

Compliance Assessment Report for: CAR_NRW0038780

Permit number	WP3231NB	Operator name	Dairy Partners (Cymru Wales) Ltd.
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Site name	The Creamery
Site address	Newcastle Emlyn
Type of assessment	Site inspection

Date of assessment	19 th August 2021
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Parts of permit assessed	See section 4
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NRW Lead officer	Neil Herbert	Accompanied by	N/A
Report sent to – Name and position	Andrew Jones Environment Manager	Date	14 th October 2021

1. Summary of our findings (full details in section 4)

Part of permitted activity assessed (use action criteria below)	Assessment result	Permit condition
C4 General management – Storage, handling, labelling and segregation	C1 Major	1.1.1a
E2 Emissions – Land and groundwater	C3 Minor	3.1.1
B4 Infrastructure – Containment of stored materials	C2 Significant	3.2.3
A1 Specified by permit	C2 Significant	2.3.1a
F2 Amenity – Noise	C2 Significant	3.5.1
F1 Amenity – Odour	C2 Significant	3.4.1

Result types are explained in more detail in the 'Important Information' section below.

Total number of non-compliances recorded
6

2. What action is required?

Criteria	Action needed	Complete by
c4	<u>Chemical Inventory – management system and operational procedures</u>	12 th November 2021
	Dairy Partners will undertake an urgent review of their site's management system to ensure that the effluent treatment plant is operated and managed in accordance with the EPR permit.	
	Dairy Partners will ensure that they maintain an accurate, up to date and accessible inventory of potentially polluting substances held on site (and where relevant the respective site safety sheets).	29 th October 2021
	Dairy Partners need to clarify the reasons for the apparent inconsistencies (see section 4) in the stock records pertaining to NaOH records.	29 th October 2021
	Dairy Partners must provide an accurate means of gauging the stock levels for their potentially polluting liquids.	12 th November 2021
e2	<u>Sludge Tanker Spillage</u> - Dairy Partners will undertake an investigation into the cause of the spillage with actions to ensure no re-occurrence of the incident. - Dairy Partners will implement the recommendations of their investigation in order to ensure no re-occurrence of this type of incident.	This action should now be completed.
b4	<u>Secondary Containment</u> The use of IBC containers for the storage of potentially polluting liquids (e.g. NaOH) shall cease.	Action completed
f2	<u>Noise</u> - The operator shall submit a written report and action plan detailing: - the Cost Benefit Analysis for all of the <i>Potential BAT Measures</i> listed in Table 3.2 of the July 2021 BAT Noise Audit report¹; - a schedule listing which noise reduction measures have been identified for implementation as part of the Cost Benefit Analysis; - a completion date for implementation of each of the noise reduction measures identified for implementation as part of the Cost Benefit Analysis. The noise reduction measures listed in the written report and action plan should be prioritised and laid out in a sequential manner.	15 th October 2021 Note: This deadline has been formalised in a Regulation 61 Notice

¹ Parker Jones Acoustics – The Creamery, Aber-Arad – Dairy Partners Ltd - BAT Noise Audit - dated 22nd July 2021

Criteria	Action needed	Complete by
f1	<u>Odour</u> The operator shall implement the Odour Action Plan (received 23rd September 2021) to the timetable specified in the submission.	Timetable specified in Odour Action Plan
a1 & b4	<u>Unauthorised operation of new ETP and use of tanks and pipework without appropriate containment.</u> - The new ETP (which is currently un-permitted and includes large tanks without secondary containment), will need to be deactivated and carefully emptied until such time as: - the new ETP plant is provided with appropriate secondary containment and - is permitted under the requirements of the EPR regulations. - During and after the deactivation of the new ETP, Dairy Partners must ensure compliance with all other conditions in their EPR permit.	Overdue
Follow up action from previous visit.	<u>Use of Surface Water Lagoon</u> Surface Water Lagoon to be decommissioned until Dairy Partners have completed repairs to the surface water lagoon structure to ensure appropriate containment (the work will need to be certified by an appropriately qualified engineer confirming that the repairs have been completed to the required standard).	Overdue
Follow up action from previous visit.	<u>W3 Emission</u> The operator to undertake an investigation to: - remediate/mitigate the contamination. - ascertain the source of the W3 contamination monitor	Operator have since submitted the findings of their investigation and this is now awaiting assessment. ²

Action criteria codes are listed in the 'Important information' section.

If the operator considers that they are unable to comply with any of the actions noted above, or to the deadlines specified, they must contact NRW immediately.

3. What will happen next?

You are non-compliant with your permit. We will be considering taking enforcement action against you for the non-compliance recorded above in due course.

² Note: We have since received the investigation report and will be reviewed in due course.

4. Details of our assessment

Introduction

- On the 19th August 2021 the site's regulatory officer (Neil Herbert) visited the site. We were escorted by Mr. Andrew Jones (Dairy Partners - Health Safety and Environment Manager). We also periodically met with other Dairy Partners (DP) staff during the visit. The visit was primarily a follow up site inspection (see previous CAR reports).
- Following the site visit, NRW undertook a partial review of some of the site's procedures pertaining to the operation and management of the sodium hydroxide chemicals used in the ETP. The key findings of this review have been included in this report.

Dairy Partners' investigation/mitigation (W3 July pollution) update

- We were informed that DP have completed their intrusive investigations and have reported that the pipework (leading to W3) was found to be intact
- A report has since been submitted and will be reviewed shortly.
- The W3 emission pipe will remain sealed for the time being and any liquid within the pipe re-circulated through the plant's treatment process.
- During this visit we checked the pH of the liquid (collecting in the W3 pipe) and found it was neutral (pH 7)

IBC Containers – containment deficiencies - update

- Since the last visit the operator had relocated the IBCs³ onto larger pallet bunds which should (if properly dewatered) provide improved containment.
- However at the time of this visit the pipework serving the IBCs were still not provided with any containment.
- During the inspection, concerns over the ongoing suitability and use of the IBCs as holding tanks were again raised by NRW, particularly in term of the risks posed by the re-filling activity (both environmentally and from a H&S aspect).
- During these discussions Dairy Partners representatives stated that the longer term aim was to entirely remove the need to use the IBCs by installing two new bespoke chemical tanks (with an integrated bund). However Darryl White (Dairy Partners Operations Manager) explained that this had been delayed due to delivery issues at the manufacturer.
- During the subsequent discussions, DW presented an interim proposal which would allow the permanent decommissioning of the IBCs to be undertaken. DW proposed that Dairy Partners could install steel pipework between the current bulk tanks (used to hold NaOH and Coagulant) allowing them to be transferred directly to the effluent treatment plant. This would negate the need to use the IBCs to hold chemicals and would also remove the high risk practice of daily transfers of chemicals to the IBC. DW further explained that the modifications could be completed within two weeks.

³ Storing NaOH and Coagulant.

Action: DP were instructed to implement measures to allow the decommissioning of the IBCs used to store NaOH and Coagulant.

NOTE: NRW have since confirmed that these measures have been implemented and the IBC are no longer in use.

Compliance: Whilst the issue with the pipework serving the IBCs has since been addressed, the deficiencies noted in this Aug visit are still considered a breach of condition 3.2.3 of the permit. However this condition has been attributed a ccs score for separate breaches pertaining to the use of the balance and aeration tanks (see later). We have therefore not attributed a separate ccs score for this failure, on this occasion.

Sludge Tanker Spillage

- On arrival to the site we were informed that a small localised spillage had occurred at the sludge tank. A tanker arrived on site earlier that morning to remove sludge from the tanks. DP are unclear why but a small spillage of sludge had occurred onto unmade (permeable) ground and not cleared. The tanker reception area has been fitted with a containment apron so it also unclear why the spillage was not contained on that area. Eitherway the operator must review its p[rocedures (including its supervision of tanker operatives) to ensure that this does not occur again. Mr. Jones confirmed that the sludge would be cleared immediately that same day.

Compliance:

The above incident is considered a breach of condition 3.1.1. A ccs score of 3 has been allocated to this failure (e2).

Surface Water Lagoon

- During previous inspections NRW discovered containment deficiencies in the site's surface water lagoon. The operator has since⁴ started repairs to the lagoon structure and are now planning to make improvements to the site's drainage systems. It is understood that it is the operator's intention that the changes will result in only clean rainwater will be collected in the surface water lagoon (as per permit), with drainage from areas which have higher risk of contamination (milk reception) diverted to the ETP. The W2 emission point remains closed and sealed until the works will be completed.

⁴ September 2021

Noise

- I undertook a noise check at a location outside the installation boundary. A persistent noise was clearly audible and at levels and at an intensity that I perceived to be polluting. The noise was emanating from the Dairy Partner's installation.
- During this visit NRW confirmed that acoustic lagging had not been fitted to the oil separators in the chiller compound.
- Since this visit NRW have issued an enforcement notice requiring the operator to install the overdue acoustic lagging to the chillers oil separators. This action has since been completed.
- NRW have also issued another notice on the operator to submit a Cost Benefit Analysis for the remaining BAT measures and an implementation plan. NRW will review this once submitted.

Compliance

The ongoing noise pollution noted in this report is considered a breach of condition 3.5.1. of the site permit. This is deemed an ongoing noise issue and there is a presumption to record a CCS score of 2 for ongoing amenity failures (f2).

Odour

- A highly offensive odour was noted outside the site boundary by the inspector. Whilst on site the same odour was later noted in the area around the sludge pit and crude pits.
- The operator had placed some plastic sheeting over the crude and sludge pits, which partially covered the open pits. However this appeared to be ineffective at reducing the odour from these points. The inlet sumps to the pits were also uncovered. The operator are presently in the process of implementing a series of further odour abatement measures (in response to their odour specialist's report). The operator need to complete the odour abatement measures to the timetable specified in their Odour Action Plan (received⁵ 23rd Sept 2021). On completion of the measures the operator will need to schedule a re-assessment of their effectiveness by their odour specialist.

Compliance

The odour pollution noted in the August visit, are considered a breach of condition 3.4.1. of the site permit. These incidents are deemed an ongoing odour issue and there is a presumption to record a CCS score of 2 for ongoing amenity failures (f1)

Un-authorised operation of new ETP and containment deficiencies

- The operator is continuing to operate the new ETP and treating process effluent. As previously noted, the new ETP can only be commissioned and operated once the existing EPR permit has been successfully varied.

⁵ This Odour Action Plan was submitted in response to an NRW issued notice.

- The operator have commissioned a civil engineering consultant to develop designs to retrofit appropriate secondary containment systems to the new ETP plant. The operator have indicated that they plan to submit an application to vary the permit (which will include the new design). The operator has also been reminded that any retrospective designs must be first submitted and approved as part of a new application to vary the EPR permit⁶, before any construction can commence.

Compliance

The continued operation and use of the new ETP for the treatment of effluent, without the necessary changes to the permit being approved (i.e. through the EPR permit variation process), is considered a breach of condition 2.3.1(a). A compliance classification score (ccs) of 2 has been attributed to this failure (a1).

The continued use of tanks to hold potentially polluting liquids (effluent), without secondary containment, is considered breaches of condition 3.2.3 of the permit. A ccs score of 2 has been allocated to this breach (b4).

Possible Future Developments – new Clean In Place (CIP) plant

- During the visit we met with Mr. Ashton Davies (Dairy Partners Engineering Manager). He explained that DP were exploring the possibility of making improvements to their CIP plant. If approved the plan would necessitate the construction of new tanks for chemicals and wastes. The concept is at the early stages and little detail is available. I explained that prior to the construction of any new tanks, the design may need to be submitted for approval as part of a permit variation⁷ application to NRW. Furthermore any new tanks (and associated infrastructure) would need to be built to the required standards. It was agreed to keep NRW informed of progress with the project and if the company plan to proceed with the design stage than it would be prudent to start early discussions over potential permitting implications

Chemical Inventory – management

(also includes a part⁸ review of some of the site's records/procedures following the inspection)

Overview: A means to accurately gauge the volume of chemicals stored on site, either in tanks or other containers is a fundamental requirement of an effective management system: for the control of the chemical inventory; for the detection of chemical losses and as a means of leak detection. As part of this inspection (and follow up review) we were shown how the operator's staff determine, monitor and keep records pertaining to the volumes of chemical used in the effluent treatment process (specifically NaOH in this example).

NaOH used in the effluent treatment process is delivered to site in bulk, by a road tanker and transferred to the site's NaOH bulk tank (sited in the old ETP compound). NaOH is then transferred, by a small pump into IBCs containers. Two IBCs are used to hold NaOH which is used to supply the ETP plant. According to the effluent plant operative, one of the IBC's is refilled daily with NaOH, whilst the second IBC will require less frequent refilling with NaOH.

⁶ The new designs will also need to be approved as part of the planning process.

⁷ It would also likely require planning permission.

⁸ This was a limited review undertaken after the inspection and only focussed on the chemical management.

Tanker delivery: We were informed that when NaOH is delivered to the site, a ticket is provided by the tanker driver. The mass (in metric tonnes) of the chemical delivered is determined by an onboard weighing device fitted to the tankers. The mass delivered is handwritten on the delivery ticket which is signed by the effluent plant operative. However this information is not used in the stock inventory at the ETP.

NaOH Bulk Tank: The volume of liquid in the bulk NaOH tank is determined and recorded daily by the Effluent Plant Operative. The volume is determined using a sight glass level gauge, fitted to the side of the tank. Handwritten numbers have been marked on the sight glass at what appears to be 1,000 litre increments. The level in the tank is determined by an operative reading the liquid level against these labels. If the level is between the 1,000l increments the operative will estimate the volume of liquid within the tank. The highest number written on the level gauge is 10 (10,000l). When liquid is removed from the bulk tank (i.e. transferred to the IBC) it is via a small electric pump located next to the bund. The pump is not fitted with a flow meter.

IBCs Volumes: The IBCs in use at DP have level markers embossed on the container's surface (up to 1,000l). There is no flow meter to record the volume removed from the IBC and there is no record made or kept pertaining to the specific volume of NaOH removed daily from the individual IBCs.

Record Keeping: the DP Effluent Plant Operatives maintain a daily record of some of the chemicals used in the ETP (form Ref: FRM-EFF-016 - *Daily Effluent Chemical and Ingredient Stock Sheet*). In the case of NaOH, the effluent plant operative (Mr. Gethin Jones (G.J)) confirmed that the volume recorded on this document is based on level gauge readings made after the IBCs have been filled. GJ also confirmed that the figure recorded by him is the sum volume of the contents of the bulk tank and the two IBCs that hold the chemical. The operative (G.J) was unable to verify how his colleague⁹ calculates the volumes (i.e. whether he records the sum values of the three containers or just the volume in the bulk tank). Neither could G.J. clarify whether the record by his colleague is made before or after the NaOH is transferred to the IBCs. There is no procedure or guidance on how the records should be maintained consistently by the operatives (see later).

There is no record made documenting the number of times an IBC (storing NaOH) is refilled in a day, although the ETP operative (GJ) explained that the IBC connected to the DAF unit is only refilled once a day (every morning). The second IBC (connected to the balance tank) is refilled less frequently). There are also no daily records kept, documenting the volumes found in either IBCs used to store the sodium hydroxide (or coagulant).

Furthermore the operator did not have an accurate, readily accessible and up-to-date register of polluting substances (and their associated chemical data sheets). This information had to be provided by the chemical supplier, although it is understood the operator still do not have the

⁹ We were informed during this visit that there are only two members of staff (Mr. Gethin Jones & Mr. Henry Hall) who are designated to specifically manage the effluent treatment plant, although only one operative will be on site at any one time. The effluent plant is only staffed by the treatment plant operatives between 6 a.m. to 5/6 p.m. Outside of these hours the plant is not staffed although we were informed that the area would be subject to periodic checks by the night shift engineers, although the frequency of these checks is not specified.

records for all the chemicals¹⁰. It is important that this information is kept up to date and is readily accessible as it is a critical component of the site accident management plan.

An examination of the NaOH stock records¹¹ made by the operator indicate several inconsistencies that indicate deficiencies in the management system for the measurement and recording of chemical stocks. These include:

- Data from the records¹² indicates NaOH hydroxide volumes at the site exceeded the storage capacity available on several occasions¹³;
- On the 30th of June volume of NaOH stored on site exceeded the storage capacity of the site.

These issues may be due to inaccurate or incomplete record keeping, undocumented changes in assets, measurement errors or containment issues. Eitherway it further demonstrates the deficiencies in the site's management systems.

The procedures are also deficient in that they do not specify how the daily accountancy checks for chemicals volumes should be undertaken. In one of the examples explored during this inspection the entry for *A32 Caustic* substance, on the FRM-EFF-016 form (which is the daily record for the Sodium Hydroxide), is derived when the operative adds together the volumes of the three containers (bulk tank and the two IBC with A32). However as this is not specified or documented, there is a risk that some operatives could record the volume in a different way resulting in inaccuracies and affecting the ability to manage stock. The environment manager has since identified the need to review many of the record templates/instructions used at the site.

Review Conclusions:

- The operation and management of the ETP is reliant on an effective management system. In this review we found a series of deficiencies both procedural and in record keeping that need to be addressed. They include (but not limited to):
 - There were no systems in place to allow the accurate measurement of NaOH volumes used and transferred within the ETP site. The operator relies on a rudimentary sight gauge fitted to the side of the bulk tank which provides poor accuracy as the increments marked on the gauge are in 1,000 litre units. Furthermore these 1,000l increments have been hand written and may further lack accuracy. Whilst the operator has indicated that their long term aim is to replace the bulk tank (presumably with a better means of gauging the contents), this is understood to be several months away. In the meantime Dairy Partners must establish a more accurate means of gauging chemicals stored at the site. **Action**
 - Even where stock measurements are made there are no adequate procedures to specify how the operative undertake and record this information consistently.
 - There were no daily records kept documenting the volumes found in either IBCs used to store the sodium hydroxide (or coagulant). Therefore detailed stock management at the IBC area (e.g. for the detection of chemical losses and process usage) was not possible.

¹⁰ A600

¹¹ Based on the submitted FRM-EFF-016 records for the period 28th March to 6th July.

¹² and based on the information provided by the ETP operative.

¹³ 30/31 March; 15/16 April; 20/21 April; 25/26 April; 29/30 May; 2/3 June; 19/20 June

- Whilst the practice and manner of using the IBCs at DP (as interim storage tanks for the ETP) is considered poor practice, this was further aggravated by the absence of any documented procedures covering the safe transfer and filling of chemicals between the Bulk tank and IBC containers.
- The operator was also unable to provide procedures for the unloading of chemicals from tankers¹⁴. Whilst the practice of using IBCs to store NaOH (and Coagulant) has since discontinued, the operator needs to undertake an urgent review of their procedures to ensure that any other potentially polluting liquids are managed in a way as to prevent pollution.

Compliance

The extensive failings noted in the management systems, especially the deficiencies and/or absence of procedures covering the management of potentially polluting liquids at the ETP, are considered breaches of condition 1.1.1a of the permit. A ccs score of 1 has been attributed to this failure (c4) .

END OF SECTION 4

¹⁴ The only reference in the procedures relate to “cleaning chemicals” not chemicals used in the ETP process . Even then the detail is scant. There is no mention of chemical tanker deliveries in the procedures.

Important information

Legal status of this report

Your permit is issued to you under the Environmental Permitting Regulations. You have a responsibility to comply with the conditions of your permit and prevent pollution/harm of the environment. You must also ensure that you comply with any other relevant legislation that may apply to your site's operations.

This report explains the findings of our assessment and any action you are required to take. We categorise non-compliance using our guidance for assessing non-compliance at regulated sites.

When we find potential non-compliance/s we will normally give you advice on how to maintain compliance.

To correct non-compliance, we may:

- require you to take specific actions
- issue a notice
- review the conditions of your permit.

Any advice and guidance we give will be without prejudice to any other enforcement response that we consider may be required.

Assessment results and non-compliance categories (used in section 1):

Assessment result	Description
Assessed (A)	Assessed or assessed in part, no evidence of non-compliance found in the aspects assessed.
Action only (X)	Action only relating to the activity assessment
Ongoing (O)	Ongoing non-compliance, not scored

Non-compliance category	Description
C1 Major	Potential to have a major, serious, persistent and/or extensive impact or effect on the environment, people and/or property
C2 Significant	Potential to have a significant impact or effect on the environment, people and/or property
C3 Minor	Potential to have a minor or minimal impact or effect on the environment, people and/or property
C4 No environmental impact	Non-compliance at a regulated site that cannot foreseeably have any impact on the environment, people and/or property

Full list of Industry and Waste action criteria (used in section 1 and 2):

A: Permitted activities

- A1 Specified by permit

B: Infrastructure

- B1 Infrastructure – Engineering for prevention and control of emissions
- B2 Infrastructure – Closure and decommissioning
- B3 Infrastructure – Site drainage engineering (clean and foul)
- B4 Infrastructure – Containment of stored materials
- B5 Infrastructure – Plant and equipment

C: General management

- C1 General management – Staff competency/training
- C2 General management – Management system and operating procedures
- C3 General management – Materials acceptance
- C4 General management – Storage, handling, labelling and segregation

D: Incident management

- D1 Incident management – Site security
- D2 Incident management – Accidents, emergency and incident planning

E: Emissions

- E1 Emissions – Air
- E2 Emissions – Land and groundwater
- E3 Emissions – Surface water
- E4 Emissions – Sewer
- E5 Emissions – Waste

F: Amenity

- F1 Amenity – Odour
- F2 Amenity – Noise
- F3 Amenity – Dust/fibres/particulates and litter
- F4 Amenity – Pests/birds and scavengers
- F5 Amenity – Deposits on road

G: Monitoring and records, maintenance and reporting

- G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment
- G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events
- G3 Monitoring and records, maintenance and reporting – Maintenance records
- G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales

H: Resources efficiency

- H1 Resource efficiency – Efficient use of raw materials
- H2 Resource efficiency – Energy efficiency

Enforcement response

Any permit condition non-compliance is an offence and we may take legal action against you. Action we take can include prosecution, serving a notice on you and/or suspension or revocation of your permit. See our Enforcement and Sanctions Guidance for further information.

Data protection notice

You should make sure that anyone named in this report knows that the information it contains will be processed by Natural Resources Wales to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s).

We may also use and/or disclose the report in connection with:

- offering or providing you with our literature or services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, local authorities) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law
- assessing customer service satisfaction and improving our service
- Freedom of Information Act or Environmental Information Regulations requests.

We may also pass it on to our agents or representatives to do these things on our behalf.

Disclosure of information – this report will be available to view on-line

If you think this report contains commercially confidential information that should not be placed on our public register, you must contact your local Natural Resources Wales office within **fifteen working days** of receiving this report, using the contact details in the accompanying email or letter. You must give a full explanation of why it should not be added to our public register, including specifying which information is commercially confidential. We will assess your request and respond to you within 20 working days to let you know if we agree to your request.

What do I do if I disagree with the report or have a complaint?

If you disagree with this compliance assessment report, you should contact the lead officer without delay to discuss your concerns.

If you are unable to resolve the issue with the lead officer or their line manager you should contact our Customer Contact team on 0300 065 3000 (Monday to Friday 08:00 – 18:00), or email enquiries@naturalresourceswales.gov.uk for details of how to raise your dispute further through our Complaints and Commendations procedure.

If you are dissatisfied with our response, you can contact the Public Services Ombudsman for Wales by phone on 0300 7900203 or by email at ask@ombudsman.wales

Welsh Language Standards

We are committed to establishing Natural Resources Wales as a naturally bilingual organisation. We will provide compliance reports in your preferred language.