

Our Ref: EPR/WP3231NB

Mr Ashton Daniels
Dairy Partners (Cymru Wales) Ltd.
The Creamery
Aberarad
Newcastle Emlyn
Carmarthenshire
SA38 9DQ

Date: 13th February 2025

Dear Mr Daniels

EPR-WP3231NB Dairy Partners (The Creamery, Newcastle Emlyn) Improvement Condition Review

Thank you for submitting Dairy Partners' response to discharge the requirements of Improvement Condition (IC) 21b of the environmental permit EPR-WP3231NB.

- Email received on 22/10/2024 and 20/12/2024 from Ashton Daniel (Dairy Partners) with a response to IC21b – BAT review assessment of the noise pollution from the whole installation.

Documents received from Dairy Partners:

- *240916 - The Creamery Aber-arad BAT Noise Audit.pdf* (written by consultants ParkerJones Acoustics Limited on behalf of the operator Dairy Partners (Cymru Wales) Ltd) - submitted 22/10/2024.
- *Noise Implementation Plan.xlsx* - submitted 20/12/2024.

IC21b is set out in the Dairy Partners Environment Permit EPR/WP3231NB/V005, issued on the 16th May 2023. For convenience I have included the wording of the condition in the Table below (in italics).

IC21b	<p><i>The Operator shall carry out a BAT review assessment of the noise pollution from the whole installation. Paying attention to the potential for minimising noise pollution from the whole installation. The review shall include:</i></p> <ul style="list-style-type: none">• <i>Determination of the level of impact by completion of a noise impact assessment as required by IC21a</i>• <i>Review of the noise control techniques and measures outlined in BAT Conclusion 14 of the Food, Drink and Milk Industries BRef Document (EU 2019) to demonstrate noise emissions have been prevented or minimised as far as reasonably practicable. The review should include a feasibility study of installing further noise control techniques and measures, including a cost-benefit analysis where required.</i>• <i>An implementation plan where improvements to the noise control techniques and</i>
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measures are identified including a timetable for their installation.

The BAT review assessment shall be submitted to Natural Resources Wales by the date specified for approval.

The implementation plan shall be implemented in accordance with Natural Resources' Wales written approval.

IC21b follows on from the previous IC (IC21a) which required Dairy Partners to undertake a Noise Impact Assessment (NIA) for the whole site. The results of the NIA (based on-site noise monitoring data) concluded site activities are having a significant adverse impact. Therefore, the results of the NIA, together with ongoing noise complaints from the community further emphasise the importance for Dairy Partners to make appropriate noise control measure/mitigation improvements.

As per IC21b, noise control techniques and measures are outlined in BAT Conclusion 14 of the Food, Drink and Milk Industries BRef Document (EU 2019). A review of these measures is required to demonstrate noise emissions have been prevented or minimised as far as reasonably practicable.

We have reviewed the response provide in relation to IC21b with assistance from NRW's Air Quality and Noise Team (AQNT).

In summary, the information provided does not fully satisfy the requirements of IC21b. In particular, the submitted "Noise Implementation Plan" spreadsheet, which draws on information within the "BAT Noise Audit Report", requires further information to fulfil Improvement Condition IC21b. See further comments below.

It is acknowledged that Dairy Partners has committed to certain mitigation measures (listed in the "Noise Implementation Plan" spreadsheet) for a number of identified noise sources, however, the justification for the chosen mitigation measures and the technical detail of those mitigation measures have not been provided. Therefore we cannot comment with confidence on the appropriateness or effectiveness of the proposed measures.

Please see the following comments (please review and provide additional information to address each point):

Comments

- In **Table 1** below, we have collated a summary of the information in the "*BAT Noise Audit Report*" and the "*Noise Implementation Plan*" spreadsheet, and provided comments on the proposal for each of the identified noise sources.
- The information provided by Dairy Partners on the proposals for "next steps" (within the "*Noise Implementation Plan*" spreadsheet) is generally very limited in both the technical detail and the practical implementation. Where the consultant (ParkerJones Acoustics Limited) has indicated that measures may or may not be appropriate, depending on a cost benefit analysis, this analysis has not been provided by Dairy

Partners, or commentary has not been provided as to why that analysis is not necessary.

- The consultant has not explained how the sound power levels used in the modelling were derived from measured sound pressure levels of plant equipment. The consultant should provide this information and also confirm the method follows the guidance set out in the “*Method implementation document (MID) for BS 4142*” and reproduced below:

“You must not carry out measurements of the specific sound level in the near field unless you can provide valid assumptions of a measurement surface area. For example, a parallelepiped for sound power determination ($L_p + 10 \times \text{Log}(\text{surface area})$). If you are doing this you should follow a procedure required by BS EN ISO 3744:2010 to work out sound power level in-situ. Otherwise, if you are using a single sound pressure measurement, you must meet the far-field conditions where hemispherical propagation can be assumed and provide proof of this.”

- Dairy Partners must consider all and/or the combination (where appropriate) of improvement options proposed by the consultant for each noise source and provide justification for the feasibility of installing individual or multiple improvement options (evidence that all options have been explored and considered). If necessary, as per the requirement of IC21b and as indicated by the consultant, Dairy Partners must provide a cost benefit analysis for the potential mitigation measures listed for each noise source.
- Section 3.2 of the “*BAT Noise Audit Report*” report states noise sources are effectively ranked in order of disturbance. You must consider ranking noise by duration as well as loudness. Please review and confirm how ranking has been made. Update as required.
- The status column within the “*Noise Implementation Plan*” spreadsheet should only be considered closed after discussions and agreement with NRW. See comments below in **Table 1**.
- While there is some mention in the assessment of frequency (Hz) content of noise sources, further detail is required. It is assumed that the effectiveness of some noise mitigation options (e.g., acoustic barriers) will be dependent on the frequency content of the noise source. For example, acoustic fencing could be very effective at attenuating noise in the mid to high-frequency ranges but could be completely ineffective at lower frequencies. See **Table 1** for further comments.
- Have Dairy Partners/ ParkerJones Acoustics Limited considered if the measured frequency profile at receptor locations compared with on-site source measurements/modelling to see if that helps identify sources of concern? For example, from a nearfield assessment, the dominant frequency could be 7KHz, but offsite at the receptor properties, or even more likely inside the residential properties, the dominant frequencies could be in the lower range. These properties could act as a low-pass filter.
- Given the list of various options to mitigate noise, we recommend Dairy Partners have an overall prediction of the impact the various measures would have on the cumulative site noise levels. We would also recommend Dairy Partners assessing

the cumulative impact of phases of works as measures are completed sequentially, and this would allow assessment of the effectiveness of mitigation as it is undertaken.

NOTE: Comments provided in this letter are to seek further information. No agreement or sign-off of the “*BAT Noise Audit Report*” or “*Noise Implementation plan*” is confirmed at this time.

Table 1

Source	Consultant's opinion Already employing BAT ?	Consultant's comments Possible next step for improvement?	Operator's comments Next steps for improvement	NRW comments
ETP Tankers (pumping) ETP Tankers (idling)	Yes	No Substantial improvements have already been recently made	No Action Needed As per Bat report	<p>The consultant states that BAT is already employed for this noise source, although potential measures listed by the consultant included movement of sources and erection of temporary/permanent screening.</p> <p>The operator states that no further action is required for this noise source.</p> <p>The predicted levels and observations indicate that this is a dominant source at sensitive receptor, although claimed it is only for a limited period (20 minutes typically once every other day).</p> <p>Further justification required regarding implementation of other potential BAT measures recommended and information regarding the feasibility of implementing these further mitigation measure (cost benefit analysis to support if needed).</p>

Source		Consultant's opinion	Consultant's comments	Operator's comments	NRW comments
	Already employing BAT ?	Possible next step for improvement?	Operator's comments	Next steps for improvement	
Chillers	No	<p>Yes – subject to cost/benefit analysis</p> <p>A roof or a full enclosure is the next step to gain any further substantial reduction in noise emissions.</p> <p>However, the expense of this measure may be prohibitive and limited in benefit, given the likely level of reductions stated to the left.</p>	<p>Step 1, Improve Enclosure with acoustic panels</p>	<p>It is acknowledged that Dairy Partners is committed to improving the enclosure with acoustic panels.</p> <p>However, no detail has been provided as to whether this will be a full enclosure with roof or improvements to the existing enclosure. Dairy Partners must provide description of and/or drawings of how the improvements will be implemented. The plan should consider the type of acoustic panelling that will be used and the potential effectiveness across the frequency range. The consultant states an enclosure would require a ventilation system which may generate noise and require a silencer. More detail information is also required on this element.</p> <p>If necessary, as per the requirement of IC21b and as indicated by the consultant, Dairy Partners must provide a cost benefit analysis for the potential mitigation measures listed if required.</p>	
Cooling Tower Pumps	No	<p>Maybe</p> <p>Acoustic lagging is installed, as well as an enclosure, but could be improved.</p>	<p>Improve Enclosure, reduce air gaps</p>	<p>It is acknowledged that Dairy Partners is committed to improving the enclosure and reduce air gaps.</p> <p>However no detail has been provided as to how this will be implemented.</p> <p>Dairy Partners must provide description and/or drawings of how the improvements will be made and using what materials. Consideration should be given to the type of acoustic lagging and its sound reduction effectiveness across the frequency range.</p>	

Source	Consultant's opinion Already employing BAT ?	Consultant's comments Possible next step for improvement?	Operator's comments Next steps for improvement	NRW comments
Milk Tankers (pumping and idling)	No	<p>Maybe</p> <p>Will require a significant overhaul which may not provide enough benefit against cost.</p>	Not possible	<p>The consultant states that BAT is not being followed for this noise source. BAT¹ is to switch running engines and refrigeration units of vehicles off during loading and unloading and when the vehicle is parked, as these can lead to noise nuisance. The consultant presents a couple of potential mitigation measures, but acknowledge that it will require significant overhaul which may not provide enough benefit against the cost.</p> <p>An electric pumping system is one measure recommended by the consultant. Further clarity is sought on the electric pump system being used on site to empty milk tankers (does this differ from the consultants suggestion?).</p> <p>Dairy Partners have not address the potential for acoustic screening as proposed by the consultant.</p> <p>Further information and evidence is required to justify why it is "not possible" for any improvements to be made.</p> <p>No cost benefit analysis has been presented by Dairy Partners, as is required by IC21b for the BAT measures proposed by the consultant.</p>

¹ Best Available Techniques (BAT) Reference Document for the Food, Drink and Milk Industries 2019.

Source	Consultant's opinion Already employing BAT ?	Consultant's comments Possible next step for improvement?	Operator's comments Next steps for improvement	NRW comments
Vat Room Exhausts (east elevation)	No	Yes – subject to cost/benefit analysis Broadband noise with no tonal qualities, but may be a significant noise contributor which has a clear line of sight to receptors. Maybe	Install acoustic duct	It is acknowledged that Dairy Partners is committed to installing acoustic ducts. However no detail is provided regarding the type of duct and expected performance of the chosen acoustic duct.
Vat Room Exhaust (south elevation)	No	Recently installed and less noise contributions than other sources, no tonal quality. No	Install acoustic duct	It is acknowledged that Dairy Partners is committed to installing acoustic ducts. However no detail is provided regarding the type of duct and expected performance of the chosen acoustic duct.
ETP	No	Negligible reduction at boundary vs significant cost outlay. Significant improvements already made to the blower pipe.	No Action Needed As per BAT report	No further comments.
Borehole Pump Room	Yes	No Already improved recently	No Action Needed As per BAT report	No further comments.

Source	Consultant's opinion Already employing BAT ?	Consultant's comments Possible next step for improvement?	Operator's comments Next steps for improvement	NRW comments
Boiler House Pressure Valve Release	No	Maybe As this only occasionally happens, it would not appear critical to treat this before other noise sources.	No Action Needed As per BAT report	The consultant's subjective observations indicate that this is clearly noticeable at receptors although as a relatively broadband noise. The consultant states that this event "Rarely occurs" and Dairy Partners comments indicate that this is a "health & safety requirement which is planned once per year". Dairy Partners must clarify or attempt to quantify "Rarely occurs".
LNG (pressure fill)	Yes	Yes	Awaiting permit variation discussion, A permanent noise barrier complying with BAT to be installed	It is acknowledged that Dairy Partners is committed to installing a permanent noise barrier around the area. Based on the submitted document "LNG sound barrier.doc" (part of the permit variation application ²), the proposed "permanent" barrier appears to consist of a 0.7m concrete block base with a 2m Heras fence with an Echo H9 Acoustic barrier attached to the fence. These type of portable acoustic barriers are predominantly used as a temporary measures in industries such as construction and are not generally considered a permanent solution. Compared to other permanent acoustic barriers, these portable barriers may be more susceptible to weather conditions causing damage or movement of the barrier and subsequently degrading the performance. Additionally, the consultant's subjective observations indicate a "Very-noticeable low-frequency noise". The technical specification of the Echo H9 indicates the performance of the acoustic panels is

² Technical advice is being provided as part of this IC review. Any comments made in this response does not pre-determine the permit variation application.

Source	Consultant's opinion Already employing BAT ?	Consultant's comments Possible next step for improvement?	Operator's comments Next steps for improvement	NRW comments
LNG (alarm)*	Yes	Yes Whilst the alarm is necessary a simple casing could be installed around the alarm as observed on previous suppliers tankers.	Health & Safety requirement. No action	significantly less in the low frequencies. Dairy Partners has not considered the effectiveness of the Echo H9 barriers at mitigating the observed low frequency element of the LNG source. The consultant/Dairy Partners has not undertaken any cost benefit analysis of using other materials for an acoustic barrier such as a full height concrete block. It should be noted that although not stated within the "Noise Implementation Plan" it is understood the consultant claims the "silent delivery" option is not possible. Additional information required. Evidence of alternative suppliers must be provided. Details of a suitable permanent noise barrier to be implemented must be provided.
Cooling Towers	Yes	No Already improved recently	No Action Needed As per BAT report	We cannot comment on the requirement of this alarm with regards to health and safety, however, we would note that the consultant has provided suggestions for mitigation that Dairy Partners has not fully addressed. No further comment.

Source	Consultant's opinion Already employing BAT ?	Consultant's comments Possible next step for improvement?	Operator's comments Next steps for improvement	NRW comments
Glycol Pumps (Chiller Base)	No	<p>Yes – subject to cost/benefit analysis</p> <p>A roof or a full enclosure is the next step to gain any further substantial reduction in noise emissions. However, the expense of this measure may be prohibitive and limited in benefit, given the likely level of reductions stated to the left.</p>	<p>Step 1, Improve Enclosure with acoustic panels</p>	<p>It is acknowledged that Dairy Partners is committed to improving the enclosure with acoustic panels.</p> <p>However, no detail has been provided as to whether this will be a full enclosure with roof or improvements to the existing enclosure. Dairy Partners must provide description of and/or drawings of how the improvements will be implemented. The plan should consider the type of acoustic panelling that will be used and the potential effectiveness across the frequency range.</p> <p>If necessary, as per the requirement of IC21b and as indicated by the consultant, Dairy Partners must provide a cost benefit analysis for the potential mitigation measures listed.</p>
Why Dispatch Pump	No	<p>No</p> <p>Not critical in comparison to other noise sources.</p> <p>Negligible reduction at boundary vs significant cost outlay.</p>	<p>No Action Needed As per BAT report</p>	<p>No further comment.</p>
Boiler House Louvres	No	<p>No</p> <p>Not critical in comparison to other noise sources.</p> <p>Negligible reduction at boundary vs significant cost outlay.</p>	<p>No Action Needed As per BAT report</p>	<p>No further comment.</p>

Source	Consultant's opinion Already employing BAT ?	Consultant's comments Possible next step for improvement?	Operator's comments Next steps for improvement	NRW comments
Pump House	No	No Not critical in comparison to other noise sources. Negligible reduction at boundary vs significant cost outlay.	No Action Needed As per BAT report	No further comment.
Production Hall Exhausts	No	No Not critical in comparison to other noise sources. Negligible reduction at boundary vs significant cost outlay.	No Action Needed As per BAT report	No further comment.
Borehole Water Tank	No	No Not particularly loud or disturbing	No Action Needed As per BAT report	No further comment.
Compressor room exhaust	No information provided	No information provided	Install acoustic duct	The compressor room has not been included within the consultants "BAT Noise Audit Report". A BAT review of this noise source must be undertaken. It is acknowledged that Dairy Partners is committed to installing acoustic ducts. However no detail is provided regarding the type of duct and expected performance of the chosen acoustic duct.

You will need to undertake a review of your submission to address the issues raised above and submit the updated response/documents to NRW by 11/04/2025 (unless otherwise agreed in writing with NRW).

Yours sincerely



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Croesewir gohebiaeth yn Gymraeg a byddwn yn ymateb yn Gymraeg, heb i hynny arwain at oedi.

Correspondence in Welsh is welcomed, and we will respond in Welsh without it leading to a delay.