

# **Environment Agency permitting decisions**

## **Bespoke permit**

We have decided to grant the permit for Kirkby Creamery operated by Dairy Crest Limited.

The permit number is [EPR/VP3234NX](#)

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

## **Purpose of this document**

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

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

## **Structure of this document**

- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

## **Key issues of the decision**

### **Industrial Emissions Directive (IED)**

The Environmental Permitting (England and Wales) (Amendment) Regulations 2013 were made on the 20 February and came into force on 27 February. These Regulations transpose the requirements of the Industrial Emissions Directive (IED).

This permit implements the requirements of the EU Directive on Industrial Emissions.

### **Odour**

There are sensitive receptors within 100 metres of the installation, which consists of residential properties to on Moorgate Road opposite the site entrance and loading bays.

There is no history of odour complaints linked to the existing facility, and the risk of odour pollution is low due to the nature of the process and that the site is large, with a significant buffer area around most of the process areas.

The applicant has provided an assessment of odour risks in the H1 risk assessment in Appendix 2 Table 1 of their application supplementary documentation.

Overall there is the potential for odour pollution from the installation. However the risk of odour pollution beyond the installation boundary is considered insignificant.

### **Noise**

There are sensitive receptors within 100 metres of the installation, which consists of residential properties to on Moorgate Road opposite the site entrance and loading bays.

Operations with most potential to cause have been assessed engine noise from vehicles, noise from reversing warnings from vehicles in loading bay areas and noise from refrigeration compressors on loaded trailers.

There is no history of noise complaints linked to the existing facility and the risk of noise pollution is low due to the nature of the process and that the site is large, with a significant buffer area around most of the process areas.

The applicant has provided an assessment of noise and vibration risks in the H1 risk assessment in Appendix 2 Table 2 of their application supplementary documentation.

Overall there is the potential for noise pollution from the installation. However the risk of noise pollution beyond the installation boundary is considered insignificant.

## Improvement Condition Programme

Several improvement conditions have been included in the permit, to ensure the installation will meet BAT requirements in a timely manner, as detailed below. In addition the operator has proposed measures to manage the risk in the interim, as requested by the Environment Agency at the duly making stage, for some of the issues, and these measures are included below. Deadlines for completion have been given in accordance with the level of risk posed by the various operations:

- IC1– Boilers:

The existing boilers are larger than required to meet the installation's steam demand, and are therefore are being run on very low load which reduces energy efficiency and creates higher emissions of nitrogen oxide (NO<sub>x</sub>). In addition they are over 30 years old and not as efficient as modern boilers. An improvement condition IC1 has been included to review the current and predicted future site steam demand and submit a proposal to the Environment Agency for approval for how current and future demand will be managed and delivered. The review shall take into account energy efficiency, emissions and costs and shall also consider potential options for the use of combined heat and power generation. The proposal shall include a timescale for implementing identified improvements.

- IC2 – Effluent Treatment Plant (ETP) sump:

The ETP sump has proven to be sufficient in containing effluent but the operator recognises there is a risk with regards to potential for leak and pollution to surrounding land and groundwater. An email dated 14/05/14 confirmed that a planned inspection of the sump was completed in April 2014 and IC2 has been included for the operator to submit a report containing details of the latest inspection of the effluent collection sump. The report shall include an evaluation of the findings of the inspection and a risk assessment to quantify the risk of leaks from the sump. Based on the findings of this study, the operator shall propose improvements, with timescale for implementation, to manage the risks to ensure protection of groundwater.

- IC3 and IC4 - ETP containment:

The existing effluent treatment plant has a form of secondary containment consisting of drainage channels and surrounding kerbing although it is recognised this will not be sufficient to withhold flow in the event of serious overflow or accident. Information received from the operator on 04/03/14 included an action plan for an ETP high level alarm and road hump to be implemented by April 2014. This was confirmed as implemented in an email dated 14/05/14. IC3 has been included for the operator to review containment and control measurements at the effluent treatment plant (ETP) to ensure the risks from overflow or failures of tanks and associated pipes and equipment is minimised. A report detailing the findings of the review, including proposals for improvement and proposed dates for implementation, shall be submitted to the Agency for approval. IC4 has been

included to ensure the operator implements any measure or measures as approved through IC3.

- IC5 – Surface water protection:

The operator recognises that in the event of a loss to surface water drainage the site has no form of isolation or shut off valve. With consideration of containment issues described above for the ETP, and below (see IC6) for borehole and CIP caustic tanks, and with regards to potential for spill on other areas of the site IC5 has been included requiring the operator to evaluate / quantify the risk of potential pollution to surface water across the installation and control measures in place at each location, including but not necessarily limited to ETP containment, borehole protection, caustic tank containment and chemical delivery and storage areas, and submit a report to the Agency. The report shall include proposals to reduce the risk and any proposed containment measures, and include timescale for implementation.

- IC6 – Bund valves:

A large majority of external bunds have historically been fitted with lockable drain valve points in order to assist with de-watering and prevent rainwater accumulating within the bund. The operator recognises that this is not deemed as good practice and increases the likelihood of any contaminated water to be released without proper control. The operator submitted a report on 04/03/14 of a new bund inspection to be completed in March 2014 and a revised emptying procedure developed and training. IC6 has been included requiring the operator to identify all external bund valves with drain valve points and either remove the valve and restore bund, or where removal is deemed higher risk, implement a suitable physical control to prevent opening or leakage of valve, and confirm actions in writing to the Environment Agency.

- IC7 – Fugitive emissions monitoring:

The operator has stated in the application that whilst any fugitive emissions arising from spill or incident will be recorded through the existing environmental incident procedure there is no current method for recording fugitive emissions from the likes of refrigeration equipment. IC7 has been included requiring the operator to develop and implement a suitable method of assessing and recording fugitive emissions to air, land and water, to commence reporting in January 2015 covering the 2014 calendar year, and include this method in a revised Environment Management System, and submit to the Environment Agency for approval. This will cover in particular the issues detailed below:

- Borehole containment:

The chemical storage tanks for the borehole abstraction and treatment are double skinned. However they do pose a risk with regards to proximity to the

borehole itself and surrounding unmade ground. Additionally there is no protection to the tanks from vehicle movements during delivery. Information received from the applicant on 04/03/14 confirms that kerbing and a barrier are to be installed by April 2014. An email received 14/05/14 confirmed that kerbing has been fitted and well head protection has also been fitted.

- Caustic containment:

The Cleaning In Place (CIP) bulk caustic tank is double skinned and within a bunded area. However, the caustic delivery area, whilst it may contain some leakage from the connection point, will not contain a leak from the tanker itself or in the event of an emergency. Any resulting leak is likely flow to the surface water drain which is located within approximately 15 metres. The operator has submitted a risk assessment on 04/03/14 which includes proposals for a new delivery procedure to be implemented by March 2014. An email dated 14/05/14 has confirmed that the bulk chemical delivery procedure will go live across all the relevant departments in May 2014 and noted that the drain protection measures and spill kit availability was already being undertaken.

- Waste mineral oil tank:

The existing waste mineral oil tank is approximately 500 litres and bunded. The operator recognises that both the tank and the bund are showing signs of deterioration with subsequent potential for loss of oil.

- IC8 – Disused internal drain:

A drain shown in light blue/turquoise on the site drainage plan which is marked as “filled with expanding foam” is a legacy drain that previously captured rain water from the roof of the facility. However if the foam fails this could be considered as a potential pathway for pollution. The operator confirmed on 25/04/14, in response to a Schedule 5 Notice, that this drain has since been filled to prevent any further ingress and further inspection of the drain has shown that this encapsulation still appeared robust and intact which would indicate that it should not therefore be considered as a potential pathway for pollution. They advised that tests will be performed to verify this. IC8 has been included for the operator to develop and implement a suitable method for monitoring the disused internal drain to verify whether the encapsulation appears robust and intact, and include this method in a revised Environment Management System, and submit to the Environment Agency for approval.

## **Energy Efficiency**

The operator has a Climate Change Levy Agreement.

In addition the nature of the business requires that energy efficiency is of high priority and the operator regularly reviews operations to reduce energy usage. This has been demonstrated by the introduction of the one of the new processes, where the use of butter rather than cream means no pasteurisation of cream is required and therefore no heat required. Another example is the use of scrape surface technology allows longer cycles than churn technology resulting in a reduction of energy and water usage.

The operator confirmed in their response (received 25/04/14) to a Schedule 5 Notice request for further information regarding CIP optimisation that Cleaning in Place (CIP) Optimisation:

*'Dairy Crest guidance and policy exists to optimise CIP performance, the key consideration being to ensure food safety requirements are fully met. On this basis, CIP validation and optimisation studies are undertaken every three years and the latest study was completed in 2013 by both internal and external assessors.'*

*'As part of the optimisation programme, water and chemical use is a significant consideration (whilst ensuring food safety) and that is reflected in the site's continued reduction in chemical and water usage.'*

*'Water usage is constantly monitored and tracked using 'Carbon Desktop' and will continue on an on-going basis. The site's water usage is currently in line with industry indicative best practice.'*

The operator also confirmed in their response to the Schedule 5 Notice the following information regarding their pasteurisation process and its optimisation:

*'There are currently five pasteurisation sets (PA1, PA2, PA3, PA5 and PA6), each of these pasteurisers are configured and controlled in the same way. The main heating medium is steam, from which the site recovers the condensate produced and this is returned to the boiler 'hot well'. Product is pre heated in the pasteuriser with low grade recovered water from the cooling section of the product pasteuriser.'*

The operator recognises that there are areas for improvement. The existing boilers are larger than required to meet the installation's steam demand. In addition they are over 30 years old and not as efficient as modern boilers. Additional information was received from the operator on 25/04/14 in response to a Schedule 5 Notice request for further information regarding the unrestricted and restricted net rated thermal input of the boilers and the measures in place to ensure the restriction can not be altered during normal operation. An improvement condition IC1 has been included to review the current and future site steam demand and submit a proposal to the Environment Agency for approval for how current and future demand will be managed and delivered. The review shall take into account energy efficiency, emissions and costs and shall include but not necessarily be limited to use of combined heat and power generation. The proposal shall include a timescale for implementing identified improvements.

## **Process Monitoring Requirements**

It has been deemed necessary to include a process monitoring requirement in the permit, included in table S3.4, for pH monitoring to ensure that the pH value of 6 - 11 leaving the ETP to join the sewer will be monitored continuously and should the level not be between 6 – 11 it will be diverted back to the ETP. This is due to the fact that there could be a potential for effluent outside of this pH range to damage the drain and create a potential pathway for pollution.

## **Impact on Nature Conservation Sites**

The installation is within 2km of 16 Local Wildlife Sites (LWS) and 2 Local Nature Reserves (LNR). There are no Sites of Special Scientific Interest (SSSI) within 2km and no Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Ramsars within 10km of the installation.

Given the size of the boilers it is highly unlikely for the process contributions of emissions to exceed critical levels or loads. Also in the Environment Agency's H1 guidance it states that detailed modelling is not needed for boilers with an aggregated thermal input of <20MW.

The Environment Agency completed a basic screening to calculate the impact at the nearest nature conservation site and it concluded that emissions from the installation are not likely to have an impact on these designated sites.

## Annex 1: decision checklist

This document should be read in conjunction with the Duly Making checklist, the application and supporting information and permit/ notice.

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>Consultation</b>		
Scope of consultation	The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.	✓
Responses to consultation and web publicising	The web publicising and consultation responses (Annex 2) were taken into account in the decision.  The decision was taken in accordance with our guidance.	✓
<b>Operator</b>		
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator.	✓
<b>European Directives</b>		
Applicable directives	All applicable European directives have been considered in the determination of the application.  This permit implements the requirements of the EU Directive on Industrial Emissions.	✓
<b>The site</b>		
Extent of the site of the facility	The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility.  A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.	✓
Site condition report	The operator has provided a description of the condition of the site.	✓



Aspect considered	Justification / Detail	Criteria met
		Yes
	We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED–guidance and templates (H5).	
Biodiversity, Heritage, Landscape and Nature Conservation	<p>The application is within the relevant distance criteria of nature conservation sites.</p> <p>An assessment of the application and its potential to affect this site has been carried out as part of the permitting process. See Key Issues – Impact on Nature Conservation Sites section above.</p> <p>We have not formally consulted on the application. The decision was taken in accordance with our guidance.</p>	✓
<b>Environmental Risk Assessment and operating techniques</b>		
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p> <p>Based on the applicant's assessment we are satisfied that emissions are unlikely to be significant.</p>	✓
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes.</p> <p>Most of the proposed techniques for priorities for control are in line with the benchmark levels contained in the SGN EPR6.10 and 6.13 and we consider them to represent appropriate techniques for the facility. See Key Issues - Improvement Conditions Programme section above for areas that need further improvement.</p>	✓
<b>The permit conditions</b>		
Improvement conditions	<p>Based on the information on the application, we consider that we need to impose improvement conditions.</p> <p>See Key Issues - Improvement Condition Programme section above for further details</p>	✓
Incorporating	We have specified that the applicant must operate the	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
the application	<p>permit in accordance with descriptions in the application, including all additional information received as part of the determination process.</p> <p>These descriptions are specified in the Operating Techniques table in the permit.</p>	
Reporting	We have specified reporting in the permit for water and energy use.	✓
<b>Operator Competence</b>		
Environment management system	There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓
Relevant convictions	<p>The National Enforcement Database has been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found.</p> <p>The operator satisfies the criteria in RGN 5 on Operator Competence.</p>	✓
Financial provision	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓

## Annex 2: Consultation and web publicising responses

Summary of responses to consultation and web publication and the way in which we have taken these into account in the determination process.

Response received from
Public Health England (received 08/04/14)
Brief summary of issues raised
<p>The following comments were made on behalf of Public Health England:</p> <p>The site is located in a predominantly commercial area. The closest residential receptors are approximately 100m to the west, with residential properties also located 170m to the north. There is also a school approximately 550m to the north-west and a hotel approximately 50m to the south.</p> <p>It is recommended that the permit issued for the site should contain conditions to ensure that potential emissions do not impact on public health, from point source emissions, fugitive emissions and odour.</p> <p>Based on information within the application, PHE has no significant concerns regarding risk to health of the local population providing the applicant takes all appropriate measures to prevent or control pollution in accordance with relevant sector technical guidance or industry best practice.</p>
Summary of actions taken or show how this has been covered
We consider that the permit conditions will ensure that potential emissions from the installation will not impact on public health.

Response received from
Knowsley Metropolitan Borough Council Director of Public Health (received 14/04/14)
Brief summary of issues raised
<p>The response included a summary of the application, a summary of health issues specific to Knowsley and the area in and around the postcode L33 7XW. In particular a summary of public health concerns were raised relating to increased vehicular movement, environmental damage to local environment including local water courses, groundwater, biodiversity, surrounding farmland and future food supply chain, and odours.</p>
Summary of actions taken or show how this has been covered
<p>We consider that the permit conditions will ensure that potential emissions from the installation will not impact on public health.</p> <p>Issues relating to vehicular movement resulting in increased traffic congestion are not an issue under the Environment Agency's remit.</p> <p>The application describes measures to protect controlled water and ground water. These measures, together additional permit conditions, will ensure that</p>

the installation will not have a significant impact on the local environment. We are satisfied that emissions from the installation will not cause significant odour nuisance or damage ecological sites or impact on the food chain.

Response received from
United Utilities Water PLC (received 28/04/14)
Brief summary of issues raised
The following comments were made on behalf of United Utilities Water PLC:  <ol style="list-style-type: none"><li>1. No objection to the discharge to foul sewer specified in application (covered by consent to discharge trade effluent).</li><li>2. Adequate sewerage and sewage treatment facilities exist, no significant pollution is caused by acceptance of trade effluent and treatment of trade effluent in admixture with domestic sewage represents BAT.</li><li>3. No further issues to draw to attention of regulator.</li></ol>
Summary of actions taken or show how this has been covered
No action required.

In addition the Health and Safety Executive and Knowsley Metropolitan Borough Council Environmental Health were consulted and no responses were received.