

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Pembrokeshire County Council

**Hydrogen Refueler
Mackerel Quay
Milford Haven Marina
Milford Haven
SA73 3BH**

Permit number

Number not yet allocated

Hydrogen Refueler

Permit number **EPR/AB1234CD**

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

Hydrogen gas will be produced on site to fuel two Riversimple Rasa hydrogen fuel cell electric vehicles. Production of the Hydrogen is via zero emissions green electrolysis and hydrogen is held securely in gaseous form in gas storage cylinders prior to dispensing into hydrogen vehicle

To manufacture Hydrogen an electric current is run through water in an electrolyser. The only products are the separated constituents of H₂O. The system is completely clean/zero emissions and electricity use for the electrolyser is sourced from guaranteed renewable energy generation sources.

The only outputs are green hydrogen stored in cylinders and pure water in very minimal quantities. The proposed system will use an Enapter Water Tank Module 2.0 can that can store a maximum 35 litres (0.035 m³) of clean water for the electrolyser. 0.035 m³ is the maximum amount of clean water that can be discharged in the unlikely event it is decided to empty the water tank – which is not planned to occur. At decommissioning the water tank will be removed with its contents and not emptied on site.

The electrolyser unit has a small water purification module that will occasionally purge a small amount of pure water in normal operation. The electrolyser modules will periodically have a small purge too (also pure water). The air compressor emits a small amount of condensate water every so often. In each case, it's such a small amount that it doesn't merit an actual drain. The intention is to discharge this pure water onto the hard standing and evaporate naturally.

The status log of the permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit

Description	Date	Comments
Application PAN-012243	Duly made 17/03/2021	Application for hydrogen production using electrolysis and hydrogen fuel cell refuelling.
Permit determined	DD/MM/YY	Permit issued to Joe Bloggs

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/AB1234CD

The Natural Resources Body for Wales (“Natural Resources Wales”) authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Pembrokeshire County Council (“the operator”),

of

**County Hall
Freemans Way
Haverfordwest
Pembrokeshire
SA61 1TP**

to operate an installation at

**Hydrogen Refueler
Mackerel Quay
Milford Haven Marina
Milford Haven
SA73 3BH**

to the extent authorised by and subject to the conditions of this permit.

Signed

Date

<p><i>[name of authorised person]</i></p>	<p><i>[DD/MM/YYYY]</i></p>
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Authorised on behalf of Natural Resources Wales

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

1.2.1 The operator shall:

- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
- (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
- (b) maintain records of raw materials and water used in the activities;
- (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

1.4.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.
- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated in accordance with the Low Impact Installation criteria specified in Natural Resources Wales’s Environmental Permitting application form at the time the permit application was duly made.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.3 The operator shall:

- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
- (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by Natural Resources Wales, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.

- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by Natural Resources Wales.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.
- 4.2.2 A report on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) each year. The report shall include as a minimum, a review of the results of the actual and anticipated operation of the installation against the low impact criteria issued by Natural Resources Wales at the time of the review.

4.3 Notifications

- 4.3.1 (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
- (i) inform Natural Resources Wales,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) in the event of a breach of any permit condition the operator must immediately—
- (i) inform Natural Resources Wales, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 Natural Resources Wales shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- Where the operator is a registered company:
- (a) any change in the operator's trading name, registered name or registered office address; and

- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) Natural Resources Wales shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.3.6 Natural Resources Wales shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
A1	S4.2 A1 (a)	Inorganic Chemicals – production of hydrogen	Electrolysis of water to produce green hydrogen

Directly Associated Activity

A2		Refuelling of riversea hydrogen car	Refuelling hydrogen fuel cell
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Table S1.2 Operating techniques

Description	Parts	Date Received
Application	Part B1 of application form Section 6 - LII checklist detail document & PreConstruction Phase H&S plan guidance & risk register 10 11 2020 Appendix 1 – Low impact installation checklist Section 3a – technical standards , Part B3 of the application form	24/11/20
Document reference:005 MHEK: Technical Response	All parts – Remote Monitoring	24/11/20
Document reference:001 FCS-HYS-001-BLK-001-R00-Safety_System_Overview	All Parts	24/11/20
Document reference:006 Maintenance, Servicing, Support & Monitoring Specification	All Parts	24/11/20
Document reference:007 Safety distances for bulk gaseous hydrogen	All Parts	24/11/20
Document reference: CA4691 – GA002	Drawing showing spec for hydrogen refueller containment	24/11/20
Document reference: LII Installation checklist detail	All parts demonstrating how Low Impact Installation criteria and technical standards for hydrogen production and storage shall be maintained	24/11/20
Pre-Construction Phase Health & Safety Plan Guidance & Risk Register	All parts	24/11/20

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	Supplementary information for Q3A, Form B3, Table 3A	17/03/21
EMS	All Parts of EMS referenced NRW EMS - PAN 012243 – 17/03/2020	17/03/21

DRAFT

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels

Raw materials and fuel description

Specification

“”

“”

DRAFT

Schedule 3 – Emissions and monitoring

Table S3.1 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
Emission of minimal quantities of clean water	Electrolyser	No parameters set	No limit set			

Schedule 4 - Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1: Annual production

Parameter	Units
Hydrogen	tonnes

Table S4.2 Performance parameters

Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes
Energy usage	Annually	MWh

Table S4.4 Reporting forms

Media/parameter	Reporting format	Date of form
Water usage	Form water usage 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY

Schedule 5 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment	
To be notified Immediately	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a permit condition	
To be notified immediately	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) In the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment:

To be notified immediately	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

“accident” means an accident that may result in pollution.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by Natural Resources Wales under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit..

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“year” means calendar year ending 31 December.

Permit Number: AB1234CD Operator: Pembrokeshire County Council
Facility: Hydrogen Refueler Form Number: WaterUsage1 / DD/MM/YY

Reporting of Water Usage for the year 2021

Water Source	Usage (m ³ /year)	Specific Usage (m ³ /unit output)
Mains water		
TOTAL WATER USAGE		

Operator's comments :

Signed
(authorised to sign as representative of Operator)

Date.....

Permit Number: AB1234CD

Operator: Pembrokeshire County Council

Facility: Hydrogen Refueler

Form Number: Energy1 / DD/MM/YY

Reporting of Energy Usage for the year 2021

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity *	MWh		
TOTAL	-		

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments :

Signed
(Authorised to sign as representative of Operator)

Date.....

Permit Number: AB1234CD

Operator: Pembrokeshire County Council

Facility: Hydrogen Refueler

Form Number: Performance1 / DD/MM/YY

Reporting of other performance indicators for the period DD/MM/YYYY to DD/MM/YYYY

Parameter	Units
Total Hydrogen produced	tonnes

Operator's comments :

Signed
(Authorised to sign as representative of Operator)

Date.....