

Compliance Assessment Report CAR_NRW0046151

Permit being assessed: PP3338CQ.

For: Nant-y-caws Landfill Site (Phase 1 Effluent Treatment Plant), **held by:** Carmarthenshire County Council

At: Nant-y-caws Landfill Site (Phase 1 Effluent Treatment Plant) Llanddarog Road , CARMARTHEN, Dyfed, SA32 8BG.

Type of assessment: Report/Data Review,

Reason: Routine.

On: 31/12/2024.

Parts of permit assessed: Permit condition 3.1.2, 3.1.3, 3.5.1, 4.2.2, 4.2.3, 4.3.2.

NRW Lead Officer: Benjamin Taylor.

Report sent to: Waste Strategy & Policy Officer, Carmarthenshire County Council, on 20/02/2025.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR3A(1) - Installations - Emissions and monitoring - Emissions to water	C3 Minor	Permit condition 3.1.2.
IR3E - Installations - Emissions and monitoring - Monitoring	Action only (X)	
IR4B - Installations - Information - Reporting	Assessed (A)	
IR4C - Installations - Information - Notification	Assessed (A)	

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

Total non-compliances recorded	Total non-compliance score
1	4

How we use the non-compliance score to calculate your annual fee is explained in the 'Important Information' section below.

2. What action is required?

Criteria	Action needed	Complete by
IR3A(1)	Operator is to submit a permit variation application which will capture the proposed changes to the installation infrastructure	30/04/2025

Criteria	Action needed	Complete by
	and processes. This variation will need to be in place before any changes can be implemented.	
IR3E	Operator is to undertake future analysis for the parameters as they are listed within Schedule 3(b): Table S3.1 i.e. Total Nitrogen.	28/07/2025

Compliance criteria codes are listed in the 'Important information' section below.

3. What will happen next?

Any non-compliance we have identified and recorded on this form is an offence. It can result in criminal prosecution and/or suspension or revocation of your permit.

You are non-compliant with your permit.

We are currently considering taking enforcement action against you for the non-compliance recorded above. We will contact you in due course.

4. Details of our assessment

Introduction

This Compliance Assessment Report (CAR) is an assessment of the July – December 2024 monitoring results, associated Schedule 5 notifications in addition to the 2024 annual reports that have been submitted by Excal Ltd (the Operator). These have been submitted by the Operator on behalf of Carmarthenshire County Council whom is responsible for the permit (*EPR/PP3338CQ*).

The Effluent Treatment Plant (ETP) consists of a Submerged Aerobic Filter (SAF) system which receives and treats leachate generated from the Phase 1 Closed Landfill Complex. These SAF tanks are aerated by a grid of fine bubble diffusers mounted on the base of the tank, which is coupled to an air blower. Plastic media are deployed within the tanks to provide a high surface area for micro-organisms to grow and nitrify the leachate prior to discharge to controlled waters.

Scope

The following monitoring data has been assessed within this Compliance Assessment Report (CAR):

- PP3338CQ Reporting form 2024 V2.
 - Water1 / 17/08/2022.
 - WaterUsage1 / 17/08/2022.
 - Energy1 / 17/08/2022.
 - Performance1 / 17/08/2022.
- 44-06-24 - Leachate Treatment Report - January - December 2024.
- Schedule 5 Notifications.

July – December 2024 Monitoring Submission

The monitoring data between January – June 2024 was submitted by the Operator on the 23rd of January 2025. The submitted data contained all informative requirements outlined within permit condition 4.2.3a and as a result is **compliant**.

The data was sent within the reporting period (28 days), which is **compliant** with permit condition 4.2.3.

The Installation has one discharge point to controlled waters (Afon y Bantwen), which is detailed as W1 within *Schedule 7* of the permit.

Total Nitrogen

Monitoring Date	Monitoring Location	Parameter	Reported Value	Emission Limit Value (ELV)
10/10/2024	W1	Total Nitrogen	44.43mg/l	25mg/l

Table 1: Reported Total Nitrogen figure detailed within PP3338CQ Reporting form 2024 V2.

The reported figure of 44.43mg/l exceeds the permitted Emission Limit Value (ELV) detailed within *Schedule 3(b): Table S3.1* and is contrary to permit condition 3.1.2.

Permit condition 3.1.2 below states:

'The limits given in schedule 3 shall not be exceeded.'

Investigations undertaken by Excal Ltd have identified that the elevated Total Nitrogen is due to the lack of de-nitrification processes within the Effluent Treatment Plant (ETP). Currently, the ETP operates through the conversion of Ammoniacal Nitrogen to Nitrate.

Excal Ltd have proposed to incorporate a de-nitrifying reedbed into the end stages of the effluent treatment process. An extract from *44-06-24 - Leachate Treatment Report - January - December 2024* provides further information of the proposal specifying that *"the reed bed will not be aerated and will be as large as possible (roughly 250m³) to allow denitrifying bacteria the time to covert nitrate into nitrogen gas. The post waters will enter the new reed bed and then enter the rear of the existing denitrification reed bed (where the SAF2 waters currently enter), and both water streams will proceed through the reed bed to W1"*. NRW has advised the Operator that these change will need to be captured within a permit variation.

From information provided within the *Leachate Treatment Report*, it is the understanding of NRW that the proposal is still awaiting approval from Carmarthenshire County Council.

Compliance:

The above Total Nitrogen results are an exceedance of the emission limits outlined within *Schedule 3(b): Table S3.1* of the permit. A non-compliance score of C3 against criteria IR3A has been allocated to this breach of permit condition 3.1.2.

Action:

Operator is to submit a permit variation application which will capture the proposed changes to the installation infrastructure and processes. This variation will need to be in place before any changes can be implemented.

The Operator submitted 7 Schedule 5 Notifications for exceedances of the Total Nitrogen ELV, these are reported as the combination of Nitrate, Nitrite and Ammoniacal Nitrogen. NRW have requested that future analysis by the external laboratory is undertaken for Total Nitrogen directly.

Monitoring Date	Monitoring Location	Parameter	Measured Value	Emission Limit Value (ELV)
04/07/2024	W1	Total Nitrogen	182.092mg/l (as NH ₄ , NH ₃ and NH ₂)	110mg/l (as NH ₄ , NH ₃ and NH ₂)
17/07/2024	W1	Total Nitrogen	184.45mg/l (as NH ₄ , NH ₃ and NH ₂)	
23/07/2024	W1	Total Nitrogen	141mg/l (as NH ₄ , NH ₃ and NH ₂)	
13/08/2024	W1	Total Nitrogen	115mg/l (as NH ₄ , NH ₃ and NH ₂)	
12/09/2024	W1	Total Nitrogen	112mg/l (as NH ₄ , NH ₃ and NH ₂)	
05/09/2024	W1	Total Nitrogen	153mg/l (as NH ₄ , NH ₃ and NH ₂)	
25/09/2024	W1	Total Nitrogen	139mg/l (as NH ₄ , NH ₃ and NH ₂)	
01/10/2024	W1	Total Nitrogen	121mg/l (as NH ₄ , NH ₃ and NH ₂)	
10/10/2024	W1	Total Nitrogen	149mg/l (as NH ₄ , NH ₃ and NH ₂)	
16/10/2024	W1	Total Nitrogen	132mg/l (as NH ₄ , NH ₃ and NH ₂)	
25/10/2024	W1	Total Nitrogen	138mg/l (as NH ₄ , NH ₃ and NH ₂)	
30/10/2024	W1	Total Nitrogen	174mg/l (as NH ₄ , NH ₃ and NH ₂)	

Table 2: List of Schedule 5 Notifications for exceedances of Total Nitrogen ELV between July – December 2024

Action:

Operator is to undertake future analysis for the parameters as they are listed within *Schedule 3(b): Table S3.1* i.e. Total Nitrogen.

2024 Annual Submission

The following reports were submitted by the Operator on the 23rd and 24th of January 2024 respectively:

- PP3338CQ Reporting form 2024 V2.
 - WaterUsage1 / 17/08/2022.
 - Energy1 / 17/08/2022.
 - Performance1 / 17/08/2022.
- 44-06-24 - Leachate Treatment Report - January - December 2024.

The above reports fulfil permit requirements and were submitted within the specified timeframe and as a result, the Operator is **compliant** with permit condition 4.2.2.

Furthermore, the total annual emissions of following did not exceed annual limits contained within *Schedule 3: Table S3.2* (illustrated below). As a result, the Operator is **compliant** with permit condition 3.1.3.

Table S3.2 Annual limits		
Substance	Medium	Limit (including unit)
Total suspended solids	Water	1,095 kg in a year
Ammonium	Water	146 kg in a year
Iron	Water	28 kg in a year

Please note: This CAR report and assessment was undertaken on 5th of February 2025. However to ensure that the non-compliance score is attributed to the correct financial year (for billing) the date on CARS system has been altered to 31st of December 2024.

If you have any queries about this report, or to discuss completion of any actions, please contact the NRW Officer named above.

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
Action only (X)	Action only relating to the activity assessment
Ongoing (O)	Ongoing non-compliance, not scored

Non-compliance category	Description	Score
C1 Major	Potential to have a major, serious, persistent and/or extensive impact or effect on the environment, people and/or property	60
C2 Significant	Potential to have a significant impact or effect on the environment, people and/or property	31
C3 Minor	Potential to have a minor or minimal impact or effect on the environment, people and/or property	4
C4 No environmental impact	Non-compliance at a regulated site that cannot foreseeably have any impact on the environment, people and/or property	0.1

How we use assessment scores

The number and severity of non-compliances recorded in a year will affect your annual subsistence fee the following year. A non-compliance factor is added to your site's Operator

Performance Risk Appraisal (OPRA) score when we calculate your fee to reflect the additional resource we use to assess permit compliance.

If your assessment result in Section 1 is suspended, what does this mean?

In line with our guidance, we may suspend scores for up to six months to allow time for remedial action to be taken. Suspended scores will be re-instated if the action is not completed.

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

1. Management

- IR1A – General management
- IR1B – Finance (only applicable to Landfill)
- IR1C – Energy efficiency
- IR1D - Efficient use of raw materials
- IR1E - Avoidance, recovery and disposal of wastes produced by the activities
- IR1F - Multiple operator installations

2. Operations

- IR2A – Permitted activities
- IR2B – The site
- IR2C – Operating techniques
- IR2D – Technical requirements
- IR2E – Improvement programme
- IR2F – Pre-operational conditions
- IR2G – Landfill engineering (only applicable to Landfill)
- IR2H – Waste acceptance (only applicable to Landfill)
- IR2I – Leachate levels (only applicable to Landfill)
- IR2J – Closure and aftercare (only applicable to Landfill)
- IR2K – Landfill gas management (only applicable to Landfill)

3. Emission and Monitoring

- IR3A – Emissions to water, air or land
- IR3B – Emissions of substances not controlled by emission limits
- IR3C – Odour
- IR3D – Noise and vibration
- IR3E – Monitoring
- IR3F – Pests
- IR3G – Air quality management plans
- IR3H – Monitoring for the purposes of the Industrial Emissions Directive (this heading includes Large Combustion Plants)
- IR3I – Fire

4. Information

- IR4A – Records
- IR4B – Reporting
- IR4C – Notification

Enforcement response

Any non-compliance with a permit condition 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 twenty 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 to 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.