Cyfoeth Naturiol Cymru
Natural Resources Wales

Mrs. Anita Manns
Mott MacDonald
Mountbatten House
Grosvenor Square
Southampton
SO15 2JU

Our ref: PAN-018778
Your ref: EPR/ZP3032KQ

Date: 14/12/2023

Cc. Dave Holthofer Dave.Holthofer@dwrcymru.com

Dear Mrs. Manns,

Notice of deemed withdrawal

Application reference: PAN-018778
Operator: Dwr Cymru Cyfyngedig
Facility: Afan Combined Heat and Power Facility, Afan Wastewater Treatment Works Harbour Road, Phoenix Walk, Port Talbot Steelworks, Port Talbot, SA13 1RA

I enclose a notice informing you that your application is deemed withdrawn because of your failure to comply with the two Schedule 5 Notices we issued on 01/03/2023 and 30/03/2023 respectively.

As a result of the deemed withdrawal no further work will be carried out in relation to your application. In these circumstances the fees that you paid to the Natural Resources Body for Wales ("Natural Resources Wales") are non-refundable.

Rights of appeal
If you are not happy with our decision to deem withdrawal you may appeal to the Welsh Ministers. You must make your appeal by **09/01/2024**.

Further information about making an appeal and the forms you will need are available from the contact details below.

Planning and Environment Decisions Wales, Crown Buildings, Cathays Park, Cardiff, CF10 3NQ.

Phone: 0300 0604400, Email: PEDW.Casework@gov.wales

You must send written notice of the appeal and the documents listed below to the Welsh Ministers address at the address given above. At the same time you must send us a copy of the notice and documents.

The documents are:

- a statement of the grounds of appeal;
- a copy of any relevant application;
- a copy of any relevant environmental permit;
- a copy of any relevant correspondence between the appellant and the regulator;
- a copy of any decision or notice which is the subject matter of the appeal; and
- a statement indicating whether you wish the appeal to be in the form of a hearing or dealt with by way of written representations.

You may withdraw an appeal by notifying the Welsh Ministers in writing and sending a copy of that notification to us.

If you have any questions in relation to the Notice please phone me on 03000 654 419 or email Lucinda.hall@naturalresourceswales.gov.uk, or alternatively email the installations permitting team at installationspermitting@cyfoethnaturiolcymru.gov.uk.

Yours sincerely

Lucinda Hall MCIWM BSc (Hons)
Permitting Consultant Installations and RSR Permitting Team

Permitting Service

Y**our application is deemed withdrawn because of your failure to provide sufficient information to fully satisfy all questions listed within the Schedule 5 Notices we issued on 01/03/2023 (2nd Notice) and 30/03/2023 (3rd Notice) respectively. We have reached this decision based on the following primary reasons:**

2No. Schedule 5 Notice Dated 01.03.2023

6. ***Secondary Containment of Raw Materials***
   Provide:
   a) a risk assessment of all primary, secondary, and tertiary (where applicable) containment measures for all raw materials to be stored on site.
   b) Provide details of the construction standards for this containment measures.

A revised containment risk assessment report was submitted to NRW on 21/07/2023, and a subsequent updated report received on 20/10/2023. Although these reports considered secondary containment for the site as a whole, details of storage and containment of all raw materials was still not fully considered within either report.

An inventory list of tanks / storage vessels was detailed within section 3.2.1 (Table 3-1) within the July 2023 assessment report. It was highlighted as incomplete in feedback provided to applicant on 13/09/2023. Table 3-1 has since been removed from the revised report submitted in October 2023.

The applicant has stated within their applications main supporting document (100123523_MSD_AFA) that raw materials to be stored on site include the following:

Table 6.6: Types and amounts of raw materials used on

Schedule 1 activity	Description of raw material and composition	Maximum amount (tonnes)	Annual throughput (tonnes each year)	Description of the use of the raw material including any main hazards
5.4, Part A (1), (b) and (i)	Diesel	4,500 litres	2,000 litres	Use for mobile plant on site. Ordered on an ad hoc basis.
	Poly (Cationic Polyacrylamides) (FloPam FO4440 and FloPam FO4808SSH)	35 tonnes	140 tonnes	Used as flocculant to enhance thickening and dewatering processes. Amount ordered depends on centrifuge use.
	Antifoam	200 litres	50 litres	Used in digesters to prevent foaming
	Grease	200 litres	100 litres	Used for lubrication plant and equipment
	Lubrication oils	2,000 litres	1,500 litres	Lubricating plant and machinery
	Tannin	1,000 litres	3,000 litres	Boiler water treatment
	Sodium Hydroxide	5,000 litres	10,000 litres	Boiler water treatment and pipework cleansing
	Sulphuric Acid	1,000 litres	2,000 litres	OCU acid scrubber process

The revised report dated Oct 2023 fails to provide details of primary storage or details of secondary containment for the above listed raw materials, or construction standards suitable for the type of material to be stored (How sulphuric acid primary & secondary containment will be acid resistant for example).

The October 2023 report includes the following statement:

'The containment bund wall constructed at Afan STC shall be built to British Standards BS EN 15258-2008, CIRIA 124 - Barriers for containment and control of land contamination, and using best practices as outlined in CIRIA C736 – Containment Systems for prevention of pollution – Chapters 6 and 7, CIRIA C608 - Use of sewage sludge in construction and HSE document 'Principles, design and operation of Containment Level 4 facilities'.

The October report appears to be restricted to assessing loss of containment of a sludge event as the only raw material at risk of a containment failure. This does not fully satisfy the outstanding information requested within the 2nd Schedule 5 Notice.

3No. Schedule 5 Notice Dated 30.03.2023

1. ***CIRIA Risk Assessment – Secondary Containment for Site***
   Submit revised CIRIA Risk Assessment(s) which demonstrate compliance against BAT19 of the Waste Treatment BREF BAT Conclusions (2018).

Whilst a revised CIRIA Risk Assessment was submitted to NRW on 20/10/2023 the report did not fully satisfy the information requested within the notice.

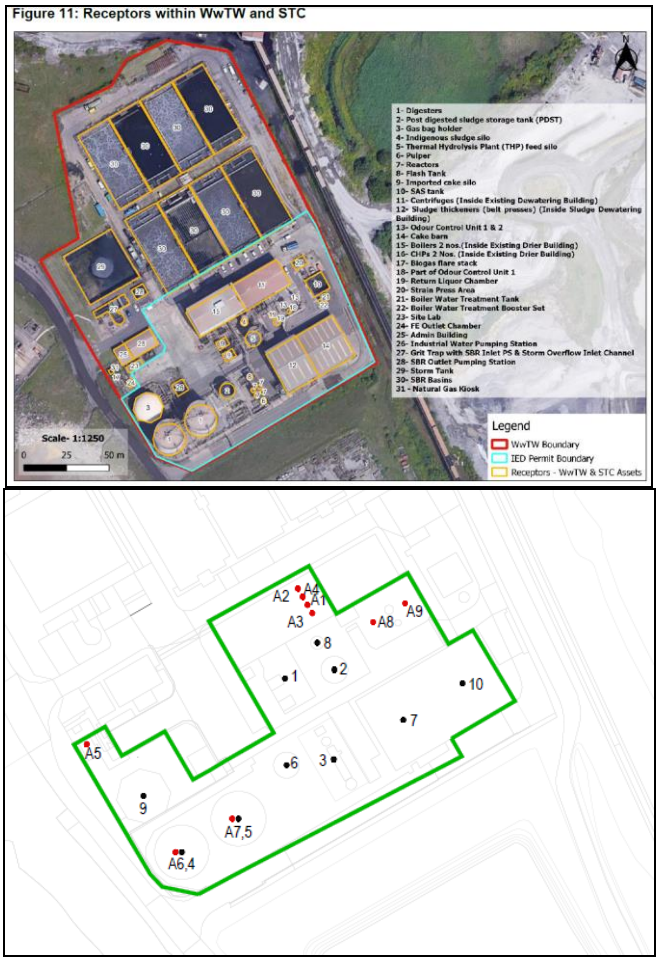
A summary of our review of the updated report is as follows:

1. <u>Cake Barn</u>

The Cake Barn has now been included within the revised assessment report submitted in October 2023 – with the applicant confirming that the barn falls within the confines of the STC permit boundary. However, the proposed permit boundary line now appears to cover a much larger footprint, which includes additional plant and infrastructure. The boundary line as shown within the revised CIRIA and AMP reports is illustrated below. The permit boundary line as confirmed within the applicants' response to the 1st Schedule 5 Notice and is subsequently illustrated underneath.

If the permit boundary line is to be extended to include a larger footprint of land, the applicant will need to re-submit updated reports including Site Condition Report (SCR); Main Supporting Document (MSD); Odour Management Plan (OMP); Site boundary plan; Site layout plan to reflect the change to their application.

Figure 11: Receptors within WwTW and STC



2. Volume of containment capacity

- The revised report confirmed there is no hydraulic connection between the two digesters that could result in failure of both tanks.
- Evidence provided within revised report now justifies why lower capacity volume used within model. The working volume of 4,250m^3 for one Anaerobic Digestor is argued to be the worst-case volume to use for the calculation of the containment capacity.
- The area of the bunded containment has been increased and now covers all of the existing STC drainage channels (previously there was a drainage leakage route under one of the flood gates). It is stated that the containment is enough for 110% of the full working volume of one Digester and an allowance for 1 in 10yr return period rainfall captured within the containment over 24 hours pre-failure. This complies now with the CIRIA 736 Guidance in principle. It is unclear however what the calculated containment volume is, with different figures used throughout the documents. There are figures of 5,215m^3 in the Executive Summary, 4,675m^3 or 4,765m^3 are used throughout the report and 10,687m^3 is used in 5.4 of ABDA Risk Assessment spreadsheet (is that last figure actually the containment area i.e. a typo which should be m^2 not m^3?). Following the method used by Mott MacDonald should the actual minimum containment required be 4,675m^3 (110% of one Digestor) plus 700m^3 (see Section 6.2) of 1 day of pre-failure rainfall = 5,375m^3?
- Additional information has been provided within the revised response to detail steps to be taken to clear the site. Reference to 3-4 days required to clean site and remove sludge. Although days referenced is likely an unrealistic timeframe – a procedure has now been provided with rainfall accounted. In principle this complies now with the CIRIA 736 Guidance.

- Additional information has been included within revised report to assess fire risks and fire water emergency scenarios. Low probability of digesters catching fire however their location is within close proximity to gas holder and other DSEAR zones.
- An allowance for firefighting water to be included in the containment capacity has been considered and discounted for inclusion in the containment volume calculations.
- There are now more details on the procedure for emptying the containment after a spill. The existing return pump is able to empty a maximum spill back to the SBRs in approximately 2.5 days including rainfall over that period. It is assumed that this timeframe can occur without interfering with the SBR process. 4 to 5 days have been estimated to clean up the area. In principle this complies now with the CIRIA 736 Guidance.

3. Risk assessment

- It is noted that the revised CIRIA assessment report and updated ABDA overall site risk rating has been revised to Moderate Hazard requiring Medium or Class 2 containment (from the previous assessment of High, requiring Class 3 containment). The applicant has stated that Class 3 was erroneously identified within previous report submitted in July 2023.

4. Options appraisal

- The CIRIA 736 containment design process should consider different options to identify the best solution. Previously only one option had been submitted. More options have since been assessed which is now in line with CIRIA 736 Guidance, although it is noted the options are restricted to the same theme and vary only by considering different areas of the WwTW and STC to flood and form the containment. The preferred option is changed to a larger area that allows for a lower perimeter wall that is now provisionally a maximum of 1.3m high. There will be 4no. flood gates in the wall.

5. Engineering design of structures in the containment system

- The revised report received in October 2023 includes details of multiple secondary containment options.
- Section 6 of revised report now includes details of a feasible / workable containment option. Reference to 'enhanced' secondary containment is misleading – as previous submission / existing drainage did not provide secondary containment – this new option now does *in principle* when flood gates are in closed position. Response states that section 6.2 has been added to the report noting the drainage alteration as a part of the proposed containment option and references a drawing in Appendix A which evidences that no drainage from outside the containment area connects to the same chamber. This drawing has not been provided – as Appendix A is blank. Section 6.2 within the report states that the containment area has been extended from the original proposed STC boundary to a new permit boundary area. If the applicant is now proposing to increase the footprint of land further, as stated above a revised SCR and site drawings plan should have also been submitted with this response.
- There is now some preliminary information on the proposed structures to accept that the design is feasible. It is stated that the flood gates will conform to BS851188 and there is an outline sketch provided of the reinforced concrete wall, however detailed design has not been provided.
- The revised CIRIA assessment report now includes additional details on proposed flood gates. Two flood gates are proposed to be manually opened and closed, remaining in a default closed state normally. The two flood gates to be combined with the site access gates will need to be automatically operated to allow for traffic

(Section 6.1 of report). Their default position would be open. When in open position, 110% secondary containment would not be provided.

- Section 6.7.2 then references two options for ensuring containment is provided in event of catastrophic failure. However, we are unable to deem either option suitable without further detail of how they would work in practice. Reference is made to need for further consultation with operators on site to explore any automatic isolation solutions that involve software modifications. The reliance of level sensors to trigger closure of flood gates presents a weakness in design due to single point of failure. Although this issue was discussed with Motts and DCC representatives during a conference call held on 12/10/2023, this has not been addressed within the report, and no additional redundancy to the system proposed.

6. Procedures in an event of a spill

- An updated Accident Management Plan (AMP) was submitted within the revised CIRIA assessment report.
- Reference to manually covering drains has been removed from the revised report, response stating that previous reference was erroneously included as a recommendation.
- There is now some detail provided of the intended procedure to deal with a spill to be able to accept that the design is feasible. However, we do not yet know the intended procedure for the operation of the flood gates.

Conclusions of Review

The revised containment report now offers a secondary containment solution which *in principle* meets CIRIA guidance and would provide 110% containment capacity when flood gates are in closed position. However, when the flood gates are in the open position, secondary containment requirements would not be met. This does not meet BAT.

The newly proposed conceptual design incorporates a larger area to be permitted, and includes the use of flood gates, two of which would remain open as a default setting to allow frequent traffic movements in and out of the site. Insufficient information has been provided to understand how these gates would be closed in event of loss of containment event. Reference within the report refers to further discussions with site operators required.

Details of containment for *all* raw materials to be stored is not included within the revised report.

The containment design principles rely on an effective operating procedure for the flood gates, for the 110% containment requirement to be achieved. NRW would need to see the details of how this would work in practical terms, to have confidence in the design, to confirm it can meet BAT and before we could issue a permit.

Without this information NRW are unable to deem the Schedule 5 Notices fully discharged.