

Compliance Assessment Report CAR_NRW0041911

Permit being assessed: CB3690ZB.

For: University of South Wales Hydrogen R&D Centre, held by Protium Green Solutions Ltd

At: Central Avenue, Baglan, Port Talbot, SA12 7AX.

Type of assessment carried out: Site Inspection, Reason: Routine.

On 25/05/2023 between 09:00 and 10:00.

Parts of permit assessed: Please see details

NRW Lead Officer: Michael Launder.

Report sent to: Stephen Peng, Project Consultant on 05/06/2023.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
A1 - Specified by permit	Action only (X)	
B1 - Infrastructure - Engineering for prevention and control of emissions	Assessed (A)	
B3 - Infrastructure - Site drainage engineering (clean and foul)	Assessed (A)	
B4 - Infrastructure - Containment of stored materials	Assessed (A)	
E1 - Emissions - Air	Assessed (A)	
E5 - Emissions - Waste	Assessed (A)	

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

Total number of non-compliances recorded	Total non-compliance score
0	0

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
A1	The map in the permit cover sheet to be changed to reflect correct layout and boundary through a variation applied for by the operator.	31/07/2023

Action 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.

At this time, we do not intend to take any further action.

This statement does not stop us from taking additional enforcement action if further relevant information comes to light or offences continue.

4. Details of our assessment

Attendees

- Darren Thomas – Site Manager, Protium
- Stephen Peng – Project Consultant, Protium
- Michael Launder – Senior Industry Regulation Officer, Natural Resources Wales

Introduction

This Compliance Assessment Report was completed following a site visit by Michael Launder on 25 May 2023. The aim of the visit was an initial inspection following the completion of commissioning of the electrolyser plant and moving into an operational phase.

Site Operations

The Site Manager provided an overview of current operations at the site. A single shipping container houses a bank of modular electrolysers, supplied with demineralised and deionised water (treated onsite from a potable mains supply) and using a 1% potassium hydroxide electrolyte. The process produces O₂ and H₂O, currently vented to air, with the gaseous H₂ product pressurised to 32 bar and sent to a buffer storage tank which runs until full, when a pressure feedback system then shuts off the electrolysis process. From the buffer storage, manifolded cylinder pallets (MCPs) are filled and distributed to customers.

The input capacity of the electrolyser bank is 100kW, with a maximum output of 40kg per day.

Waste water from the demineralisation process goes to a surface water drain and site sump. The electrolyte is supplied and replaced by a third party contractor, with no site wastes arising from the replacement.

Permit

The operations at this site are covered by Standard Rules permit SR2009 No2 (v4.1) – Low Impact Part A Installation.

During the site visit, it was confirmed that the conditions for the low impact installation standard rules permit (*Guidance for environment permit applications: Part B1 - Standard facilities permit*) are currently met:

- Aqueous waste released does not exceed 50m³ per day;
- No abatement is required for the releases to air (water vapour, gaseous oxygen and hydrogen);
- There are no planned or potential fugitive emissions from the installation to ground, all wastewater is discharged to a sump for collection and disposal off-site;
- The volumes of waste produced are significantly below the thresholds specified;
- Energy input to the installation is rated as 100kW for the electrolysers, and, in

combination with other associated equipment, does not consume electricity at a rate exceeding 3MW;

- Accident prevention and containment measures are in place in the form of spill kits;
- The plant was not running at the time of the visit, noise and odour potential were not assessed;
- There is no compliance history for this site or operator.

The location of the operations has changed since the operator initially applied for the permit, and the map associated with the cover sheet is now incorrect.

Action: The map in the permit cover sheet to be changed to reflect correct layout and boundary through a variation applied for by the operator.

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.

What are suspended scores?

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 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.