

Our Ref: EPR/WP3231NB

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

Date: 16th September 2025

Dear Sir/madam

EPR- WP3231NB Dairy Partners (The Creamery, Newcastle Emlyn) Improvement Condition Review – IC24

On 4 December 2024 Dairy Partners submitted to Natural Resources Wales (NRW) a submission to satisfy Improvement Condition 24 (IC24)¹. Documents submitted:

- *HCE-1768-CVD-RA-001– CIRIA 736 Containment Risk Assessment.*
Document prepared by HCE Limited on behalf of Dairy Partners.

The Improvement Condition (IC) is set out in Dairy Partners' Environmental Permit EPR/WP3231NB/V005, which was issued on 16 May 2023.

For convenience I have included the wording of the IC condition below:

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC24	<i>The Operator shall submit a written 'secondary and tertiary containment plan' for the installation and shall obtain Natural Resources Wales's written approval to it. The plan shall contain the results of a review conducted, by a competent person, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) guidance, of the condition and extent of the</i>	<i>Within 12 months of permit variation V005 issue</i>

¹ Document submitted by Dairy Partners Operation Manager

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
	<i>secondary and tertiary containment systems where all potentially polluting liquids and relevant solids are being stored, treated and/or handled within the installation. The review shall consider, but not be limited to, the legacy effluent storage and treatment vessels that are not considered new from V004 variation, chemical reagent storage vessels, bunds, transfer pipework/pumps and milk silos. The plan must contain dates for the implementation of individual improvement measures necessary for the secondary and tertiary containment systems to adhere to the standards detailed/referenced within CIRIA C736 (2014) guidance and How to Comply with your environmental permit guidance or equivalent. The plan shall be implemented in accordance with Natural Resources Wales's written approval.</i>	

1. Overview

The Dairy Partner's Creamery in Newcastle Emlyn is permitted as an Installation under the EPR (Environmental Permitting Regulations) and Industrial Emissions Directive (IED) and must comply with the requirements of these regulations. The environmental permit for this installation specifies a requirement for secondary containment for all liquids in containers whose emissions to water or land could cause pollution (permit condition 3.2.3 (WP3231NB)), unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container. This requirement is also further explained in "How to comply with your Environmental Permit" guidance. Ultimately, suitable measures to prevent any leaks or accidental releases of potentially polluting materials must be in place.

The River Arad (a tributary of the River Teifi) flows directly through the site. Both rivers are sensitive receptors, however the Teifi is also a Designated Special Area of Conservation (SAC) which is the highest level of environmental protection that can be afforded to a habitat in Europe. Dairy Partners have had several historical water pollution incidents which has resulted in potentially contaminated material entering the River Arad, with the most recent incident being in May 2025.

Given the proximity of highly sensitive receptors and the high risks posed by the activities on the site, Dairy Partners must ensure appropriate containment systems

are installed on site as required by the permitting regulations, condition 3.2.3 of your permit and now as per IC24. The focus of Improvement Condition 24 is older legacy containers and pipework.

NRW have undertaken a review of the following document submitted by Dairy Partners, against the requirements set out in IC24:

- *HCE-1768-CVD-RA-001– CIRIA 736 Containment Risk Assessment* (received 04.12.2024). Document prepared by HCE Limited on behalf of Dairy Partners.

Following our review we have concluded that the containment risk assessment report you submitted does not satisfy the requirements of IC24. Please see the following comments that must be addressed.

2. Comments

2.1 Risk assessment

The CIRIA 736² guidance provides details of the risk assessment methodology³ that must be completed to support a three-tier risk-based classification system for secondary and tertiary containment. The approach determines the overall site risk rating and appropriate class of containment required (Class 1, 2 or 3 – each representing a different level integrity required).

As per the CIRIA 736 guidance, assigning an appropriate environmental hazard rating (high, moderate or low) for the source, pathway and receptors is an important step of the risk assessment methodology. **You must refer to the key steps of the CIRIA risk assessment methodology which are as follow:**

- Identify and categorise the environmental hazard ratings (high, moderate, low) for source, pathway and receptors. You will need to demonstrate and provide rationale on how you have assigned the ratings within the risk assessment.
- Determine overall site hazard rating based on the hazard ratings above (high, moderate, low). You will need to consider multiple source, pathway and receptor scenarios.
- Calculate the likelihood of a loss of primary containment event (high, moderate, low).

² CIRIA C736 (2014) – Containment systems for the prevention of pollution; secondary, tertiary and other measures for industrial and commercial premises.

³ The general framework for the risk assessment methodology required by CIRIA 736 is illustrated by Figure 2.5 of the guidance and provides a three-step approach (further explained in Chapter 2 of the CIRIA 736 guidance).

- Determine the combination of the site hazard rating and the likelihood of a loss of containment to give the site risk rating (high, moderate, low) and secondary containment classification. The site risk rating requires you to consider the events that may lead to the release of inventory primary containment and the likelihood that this event would occur. The CIRIA 736 guidance includes a list of potential failures. The risk assessment provided does not include a description or assessment of these risks and the likelihood of occurrence. Box 2.2 of the CIRIA 736 guidance outlines how overall site risk rating:

Box 2.2 Overall site risk rating as defined by combining ratings of site hazard and probability of containment failure

Site hazard ratings	
May be high (H), moderate (M) or low (L) (see Box 2.1)	
Frequency of loss of containment	
May be high (H), moderate (M) or low (L)	
Possible combination of ratings:	Suggested consequent overall site hazard rating:
HH or HM or MH	HIGH
MM or HL or LH	MODERATE
LL or ML or LM	LOW

Please note, you will need to demonstrate and provide rationale on how you have assigned the scorings/ratings within the risk assessment e.g. probability and severity.

- From the class of containment required (class 1, 2, 3), identify suitable designs for secondary and tertiary containment for the site.

In conclusion, the risk assessment methodology that Dairy Partners submitted (HCE-1768-CVD-RA-001– CIRIA 736 Containment Risk Assessment) does not follow the CIRIA methodology specified in Improvement Condition 24 of your permit.

ACTION – Review and update the containment risk assessment in line with the methodology outlined in the CIRIA 736 guidance and as specified in your EPR permit (IC24). Submit revised risk assessment to NRW for review.

2.2 Condition and extent of secondary and tertiary containment.

A risk assessment completed in accordance with the CIRIA 736 guidance must first be completed which will need to identify the class of containment needed for the site. **Given the array of potentially polluting liquids stored on your site, close proximity to sensitive receptors and history of regular containment losses, NRW are seriously concerned about the pollution potential of the site.**

Please also note that in addition to IC24, permit condition 3.2.3 your permit already specifies a requirement for secondary containment for **all** liquids in containers whose emissions to water or land could cause pollution, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

Information provided regarding the condition and extent of the secondary and tertiary containment systems where all potentially polluting liquids and relevant solids are being stored, treated and/or handled within the installation is limited in places (“TBC or “bund” listed with no details of bund capacity as an example).

There are also many containers which hold potential polluting sources listed in your submission which do not have secondary containment. Furthermore you have not proposed any containment improvements to mitigate this (further comments are provided below for each area of the site). No supporting evidence (e.g. spill modelling etc.) has been provided to justify any deviation from the containment requirements.

It should also be noted that the Secondary Containment Lagoon (SCL) agreed for the new ETP is based on the capacities of tanks associated with the new ETP and not the remaining assets covered by this IC.

No spill modelling or other alternative evidence has been provided to evidence the likelihood of a tank failure, for example, reaching the river.

ACTION – Review and provide a revised proposals, for the provision of suitable secondary and/or tertiary containment following the completion of your revised of your risk assessment. Particular attention must be paid to future mitigation measures required and inclusion of missing information (“TBC”). Justification and evidence for any deviation from the required standards must be provided.

Existing Cheese Factory Manufacturing Plant

- **Milk silos** - Based on the current methodology used in this risk assessment, the risk has been calculated as low. However, the milk silos can hold large quantities of material and are located within close proximity to the River Arad, which is a tributary of the River Teifi - a designated SAC for several Annex II fish species. As you are aware milk is a very harmful environmental pollutant specifically to the aquatic environment. As noted earlier the Afon Arad is a

highly sensitive receptor which flows through the site, in close proximity to these silos.

The milk silos do not have secondary containment and you have not proposed any future mitigation. You have claimed in your submission that containment of any loss of containment at the milk silos, is reliant on external storm drains within the site routing any escaped inventory into the stormwater lagoon and ultimately to the Effluent Treatment Plant (ETP) when operating under normal conditions. No evidence has been provided to demonstrate the external storm drains stormwater lagoon, ETP drainage system and the ETP itself has the capacity and capability to cope with a large volume of milk in the event of a tank failure. Such an event could also potentially overwhelm the drainage system and overflow could enter the river. Such an event could also lead to the impaired functionality of the ETP affecting your effluent quality and itself causing pollution in the Afon Teifi .

ACTION - Additional evidence is required to demonstrate the suitability, integrity and capacity of drainage routes/system (including the storm water lagoon) as well as the ETP itself. Evidence to demonstrate how milk/effluent from a tank failure or spill would be routed to the onsite drainage system and ETP (possibly by dye trace testing results or spill modelling etc) is required.

NOTE - this comment relating to the milk silos submission also applies for all your inventory listed in the risk assessment (i.e. spillages draining to the ETP). Consideration must also be given to vessels being in continuity to each other (e.g. if one fails, others/all fail).

The “Location of source” column within the risk assessment tables (Section 2.0 of the report) does not clearly specify the location of potential pollutants on site and not all sources are clearly identifiable in the schematic storage layout in Section 3.0 or Appendix A.

ACTION - Please update the location descriptions with clear correlation to the schematic storage layout figure.

- Several items have “TBC” within the columns e.g. Ortho Phosphoric Acid does not contain information on location source or containment measures in place (primary, secondary or tertiary).

ACTION - Provide missing information.

- All rows within the existing cheese factory manufacturing plant have the following statement in relation to mitigation in place now:

“Implement Inspection of tank and bund structure and ensure planned maintenance schedule in place”.

It is unclear if an inspection and maintenance schedule is already in place.

ACTION - Please provide additional information and/or an inspection and maintenance procedure document that is place for the tank and bund structures.

- Groundwater is identified as a pathway and receptor. There has been no detailed information included on the type of surfacing within this area e.g. whether chemicals are stored on impermeable or permeable surfaces.

ACTION: Provide additional information.

- Many chemicals are identified to drain to the ETP in the secondary containment column. The following definitions are included in the CIRIA 736 guidance:
 - **Secondary containment** – “minimise the consequences of a failure of the primary storage by preventing the uncontrolled spread of inventory. Secondary containment is achieved by equipment that is external to and structurally independent of the primary storage”.
 - **Tertiary containment** – “minimise the consequence of a failure in the primary and secondary containment systems. This is done by providing an additional level of protection preventing the uncontrolled spreads of the inventory such as site drainage and sumps, diversion tanks and lagoons...”

ACTION - Review and update the risk assessment to clarify which are secondary and tertiary measures.

- The primary and secondary containment measures for the various inventory including Aquatreat 319 and 320 liquids (sodium chlorite and hydrochloric acid respectively) have been identified as a polypropylene double skinned tanks. CIRIA 736 states the second skin of the double skinned tank is not considered to provide secondary containment.

Please note that in addition to tanks, silos etc, the associated pipework must be located within the bunded area (or provided with appropriate containment provision). The pipework material itself should be of appropriate material and regularly inspected/maintained. All assets containing potential liquids that have the potential to cause pollution must have appropriate containment.

ACTION - Review and update. Other inventory listed as having double skinned tanks must also be reviewed.

- B113 Sodium Bisulphate and glycol areas are identified as having a bund as secondary containment. No information is provided on the bund capacities i.e. in line with CIRIA 736 storage capacity rules and How to Comply. The CIRIA

736 guidance states a minimum volume for containment – 110% (capacity of the largest tank) and 25% (capacity of the total volume where more than one tank) rule. There is no evidence to demonstrate that containment is in line with the CIRIA requirements.

ACTION - Provide additional information.

- Heavy fuel oil is listed in the inventory for ancillary heating – steam raising. The use of Heavy fuel oil is not permitted on the environmental permit EPR/WB3231NB. Light fuel oil is permitted for use on site as a back-up fuel to the two dual fuel boilers.

ACTION - Please confirm if heavy fuel oil is being used on site instead of light fuel oil.

- Secondary containment capacity volumes must also consider sufficient capacity for dealing with rainwater, firefighting water and firefighting agent where relevant.

ACTION - Provide additional information for all applicable areas.

Effluent Treatment Plant/System

- An agreed containment system for the ETP area has been assessed through a previous permit variation (EPR/WB3231NB/V004). A Regulation 36 Enforcement Notice was issued to Dairy Partners for the SCL implementation. This SCL is yet to be built. However, not all aspects of the ETP are situated in the proposed SCL area to be constructed and this Improvement Condition requires you to address these.
- Pipework (which provides primary containment), pumps, and valves must be located within the bunded area (or provided with appropriate containment provision). The pipework material itself should be of appropriate material and regularly inspected/maintained. No information on the current or proposed secondary or tertiary containment measures have been provided for the existing operational pipework.

ACTION - Provide additional information.

- NRW has not provided comment of the redundant parts of the ETP as they are to be decommissioned shortly. Tanks and pipework within the area of the agreed SCL area must adhere to the CIRIA 736 standards.
- Reference is made to the large containment lagoon with approved multi-tank bunding that will provide 25% of the maximum volume in compliance with CIRIA 736. However, the ETP permit variation (EPR/WB3231NB/V004) decision document states the following:

“The largest tank within the SCL is the balance tank which has a capacity of 1,599 m³, 110 % of this is 1,759 m³. The total capacity of all the tanks within the SCL is 2,925 m³, 25 % of this is 731 m³. As shown, the 110 % capacity of the largest tank is larger than 25 % of the multi-tank capacity. The SCL will provide a capacity of 2,079 m³ therefore meets the capacity rules of CIRIA C736 and provides a capacity in excess of 110 % of the largest tank volume situated within it.

The information provided contradicts what was proposed and agreed as part of the previous variation.

ACTION - Review and clarify the containment capacity sizing in line with CIRIA 736. Confirm that the jetting protection shroud is in line with the details agreed in permit variation V004.

- The new ETP chemical storage area (not clearly identified in schematic storage layout plan) is to be located within the yet to be built SCL. Please note previous comments regarding impact to the ETP.

ACTION - Please review.

- Out of specification treated effluent tanks are noted as old re-purpose ETP tanks that are operational but due to be replaced with double skin tanks.

ACTION - Confirm when tanks are to be replaced with double skinned tanks. Noted these will form part of the SCL to be implemented.

- Effluent existing operational pipework has no secondary or tertiary containment identified and no future mitigation proposed.

ACTION - Provide additional information/justification.

- The crude pit and sludge pit consist of sunken concrete and brick pits (primary containment). The report states the pits have bunded/integral bund walls (secondary containment) raised above historical maximum river height. There is a lack of information regarding the bund walls such as:

- What material the bund wall is made of?
- Does bund encase the whole pit providing secondary containment below ground also?
- Is the bund structurally independent from the primary containment tank/pit?
- What containment capacity does the pits bund provide e.g. 110%.

The “mitigation in place now columns” have identical text for both the crude pit and sludge pit e.g. “no incident of sludge pit being flooded.....” This crude pit

column will need reviewing and updating. Additionally, following a recent water pollution incident to the River Arad, as a result of the overflowing crude pit, the Compliance Assessment Report CAR_NRW0048395 was issued and included additional actions associated with the crude pit containment⁴.

ACTION - You must ensure these actions are complete and the report updated as necessary with additional information.

- Final pit – Insufficient information on the material used for the construction of the subsurface pit was provided. No secondary or tertiary containment proposed.

ACTION - Provide additional information.

- Surface water lagoon/stormwater lagoon – Noted as an open lagoon to collect surface water runoff and is a sunken brick/concrete area with raised bunded wall. The storm water lagoon is to be used to capture any escaped inventory, such as runoff from hardstanding areas such as those within the milk and whey silos vicinity. However, there is a lack of detail regarding the bund walls/containment. Also, the stormwater lagoon may become overwhelmed with a loss of effluent from the milk and whey silos.

ACTION - Provide additional information on the suitability and capability of the existing stormwater lagoon system. Further information must include details of how the structure was built, its current integrity and what secondary containment measures are in place for the structure.

- Firefighting water/agents to river via ETP.

ACTION – clarify whether the approved SCL design accounted for firewater. As previously mentioned, provide additional information on how firewater in other areas of site is contained where relevant.

New Clean In Place (CIP) Equipment/Plant

- Dairy Partners have applied for a permit variation for the new Clean in Place (CIP) equipment/plant and is pending determination by NRW⁵.
- Several inventory items listed under the CIP note that secondary containment in the form of a concrete RC bund wall designed in accordance with CIRIA is installed. No detailed information has been provided to affirm this statement, e.g. no information of bund compacity capabilities in line with the CIRIA 736 guidance (110%/25% rule).

ACTION - Further information is required.

⁴ NRW will provide a separate response to information submitted to address actions within CAR_NRW0048395.

⁵ Any comments made do not pre-determine the pending permit variation.

- As with the previous sections, no evidence has been provided to demonstrate the ETP drainage system and the ETP itself has the capacity and capability to cope effluent from this area. Such an event could lead to the impaired functionality of the plant.

ACTION - Additional information is required.

Please also note, no information has been provided on containment capacity in line with the CIRIA 736 guidance - the CIRIA guidance states a minimum volume for containment – 110% (capacity of the largest containers) and 25% (capacity of the total volume where more than one container) rule. No evidence has been provided that containment is in line with the CIRIA requirements. Secondary containment must also for sufficient capacity for rainwater, firefighting water and firefighting agent where required.

- There is contradiction in terms of reference to primary containment being single walled stainless-steel tanks, but additional text within the “mitigation in place” column claims spills would be contained within the second skin wall as tanks are double walled.

ACTION - Review and correct as required.

- A bund wall in line with CIRIA 736 guidance for secondary containment is not proposed for the water with condensed vapour, Mida Flow 201 LG or water with detergent sources according to the tables. However, the CIP drawing in Appendix C appear to indicate all tanks are located within the bunded area except for those located in the CIP control room.

ACTION - Please confirm.

As per the CIRIA 736 guidance, NRW’s guidance and the permit condition, secondary containment for all liquids in containers whose emissions to water or land could cause pollution must be implemented (unless otherwise agreed).

Other Known Chemicals Used On-site

- Rows under the “other known chemicals used on-site” are incomplete, namely columns for chemical, chemical state and storage container volume.

ACTION - Additional information is required.

- As with the previous sections, no evidence has been provided to demonstrate the Effluent Treatment Plant (ETP) drainage system and the ETP itself has the capacity and capability to cope with spillages from this area. Such an event could lead to the impaired functionality of the plant.

ACTION - Additional information is required.

Please also note, no information has been provided on containment capacity in line with the CIRIA 736 guidance - The CIRIA guidance states a minimum

volume for containment – 110% (capacity of the largest containers) and 25% (capacity of the total volume where more than one container) rule. No evidence that containment is in line with the CIRIA requirements. Secondary containment must also for sufficient capacity for rainwater, firefighting water and firefighting agent where required.

ACTION - Additional information is required.

- There is contradiction in terms of reference to primary containment being single walled stainless-steel tanks but additional text within the “mitigation in place” column claims spills would be contained within the second skin wall as tanks are double walled.

ACTION - Review and correct as required.

Many chemicals are identified to drain to the ETP in the secondary containment column. Please refer to previous comments regarding secondary and tertiary definitions within the CIRIA 736 guidance.

ACTION - Review and update risk assessment to clarify which are secondary and tertiary measures.

2.3 Implementation plan

As per the requirements of IC24, your submission must contain dates for the implementation of individual improvement measures, necessary to provide the required secondary and tertiary containment systems to adhere to your permit - specifically the standards detailed/referenced within CIRIA C736 (2014) guidance and How to Comply with your environmental permit guidance.

Following completion of the revised risk assessment (in line with CIRIA 736 guidance), the implementation plan must be reviewed and updated where necessary. The list of future mitigation options listed in the current risk assessment is limited. More information is required.

Improvements necessary for containment systems to adhere to the CIRIA 736 standards/How to comply standards and in line with permit condition 3.2.3 must be detailed.

Improvements identified must include an options appraisal detailing information on the most appropriate improvements being made. The implementation plan must also include information regarding engineering designs for containment systems.

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 14/11/2025 (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.