the demineralised whey process stopped.

	The data show a significant and sustained reduction in emissions of the pollutants set out in Section 7.2.7 of this decision document. This is expected because the demineralised whey process was the source of these emissions. We are satisfied there is enough data to demonstrate continued reduced pollutants.

11.1.4 Representations from individual members of the public

Brief summary of issues raised:	Summary of action taken / how this has been covered
Observations that the River Inny has brown sludge and the water weed is reduced.	The operator has historically released partially treated effluent, which has coated the River Inny in sludge. The cause of the Myriophyllum alterniflorum (water weed) die off is unknown. The most likely causes are nutrient enrichment and or elevated concentrations of potassium, sodium, and chloride in the River Inny downstream of the Davidstow Creamery discharge. The varied permit removes the demineralised whey process, which was the major contributor to elevated levels of potassium, sodium, and chloride. Emissions have been modelled. The permit includes appropriate monitoring and limits to protect the River Inny ecology, including water weed. See Section 7.2 of this decision document.
Concerns regarding the lack of regulation at the site.	We regulate the site carrying out a continual assessment of plant operations and its environmental performance. This is achieved in the following ways; • We regularly inspect the site at a frequency that we consider appropriate • The operator must monitor emissions and report the results to us • The operator's monitoring results and our compliance assessment reports are placed on the public registers

	• The operator must inform us immediately of any breach of any permit condition or any accident or incident which significantly affects or may significantly affect the environment If there is a breach of the permit then depending on the seriousness of it, we will take appropriate enforcement action and/or prosecute.

11.1.5 Representations on issues that do not fall within the scope of this Permit determination

Brief summary of issues raised:	Summary of action taken / how this has been covered
We should be moving away from an animal based diet	This is not an issue under the Environment Agency's regulatory responsibility.
Litter cause by tanker drivers	This is not an issue under the Environment Agency's regulatory responsibility. This may be a relevant consideration for the granting of planning permission.

Annex 1 Decision checklist for relevant BAT conclusions

BAT Conclusions for the Food, Drink and Milk Industries, were published by the European Commission on 4 December 2019.

There are 37 BAT Conclusions.

BAT 1 – 15 are General BAT Conclusions (Narrative BAT) applicable to all relevant Food, Drink and Milk Installations in scope.

BAT 16 – 37 are sector-specific BAT Conclusions, including Best Available Techniques Associated Emissions Levels (BAT-AELs) and Associated Environmental Performance Levels (BAT-AEPLs).

BAT 16 & 17	BAT Conclusions for Animal Feed
BAT 18 – 20	BAT Conclusions for Brewing
BAT 21 – 23	BAT Conclusions for Dairies
BAT 24 BAT 25 & 26	BAT Conclusions for Ethanol Production BAT Conclusions for Fish and Shellfish Processing
BAT 27	BAT Conclusions for Fruit and Vegetable Processing
BAT 28	BAT Conclusions for Grain Milling
BAT 29	BAT Conclusions for Meat Processing
BAT 30 – 32	BAT Conclusions for Oilseed Processing and Vegetable Oil Refining
BAT 33 BAT 34	BAT Conclusions for Soft Drinks and Nectar/Fruit Juice Processed from Fruit and Vegetables BAT Conclusions for Starch Production
BAT 35 – 37	BAT Conclusions for Sugar Manufacturing

This annex provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the variation.

The overall status of compliance with the BAT conclusion is indicated in the table as:

NA – Not Applicable
CC – Currently Compliant
FC – Compliant in the future (within 4 years of the publication of BAT conclusions)
NC – Not Compliant

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
GENERAL BAT CONCLUSIONS (BAT 1-15)			
1	**Environmental Management System (EMS) - Improve overall environmental performance.** Implement an EMS that incorporates all the features as described within BAT 1.	**CC**	The Applicant has submitted information to demonstrate compliance with BAT 1. We have reviewed the information provided and are satisfied that the Operator has demonstrated compliance with this requirement. See Section 5.6.3 of this decision for further information in relation to a future increase in production. The Operator has an EMS that is externally certified to the ISO 14001 standard.
2	**EMS Inventory of inputs & outputs. Increase resource efficiency and reduce emissions.** Establish, maintain and regularly review (including when a significant change occurs) an inventory of water, energy and raw materials consumption as well as of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the features as detailed within the BATCs.	**CC**	The Operator has provided information to support compliance with BAT 2. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement. The Operator maintains an EMS that is externally certified to the ISO 14001 standard. Compliance with BAT 2 has been demonstrated through the following measures: • A simplified process flow diagram identifying emissions sources • Aspects and impacts assessments covering the WPF & cheese production • A simplified process flow diagram for the entire site • Diagrams illustrating the mass balance of water consumption and reuse

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			• Monitoring and characterisation of effluent • Monitoring of waste gas streams • Ongoing monitoring of energy consumption and raw material usage • Implementation of a resource use and waste generation monitoring plan to identify efficiency opportunities • Energy consumption and raw materials usage are monitored • Resources use and waste generation monitoring plan implemented to identify efficiency opportunities
3	**Monitoring key process parameters at key locations for emissions to water.** For relevant emissions to water as identified by the inventory of waste water streams (see BAT 2), BAT is to monitor key process parameters (e.g. continuous monitoring of waste water flow, pH and temperature) at key locations (e.g. at the inlet and/or outlet of the pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation).	**CC**	The Operator has provided information to support compliance with BAT 3. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement. Monitoring is undertaken at the preliminary and primary treatment stages for the following parameters: • pH • Chemical oxygen demand • Total phosphorous • Total suspended solids • Ammoniacal nitrogen • Total nitrogen • Iron • Volume • Flow

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			Monitoring is undertaken at the secondary treatment stage for the following parameters: • pH • Total suspended solids • Flow • Dissolved oxygen • Sludge microscopy. Monitoring is undertaken prior to discharge to the River Inny for the following parameters: • pH • Chemical oxygen demand or total organic carbon • Total phosphorous • Total suspended solids • Ammoniacal nitrogen • Total nitrogen • Iron • Volume • Flow • Biological oxygen demand • Chloride • Total potassium • Total sodium • Sulphate • Cadmium • Mercury

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
4	**Monitoring emissions to water to the required frequencies and standards.** BAT is to monitor emissions to water with at least the frequency given [refer to BAT 4 table in BATc] and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.	**CC**	The Operator has provided information to support compliance with BAT 4. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement. In line with, BAT 4 the following parameters and standards will be retained in the varied permit • Biological oxygen demand – EN 1899-1 • Total suspended solids – EN 872 • Total phosphorus – EN IDO 6878, EN ISO 15681-1 & -2 or EN ISO 11885 The following parameters and standards will be added to the varied permit • Chemical oxygen demand BS 6068-2.34 or BS ISO 15705 • Total nitrogen – EN 12260 or EN ISO 11905-1 • Chloride – EN ISO 10304-1 or EN ISO 15682 The following parameters will be removed from the varied permit, as they are not required under BAT. • Mercury and its compounds • Cadmium and its compounds • Total iron

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			• Total sodium • Sulphate
5	**Monitoring channelled emissions to air to the required frequencies and standards** BAT is to monitor channelled emissions to air with at least the frequency given and in accordance with EN standards.	**CC**	The Operator has provided information to support compliance with BAT 5. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement. Under the current permit conditions, the Operator is already required to monitor emissions from the whey powder drier in accordance with the relevant European Standard, BS EN 13284-1. There are a number of activities within the FDM sector which result in release of particulates to air eg drying, milling and grinding. Overall, there is little available information on how much fine particulates are released. We have set IC12 which is a one-off exercise requiring the operator to report on fine particulate emissions and increase our understanding of the emissions.
6	**Energy Efficiency** In order to increase energy efficiency, BAT is to use an energy efficiency plan (BAT 6a) and an appropriate combination of the common techniques listed in technique 6b within the table in the BATc.	**CC**	The Operator has provided information to support compliance with BAT 6. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement.

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			Periodic energy audits are carried out consistently with the requirements of ESOS. In addition to an annual 'Utility Reduction Plan' which is prepared to identify energy reduction opportunities linked to annual energy reduction objectives and targets. This is considered to meet BAT 6a. The site uses the following techniques, which are considered BAT in accordance with BATc 6b, to increase energy efficiency across the site; • Burner regulation and control • Energy efficient motors • Heat recovery with heat exchangers • LED lighting is use in the production and office areas • Multiple effect evaporation (whey evaporation is carried out in multiple stage systems utilising Mechanical Vapour Recompression (MVR) and Thermal Vapour Recompression (TVR) • Use of solar energy • Minimising the blow down from boilers • Preheating feed water (including the use of economisers) • Process control systems • Reducing heat losses by insulation • Reducing compressed air system leaks • Use of variable speed drivers •
7	**Water and wastewater minimisation**	**CC**	The Operator has provided information to support compliance with BAT 7. We have assessed the submitted

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	In order to reduce water consumption and the volume of waste water discharged, BAT is to use BAT 7a and one or a combination of the techniques b to k given below. (a) water recycling and/or reuse (b) Optimisation of water flow (c) Optimisation of water nozzles and hoses (d) Segregation of water streams Techniques related to cleaning operations: (e) Dry cleaning (f) Pigging system for pipes (g) High-pressure cleaning (h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP) (i) Low-pressure foam and/or gel cleaning (j) Optimised design and construction of equipment and process areas (k) Cleaning of equipment as soon as possible		information and are satisfied that the Operator has demonstrated compliance with this requirement. Water is recycled and reused at the site by the following means: • Effluent is treated at the on-site WPF with +1,000m^3 per day being passed through the RO plant, ultra filtration and chlorination systems – the treated water is re-used within the creamery. Within the creamery the following techniques are used to reduce water consumption; • Water flow is metered and controlled by automated systems. • Hose use is minimal, and hoses have been fitted with restrictors (triggers). • Water sources (potable mains, abstraction and recycled treated wastewater) have been mapped to end users to ensure the use of water of appropriate quality is used e.g. (1) use of potable water as an ingredient (ii) use of process water (comprising abstraction and recycled treated waste water) in cooling towers, boilers etc. • The sequencing of the majority of cleaning-in-place (CIP) systems are controlled automatically with rinse water managed through use of turbidity measurement. CIP chemicals are routinely analysed and replenished

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			only when required to ensure that food safety standards are maintained. • Cleaning sequences are automated to minimise delays and maximise effectiveness.
8	**Prevent or reduce the use of harmful substances** In order to prevent or reduce the use of harmful substances, e.g. in cleaning and disinfection, BAT is to use one or a combination of the techniques given below. (a) Proper selection of cleaning chemicals and/or disinfectants (b) Reuse of cleaning chemicals in cleaning-in-place (CIP) (c) Dry cleaning (d) Optimised design and construction of equipment and process areas	**CC**	The Operator has provided information to support compliance with BAT 8. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement. The Operator uses a range of suitable cleaning chemicals and disinfectants across the site, with CIP processes implemented to support hygiene and operational efficiency. Procedures are in place to assess and evaluate any changes to the chemicals used on-site. Prior to introducing new substances, the Operator consults a chemical database known as Sypol, which contains information on chemical characteristics, physico-chemical properties, safety, and eco-toxicological profiles. The system also provides suggestions for alternative substances to support the evaluation of potential environmental impacts.
9	**Refrigerants** In order to prevent emissions of ozone-depleting substances and of substances with a high global warming potential from cooling and freezing, BAT is to use refrigerants without ozone depletion potential and with a low global warming potential.	**CC**	The Operator has provided information to support compliance with BAT 9. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement.

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			The majority of process cooling across the site is provided by ammonia-based refrigeration systems. The Operator has identified several refrigeration units that currently use substances with higher GWP. The Operator has confirmed the following replacement strategy: • Units using **R404A** will be replaced with a lower GWP refrigerant, **R513A**, by the end of 2026. • Units using **R134A** and **R407C** will be replaced in their entirety at the end of their performance life, or retrofitted with 'drop-in' alternatives with lower GWP or Hydrofluoroolefin (HFO) refrigerants, subject to system compatibility. • Units using **R449A** and **R410A** will be replaced at the end of their asset life.
10	**Resource efficiency** In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below: (a) Anaerobic digestion (b) Use of residues (c) Separation of residues (d) Recovery and reuse of residues from the pasteuriser (e) Phosphorus recovery as struvite (f) Use of waste water for land spreading	**CC**	The Operator has provided information to support compliance with BAT 10. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement. The Operator utilises the following techniques at the site to increase resource efficiency;

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			• Appropriate wastes and by-products such as slay whey and cheese curd waste are sent off-site for energy recovery via anaerobic digestion. • Residues from the Whey Protein Concentrate (WPC) permeate are send for animal feed. • Residues are segregated to optimise their reuse and recovery potential for off-site recovery. • Waste from the pasteurisation process is minimised. • Effluent streams containing higher concentrations of phosphorus are pre-treated in a Phosphate Removal Plant employing precipitation with solubilised hydrated lime, which is comparable to, and achieves similar phosphate removal efficiency as the struvite process. • Sludges produced from aerobic treatment of wastewater and any surplus waste is disposed of by land spreading by a suitably licenses contractor.
11	**Waste water buffer storage** In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.	**CC**	The Operator has provided information to support compliance with BAT 11. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement. The site has appropriate buffer storage in place to manage higher-strength effluents. This includes a 600 m³ contingency lagoon installed at the Creamery and two reception tanks at the WPF, providing approximately 3,000 tonnes of buffering capacity. One of these tanks is reserved specifically for contingency storage of high-strength effluents.

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			Roof water and surface water from low-risk areas is routed through a two-stage containment system to attenuation ponds operating in series. The downstream pond discharges to the headwaters of the River Inny via Release Point W1. Surface water from car parks and internal roadways is directed through oily water interceptors before reaching the attenuation ponds. The contents of the attenuation ponds are sampled daily and analysed by the on-site laboratory for pH, chemical oxygen demand, total phosphorus, ammoniacal nitrogen and conductivity. If any of the monitored parameters do not meet the required criteria, the penstock valves are closed to prevent discharge to the river. Where necessary, surface water can be redirected to the WPF for treatment or tankered off-site for further processing.
12	**Emissions to water – treatment** In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below. Preliminary, primary and general treatment (a) Equalisation (b) Neutralisation (c) Physical separate (eg screens, sieves, primary settlement tanks etc) Aerobic and/or anaerobic treatment (secondary treatment)	**CC**	The Operator has provided information to support compliance with BAT 12. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement. The WPF employs a combination of physico-chemical and biological treatment techniques to manage process effluent prior to discharge to the River Inny. The following treatment methods are utilised within the WPF:

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	(d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc) (e) Nitification and/or denitrification (f) Partial nitration - anaerobic ammonium oxidation Phosphorus recovery and/or removal (g) Phosphorus recovery as struvite (h) Precipitation (i) Enhanced biological phosphorus removal Final solids removal (j) Coagulation and flocculation (k) Sedimentation (l) Filtration (eg sand filtration, microfiltration, ultrafiltration) (m) Flotation [for detail of each technique, refer BAT 12 table 1]		**(a)** Equalisation - flow and load buffering/ equalisation is provided in WPF reception tank. **(b)** Neutralisation - pH correction is undertaken within the WPF reception tanks. **(c)** Physical separate - rotating screen installed at inlet of works to remove coarse particles. **(d)** Aerobic treatment - provided by the activated sludge processes within Anoxic Tanks 1a/b, 2 and 3. **(e)** Nitrification - achieved in activated sludge aerobic systems and supplemented with additional denitrifying bacteria as required. **(f)** Partial nitration - anaerobic ammonium oxidation - provided in anoxic conditioning tanks installed prior to each of the aeration systems identified under point (d) above. **(g)** Phosphorus recovery as struvite - dedicated Phosphate Removal Plant serving process wastewater streams of highest TP content which employs reaction with solubilised hydrated lime, which is analogous to, and achieves comparable abatement efficiencies of, struvite process, i.e. forms a calcium phosphate salt as opposed to magnesium phosphate salt **(h)** Precipitation - provided by the dedicated Phosphate Removal Plant which employs precipitation with solubilised hydrated lime. **(i)** Enhanced biological phosphorus removal - provided by aeration systems through optimum control of Mixed Liquor Suspended Solids (MLSS).

<table>
<tr><th>BAT No.</th><th>Summary of BAT Conclusion requirement for Food, Drink and Milk Industries</th><th>Status NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td></td><td></td><td></td><td>(j) Coagulation and flocculation - provided by three DAF (DAFs).
(k) Sedimentation - provided in gravity settlement tanks ST1 and ST2.
(l) Filtration - provided by (i) Activated Filter Media serving water recovery plant reject stream and (ii) continuous 40-micron filtration system providing tertiary filtration downstream of key gravity settlement tank.</td></tr>
<tr><td>12</td><td>Emissions to water – treatment
BAT-associated emission levels (BAT-AELs) for direct emissions to a receiving water body

<table>
<tr><th>Parameter</th><th>BAT-AEL (1) (2) (daily average)</th></tr>
<tr><td>Chemical oxygen demand (COD) (3) (4)</td><td>25-100 mg/l (5)</td></tr>
<tr><td>Total suspended solids (TSS)</td><td>4-50 mg/l (6)</td></tr>
<tr><td>Total nitrogen (TN)</td><td>2-20 mg/l (7) (8)</td></tr>
<tr><td>Total phosphorus (TP)</td><td>0,2-2 mg/l (9)</td></tr>
</table>
Chemical oxygen demand (COD) – a higher limit of 125mg/l is appliable if the abatement efficiency is ≥ 95 % as a yearly average or as an average over the production period

Total Nitrogen (TN) – a higher limit of 30mg/l as a daily average is applicable if the abatement efficiency is ≥ 80 % as a yearly average or as an average over the production period</td><td>CC</td><td>The Operator has provided information to support compliance with BAT 12. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement.

Considering the no back-sliding principle, i.e. an increase in emission limit value and BAT 12 the following parameters and emission limits will be retained in the varied permit.

• Total suspended solids – 20 mg/l

The following revised permit limits have been introduced.
• Chemical oxygen demand 125 mg/l
• Total nitrogen – 30 mg/l
• Total phosphorus – 0.3 mg/l

Chemical oxygen demand and total nitrogen emission limits have been set at the upper end of the permissible range, as the abatement efficiencies consistently achieve</td></tr>
</table>

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			greater than 95% and 80% respectively, based on yearly average performance. The total phosphorus emission limit has been set at the lower end of the range to protect water quality.
13	**Noise management plan** In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to set up, implement and regularly review a noise management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements: - a protocol containing actions and timelines; - a protocol for conducting noise emissions monitoring; - a protocol for response to identified noise events, eg complaints; - a noise reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures. Note: BAT13 is only applicable where a noise nuisance at sensitive receptors is expected and/or has been substantiated.	**FC**	On 5 June 2025, the Environment Agency's local Regulatory Team required the applicant to develop an NMP for approval, in accordance with Environment Agency guidance. The applicant submitted the NMP on 24 December 2025. The NMP includes plans for further mitigation measures and routine noise monitoring. The NMP will be approved, if appropriate, by the local Regulatory Team. There have been no public complaints of noise since mid-August 2025. See Section 7.3.2 of this decision document for further details concerning the NMP. We consider that the Operator will be compliant with BAT 13 upon completion of these measures.
14	**Noise management**	**FC**	Works to reduce noise have been carried out.

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	In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given below. (a) Appropriate location of equipment and buildings (b) Operational measures (c) Low-noise equipment (d) Noise control equipment (e) Noise abatement [for detail of each technique, refer BAT 14 table in BATCs]		The NMP, submitted on 24 December 2025 includes techniques for reducing noise. The NMP will be approved, if appropriate, by the local Regulatory Team. There have been no public complaints of noise since mid-August 2025. See Section 7.3 of this decision document for further details concerning noise.
15	**Odour Management** In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an OMP, as part of the environmental management system (see BAT 1), that includes all of the following elements: - a protocol containing actions and timelines; - a protocol for conducting odour monitoring. - a protocol for response to identified odour incidents eg complaints; - an odour prevention and reduction programme designed to identify the source(s); to measure/estimate odour exposure: to characterise the contributions of the sources; and to implement prevention and/or reduction measures. BAT 15 is only applicable to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.	**CC**	The Operator has provided information to support compliance with BAT 15. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement. There have been a number of substantiated complaints regarding odour emissions from both the main dairy site and the WPF. As part of the applied-for variation (V011), a revised OMP was submitted and subsequently approved by the Environment Agency. This plan has been incorporated into Table S1.2 of the permit as an Operating Technique. In addition, several site improvements have been permitted under Variation V011 to mitigate odour emissions, including:

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			• Installation of a new contingency lagoon at the main creamery building, with extraction to an OCU • Covering and extraction of BT1 and the Divert Tank to a new OCU • Installation of new aeration pumps for BT1 and the Divert Tank • Implementation of enhanced process monitoring to support odour control • Enclosure of sludge centrifuges and associated trailer
	DAIRY SECTOR BAT CONCLUSIONS (BAT 21-23)		
21	**Energy efficiency – Dairy Sector**	**CC**	The Operator has provided information to support compliance with BAT 21. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement. The Operator has confirmed that the following techniques are employed at the site to improve energy efficiency: • **(c)** Use of continuous pasteurisers • **(d)** Regenerative heat exchange in pasteurisation • **(f)** Multi-stage drying in powder production, involving multistage evaporation and crystallisation using Mechanical Vapour Recompression (MVR) and Thermal Vapour Recompression (TVR), followed by single-stage powder drying • **(g)** Precooling of returning ice-water: 2 C water is produced via an ammonia refrigeration system and used for whey cooling and for cooling cheese curd blocks prior to maturation

<table>
<tr><th>BAT No.</th><th>Summary of BAT Conclusion requirement for Food, Drink and Milk Industries</th><th>Status NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td></td><td>In order to increase energy efficiency, BAT is to use an appropriate combination of the techniques specified in BAT 6 and of the techniques given below.
<table><tr><th colspan="2">Technique</th><th>Description</th></tr><tr><td>(a)</td><td>Partial milk homogenisation</td><td>The cream is homogenised together with a small proportion of skimmed milk. The size of the homogeniser can be significantly reduced, leading to energy savings.</td></tr><tr><td>(b)</td><td>Energy-efficient homogeniser</td><td>The homogeniser's working pressure is reduced through optimised design and thus the associated electrical energy needed to drive the system is also reduced.</td></tr><tr><td>(c)</td><td>Use of continuous pasteurisers</td><td>Flow-through heat exchangers are used (e.g. tubular, plate and frame). The pasteurisation time is much shorter than that of batch systems.</td></tr><tr><td>(d)</td><td>Regenerative heat exchange in pasteurisation</td><td>The incoming milk is preheated by the hot milk leaving the pasteurisation section.</td></tr><tr><td>(e)</td><td>Ultra-high-temperature (UHT) processing of milk without intermediate pasteurisation</td><td>UHT milk is produced in one step from raw milk, thus avoiding the energy needed for pasteurisation.</td></tr><tr><td>(f)</td><td>Multi-stage drying in powder production</td><td>A spray-drying process is used in combination with a downstream dryer, e.g. fluidised bed dryer.</td></tr><tr><td>(g)</td><td>Precooling of ice-water</td><td>When ice-water is used, the returning ice-water is precooled (e.g. with a plate heat exchanger), prior to final cooling in an accumulating ice-water tank with a coil evaporator.</td></tr></table>Applicable in addition to BAT6</td><td></td><td>Techniques (a), (b), and (e) are not applicable to the production of cheddar cheese and whey powder products.</td></tr>
</table>

<table>
<tr><th>BAT No.</th><th>Summary of BAT Conclusion requirement for Food, Drink and Milk Industries</th><th>Status NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td>22</td><td>In order to reduce the quantity of waste sent for disposal, BAT is to use one or a combination of the techniques given below.

<table><tr><th colspan="2">Technique</th><th>Description</th></tr><tr><td colspan="3">Techniques related to the use of centrifuges</td></tr><tr><td>(a)</td><td>Optimised operation of centrifuges</td><td>Operation of centrifuges according to their specifications to minimise the rejection of product.</td></tr><tr><td colspan="3">Techniques related to butter production</td></tr><tr><td>(b)</td><td>Rinsing of the cream heater with skimmed milk or water</td><td>Rinsing of the cream heater with skimmed milk or water which is then recovered and reused, before the cleaning operations.</td></tr><tr><td colspan="3">Techniques related to ice cream production</td></tr><tr><td>(c)</td><td>Continuous freezing of ice cream</td><td>Continuous freezing of ice cream using optimised start-up procedures and control loops that reduce the frequency of stoppages.</td></tr><tr><td colspan="3">Techniques related to cheese production</td></tr><tr><td>(d)</td><td>Minimisation of the generation of acid whey</td><td>Whey from the manufacture of acid-type cheeses (e.g. cottage cheese, quark and mozzarella) is processed as quickly as possible to reduce the formation of lactic acid.</td></tr><tr><td>(e)</td><td>Recovery and use of whey</td><td>Whey is recovered (if necessary using techniques such as evaporation or membrane filtration) and used, e.g. to produce whey powder, demineralised whey powder, whey protein concentrates or lactose. Whey and whey concentrates can also be used as animal feed or as a carbon source in a biogas plant.</td></tr></table></td><td>CC</td><td>The Operator has provided information to support compliance with BAT 22. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement.

(a) Centrifuges are operated in accordance with manufacturers’ specifications, minimising product rejection and raw material wastage while maintaining quality and hygiene standards.

(e) The site employs techniques such as evaporation and membrane filtration to recover whey for the production of whey powder and whey protein concentrates. A recent enhancement at the main Creamery includes the introduction of a WPC process, which increases the volume of whey recovered.</td></tr>
<tr><td>23</td><td>In order to reduce channelled dust emissions to air from drying, BAT is to use one or a combination of the techniques given below.

<table><tr><th colspan="2">Technique</th><th>Description</th><th>Applicability</th></tr><tr><td>(a)</td><td>Bag filter</td><td>See Section 14.2 Page 34 of the Bref</td><td>May not be applicable to the abatement of sticky dust.</td></tr></table></td><td>CC</td><td>The Operator has provided information to support compliance with BAT 23. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement.

The Operator utilises bag filters at emission point A3 to abate emissions of whey powder fines generated by the whey powder drier.</td></tr>
</table>

<table>
<tr><th>BAT No.</th><th>Summary of BAT Conclusion requirement for Food, Drink and Milk Industries</th><th>Status NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td></td><td>
<table>
<tr><td>(b)</td><td>Cyclone</td><td rowspan="2"></td><td rowspan="2">Generally applicable.</td></tr>
<tr><td>(c)</td><td>Wet scrubber</td></tr>
</table>
The associated monitoring is given in BAT 5.
</td><td></td><td></td></tr>
<tr><td>23</td><td>
BAT-associated emission level (BAT-AEL) for channelled dust emissions to air from drying
<table>
<tr><th>Parameter</th><th>Description</th><th>BAT-AEL (average over the sampling period)</th></tr>
<tr><td>Dust</td><td>Mg/Nm^3</td><td><2-10 (1)</td></tr>
<tr><td colspan="3">(1) The upper end of the range is 20 mg/Nm^3 for drying of demineralised whey powder, casein and lactose.</td></tr>
</table>
</td><td>CC</td><td>The Operator has provided information to support compliance with BAT 23. We have assessed the submitted information and are satisfied that the Operator has demonstrated compliance with this requirement.

The extant permit currently sets a limit of 50 mg/m³ for particulate matter emissions from the whey powder drier. Footnote 1 within the relevant table indicates that the upper end of the range for drying DWP is 20 mg/m³.

The Operator has demonstrated, through the submission of monitoring data, that a tighter emission limit can be consistently achieved. Consequently, the permit variation has been updated to include the BAT-AEL of 10 mg/m³.</td></tr>
<tr><td colspan="2">Dairy Sector Environmental Performance Levels</td><td></td><td></td></tr>
</table>

<table>
<tr><th>BAT No.</th><th>Summary of BAT Conclusion requirement for Food, Drink and Milk Industries</th><th>Status NA/ CC / FC / NC</th><th>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</th></tr>
<tr><td>BAT-EPL</td><td>
Environmental Performance Level – Energy consumption for the dairy sector
<table>
<tr><td>Main product (at least 80 % of the production)</td><td>Unit</td><td>Specific energy consumption (yearly average)</td></tr>
<tr><td>Market milk</td><td rowspan="4">MWh/tonne of raw materials</td><td>0.1-0.6</td></tr>
<tr><td>Cheese</td><td>0.10-0.22 (1)</td></tr>
<tr><td>Powder</td><td>0.2-0.5</td></tr>
<tr><td>Fermented milk</td><td>0.2-1.6</td></tr>
<tr><td colspan="3">(1) The specific energy consumption level may not apply when raw materials other than milk are used.</td></tr>
</table>
</td><td>CC</td><td>The Operator has submitted information in support of compliance with the BAT Emission Performance Levels (BAT-EPLs). Following our assessment of the provided data, we are satisfied that the Operator has demonstrated compliance with the applicable BAT-EPLs.

The site produces a range of products comprising cheese, whey powder and whey cream and pre-biotic syrups. As neither cheese nor whey powder constitutes the sole main product (>80%), direct comparison of specific energy consumption figures against sector benchmarks is not straightforward.

The total energy use at the site is reported as 0.24 MWh per tonne of raw material. This figure is slightly above the upper range typically associated with cheese production yet falls at the lower end of the range for powder production.

Given the diversity of products manufactured at the site, this level of energy consumption is considered acceptable.</td></tr>
</table>

BAT No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
N/A	Article 22 of the IED requires operators of installations that use, produce or release relevant hazardous substances which could pollute the soil or groundwater, to have a baseline report that details the pollution status of the soil, and groundwater at the site.	**FC**	The operator has not completed a Stage 3 Relative Hazardous Substances assessment. The Stage 3 assessment is being carried out alongside the evaluation of containment measures across the site. The Stage 3 assessment is required to determine the need and/or scope of: • Routine monitoring • A baseline report IC 13 has been set, requiring the completion of the Stage 3 Relative Hazardous Substances assessment and the baseline report. IC 14 has been set, requiring all site containment to be assessed against published standards and propose improvements where required.