

# Early Engagement Report

**Trecwn Green Energy Hub**

Statkraft

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# 1. Executive summary

This Report summarises the consultation process and the key issues raised by stakeholders and the community during the early engagement for Trecwn Green Energy Hub, and how Statkraft is responding to them as the project develops.

The aim of the early (non-statutory) engagement was to introduce the community and statutory stakeholders to the project and seek their feedback on the early proposals to help inform the emerging proposals for Trecwn Green Energy Hub.

The infographic below summarises this early engagement that was held from 10 October to 17 November 2022.

## Our engagement



The infographic below summarises this early engagement that was held from 10 October to 17 November 2022.



- Over 5,500 newsletters distributed
- Adverts in 2 local newspapers (in print and online)
- 21 articles in local, regional and trade press
- 3 public exhibitions
- 1 webinar
- 5 meetings with stakeholders, local communities and neighbours
- Over 300 attendees at early engagement events
- 295 feedback forms received
- 389 unique visits to the project website

## 2. Introduction

The Early Engagement Report provides an overview of the first stage of consultation on proposals for Trecwn Green Energy Hub in Pembrokeshire. It provides details of the consultation, key themes arising from the feedback and how this information is being used to inform the emerging proposals.

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### 2.1 The site

Trecwn Green Energy Hub is located in the Trecwn Valley, approximately 4km south of Fishguard. The nearest settlements are Trecwn, Letterston, Scleddau and Puncteston.

The site is a former Royal Navy armament depot, which was closed and sold in 1992. The electrolyser site will sit within the former armament depot, with a 15MW solar energy farm and three 4.8MW turbines located in adjacent farmland.

The Hub would produce up to four tonnes of green hydrogen a day, enough to run a single fuel cell powered bus for over 40,000 miles, or the equivalent of making 350 journeys from Fishguard to Cardiff, but without the harmful emissions produced by traditional diesel or petrol fuels.

The key elements of Trecwn Green Energy Hub are:

- 15 MW hydrogen electrolyser
- 4 tonnes of hydrogen storage
- 3 wind turbines (c. 14.4MW), with a maximum blade tip height of 150m
- 15 MW of ground mounted solar photovoltaic arrays
- Associated infrastructure (within the existing industrial footprint of the site)

As the site will generate more than 10MW it is a Development of National Significance (DNS) and an application will be submitted to Planning and Environment Decisions Wales (PEDW) – so it will be considered by an Inspector and determined by Welsh Ministers.

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## 2.2 Engagement approach

The early engagement took place between 10 October and 17 November 2022.

This approach highlighted in this section was taken to ensure the project and the early engagement were widely advertised; with a range of opportunities to view the proposals, ask questions of the team and provide feedback. This helped ensure that anyone who has an interest in the Trecwn Green Energy Hub had the opportunity to view and comment on the emerging proposals at this early stage.

### Consultation zones

At the start of the project, three consultation zones were defined.

#### **Zone 1: Immediate neighbours of the electrolyser site** (56 addresses)

This group, mainly in Barham Road, were identified due to their proximity to the electrolyser. It was anticipated that they would have the most interest in the electrolyser technology, in particular in relation to water supply, which has been a historic issue for properties in this area.

#### **Zone 2: Wider neighbours** (133 addresses)

This group includes residential and business addresses in close proximity to the wind turbine and solar array sites, who are likely to be most directly impacted by these proposals, particularly in relation to visual impact.

#### **Zone 3: Wider area** (c. 5,600 addresses)

An area covering local communities and extending to Fishguard in the north was identified to ensure people living and working within the local and wider area, who might have an interest in the proposals for Trecwn Green Energy Hub, would have an opportunity to find out about the proposals and take part in the early engagement.

See plans in Appendix 1.

This has been replaced by the CLG boundary reflecting feedback from residents, and this will be kept under review throughout the project.

### Stakeholders

Local and regional stakeholders were also identified, including elected representatives (MSs/MPs, County councillor and Community and Town councillors), schools, environmental groups, and community groups.

The consultation area is not fixed and will be reviewed and potentially increased as the project progresses and feedback is received.

## Notification

A range of tools were used to inform stakeholders and local communities about the proposals for Trecwn Green Energy Hub and encourage participation in the early engagement.

This included:

- Newsletter sent to around 5,600 addresses (in Zone 3)
- Newsletter with covering letter sent to around 190 addresses (in Zone 1 and 2)
- Newsletter with covering letter/emails to identified stakeholders
- Press release sent to local, regional and trade press on 10 October
- Adverts published in local newspapers – Pembrokeshire Herald (14 October) and Western Telegraph (19 October). The adverts were also run on the newspapers' websites from 19-26 October.

More detail can be found in Chapter 3 of this Report.

## Engagement tools/events

A range of early engagement tools and events were utilised to enable stakeholders, local communities and the wider public find out more about the proposals, discuss them with members of the project team and share their thoughts on the emerging proposals.

This included:

- Feedback form sent out with newsletter and available at the exhibitions
- Launch of a project website: [www.trecwn-energy.wales](http://www.trecwn-energy.wales)
- Stakeholder site visits, meetings and briefings – including presentations to Community Councils (at the start of Council meetings)
- Three public exhibitions (on site, Letterston and Fishguard)
- Webinar (online – via Zoom)
- Neighbour meeting

More details can be found in Chapter 4 of this Report.

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## 2.3 Welsh language

Statkraft is committed to promoting Welsh language and culture, and as far as is practical, Welsh will be treated as an equal language to English with all key

engagement/consultation material being produced bilingually, in English and Welsh.



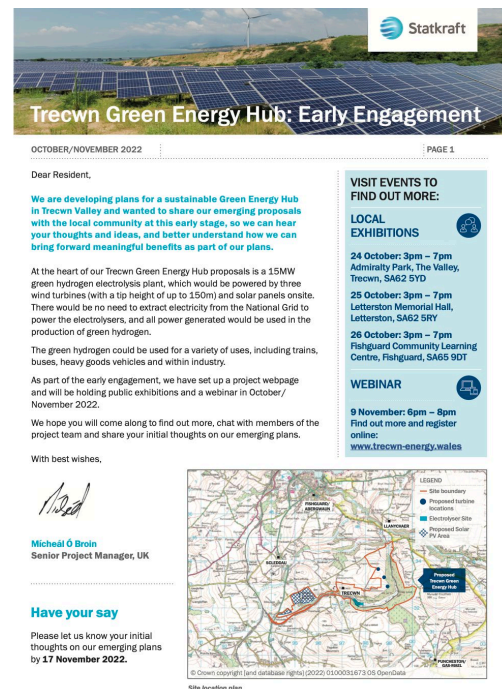
# 3. Notification

## 3.1 Newsletter

A bilingual newsletter was posted to around 6,000 residential and business addresses in consultation Zone 1, 2 and 3, and posted/emailed to identified stakeholders (including elected representatives, schools, community, and interest groups) in the consultation zone and wider area.

The newsletter included:

- An introduction to the project and the need for green energy.
- Information about the site and the emerging proposals.
- An indicative location plan for the different elements of the project – green hydrogen, wind and solar.
- Information about environmental considerations and the planning process.
- An introduction to Statkraft.
- Information about the public consultation events – exhibitions and webinar – and to provide feedback.



A copy of the newsletter can be found in Appendix 2.

## 3.2 Letters/emails

Covering letters were sent with the newsletter to the following consultees:

- Local elected representatives – with an offer of a meetings/briefing
- Consultees in Zone 1 – offering a one-to-one meeting and inviting them to attend a neighbour meeting on 10 November
- Consultees in Zone 2 - offering a one-to-one meeting and inviting them to register an interest in the proposed Community Liaison Group, which will provide an opportunity for stakeholders and resident representatives to meet with the project team at key stages of the project – through planning, delivery and operation.

Copies of these letters/emails can be found in Appendix 3.

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### 3.3 Media release

On 10 October 2022, a press release to the launch of the project and the early engagement was issued to local, regional and trade press including:

- The Western Telegraph
- The Western Mail
- The Pembrokeshire Herald
- Tivyside Advertiser
- BBC Cymru Wales
- S4C
- Nation.Cymru
- Renewables
- Energy Voice

Articles were included in a range of media outlets, including Western Telegraph, Pembrokeshire Herald BBC News, Business News Wales, renewables, Utility Week, Renewables Now, Business Live and Business Green News.

A link to the coverage received can be found in Appendix 4.

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### 3.4 Adverts

Bilingual adverts to promote the public engagement events were placed in the following local newspapers:

- Pembrokeshire Herald – on 14 October 2022
- Western Telegraph – on 19 October 2022

The adverts introduced the proposals, advertised the exhibitions and online webinar and directed people to the project website for more information.

The adverts also ran on the newspapers' websites (both mobile and desktop) from 19-26 October 2023.

A copy of the adverts can be found in Appendix 5.

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## 3.5 Social media

Statkraft promoted the project and early engagement on its LinkedIn account:

[https://www.linkedin.com/posts/statkraft\\_trecwn-green-energy-hub-activity-6985581078027640832--WB1?utm\\_source=share&utm\\_medium=member\\_desktop](https://www.linkedin.com/posts/statkraft_trecwn-green-energy-hub-activity-6985581078027640832--WB1?utm_source=share&utm_medium=member_desktop)

Other social media coverage included:

- RNAD Trecwn 1940-1996:

<https://www.facebook.com/photo?fbid=437726198420798&set=a.426844009509017>

- Trecwn Community Association:

<https://www.facebook.com/groups/49668291702>

- Western Telegraph:

<https://www.facebook.com/westerntelegraph/posts/pfbid02juGrfih2qUqwkns6LxfhufdNsCL4zvR2qCJGpFpTE5aZ16VuAxVrC8rG6oTPaM6l>

- Pembrokeshire Herald:

[https://www.facebook.com/profile/100064021424056/search?q=trecwn&filters=eyJycF9jcmVhdGlvbI90aW1lOjAiOiJ7XCJuYW1lXCi6XCJjcmVhdGlvbI90aW1lXCIsXCJhcmdzXCi6XCJ7XFxcInN0YXJ0X3llYXJcXFwiOlxcXClyMDIyXFxcliccXFwic3RhcncRfbW9udGhcXFwiOlxcXClyMDIyLTFcXFwiLXcXCJlbnRfeWVhclxcXCi6XFxcjllwMjJcXFwiLXcXCJlbnRfbW9udGhcXFwiOlxcXClyMDIyLTFcXFwiLXcXCJlbnRfZGF5XFxcjpcXFwiMjAyMi0xMi0zMVxcXCJ9XCJ9In0%3D](https://www.facebook.com/profile/100064021424056/search?q=trecwn&filters=eyJycF9jcmVhdGlvbI90aW1lOjAiOiJ7XCJuYW1lXCi6XCJjcmVhdGlvbI90aW1lXCIsXCJhcmdzXCi6XCJ7XFxcInN0YXJ0X3llYXJcXFwiOlxcXClyMDIyXFxcliccXFwic3RhcncRfbW9udGhcXFwiOlxcXClyMDIyLTFcXFwiLXcXCJlbnRfeWVhclxcXCi6XFxcjllwMjJcXFwiLXcXCJlbnRfbW9udGhcXFwiOlxcXClyMDIyLTFcXFxcliccXFwic3RhcncRfZGF5XFxcjpcXFwiMjAyMi0xMi0zMVxcXCJ9XCJ9In0%3D)

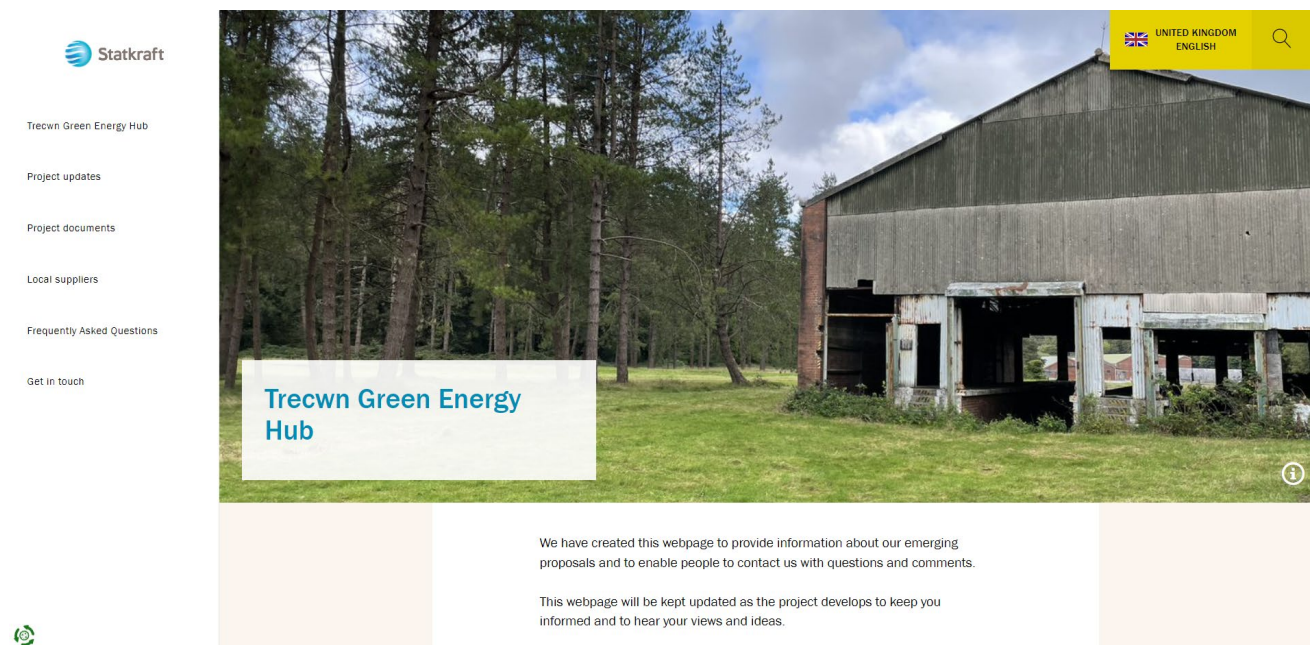
A copy of the posts can be found in Appendix 6.

# 4. Early engagement

This section provides a summary of the early engagement activities that took place as part of this early engagement consultation.

## 4.1 Project website

A bilingual website was set up at the start of the project to provide information about the proposals and feedback mechanisms so local communities and stakeholders could find out more about and have their say on the emerging proposals.



The website had 389 unique visits during the early engagement, between 10 October and 24 November 2022.

The website will be updated at key stages throughout the project.

## 4.2 Feedback form

A feedback form was distributed with the newsletter to encourage people to share their initial thoughts on the emerging proposals for Trecwn Green Energy Hub.

The feedback form also invited questions and comments and if people wanted to receive project updates and a response to their comment.

A freepost envelope was also included to send the feedback form back to the project team.

A copy of the feedback form can be found in Appendix 7.

## 4.3 Stakeholder meetings/briefings

The following early engagement meetings/briefings took place in the run up to, during or after the early engagement:

Date	Meeting type	Meeting with
4 Oct 2022	Stakeholder Meeting	Councillor Delme Harries (Bro Gwaun Ward)
5 Oct 2022	Site visit	Representatives of Pembrokeshire County Council, Cwm Gwaun Community Council, Fishguard & Goodwick Town Council, Scleddau Community Council, Puncheston Community Council, and local MP.
24 Oct 2022	Stakeholder Meeting	Councillor Michelle Bateman (Letterston Ward)
24-26 Oct 22	One-to-one meetings	Meetings with neighbours as requested following project launch (in response to offer to meet in cover letter with newsletter)
26 Oct 2022	Council meeting	Puncheston Community Council
9 Jan 2023	Council meeting	Scleddau Community Council
7 Feb 2023	Council meeting	Fishguard and Goodwick Town Council

## 4.4 Public exhibitions

Nearly 250 came along to one of the three public exhibitions held to introduce the project and give stakeholders and the local community an opportunity to find out more and discuss the proposals with the project team:

Time	Date	Location	Number of attendees
3pm-7pm	24 October 2022	The Valley, Trecwn	109

3pm-7pm	25 October 2022	Letterston Memorial Hall	79
3pm-7pm	26 October 2022	Fishguard Community Learning Centre	59

Exhibition boards in English and Welsh, a rolling presentation, print outs of plans and maps were provided, along with hard copies of the feedback forms for attendees to write their thoughts of the emerging proposals.

The exhibition boards provided information on:

- the project and indicative timeline.
- the location of the site and its suitability for green hydrogen generation.
- the components of the proposed green hydrogen project: electrolyser; solar arrays; and wind turbines.
- the community benefits fund.
- environmental considerations.
- cultural heritage.

All exhibition material was available to view on the project website.

A copy of the exhibition boards can be found in Appendix 8 and presentation in Appendix 9.



*Photos from Letterston and Fishguard exhibitions*

## 4.5 Webinar

A total of 26 consultees attended the webinar from 6pm-8pm on Wednesday 9 November on Zoom

Following a presentation by the project team, attendees were invited to ask questions, which can be viewed in the next Chapter.

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## 4.6 Neighbour meeting

Immediate neighbours near the electrolyser site (in Zone 1) were invited to an independently facilitated meeting. Ward member, Cllr Delme Harries was also invited.

This meeting was arranged to help the project team better understand local issues and opportunities, respond to outstanding queries that could be answered at this stage in the project and discuss next steps, which include the potential to create a Community Liaison Group to enable stakeholders and neighbour representatives to meet at key stages throughout the project.

A few residents living close to the solar and wind farm sites also expressed an interest in attending the meeting and the invitation was extended to them. The invite was also shared on social media by a local resident and a number of people turned up on spec and space was found to accommodate them in the meeting.

The venue was chosen based on residents who had indicated they would be attending; with the additional attendees the venue was very full, but space was found so that everyone could participate.

The meeting, facilitated by PLANED, was attended by 32 residents and Cllr Delme Harries - ward member for the site.

The meeting started with a presentation from Mícheál Ó Broin, project manager, for those who had not attended one of the other early engagement events or reviewed the information on the project webpage.

Attendees were invited to write thoughts and comments on post-it notes and put them on the flip chart board during the presentation. During the presentation, questions were asked by attendees, which were collated into themes.

A copy of the meeting notes, which were circulated to attendees for review before being finalised, are available in Appendix 10.

# 5. Key themes & responses

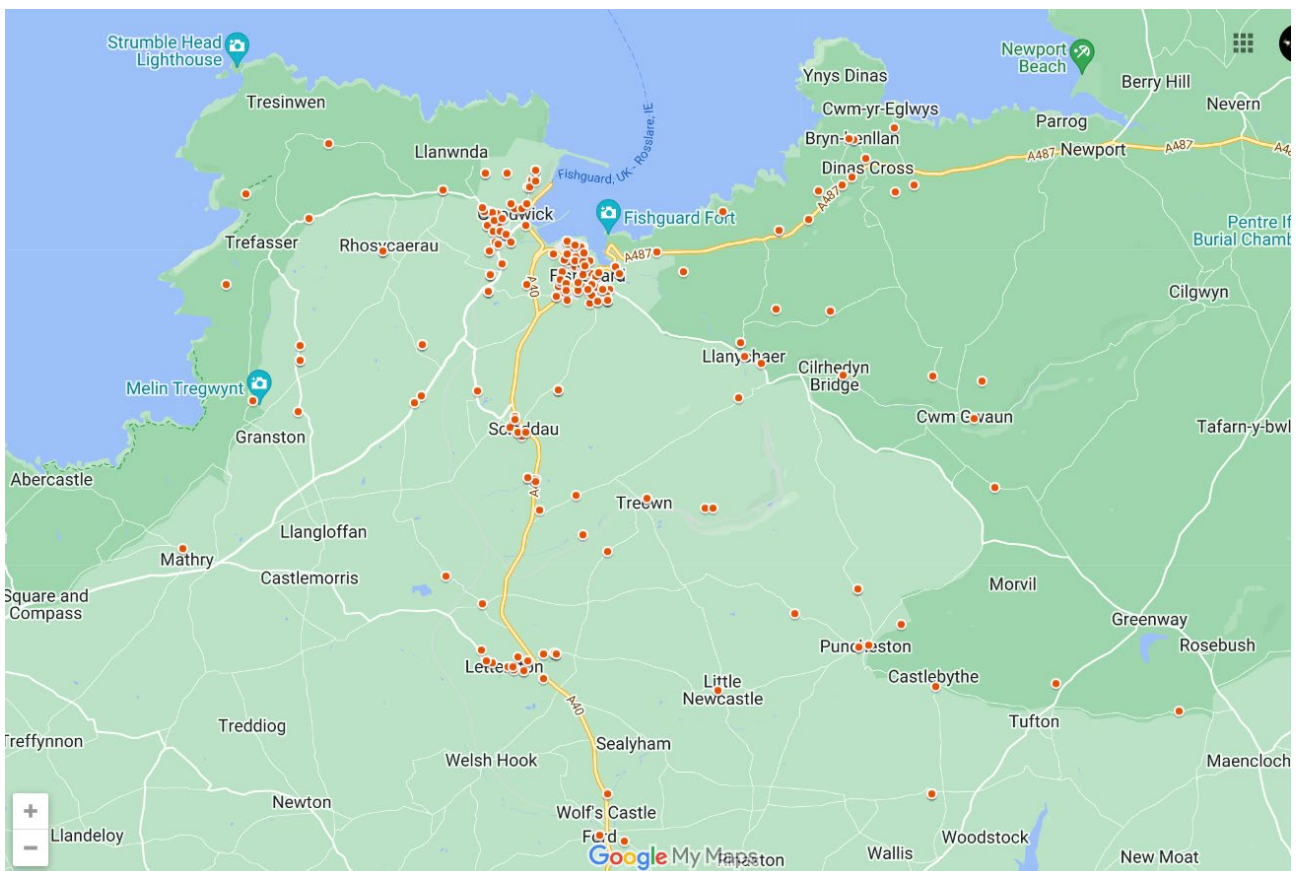
There were a variety of ways for stakeholders, residents and businesses to provide feedback on the emerging proposals for Trecwn Green Energy Hub.

This included a feedback form (which were returned using a freepost envelop or completed at the exhibition or online), emails and phone number.

Comments/queries raised during the webinar and neighbour meeting have also been captured within this Report.

## 5.1 Feedback forms

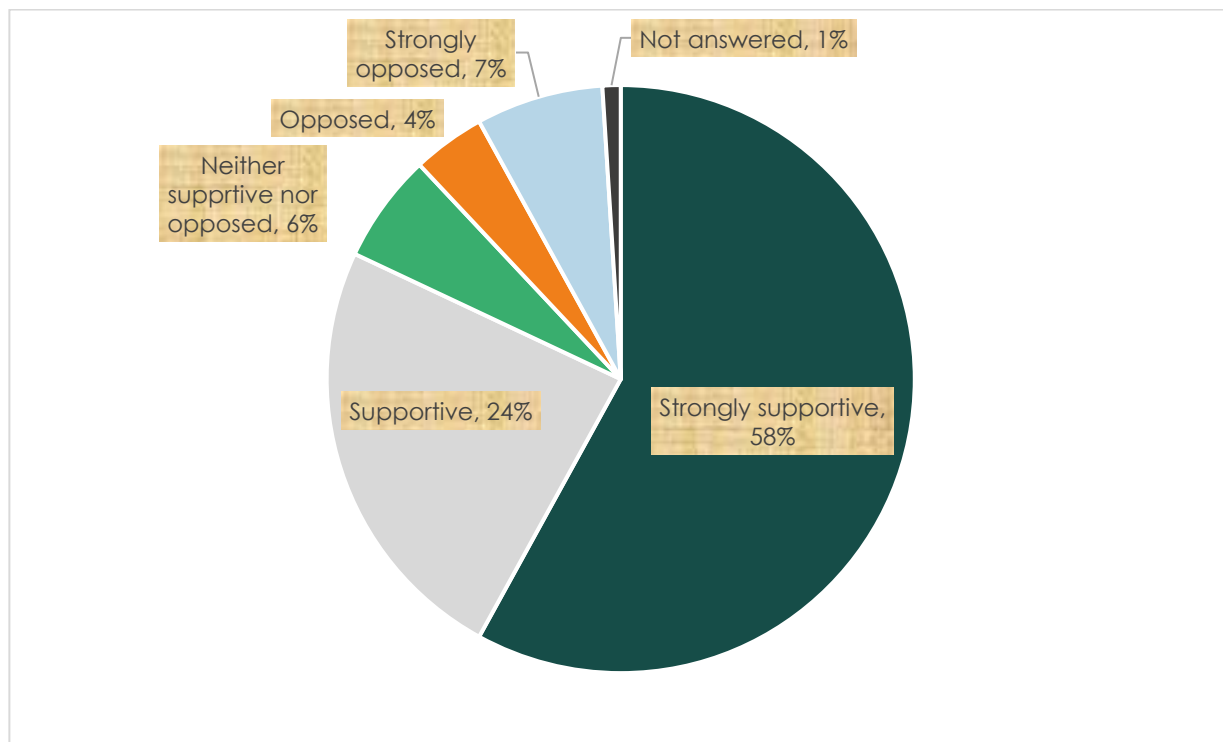
There were 295 feedback forms returned. The majority of respondents came from communities surrounding the site, with a high proportion located in Fishguard and Goodwick.





The feedback form asked: 'Which of the following best describes your initial thoughts on the emerging proposals for Trecwn Green Energy Hub?'

82% were strongly supportive or supportive of the project, with 6% neither supportive or opposed and 11% opposed or strongly opposed. 1% did not answer the question.



## 5.2 Key themes

Comments received via the feedback form, emails and phone calls, as well as the early engagement events, has been reviewed and collated into key themes.

### Green energy

**The need for renewable energy:** The majority of respondents were positive about the need for more renewable energy initiatives and the move towards green energy. A small number of respondents questioned the climate emergency and refuted the need for green energy.

**Statkraft's response:** In 2019, the Welsh Government and Pembrokeshire County Council declared a climate emergency. Increasing the generation of clean, renewable electricity will contribute to the Welsh Government's net zero target of

70% of the nation's energy being supplied by renewable sources by 2030, as well as the Council's Big Green Plan towards becoming a net zero-carbon by 2030. To meet these targets, low carbon energy such as green hydrogen will need to be introduced across all industries, including transport, power, heat, agriculture and industrial sectors.

**Alternative energy options:** A couple of respondents would prefer to see alternative renewable/low carbon energy production, with tidal and nuclear being suggested.

**Statkraft's response:** A wide range of renewable energy sources will be needed to help address the climate emergency and to allow us to decarbonise our economy while strengthening domestic energy security. Neither tidal nor nuclear would be possible at The Valley site.

## Green hydrogen production

**Green hydrogen:** Respondents commented on hydrogen as a fuel, with the majority positive about the role this would play in supplying future energy needs. A few people stated a preference for the concept of hydrogen powered cars over electric vehicles, and one respondent questioned the national grid's ability to cope with hydrogen distribution.

A few respondents questioned the energy and cost efficiency of hydrogen production, rather than exporting the solar and wind straight to the grid. A couple of respondents questioned if the UK is ready for hydrogen technology. There were also requests for examples of other successful hydrogen production facilities.

**Statkraft's response:** The UK and Welsh Governments support the development of a hydrogen economy as part of a diverse energy system. Energy networks, businesses and others across the UK are evaluating how hydrogen can help them decarbonise, replacing fuels such as diesel, natural gas or more specialised industrial fuels and processes.

Hydrogen is already produced at sites around the UK, but with significant cost in terms of carbon emissions or as a by-product of other industrial processes. Systems similar to the one that is likely to be used at Trecwn are already in operation in the UK, and we are developing further sites in England and North-Wales as part of Grenian Hydrogen.

**Use of hydrogen:** A number of respondents asked how the green hydrogen produced will be used, with suggestions including hydrogen powered vehicles such

as cars, trains, buses and tractors as well as ferries. There were also queries about using the hydrogen for fertilizer production. The potential for a heating system for local homes and businesses was also raised, with one respondent asking if local people will be able to purchase/use hydrogen for domestic use. A few respondents were sceptical that there would be end users for the green hydrogen produced.

**Statkraft's response:** Hydrogen is a growing fuel for transport. Hydrogen buses operate in several UK cities, and hydrogen trains are now in revenue earning service in Germany and in testing in the UK. Major manufacturers are supporting development of hydrogen heavy goods vehicles (HGVs), agricultural vehicles and specialist machinery such as diggers.

The project is seen as an ideal hub for transport, with discussions underway with potential end users, including HGV, train and bus companies looking to introduce hydrogen vehicles to their fleets. Ferries are also a potential end user. End users would need to be identified before going ahead but there are a number of companies already interested.

There are no plans for domestic supply of green hydrogen from this project. If it was supplied as fuel, it would most likely be sold to a fuel station rather than individuals.

**Hydrogen production process:** Some respondents commented on the production process with a suggestion to use more solar and wind to power a larger electrolyser and a query about what happens to the oxygen produced. Respondents also asked if excess energy could be put into the national grid.

**Statkraft's response:** The design of the project reflects what is expected to be a reasonable production volume for customers in Pembrokeshire. Oxygen is a by-product of hydrogen production and is returned to the atmosphere.

The national grid infrastructure in South Wales is constrained, limiting the amount of energy that can be exported from renewable development, and we are not considering this option for Trecwn.

**Transport of hydrogen:** Some respondents queried if the railway is going to be used to transport the hydrogen, and whether discussions are underway with Network Rail about availability of train paths to Carmarthen and beyond, as well as retention of the line from Letterston Junction.

**Statkraft's response:** The rail connection to Fishguard and Carmarthen is one of the many attractive features of the Trecwn site. We do not expect to export hydrogen by rail in the first few years of operation of the project but hope that this may be an

option in the longer term as hydrogen fuelled trains become more common.

**Safety of hydrogen:** Some concerns were expressed about potential risks associated with hydrogen production and transportation, in particular the possibility of an explosion, the blast radius, the 2% boil off, and what safety measures will be incorporated in the design of the facility. Proximity to residential properties was also raised – and if the electrolyser could be moved further into The Valley, away from people's homes. What licences will be required was also raised. A couple of respondents asked what safety assessments will be carried out and how the emergency services will access the site/if medical and fire safety measures will be incorporated in the proposals.

**Statkraft's response:** Statkraft will implement a comprehensive hazard management process, specific to the Trecwn Green Energy Hub project. This will enforce a stringent level of safety throughout the project's development and operation.

The process will consist of hazard identification, quantification and supervision, encompassing all the project activities (inclusive of hydrogen production and transportation). As a result, tailor-made measures will be included in the design and operation including for example: safety distances, fire safety requirements, operational procedures, leak detection systems, etc.

Safety exclusion zones will be in place according to the UK legislation. Initial research safety studies suggest the residential properties closest to the site will not be within the blast radius and further investigations will be carried out as the project progresses. All safety studies will be developed according to the UK safety framework and issued to HSE-UK.

Following community feedback, a second site deeper within the Valley is being investigated to determine whether it would be a viable alternative.

In addition to the planning permission, a hazardous consents licence and an environmental licence will be needed before the facility can become operational. The Local Authority will be part of the consultation process of the referred licences.

The fire service will be consulted as the plans develop. Safety is a key part of the design for a hydrogen electrolyser and how the facility meets those requirements will need to be demonstrated in the planning application. A Dedicated Emergency Response Plan will be drafted to the specifications of the Trecwn Project and will be coordinated with local services. This will include special fire safety measures for hydrogen risks.

**Hydrogen storage:** How the hydrogen is stored was raised – as liquid or gas – and if the underground tunnels would be utilised for storage.

**Statkraft's response:** The hydrogen will be stored as gas. The emerging proposals do not look to utilise the underground tunnels; however, the team is investigating if this would be viable for a future stage of the project.

**Waste from the hydrogen process:** What will happen to oxygen produced as a by-product and how will any residual water from the process be treated.

**Statkraft's response:** Oxygen is a by-product of hydrogen electrolysis and will be released harmlessly into the atmosphere as it is not currently economical to produce this for commercial use. Oxygen makes up 21% of earth's atmosphere.

There may be a small amount of wastewater produced from the electrolysis process. This water would need to be treated and more information will be available as the detailed designs are progressed.

## Wind turbines

**Number of wind turbines:** Several respondents suggested the use of fewer and/or smaller wind turbines – or having less turbines and taking electricity from the national grid.

**Statkraft's response:** We have chosen 149.9m turbines as the most appropriate option for the site, while recognising that manufacturers are no longer typically producing turbines below this height.

The use of locally generated green energy is a part of keeping the price of the green hydrogen produced low for end users, helping to accelerate decarbonisation. The electricity grid in Pembrokeshire is quite weak and if a grid import connection instead of a turbine would require significant and costly grid upgrades that would make the project unviable.

**Location of wind turbines:** It was suggested the wind turbines could be located further away.

**Statkraft's response:** A wider search of the area was carried out when looking at the location for the wind turbines and the area selected was the most suitable for the project.

**Wind turbine's lifespan:** A couple of issues were raised regarding rare elements used in the construction of the wind turbines, maintenance cost and what happens at the end of the project/will they be recycled?

**Statkraft's response:** Many components from a wind turbine can be easily recycled through existing processes for dealing with materials such as steel or copper, while major components such as the gearbox can potentially be refurbished for reuse.

To enable decommissioning of the wind turbines, a decommissioning bond will be held on behalf of Statkraft. The bond ensures that the turbines can be decommissioned, their infrastructure removed and the land returned to its previous use at the end of the turbine lifespan.

**Anemometer mast:** A respondent asked if there will be an anemometer mast in Trecwn.

**Statkraft's response:** An anemometer mast (also known as a met mast) will be required as part of the development to monitor and assess wind directions and speeds in more detail. We will submit a separate planning application for this to be in place for up to two years.

An anemometer mast is typically a temporary lattice truss structure secured with guy wires which can be erected and removed in a day.

## Solar arrays

**Extent of solar panels:** Concern was expressed about the cumulative impact of solar panels in the area and the number and size was queried.

**Statkraft's response:** While the maps provided as part of the early engagement are indicative, the layout of the solar panels has been revised following feedback. Work is ongoing and the extent of the solar arrays will be reduced, as reflected in the scoping report.

As procurement of the project components will not take place unless the project is consented, the exact size of an individual panel cannot yet be confirmed.

**Location of solar panels:** It was suggested that the solar panels be moved into The Valley, potentially to the north side that is south facing and largely scrubland.

**Statkraft's response:** The topography of The Valley means large proportions of The Valley are in shadow during the day, so not suitable for solar arrays. The area

suggested on the north side would take longer and be more costly, making it unviable.

**Loss of agricultural land:** Concern was expressed about the loss of best, most versatile agricultural land for the solar panels.

**Statkraft's response:** In line with the Welsh Government's planning guidance, we have designed the solar array to avoid grade 3a land, which is considered best and most versatile land.

**Visual impact of solar panels:** Concern was expressed about the visual impact of the solar panels, and cumulative impact with other solar farms in the area.

**Statkraft's response:** The solar panels used on this project will be stationary, with panels mounted on a framework above the ground. We are also able to take advantage of favourable site topography to limit visual impact. As part of our final design, we will incorporate planting to screen views of the panels as we are seeking to strengthen and enhance existing hedgerows which provide screening.

As there are only a small number of solar farms in the immediate area and the local grid transmission remains constrained, there are limited solar projects which export energy to households and businesses. As such we believe the cumulative impact is reasonable.

## Environmental considerations

**Visual impact of wind turbines:** Concern was expressed about the visual impact of the proposed wind turbines, with queries about visibility from different viewpoints, including whether they would be visible from the sea and the national park and SSSI. A respondent asked where they could go to see a turbine of a similar size to the ones proposed.

**Statkraft's response:** Landscape and visual impact of all elements of the proposals will be investigated as part of the Environmental Impact Assessment. More information will be available during the statutory consultation later this year.

Pen y Cymoedd Wind Farm (constructed, owned and operated by Vattenfall) has 76 turbines which are 145m to tip. As part of the community benefit scheme, Vattenfall have constructed a mountain biking and walking trails for visitors, providing easy access to view the turbines.

**Water supply:** Respondents asked where the water for the electrolyser would be sourced from, the volume of water needed each day and how much water is used in the creation of 1 tonne of hydrogen. Someone also asked whether the site's water usage would reduce supply to Llys-y-Fran.

**Statkraft's response:** All the water required for the hydrogen facility will come from the onsite reservoir. The facility will not require a connection to the mains water supply and won't be operational until residents are on mains supply, so would not have an impact on water supply.

**Impact on wildlife:** There were a number of queries about the impact on local flora and fauna – particularly birds and bats – primarily relating to the wind turbines; impact on mature forestry on site and SSSI; and steps will be taken to prevent the solar area becoming a sterile area for nature. Respondents asked what mitigation/biodiversity enhancements will be incorporated. It was suggested that bird and bat boxes be added where appropriate.

**Statkraft's response:** Statkraft has a strong commitment towards ensuring protection of local wildlife across all its projects. Detailed ecology studies will be carried out prior to submission of a planning application to determine the baseline conditions of the site. We will also work closely with our consultant ecologists to ensure enhancements to biodiversity are included within the project's design. The environmental impact on local flora and fauna will be assessed as part of an Environmental Impact Assessment. Overall, the Trecwn Green Energy Hub will achieve a net gain in biodiversity on site, which is in line with emerging government policy.

**Noise impact:** Noise from the three component parts of the project – electrolyser, solar arrays and wind turbines – individually and cumulatively was raised, along with concern about infrasound from turbines and potential impact on human health. People living in close proximity as well as those living in Fishguard wanted to know how they will be impacted and what mitigation measures are proposed.

**Statkraft's response:** Noise will be assessed and considered as part of the Environmental Impact Assessment and mitigation measures adopted where appropriate. More information will be available during the statutory consultation.

The WSP report for Department for Business, Energy and Industrial Strategy (BEIS) considered the topic of infrasound and low frequency noise. Whilst it may be feasible to measure infrasound from wind turbines, the current weight of evidence indicates that wind turbine infrasound has no adverse effects on human health at



typical exposure levels and that it is not necessary to consider wind turbine infrasound when determining development applications. Furthermore, that assessment on the basis of 'A' weighted sound levels (the approach in the ETSU-R-97 assessment methodology) provides sufficient control for the potential impact of low frequency noise.

**Light pollution:** Concern was expressed about light pollution, especially on SSSIs in the area.

**Statkraft's response:** The solar farm and wind turbines are not expected to require lighting. Lighting around the electrolyser plant will be assessed as part of the Environmental Impact Assessment and appropriate mitigation proposed as appropriate.

**Traffic/transport:** Concern was expressed about increased vehicle movements, particularly HGVs, during construction and operation. Respondents asked how much traffic will be generated on the A40, both during the development and when fully operational; in particular, how many tankers once operational. Maintenance of access roads was also raised.

**Statkraft's response:** Once operational, the green hydrogen will be transported in tankers with gas cylinders, similar to those that transport other gas. Up to 15 tankers a day are currently anticipated, but more will be known as the project develops. Traffic calming and management of Ffos Las as part of this project will be implemented by Valley Management Services.

**Project's carbon footprint offset:** A respondent asked how many years it will take for the proposed development to run before it offsets the CO<sub>2</sub> produced during construction?

**Statkraft's response:** The carbon payback period for wind turbines is typically two to three years while solar farms typically payback within 12 to 18 months. The project has an assumed forecast daily production of ~3 tonnes of hydrogen, which will displace traditional diesel fuel used in transport. This equates to an annual saving of 18,991 tonnes of CO<sub>2</sub> equivalent per year.

## Socio-economic

**Job creation:** The creation of new jobs was highlighted – during construction and operation – with the importance of local opportunities being stressed.

**Statkraft's response:** In addition to jobs during the construction process, there will be 2-3 permanent jobs once the facility is operational. It is hoped that the facility will act a catalyst for further redevelopment of The Valley and generate more jobs.

**Regeneration of site:** Support was expressed for the regeneration of the site and local area, and the fact that this is being developed within an existing industrial footprint. A number of respondents mentioned that the site has sat unused vacant for years, having once been a significant local employer. People also asked for information on plans for the rest of the site and any further expansion planned.

**Statkraft's response:** The site of the proposed electrolyser is in a Strategic Employment Zone near the Haven Waterway Enterprise Zone. It is hoped that Trecwn Green Energy Hub will act as a catalyst for other new business development on the site.

**Impact on house prices:** A number of local residents raised concerns that their properties would decrease in value as a result of the project – and asked is they will be compensated.

**Statkraft's response:** The electrolyser site is identified in local plans for industrial uses. It is in a strategic employment area; it is felt the proposals for Trecwn Green Energy Hub are appropriate for The Valley. Previous planning consents included a biomass facility.

**Community Benefit Fund:** Questions were asked about how the community benefit fund – how it would be administered and what project it would support; whether local facilities, infrastructure and leisure would be improved; and if profits would be reinvested locally or in alternative energy. The geographic reach of the community benefits fund was also queried, with some respondent wanting it used primarily for community projects close to the site and others looking for the fund's reach to include the Fishguard community.

**Statkraft's response:** The way the fund is administered, its geographic reach and the types of projects it can support will need to be defined if the project is consented. Thoughts and ideas from stakeholders and local communities are welcomed and will be considered as the project progresses.

**Education opportunities:** The possibility for school/university visits, an education centre and a virtual tour of the tunnels on site were suggested.

**Statkraft's response:** We are keen to look at these kinds of opportunities.

**Subsidised local energy:** Respondents asked if local people would be able to benefit from subsidised energy/lower energy bills.

**Statkraft's response:** Not in this case, as electricity produced will power the electrolyser and will not go into the grid.

## Early engagement

**Early engagement approach:** There was a mixed reaction to the timing of the consultation, while the majority of respondents appreciated the timing of the early engagement, some people wanted to know about the project earlier, whilst others would have preferred the plans to be more advanced so wind turbine visualisations could have been presented. Examples of similar projects were also requested.

**Statkraft's response:** It is important to engage local stakeholders and communities once the viability of the project has been determined but at a stage when it is still possible to influence the emerging project designs. By engaging at this stage, refinements have already been made to the solar farm proposals and an alternative location in The Valley is being investigated for the electrolyser site.

**Early engagement events:** The public exhibitions were well received, although the lack of space at the Trecwn venue was highlighted. There were mixed views to the neighbour meeting with some residents feeling the event invite should have been extended to those living close to the solar and wind elements as the project, as well as the electrolyser.

**Statkraft's response:** Comments received about the early engagement approach and activities will be taken on board in future engagement and the statutory consultation.

## Miscellaneous

**Site ownership:** A number of people asked who owns The Valley, where the electrolyser site is proposed.

**Statkraft's response:** The site is privately owned. Valley Management Services maintain and operate the site and would lease the electrolyser site to Statkraft if the project is granted consent.

**Site access:** A respondent asked if there would be opportunities for access to the site for recreation – for example public rights of way (PROWs), bike trails etc.

**Statkraft's response:** It is possible that PROWs on the wind and solar farm sites will need to be temporarily diverted during construction. This is currently being investigated and more information will be available during the statutory consultation. The electrolyser site is on a private estate (The Valley) with no public access.

**Alternative sites:** A couple of respondents asked what other brownfield sites in Pembrokeshire were considered for this project.

**Statkraft's response:** The unique nature of The Valley site is what attracted Statkraft to Trecwn. It has a spur line off the Fishguard to Swansea line, a road connection to the A40 and is a brownfield site with history of industrial use. The onsite caverns are also unique to this site, and the project team is investigating their potential for hydrogen storage, however, there are currently no plans for this, and it does not form part of the emerging proposals for Trecwn Green Energy Hub.

**Project costs:** A few respondents asked if the project could receive a government subsidy/investment, how long till it is paid back, and whether there will be opportunities for local businesses to invest.

**Statkraft's response:** There is a price stabilisation mechanism being devised by UK Government to encourage development of low carbon hydrogen in the UK. This would provide projects with a guaranteed price for 15 years. If the sales price is greater than the guaranteed price, the project would pay the difference back, and if the sales price is lower than the guaranteed price, the project would be paid the difference.

We welcome discussions regarding community ownership in the project and are keen to discuss offtake agreements with local businesses seeking to decarbonise.

**About Statkraft:** A couple of respondents highlighted that Statkraft is a foreign company and profits go to shareholders and will not remain in Wales.

**Statkraft's response:** Statkraft is currently investing more than £1.5bn in the UK and has both a history in and a long-term commitment to Wales with Rheidol Hydro Electric Plant, Alltwalis Wind Farm and the proposed Llest Y Gwynt Wind Farm and Trecwn Green Energy Hub. We have more than 250 staff across the UK, with offices in Cardiff, Glasgow and Edinburgh. There are several ways our projects can bring local investment. Construction provides a significant opportunity for local businesses, and we actively seek to maximise this – we had over 80 businesses complete our local suppliers register to be involved in the construction of our Grid project at Keith in Scotland.

The ongoing operation plant also brings significant local investment, for example, we have delivered more than £4m in community benefit across the UK. The project will also contribute to local public finances through business rates.

We welcome suggestions of how our projects can positively impact our neighbours and local community – this is how we have come to investigate the opportunity for our projects to bring improved broadband infrastructure at other sites.

# 6. Conclusion

The early engagement was well publicised through the distribution of newsletters to over 5,500 households/businesses and stakeholders, adverts in the local newspapers, articles in a range of local/regional and trade media and social media.

The engagement events were well attended with over 300 people coming along to one of the public exhibitions, the webinar and the neighbour meeting; over 350 unique visitors logged onto the website; and approximately 100 others attended stakeholder events, including presentations to local Community and Town councils.

Our responses through the feedback form demonstrate that the majority of respondents support the proposals for Trecwn Green Energy Hub. A range of issues have also been raised concerns, which are being considered and will help inform the evolving proposals, as already demonstrated be a reduced area for the solar farm and investigations into an alternative location in The Valley for the electrolyser. More information on this is available in the scoping report, which has been submitted to Planning and Environment Wales (PEDW).

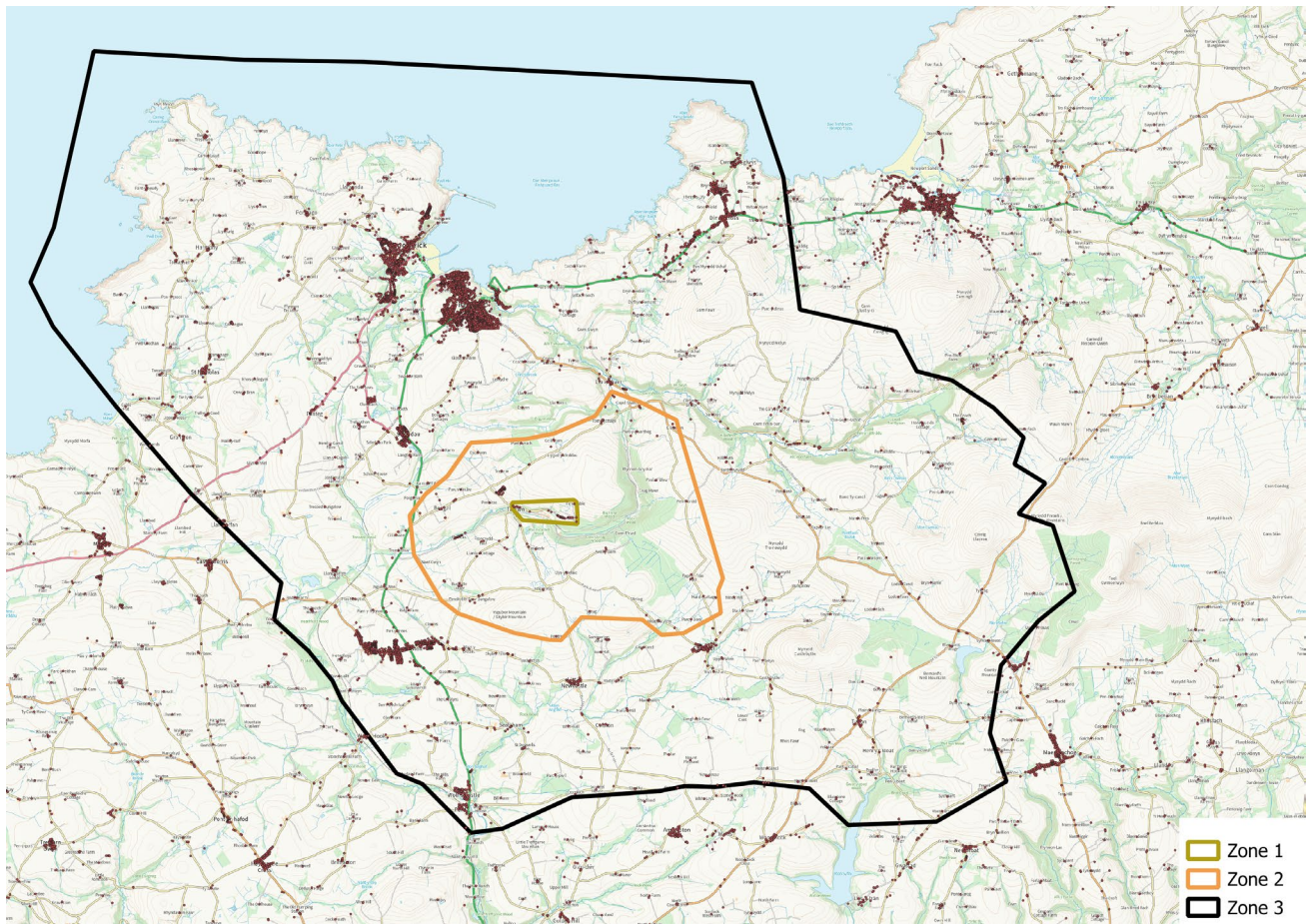
Statkraft remains committed to engaging with stakeholders and local communities as the project develops and is working with PLANED to establish a Community Liaison Group, which will meet at key stages throughout the project.

Further site investigations, surveys and project development work will take place to refine the detailed proposals, which will form the basis of the statutory consultation later this year/early next year.

In the meantime, you can still provide your thoughts, comments and queries by completing the contact form on the project website:

<https://www.statkraft.co.uk/projects/Trecwn-en/Contact/>

# 7. Appendix



# Appendix 2

English





# Trecwn Green Energy Hub: Early Engagement

OCTOBER/NOVEMBER 2022

PAGE 1

Dear Resident,

**We are developing plans for a sustainable Green Energy Hub in Trecwn Valley and wanted to share our emerging proposals with the local community at this early stage, so we can hear your thoughts and ideas, and better understand how we can bring forward meaningful benefits as part of our plans.**

At the heart of our Trecwn Green Energy Hub proposals is a 15MW green hydrogen electrolysis plant, which would be powered by three wind turbines (with a tip height of up to 150m) and solar panels onsite. There would be no need to extract electricity from the National Grid to power the electrolysers, and all power generated would be used in the production of green hydrogen.

The green hydrogen could be used for a variety of uses, including trains, buses, heavy goods vehicles and within industry.

As part of the early engagement, we have set up a project webpage and will be holding public exhibitions and a webinar in October/ November 2022.

We hope you will come along to find out more, chat with members of the project team and share your initial thoughts on our emerging plans.

With best wishes,

**Micheál Ó Broin**  
Senior Project Manager, UK

## Have your say

Please let us know your initial thoughts on our emerging plans by **17 November 2022**.

### VISIT EVENTS TO FIND OUT MORE:

#### LOCAL EXHIBITIONS



**24 October: 3pm – 7pm**  
Admiralty Park, The Valley, Trecwn, SA62 5YD

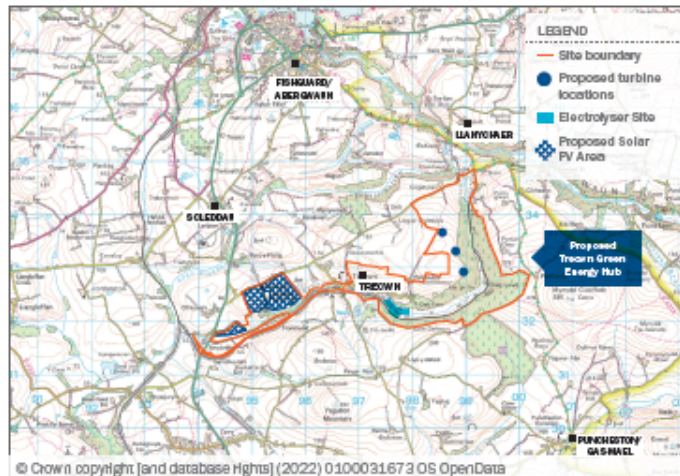
**25 October: 3pm – 7pm**  
Letterston Memorial Hall, Letterston, SA62 5RY

**26 October: 3pm – 7pm**  
Fishguard Community Learning Centre, Fishguard, SA65 9DT

#### WEBINAR



**9 November: 6pm – 8pm**  
Find out more and register online:  
[www.trecwn-energy.wales](http://www.trecwn-energy.wales)



Site location plan

## The site

Located to the southeast of Scleddau, the site is in Trecwn Valley, a Strategic Employment Zone near the Haven Waterway Enterprise Zone. The former military armaments depot employed around 3,000 people at its peak operation. Our proposal presents an exciting opportunity to produce homegrown green energy for local use and has the potential to act as a catalyst for the redevelopment of Trecwn Valley.

The site benefits from access to the A40 trunk road and a private train line (a spur to the Fishguard to Carmarthen line), providing direct access for enabling works, construction and ongoing operation.

Trecwn Valley already has significant infrastructure onsite, with an extensive array of industrial buildings, rail sidings and serviced hard standings as well as administration and security buildings. The proposed green hydrogen facility would integrate within an existing developed footprint.

## Creating green energy

The proposals would support Welsh Government's Net Zero Strategy of producing the equivalent of 70% of electricity consumption in Wales through renewable sources by 2030, as well as contributing towards the delivery of The Big Green Plan, Pembrokeshire Council's emerging decarbonisation strategy.

The Pembrokeshire plant would generate up to four tonnes of green hydrogen a day, enough to run a single bus for over 40,000 miles, or the equivalent of making 350 journeys from Fishguard to Cardiff, but without the harmful emissions produced by traditional diesel or petrol fuels.



Altwallis Wind Farm, Carmarthen, South Wales, 10 turbines, 110m tip height



## Project summary

**H 15 MW**  
Hydrogen electrolyser

**14.4 MW**  
Three wind turbines up to of 150m (to blade tip)

**15 MW**  
Ground mounted solar arrays

**H 4 TONNES**  
Hydrogen storage

**H 100%**  
Clean, carbon-free hydrogen

**£ £73k**  
Per year based on installed MW for a Community Fund\*

\* Based on £5k per MW from wind, using the lowest rated turbines (4.2MW) and £10k a year from solar.

## Environmental consideration

Early site investigations have started and Statkraft will shortly be submitting a scoping request to Planning and Environment Decisions Wales (PEDW) to ensure the appropriate environmental studies are carried out as the proposals are developed.

These studies will also help identify opportunities for biodiversity enhancement and improvements to be delivered as part of the development.

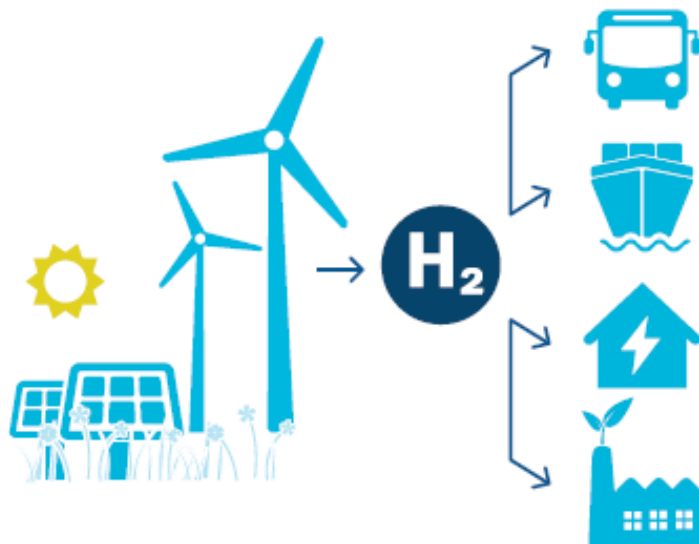


## What is green hydrogen?

Hydrogen is the most abundant element in the universe. It offers a way to deliver low carbon energy because when burned it does not produce CO<sub>2</sub>, only water and heat.

The hydrogen fuel cell was invented in Wales back in 1842 by William Grove and has been used since then as part of industrial processes and commercial settings.

Green hydrogen is produced using renewable energy (such as wind and solar) and electrolysis, making it clean and carbon free: an ideal alternative to fossil fuels for heat, fuel, electricity generation, and as a raw material in industrial processes.



## About Us

Statkraft is Europe's largest renewable energy producer, with 67 TWh of renewable power generation across our operations.

With offices in Cardiff and Aberystwyth, we have 20 projects in operation or in development across the UK, including Alltwalis Wind Farm in Carmarthenshire and Rheidol Hydropower Plant near Aberystwyth. We are currently exploring the potential to fuel hydrogen-powered trains running on railway lines west of Swansea. This would deliver many of the benefits of electrification, such as using a zero-carbon fuel, but at significantly lower capital costs, and with fewer requirements for new infrastructure.

Our ambition is to accelerate the UK's progress to net zero, and positively impact the communities we work with by delivering community benefits and biodiversity net gain.

[www.statkraft.co.uk](http://www.statkraft.co.uk)

## Planning process

As Trecwn Green Energy Hub will generate more than 10MW of electricity it is defined as a Development of National Significance (DNS). This means the planning application will be submitted to Planning Environment Decisions Wales (PEDW) and considered by an Inspector, with the final decision made by Welsh Ministers.

## Early engagement

Statkraft is committed to working closely with the local community to bring long term value and deliver a project that can be considered a local asset.

We want to hear what you think to help us shape the plans throughout development and explore how we can maximise opportunities and benefits. Visit our public exhibitions to speak to a member of the projects team and find out more about the plans and give us your thoughts.

**We want to hear from you!**

### VISIT EVENTS TO FIND OUT MORE:

#### LOCAL EXHIBITIONS



**24 October: 3pm – 7pm**  
Admiralty Park, The Valley, Trecwn, SA62 5YD

**25 October: 3pm – 7pm**  
Letterston Memorial Hall, Letterston, SA62 5RY

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#### WEBINAR



**9 November: 6pm – 8pm**  
Find out more and register online:  
[www.trecwn-energy.wales](http://www.trecwn-energy.wales)

## Meet the Project Leader

Our Senior Project Manager is Micheál and he is supported by a team of specialists that will be able to answer questions at the early engagement events.



Please visit our webpage to find out more:

[www.trecwn-energy.wales](http://www.trecwn-energy.wales)

## Contact us:



Please return the freepost reply card provided



[www.trecwn-energy.wales](http://www.trecwn-energy.wales)



Phone the project hotline: 0800 772 0668



[UKProjects@statkraft.com](mailto:UKProjects@statkraft.com)

You can find out more about our projects and the way we work at [www.statkraft.co.uk](http://www.statkraft.co.uk)

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# Hwb Ynni Gwyrdd: Ymgysylltu Cynnar

HYDREF/TACHWEDD 2022

TUDALEN 1

Annwyl Breswylydd,

Rydym wrthi'n datblygu cynlluniau ar gyfer Hwb Ynni Gwyrdd cynaliadwy yng Nghwm Trecwŷ ac roeddem am rannu ein cynigion sy'n dod i'r amlwg â chymdogion, y gymuned leol a rhanddeiliaid yn y cyfnod cynnar hwn, fel y gallwn glywed eich barn a'ch syniadau, a deall yn well sut y gallwn ni greu buddion ystyrlon yn rhan o'n cynlluniau.

Wrth galon ein cynigion ar gyfer Hwb Ynni Gwyrdd Trecwŷ mae gwaith electroleiddio hydrogen gwyrdd 15MW, a fyddai'n cael ei bweru gan dri thyrbîn gwynt (hyd at 150m o uchder) a phaneli solar ar y safle. Ni fyddai angen echdynnu trydan o'r Grid Cenedlaethol i bweru'r electroleiddwyr, a byddai'r holl bŵer a gynhyrchir yn cael ei ddefnyddio i gynhyrchu hydrogen gwyrdd.

Gellid defnyddio'r hydrogen gwyrdd at amrywiaeth o ddefnyddiau, gan gynnwys trenau, bysiau, cerbydau nwyddau trwm ac mewndiwydiant. Yn rhan o'r ymgysylltu cynnar, rydym wedi sefydlu gwedudalen prosiect a byddwn yn cynnal arddangosfeydd cyhoeddus a gweminar yn Hydref/Tachwedd 2022.

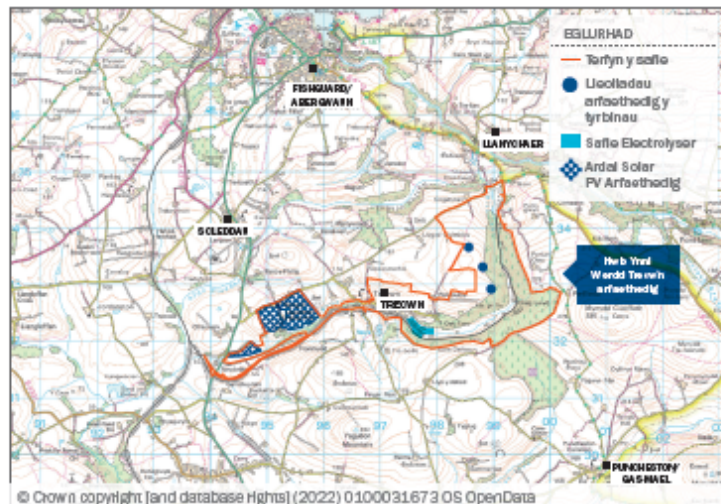
Gobeithiwn y byddwch yn dod draw i ddsygu rhagor, i sgwrsio ag aelodau o dîm y prosiect ac i rannu eich barn gyhwynnol am ein cynlluniau newydd.

Cofion gorau,

**Micheál Ó Broin**  
Rheolwr y Prosiect

## Dweud eich dweud

Rhowch wybod i ni beth yw eich barn gyhwynnol ar ein cynlluniau newydd erbyn **17 Tachwedd 2022**.



Cynllun lleollad y safle

### EWCH I DDIGWYDDIADAU I DDARGANFOD MWY:

#### ARDDANGOSFEYDD LLEOL

**24 Hydref: 3pm – 7pm**  
Parc Y Morrys (Admiralty Park),  
Y Dyffryn, Trecwŷ, SA62 5YD

**25 Hydref: 3pm – 7pm**  
Neuadd Goffa,  
Treletert, SA62 5RY

**26 Hydref: 3pm – 7pm**  
Canolfan Gymunedol Dysgu,  
Abergwaun, SA65 9DT

#### GWEMINAR

**9 Tachwedd: 6pm – 8pm**  
Dysgu rhagor a chofrestru ar-lein:  
[www.trecwn-energy.wales](http://www.trecwn-energy.wales)

## Y safle

Wedi'i leoli i'r de-ddwyrain o Sceddau, mae'r safle yng Nghwm Trecwŷ, sy'n Barth Cyfogaeth Strategol ger Ardal Fenter Dyfrffordd y Ddau Gledau. Roedd yr hen ddepo arfau milwrol yn cyflogi tua 3,000 o bobl yn ei anterth. Mae'r cynnig yn gyfle cyffrous i gynhyrchu ynni gwyrdd cartref at ddefnydd lleol ac mae ganddo'r potensial i fod yn gatalydd ar gyfer ailddatblygu Cwm Trecwŷ.

Mae'r safle'n elwa o fynediad i gefnffordd yr A40 a rheilffordd breifat (sy'n arwain at y rheilffordd rhwng Abergwaun a Chaerfyrddin), gan ddarparu mynediad uniongyrchol ar gyfer gwaith galluogi, adeiladu a gweithredu parhaus.

Mae gan Gwm Trecwŷ seilwaith sylweddol ar y safle eisoes, gydag amrywiaeth eang o adeiladau diwydiannol, cilffyrdd rheilffordd a lloriau caled â gwasanaeth yn ogystal ag adeiladau gweiryddol a diogelwch. Byddai'r cyfleuster hydrogen gwyrdd arfaethedig yn integreiddio o fewn ôl troed datblygedig presennol.

## Creu ynni gwyrdd

Byddai'r cynnig yn cefnogi Strategaeth Sero Net Llywodraeth Cymru i gynhyrchu'r hyn sy'n cyfateb i 70% o'r defnydd o drydan yng Nghymru drwy ffynonellau adnewyddadwy erbyn 2030, yn ogystal â chyfrannu at gyflawni'r Cynllun Gwyrdd Mawr, sef strategaeth ddatgarboneiddio Cyngor Sir Benfro.

O fewn Sir Benfro, byddwn yn cynhyrchu hyd at bedair tunnell o hydrogen gwyrdd y dydd, digon i redeg un bus am dros 40,000 o filltiroedd, neu'r hyn sy'n cyfateb i wneud 350 o deithiau o Abergwaun i Gaerdydd, ond heb yr allyriadau niweidiol a gynhyrchir gan danwydd diesel neu betrol traddodiadol.



## Crynodeb o'r prosiect

**H 15 MW**

Electroleiddiwr hydrogen

**14.4 MW**

Tri thyrbîn gwynt hyd at 150m (i flaen y llafn)

**15 MW**

Aræau solar wedieu gosod ar y ddaear

**H 4 TUNNELL**

o storfa hydrogen

**H 100%**

hydrogen glân, di-garbon

**£ £73k**

Yn flynyddol yn seilledig ar MW osodol at Gronfa Gymunedol\*

\* Yn seilledig ar £5k y MW o wynt, gan ddefnyddio'r tyrbînau 8'r sgôr isaf (4.2MW) a £10k y flwyddyn o ynni solar.

## Ystyriaeth Amgylcheddol

Mae ymchwiliadau safle cynnar wedi dechrau a bydd Statkraft yn cyflwyno cais cwmpasu cyn bo hir i Benderfyniadau Cynllunio a'r Amgylchedd Cymru (PEDW) i sicrhau bod yr astudiaethau amgylcheddol priodol yn cael eu cynnal wrth i'r cynigion gael eu datblygu.

Bydd yr astudiaethau hyn hefyd yn helpu i nodi cyfleoedd ar gyfer gwella bioamrywiaeth a gwelliannau i'w cyflawni yn rhan o'r datblygiad.

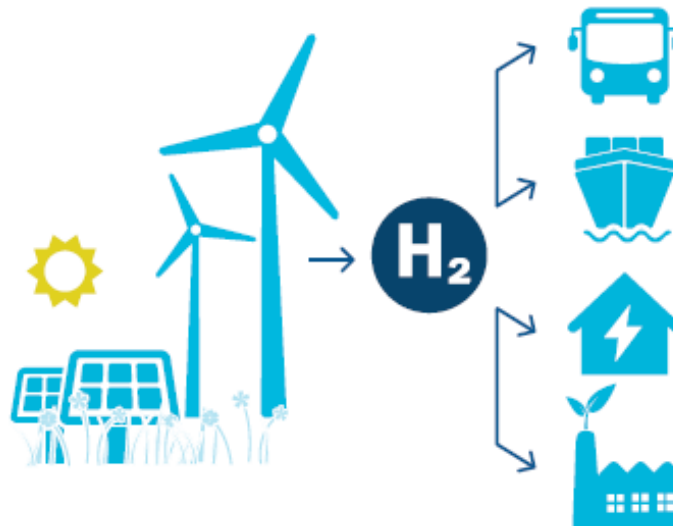


## Beth yw hydrogen gwyrdd?

Hydrogen yw'r elfen fwyaf helaeth yn y bydysawd. Mae'n cynnig ffordd o ddarparu ynni carbon isel oherwydd pan gaiff ei losgi nid yw'n cynhyrchu CO<sub>2</sub>, dim ond dŵr a gwres.

Dyfeisiwyd y gell danwydd hydrogen yng Nghymru nôl ym 1842 gan William Grove ac mae wedi cael ei defnyddio ers hynny yn rhan o brosesau diwydiannol a gosodiadau masnachol.

Cynhyrchir hydrogen gwyrdd gan ddefnyddio ynni adnewyddadwy (fel gwynt a solar) ac electroleiddio, gan olygu ei fod yn lân ac yn ddi-garbon: dewis amgen delfrydol i danwydd ffosil ar gyfer gwres, tanwydd, cynhyrchu trydan, ac yn ddeunydd crai mewn prosesau diwydiannol.



## Amdanom ni

Statkraft yw cynhyrchydd ynni adnewyddadwy mwyaf Ewrop, sy'n cynhyrchu 67 TWh o ynni adnewyddadwy ar draws ein gweithrediadau.

Gyda swyddfeydd yng Nghaerdydd ac Aberystwyth, mae gennym 20 o brosiectau ar waith neu wrthi'n cael eu datblygu ledled y DU, gan gynnwys Fferm Wynt Alltwalis yn Sir Gaerfyrddin a Gwaith Ynni Dŵr Rheidol ger Aberystwyth.

Ar hyn o bryd rydym yn archwilio'r potensial i drenau sydd yn rhedeg ar y rheilffyrdd i'r gorllewin o Abertawe gael eu pweru gan hydrogen. Byddai hyn yn sicrhau llawer o fanteision trydaneiddio, megis defnyddio tanwydd digarbon, ond am gostau cyfalaf sylweddol is, a chyda llai o angen am seilwaith newydd.

Ein huchelgais yw cyflwynu cynnydd y Deyrnas Unedig i sero net, a chael effaith gadarnhaol ar y cymunedau rydym yn cydweithio â nhw drwy sicrhau buddion cymunedol ac enillion net bioamrywiaeth.

[www.statkraft.co.uk](http://www.statkraft.co.uk)

## Y broses gynllunio

Gan y bydd Hwb Ynni Gwyrdd Trecwŷ yn cynhyrchu mwy na 10MW o drydan fe'i diffinnir yn Ddatblygiad o Arwyddocâd Cenedlaethol (DNS). Mae hyn yn golygu y bydd y cais cynllunio yn cael ei gyflwyno i Benderfyniadau Cynllunio ac Amgylchedd Cymru (PEDW) ac yn cael ei ystyried gan Arolygwr, a'r penderfyniad terfynol yn cael ei wneud gan Weinidogion Cymreig.

## Ymgysylltu cynnar

Mae Statkraft wedi ymrwmo i gydweithio'n agos â'r gymuned leol i ddod â gwerth hirdymor a chyflawni prosiecty gellir ei ystyried yn ased lleol.

Rydym am glywed eich barn i'n helpu i lunio'r cynlluniau trwy gydol y datblygiad ac archwilio sut y gallwn ni gynyddu'r cyfleoedd a'r buddion. Ewch i'n harddangosfeydd cyhoeddus i siarad ag aelod o'r tîm prosiectau a dysgu rhagor am y cynlluniau a rhoi eich barn i ni.

**Mae arnom eisiau clywed gennych!**

### EWCH I DDIGWYDDIADAU I DDARGANFOD MWY:

#### ARDDANGOSFEYDD LLEOL

24 Hydref: 3pm – 7pm  
Parc Y Morlys (Admiralty Park),  
Y Dyffryn, Trecwŷ, SA62 5YD

25 Hydref: 3pm – 7pm  
Neuadd Goffa,  
Treletert, SA62 5RY

26 Hydref: 3pm – 7pm  
Canolfan Gymunedol Dysgu,  
Abergwaun, SA65 9DT

#### GWEMINAR

9 Tachwedd: 6pm – 8pm  
Dysgu rhagor a chofrestru  
ar-lein:  
[www.trecwn-energy.wales](http://www.trecwn-energy.wales)

## Cyfarfod Arweinydd y Brosiect

Ein Huwch Reolwr Prosiect yw Micheál ac mae'n cael ei gynorthwyo gan dîm o arbenigwyr a fydd yn gallu ateb cwestiynau yn y digwyddiadau ymgysylltu cynnar.

Ewch i'n gwedudalen i ddysgu rhagor:

[www.trecwn-energy.wales](http://www.trecwn-energy.wales)



## Cysylltwch â ni:



Dychwelwch y cerdyn ateb rhabost a ddarparwyd



[www.trecwn-energy.wales](http://www.trecwn-energy.wales)



Ffoniwch linell gymorth y prosiect:  
0800 772 0668



[UKProjects@statkraft.com](mailto:UKProjects@statkraft.com)

Gallwch ddarganfod mwy am ein prosiectau a'r ffordd yr ydym yn gweithio yn  
[www.statkraft.co.uk](http://www.statkraft.co.uk)

**Cardiff**  
Regus House  
Falcon Drive  
Cardiff  
CF10 4RU

**London**  
19th Floor  
22 Bishopsgate  
London  
EC2N 4BQ

**Glasgow**  
1 West Regent Street  
Glasgow  
G2 1RW



[www.trecwn-energy.wales](http://www.trecwn-energy.wales)



# Appendix 3

## English

*Trecwn Green Energy Hub: Early engagement launch on 11 October*

**STRICTLY PRIVATE AND CONFIDENTIAL**

Dear xxx

I am writing on behalf of renewable energy company Statkraft about plans we are developing for a sustainable green energy hub, which will include a green hydrogen production facility, at Trecwn Valley in Pembrokeshire.

The proposals support the Welsh Government's Net Zero Strategy of producing the equivalent of 70% of electricity consumption in Wales through renewable sources by 2030, as well as contributing towards the delivery of The Big Green Plan, Pembrokeshire Council's emerging decarbonisation strategy.

To launch the project and promote the early engagement, we will be sending a newsletter to over 5,500 residential and business addresses within the consultation zone, issuing a press release and placing advertisements in local newspapers.

As part of the early engagement, we will be holding public exhibitions (from 3-7pm on 24, 25 and 26 October in Trecwn, Letterston and Fishguard respectively) and hosting a webinar on 9 November. More information will be available on the project website from 11 October: [www.trecwn-energy.wales](http://www.trecwn-energy.wales)

We would welcome the opportunity to meet with you to share our emerging proposals, which present an exciting opportunity to produce homegrown green energy for local use and have the potential to act as a catalyst for the redevelopment of Trecwn Valley.

I will ask Grasshopper Communications, who are coordinating the early engagement, to get in touch to see if we can arrange a mutually convenient time to meet - either via Teams/Zoom or in person. In the meantime, if you have any queries, do not hesitate to contact me.

Yours sincerely



Micheál Ó Broin  
Project Manager

Address field  
Max 5 lines to fit  
within envelope window

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Ragus House Falcon Drive  
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EMAIL  
[UKProjects@statkraft.com](mailto:UKProjects@statkraft.com)  
VAT REG.NO.  
NO-987 059 699

10.10.2022

Dear **INSERT NAME**

Re: *Trecwn Green Energy Hub - Neighbour Engagement*

I am writing on behalf of renewable energy company Statkraft about plans we are developing for a sustainable green energy hub at Trecwn Valley in Pembrokeshire. Please see enclosed newsletter for more information.

As a neighbour, we want to provide opportunities for you to engage with us throughout the whole project – from early engagement through to delivery and operation (subject to receiving planning consent).

I will be in Trecwn from 24-26 October and would welcome the opportunity to meet with you in the morning or early afternoon, before the public exhibition starts, to chat through our emerging proposals and answer your initial questions.

We are also arranging a meeting for neighbours, independently facilitated by PLANED, at 6.30pm on 10 November to feedback on initial discussions, answer any outstanding queries we can at this stage in the project and discuss next steps. We hope that this leads to the creation of a Community Liaison Group to enable neighbours to meet at key stages throughout the project.

Please let me know if you would like to meet on 24-26 October with some convenient times/dates and if you are able to attend the facilitated neighbour meeting on 10 November by emailing [UKProjects@statkraft.com](mailto:UKProjects@statkraft.com) or calling 0800 772 0668.

If you have any queries in the meantime and would like to arrange a time to speak on the telephone, please get in touch using the contact details above and I will get back to you as soon as possible.

I look forward to hearing from you.

Yours sincerely



Mícheál Ó Broin  
Project Manager



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within envelope window

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EMAIL  
[UKProjects@statkraft.com](mailto:UKProjects@statkraft.com)

VAT REG.NO.  
NO-987 059 699

10.10.2022

Dear **INSERT NAME**



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We also hope to set up a Community Liaison Group to enable neighbours to meet at key stages throughout the project.

Please let me know if you would like to meet on 24-26 October with some convenient times/dates and if you would be interested in joining the Community Liaison Group by emailing [UKProjects@statkraft.com](mailto:UKProjects@statkraft.com) or calling 0800 772 0668.

If you have any queries in the meantime and would like to arrange a time to speak on the telephone, please get in touch using the contact details above and I will get back to you as soon as possible.

I look forward to hearing from you.

Yours sincerely



Mícheál Ó Broin  
Project Manager

*Hwb Ynni Gwyrdd Trecwn: Lansio ymgysylltu cynnar ar 11 Hydref*

**YN GWBL BREIFAT A CHYFRINACHOL**

Annwyl **xxx**

Rwy'n ysgrifennu ar ran y cwmni ynni adnewyddadwy Statkraft am gynlluniau yr ydym yn eu datblygu ar gyfer hwb ynni gwyrdd cynaliadwy, a fydd yn cynnwys cyfleuster cynhyrchu hydrogen gwyrdd, yng Nghwm Trecwn yn Sir Benfro.

Byddai'r cynigion yn cefnogi Strategaeth Sero Net Llywodraeth Cymru i gynhyrchu'r hyn sy'n cyfateb i 70% o'r defnydd o drydan yng Nghymru drwy ffynonellau adnewyddadwy erbyn 2030, yn ogystal â chyfrannu at gyflawni'r Cynllun Gwyrdd Mawr, sef strategaeth ddatgarboneiddio ddatblygol Cyngor Sir Penfro.

I lansio'r prosiect a hyrwyddo'r ymgysylltu cynnar, byddwn yn anfon cylchlythyr i dros 5,500 o gyfeiriadau preswyl a busnes o fewn y parth ymgynghori, gan gyhoeddi datganiad i'r wasg a gosod hysbysebion mewn papurau newydd lleol.

Fel rhan o'r ymgysylltu cynnar, byddwn yn cynnal arddangosfeydd cyhoeddus (3-7pm ar 24, 25 a 26 Hydref, yn Nhrecwn, Treletert ac Abergwaun yn ôl eu trefn), ac yn cynnal gweminar ar 9 Tachwedd. Bydd rhagor o wybodaeth ar gael ar wefan y prosiect o 11 Hydref: [www.trecwn-energy.wales](http://www.trecwn-energy.wales)

Byddem yn croesawu'r cyfle i gwrdd â chi i rannu ein cynigion newydd, sy'n cyflwyno cyfle cyffrous i gynhyrchu ynni gwyrdd cartref at ddefnydd lleol ac sydd â'r potensial i fod yn gatalydd ar gyfer ailddatblygu Cwm Trecwn.

Byddaf yn gofyn i Grasshopper Communications, sy'n cydlynu'r ymgysylltu cynnar, i gysylltu i weld a allwn drefnu amser sy'n gyfleus i gyfarfod – naill ai drwy Teams/Zoom neu yn bersonol. Yn y cyfamser, os oes gennych unrhyw ymholiadau, mae croeso i chi gysylltu â mi.

Yr eiddoch yn gywir



Micheál Ó Broin  
Rheolwr y Prosiect



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EMAIL  
[UKProjects@statkraft.com](mailto:UKProjects@statkraft.com)  
VAT REG.NO.  
NO-587 059 699

10.10.2022

Annwyl **INSERT NAME**



**Parth: Hwb Ynni Gwyrdd Trecŵn – Ymgysylltu â Chymdogion**

Rwy'n ysgrifennu ar ran y cwmni ynni adnewyddadwy Statkraft am gynlluniau rydym yn eu datblygu ar gyfer hwb ynni gwyrdd cynaliadwy yng Nghwm Trecŵn yn Sir Benfro. Gweler y cylchlythyr amgaeedig am ragor o wybodaeth.

Fel cymydog, rydym am ddarparu cyfleoedd i chi ymgysylltu â ni drwy gydol y prosiect cyfan – o ymgysylltu cynnar hyd at gyflawni a gweithredu (yn amodol ar gael caniatâd cynllunio).

Byddaf yn Nhrecŵn o 24 i 26 Hydref, a buaswn yn croesawu'r cyfle i gwrdd â chi yn y bore neu'n gynnar yn y prynhawn, cyn i'r arddangosfa gyhoeddus ddechrau, i sgwrsio drwy ein cynigion ac i ateb eich cwestiynau cychwynnol.

Rydym hefyd yn trefnu cyfarfod i gymdogion, a hwylusir yn annibynnol gan PLANED, am 6:30pm ar 10 Tachwedd i roi adborth ar y trafodaethau cychwynnol, i ateb unrhyw ymholiadau sydd heb eu datrys y gallwn ar y cam hwn o'r prosiect, ac i drafod y camau nesaf. Gobeithiwn y bydd hyn yn arwain at greu Grŵp Cyswllt Cymunedol, i alluogi cymdogion i gyfarfod ar adegau allweddol drwy gydol y prosiect.

Rhowch wybod i mi os hoffech gyfarfod ar 24-26 Hydref, gyda rhai amseroedd/dyddiadau cyfleus, ac os y gallwch ddod i'r cyfarfod cymdogion ar 10 Tachwedd, drwy e-bostio [UKProjects@statkraft.com](mailto:UKProjects@statkraft.com) neu ffonio 0800 772 0668.

Os oes gennych unrhyw ymholiadau yn y cyfamser ac am drefnu amser i siarad ar y ffôn, cysylltwch â ni gan ddefnyddio'r manylion cyswllt uchod, a byddaf yn cysylltu â chi cyn gynted â phosib.

Edrychaf ymlaen at glywed gennych.

Yr eiddoch yn gywir



Micheál Ó Broin  
Rheolwr y Prosiect



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10.10.2022

Annwyl **INSERT NAME**



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Gobeithiwn hefyd greu Grŵp Cyswllt Cymunedol, i alluogi cymdogion i gyfarfod ar adegau allweddol drwy gydol y prosiect.

Rhowch wybod i mi os hoffech gyfarfod ar 24-26 Hydref, gyda rhai amseroedd/dyddiadau cyfleus, ac os byddai diddordeb gennych mewn ymuno a'r Grŵp Cyswllt Cymunedol, drwy e-bostio [UKProjects@statkraft.com](mailto:UKProjects@statkraft.com) neu ffonio 0800 772 0668.

Os oes gennych unrhyw ymholiadau yn y cyfamser ac am drefnu amser i siarad ar y ffôn, cysylltwch â ni gan ddefnyddio'r manylion cyswllt uchod, a byddaf yn cysylltu â chi cyn gynted â phosib.

Edrychaf ymlaen at glywed gennych.

Yr eiddoch yn gywir



Micheál Ó Broin  
Rheolwr y Prosiect

## Appendix 4

- [Trecwn: Statkraft aims to make green hydrogen at ex-arms depot - BBC News](#)
- [Statkraft Announces its First UK Green Hydrogen Project in Pembrokeshire - Business News Wales](#)
- [Statkraft plots UK green hydrogen debut in Wales - reNews](#)
- [Statkraft announces plans for green hydrogen at RNAD Trecwn | Western Telegraph](#)
- [Impressive plans for hydrogen plant powered by wind and solar at Trecwn - Pembrokeshire Herald](#)
- [Trecwn: Statkraft aims to make green hydrogen at ex-arms depot - Yahoo News](#)
- [Statkraft reveals plans to produce green hydrogen for trains - Utility Week](#)
- [Statkraft steps on UK hydrogen market to produce green fuel for trains - Renewables Now](#)
- [Nordic renewables giant reveals plans for green hydrogen plant in Pembrokeshire - Business Live](#)
- [Statkraft announces its first UK green hydrogen project in Pembrokeshire | RailBusinessDaily](#)
- [Green hydrogen project targeting transport to be built inside Royal Navy depot - City A.M.](#)
- [Former west Wales armaments depot could soon be making 'green fuel' for buses and trains - Nation.Cymru](#)
- [Statkraft plans green hydrogen plant at former Welsh naval depot | BusinessGreen News](#)
- [Statkraft plans first UK green hydrogen project in Wales - Energy Voice](#)
- [Statkraft reveals plans for its first UK green hydrogen project in Wales - H2 View](#)
- [Statkraft announces its first UK green hydrogen project - Energy Live News](#)
- [Statkraft to generate its first UK-based green hydrogen via solar - Solar Power Portal](#)
- [Pembrokeshire site chosen for firm's first UK green hydrogen project - Insider Media](#)
- [Norwegian Statkraft announces first UK renewable hydrogen project - ICIS](#)
- [Plans announced for 30MW green hydrogen hub in Pembrokeshire - edie](#)

# Appendix 5

## Trecwn Green Energy Hub: Early Engagement



Statkraft is developing plans for a sustainable Green Energy Hub in Trecwn Valley and want to share emerging proposals with the local community at this early stage.

We want to hear what you think to help us shape the plans and explore how we can maximise opportunities and benefits in North Pembrokeshire.

We will be holding in-person and online events throughout the early engagement period.

Attend our public exhibitions and webinar to speak to members of the project team, find out more about the plans, and give us your thoughts.

Alternatively, you can view our exhibition online from **24 October 2022**.

Please submit your comments by **17 November 2022**.

### VISIT EVENTS TO FIND OUT MORE:

#### LOCAL EXHIBITIONS:



**24 October: 3pm – 7pm**  
Admiralty Park, The Valley,  
Trecwn, SA62 5YD

**25 October: 3pm – 7pm**  
Letterston Memorial Hall,  
Letterston, SA62 5RY

**26 October: 3pm – 7pm**  
Fishguard Community Learning Centre,  
Fishguard, SA65 9DT

#### WEBINAR



**9 November: 6pm – 8pm**  
Find out more and register online:  
[www.trecwn-energy.wales](http://www.trecwn-energy.wales)

## Hwb Ynni Gwyrdd Trecwn: Ymgysylltu Cynnar



Statkraft yn datblygu cynlluniau ar gyfer Hwb Ynni Gwyrdd cynaliadwy yng Nghwm Trecwn ac eisiau rhannu ein cynigion sy'n dod i'r amlwg â chymdognion.

Rydym am glywed eich barn i'n helpu i lunio'r cynlluniau ac archwilio sut y gallwn ni gynyddu'r cyfleoedd a'r buddion yng Ngogledd Sir Benfro.

Byddwn yn cynnal digwyddiadau yn bersonol ac ar-lein trwy gydol y cyfnod ymgysylltu cynnar hwn.

Mynychu ein harddangosfeydd cyhoeddus ac gweminar i siarad ag aelodau o'r tîm prosiect, dysgu rhagor am y cynlluniau, a rhoi eich barn i ni.

Fel arall, gallwch weld yr arddangosfa ar-lein o **24 Hydref 2022**.

Cyflwynwch eich sylwadau erbyn **17 Tachwedd 2022**.

### EWCH I DDIGWYDDIADAU I DDARGANFOD MWY:

#### ARDDANGOSFEYDD LLEOL



**24 Hydref: 3pm – 7pm**  
Parc Y Morlys (Admiralty Park),  
Y Dyffryn, Trecwn, SA62 5YD

**25 Hydref: 3pm – 7pm**  
Neuadd Goffa,  
Treletert, SA62 5RY

**26 Hydref: 3pm – 7pm**  
Canolfan Gymunedol Dysgu,  
Abergwaun, SA65 9DT

#### GWEMINAR



**9 Tachwedd: 6pm – 8pm**  
Dysgu rhagor a chofrestru ar-lein:  
[www.trecwn-energy.wales](http://www.trecwn-energy.wales)



Further information available on our project website:  
[www.trecwn-energy.wales](http://www.trecwn-energy.wales)



You can also contact us by emailing:  
[UKProjects@statkraft.com](mailto:UKProjects@statkraft.com)



Mae rhagor o wybodaeth ar gael ar wefannau ein prosiectau:  
[www.trecwn-energy.wales](http://www.trecwn-energy.wales)



Gallwch hefyd gysylltu â ni drwy e-bostio:  
[UKProjects@statkraft.com](mailto:UKProjects@statkraft.com)



# Appendix 6

 **Western Telegraph** ✓  
October 11, 2022 · 🌐

A site at Trecwn Valley could soon be leading the way in making environmentally friendly fuel for buses, HGVs, trains, and industry.



WESTERNTTELEGRAPH.CO.UK

**Former Royal Navy Armaments Depot site could become green energy hub**  
Exciting plans to produce green energy at Trecwn's former Royal Navy Armaments Depot (RN...

   32

3 comments 12 shares

 **The Pembroke Herald** · Follow  
October 11, 2022 · 🌐

HERALD NEWS UPDATE

There is expected to be a huge demand for cheap and clean fuel in west Wales in the near future, say developers.



PEMBROKESHIRE-HERALD.COM

**Impressive plans for hydrogen plant powered by wind and solar at Trecwn**  
THE SITE of a former Royal Navy Armaments Depot in Pembrokeshire could soon be leading the ...

 59

8 comments 5 shares



**Statkraft**  
296,408 followers  
1yr • 🌐


+ Follow ...

We're pleased to announce our first green hydrogen project in the UK - Trecwn Green Energy Hub in Pembrokeshire, Wales 🇬🇧

"Trecwn Green Energy Hub presents an exciting opportunity to produce homegrown green energy which can be used locally to shift transport off of fossil fuels, and has the potential to act as a catalyst for the redevelopment of Trecwn Valley," says [Matt Kelly](#), head of Head of UK RES eFuel Hybrids.

👉 Find out more about the project: <https://lnkd.in/eZGu3nV6>

#greenhydrogen #renewableenergy #greenenergy



It could help make local  
buses, trains and  
HGVs carbon-free

Trecwn Green Energy Hub



# Appendix 8

English



## Hello and welcome

Homegrown green energy for local use: helping decarbonise trains, buses, heavy goods vehicles and industry in Pembrokeshire.

Welcome to the early engagement on our proposals for a sustainable Green Energy Hub at Trecwn.

We're at a very early stage of the project and want to give you the opportunity to ask questions and highlight key things we should consider as we develop the proposals.

We won't have answers to all your questions yet, as we still have lots of work to do including surveys to inform an Environmental Impact Assessment. We will, however, provide updates throughout the project and will be back next year with the full draft application for review before it is submitted to the Welsh Government for determination.

### INDICATIVE TIMELINE

AUTUMN/WINTER 2022:	Early engagement on emerging proposals
SPRING/SUMMER 2023:	Statutory consultation on detailed proposals
AUTUMN 2023:	DNS application submitted to PEDW

Subject to planning consent, construction would take around 15 months, so the facility could be generating green hydrogen by 2026.

### WHAT DO YOU THINK?

We want to hear your thoughts and suggestions to help us shape the plans throughout development and explore how we can maximise opportunities and benefits.

Return the completed reply card: at the exhibition or using a Freepost envelope

Email: [UKProjects@statkraft.com](mailto:UKProjects@statkraft.com)

Call the freephone project number: 0800 772 0668

Please let us have your responses to the early engagement by 17 November 2022.

For more information and to register for updates, visit [www.trecwn-energy.wales](http://www.trecwn-energy.wales)





## Why here?

### A location ideally suited for green hydrogen production.

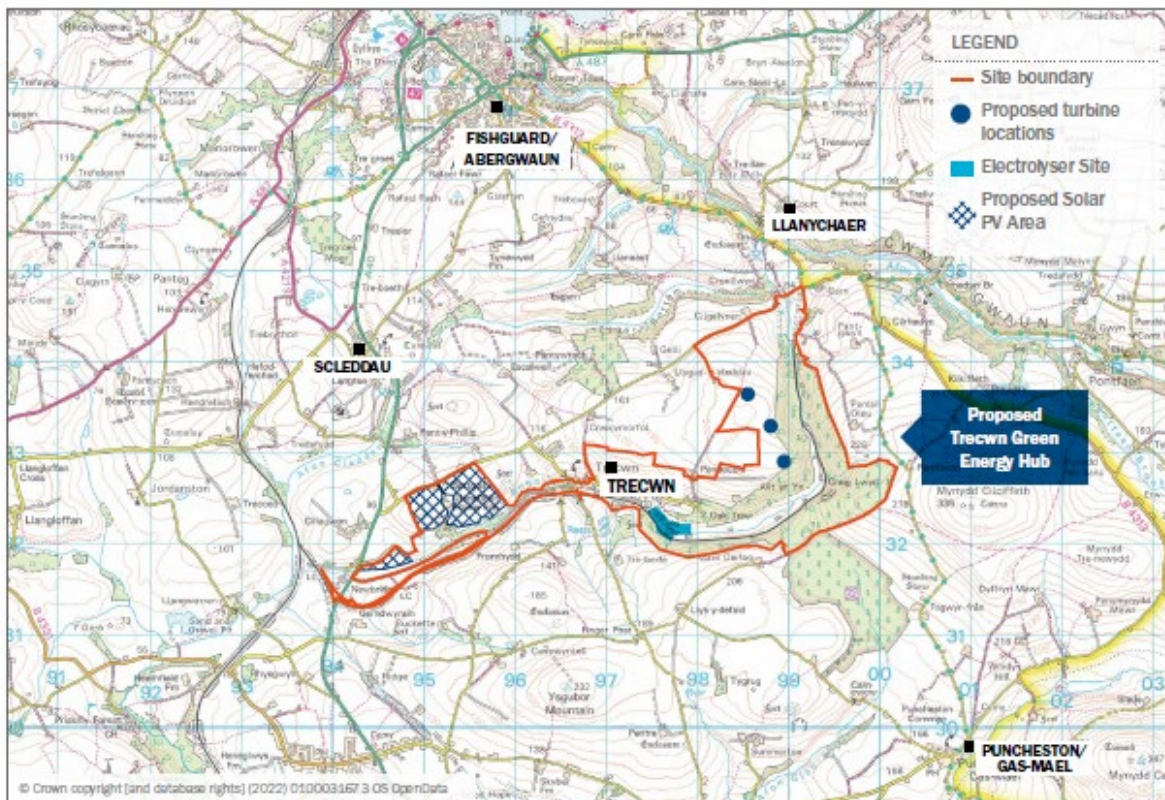
Located to the southeast of Sledduau in Trecwn Valley, the hub of the site sits within a Strategic Employment Zone, near the Haven Waterway Enterprise Zone - an area that focuses on developing opportunities within the energy and environment sector.

Trecwn Valley was used as a Royal Naval Armaments Depot (RNAD) to store ammunition, which was closed and sold in 1992. At its peak operation, the Depot employed over 3,000 people and it is hoped the Green Energy Hub could act as a catalyst for further investment and employment opportunities within the Trecwn Valley.

The proposals would help support Welsh Government's **Net Zero Strategy** to produce the equivalent of 70% of electricity consumption in Wales through renewable sources by 2030, as well as contributing towards the delivery of **The Big Green Plan**, Pembrokeshire County Council's decarbonisation strategy.

The proposed green hydrogen facility would be built on the site of an existing industrial building that is in a state of disrepair.

Existing access to the A40 trunk road and a private train line (a spur to the Fishguard to Carmarthen line) means there is good access for construction and operation.



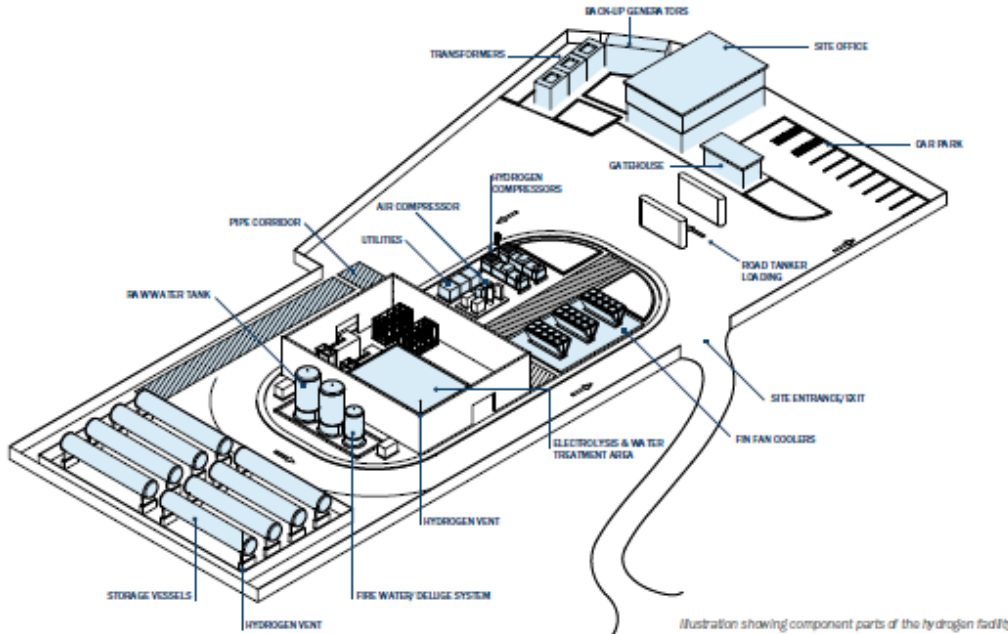


# Green hydrogen

## Leading the green hydrogen revolution in Pembrokeshire.

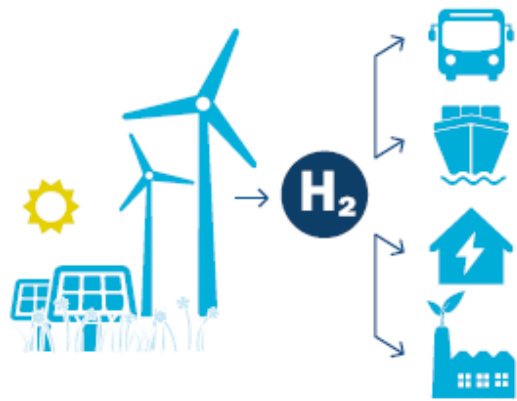
Building on experience of over a century in renewable energy generation, Statkraft is excited at the prospect of offering green hydrogen in the UK to contribute to decarbonisation in the local area.

The proposal for Trecwn Green Energy Hub includes a 15MW green hydrogen electrolyser, which would be powered by renewable energy generated as part of the facility (see next board).



**Green hydrogen** is produced using water and renewable energy (such as wind and solar) through electrolysis, making it clean and carbon free: an ideal alternative to fossil fuels for heat, fuel, electricity generation, and as a raw material in industrial processes.

The site would generate up to four tonnes of green hydrogen a day, enough to run a single bus for over 40,000 miles, or the equivalent of making 350 journeys from Fishguard to Cardiff.





## Solar and wind

The green hydrogen facility would be powered by up to 14.4MW generated by three wind turbines (with a tip height of up to 150m) and up to 15MW generated by ground mounted solar arrays. This would provide all the energy needed to run the hydrogen facility.

### Solar

- 15MW of solar panels, covering an area of approximately 28 hectares
- Fixed solar panel arrays with minimal piling
- Grazing areas throughout the solar site



### Wind

- Three 4.8MW wind turbines up to 150m
- New or upgraded access tracks
- Land around turbines remaining in full agricultural use



The position of solar arrays and wind turbines will be fixed following assessments undertaken as part of the Environmental Impact Assessment. This will include a visual impact assessment and photomontages showing what they could look like from key viewpoints, which will be available during the next stage of consultation. In the meantime, please see the map showing the Zone of Theoretical Visibility (ZTV).

NB: this is based on a bare earth model and does not include the screening effects of buildings or vegetation.

### Community Benefits Fund

It is anticipated that around **£73,000\*** would be paid into a **Community Benefits Fund** each year to support local projects and initiatives. Please share your thoughts on how the Community Benefit Fund could be used and administered using the suggestions board and post-its provided.

\*This figure is based on £5,000 per MW from wind, using the lowest rated turbines (4.2MW) and £10,000 from solar.



# Environmental Impact Assessment

Environmental Impact Assessment (EIA) is the process of identifying, assessing and presenting the likely significant environmental effects of a development proposal to inform sound decision making.

Having an understanding of the potential for significant effects as information emerges through the EIA process allows for early action to be taken to avoid these effects as part of the design of the project.

Surveys and assessments are undertaken by a team of specialist consultants. The results will be reported in the draft Environmental Statement, which will form part of the statutory consultation next year.

Based on previous experience of other wind farm, solar and hydrogen projects and knowledge of the site, EIA topics will include:

- Landscape and visual
- Ornithology
- Ecology
- Water environment
- Soils, geology and land quality
- Cultural heritage
- Noise
- Access, traffic and transportation
- Socioeconomics, tourism and recreation
- Air quality







## ABOUT TRECWN VALLEY

### DID YOU KNOW?

- In pre-Norman times, Trecwn was within the Kingdom of Deheubarth, in the Cantref of Pedidiog and within the Commote of Pencaer.
- The Barham family influenced the nature of Trecwn and its land holdings. The Barham family owned large estates in Jamaica and lived at the mansion in Trecwn. Influential members of the family included Joseph Foster Barham (1759-1832) M.P. for Stockbridge and Charles Henry Foster Barham\* (1808-1878) M.P. for Appleby. The original school in Trecwn was initiated and maintained by Elizabeth Maria Barham (Charles Barham's wife) and Barham School was founded in her memory in 1877. It closed in 2001 when the number of children enrolled decreased following the decommissioning of the Depot and consequent job losses.
- Italian prisoners of war built a wooden chapel at Trecwn, Henllan in Carmarthenshire and on the island of Lamb Holm in the Orkneys. The latter two remain standing and can be visited.
- The extensive chambers in Trecwn, built to safely store armaments, were constructed by civil engineers Edmund Nuttall Sons and Co., Manchester.

\*Charles died in Trecwn in 1878 following a prolonged period of ill health and left most of his personal wealth to his widow. He owned farms and quarries at Buckett, Barnard's Well, Cilgynnau, Henry's Moat, Llanstinian, Maenclochog, Revel Fach and Temple Druid.





# Helô a chroeso

Ynni gwyrdd cartref at ddefnydd lleol: yn helpu i ddatgarboneiddio trenau, bysiau, cerbydau nwyddau trwm a diwydiant yng Sir Benfro.

Croeso i'r ymgysylltu cynnar ar ein cynigion ar gyfer Hwb Ynni Gwyrdd cynaliadwy yn Nhrecofn.

Megis dechrau y mae'r prosiect ac rydym am roi'r cyfle i chi ofyn cwestiynau ac amlygu'r pethau allweddol y dylem eu hystyried wrth i ni ddatblygu'r cynigion.

Ni fydd gennym atebion i'ch holl gwestiynau eto, gan fod gennym lawer o waith i'w wneud o hyd gan gynnwys arolygon i lywio Asesiad o'r Effaith Amgylcheddol. Fodd bynnag, byddwn yn darparu diweddariadau drwy gydol y prosiect a byddwn yn ôl y flwyddyn nesaf gyda'r cais drafft llawn i'w adolygu cyn iddo gael ei gyflwyno i Lywodraeth Cymru i'w benderfynu.

### AMSERLEN DDANGOSOL

HYDREF/GAEAF 2022:

Ymgysylltu cynnar ar gynigion sy'n dod i'r amlwg

GWANWYN/HAF 2023:

Ymgynghoriad statudol ar y cynigion manwl

HYDREF 2023:

Cais DNS yn cael ei gyflwyno i PEDW

Yn amodol ar ganiatâd cynllunio, byddai'r gwaith adeiladu'n cymryd tua 15 mis, felly gallai'r cyfleuster fod yn cynhyrchu hydrogen gwyrdd erbyn 2026.

### BETH YW EICH BARN CHI?

Rydym am glywed eich meddyliau a'ch awgrymiadau i'n helpu i lunio'r cynlluniau trwy gydol y datblygiad ac archwilio sut y gallwn ni gynyddu'r cyfleoedd a'r buddion.



Dychwelwch y cerdyn ateb wedi'i gwblhau: yn yr arddangosfa neu gan ddefnyddio amlen Rhadbost



E-bost : [UKProjects@statkraft.com](mailto:UKProjects@statkraft.com)



Ffoniwch rif rhadffôn y prosiect: 0800 772 0668

Rhowch eich ymatebion i'r ymgysylltu cynnar i ni erbyn 17 Tachwedd 2022.

Am ragor o wybodaeth ac i gofrestru am ddiweddariadau, ewch i [www.trecwn-energy.wales](http://www.trecwn-energy.wales)





## Pam yma?

### Lleoliad sy'n ddelfrydol ar gyfer cynhyrchu hydrogen gwyrdd.

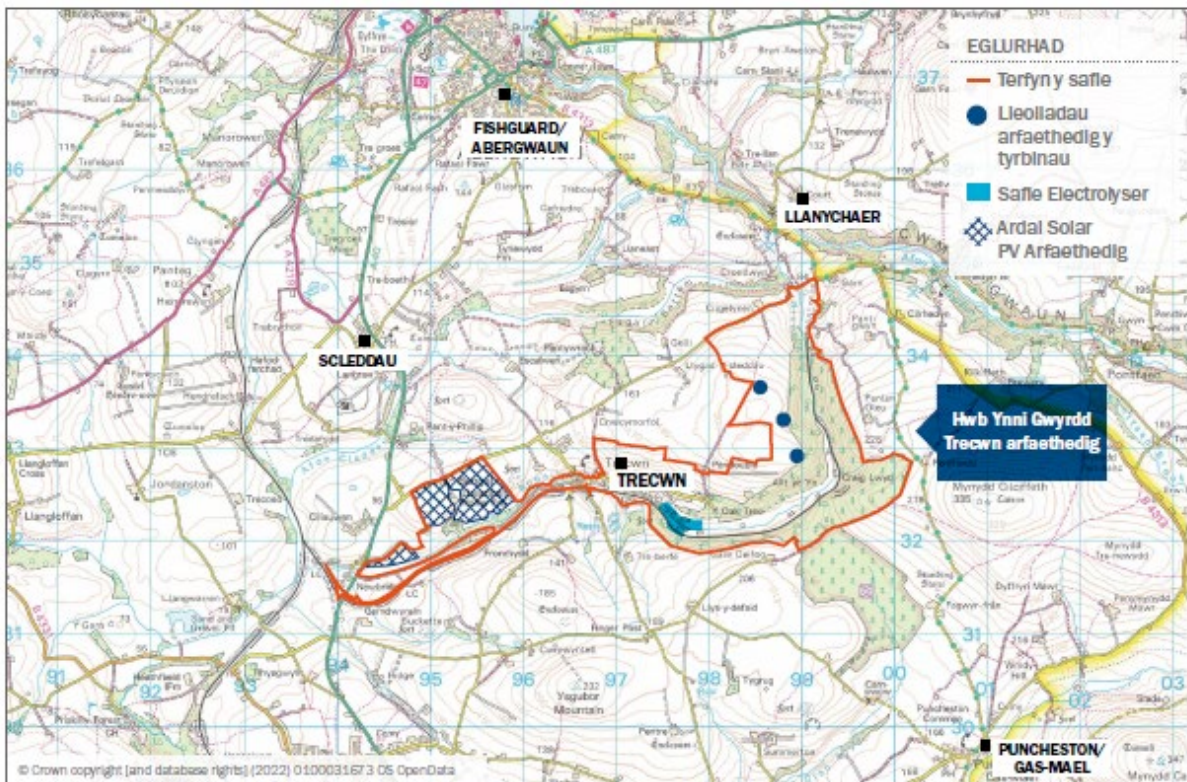
Wedi'i leoli'r de-ddwyrain o Sceddau yng Nghwm Trecwn, mae canolbwynt y safle o fewn Parth Cyflogaeth Strategol, ger Ardal Fenter Dyffordd yr Hafan – ardal sy'n canolbwyntio ar ddatblygu cyfleoedd o fewn y sector ynni a'r amgylchedd.

Defnyddiwyd Cwm Trecwn fel Depo Arfau'r Llynges Frenhinol (RNAD) i storio bwledi, a gafodd ei gau a'i werthu ym 1992. Yn ei anterth, roedd y Depo yn cyflogi dros 3,000 o bobl a'r gobaith yw y gallai'r Hwb Ynni Gwyrdd fod yn gatalydd ar gyfer cyfleoedd buddsoddi a chyflogaeth pellach yn Nyffryn Trecwn.

Byddai'r cynigion yn helpu i gefnogi **Strategaeth Sero Net** Llywodraeth Cymru i gynhyrchu cyfwerth â 70% o'r trydan a ddefnyddir yng Nghymru drwy ffynonellau adnewyddadwy erbyn 2030, yn ogystal â chyfrannu at gyflawni'r **Cynllun Gwyrdd Mawr**, sef strategaeth datgarboneiddio Cyngor Sir Penfro.

Byddai'r cyfleuster hydrogen gwyrdd arfaethedig yn cael ei adeiladu ar safle adeilad diwydiannol presennol sydd mewn cyflwr gwael.

Mae'r mynediad presennol i gefnffordd yr A40 a rheilffordd breifat (sy'n arwain at y rheilffordd rhwng Abergwaun a Chaerfyrddin) yn golygu bod mynediad da ar gyfer adeiladu a gweithredu.



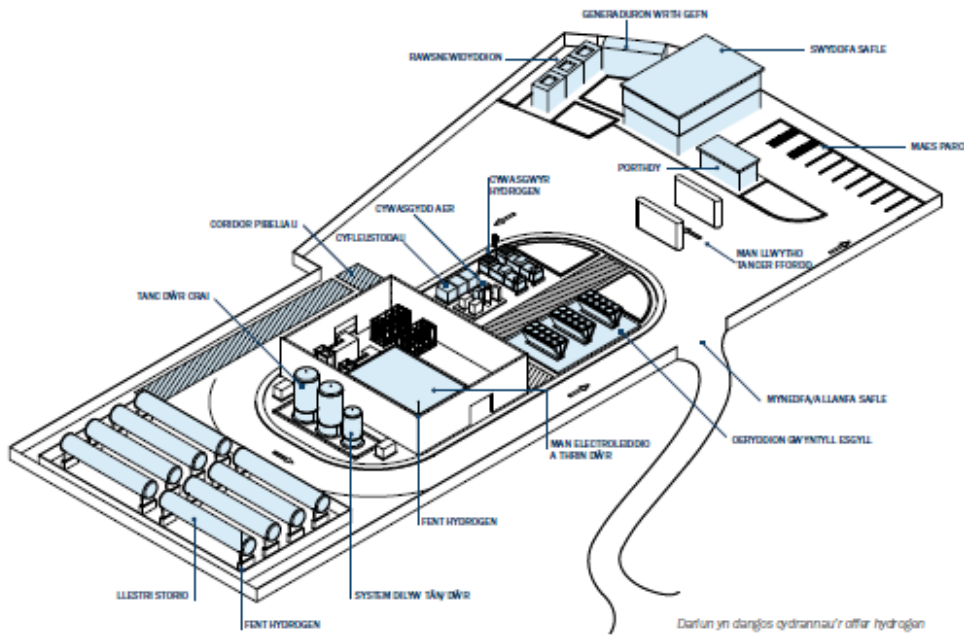


# Hydrogen gwyrd

## Arwain y chwyldro hydrogen gwyrd yn Sir Benfro.

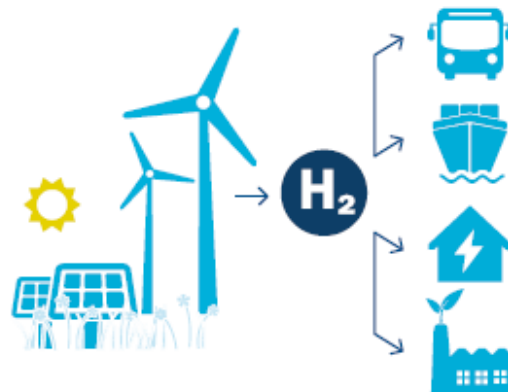
Gan adeiladu ar brofiad o dros ganrif ym maes cynhyrchu ynni adnewyddadwy, mae Statkraft yn llawn cyffro am y posibilrwydd o gynniig hydrogen gwyrd yn y DU i gyfrannu at ddatgarboneiddio yn yr ardal leol.

Mae'r cynnig ar gyfer Hwb Ynni Gwyrd Trecwn yn cynnwys electrolyswr hydrogen gwyrd 15MW, a fyddai'n cael ei bweru gan ynni adnewyddadwy a gynhyrchir fel rhan o'r cyfleuster (gweler y bwrdd nesaf).



**Cynhyrchir hydrogen gwyrd** gan ddefnyddio ynni adnewyddadwy (fel gwynt a solar) ac electrolysis, gan olygu ei fod yn lân ac yn ddi-garbon: dewis amgen de ffrydol i danwyddau ffosil ar gyfer gwres, tanwydd, cynhyrchu trydan, ac yn ddeunydd crai mewn prosesau diwydiannol. Yr unig allyriadau o'r broses yw anwedd dŵr.

Byddai'r safle'n cynhyrchu hyd at bedair tunnell o hydrogen gwyrd y dydd, digon i redeg un bus am dros 40,000 o fillitiroedd, neu'r hyn sy'n cyfateb i wneud 350 o deithiau o Abergwaun i Gaerdydd.





## Solar a gwynt

Byddai'r cyfleuster hydrogen gwyrdd yn cael ei bweru gan hyd at 14.4MW a gynhyrchir gan dri thyrbîn gwynt (ag uchder blaen llafn o hyd at 150m) a hyd at 15MW yn cael ei gynhyrchu gan araeau solar wedi'u gosod ar y ddaear. Byddai hyn yn darparu'r holl ynni sydd ei angen i redeg y cyfleuster hydrogen.

### Solar

- 15MW o baneli solar, yn gorchuddio arwynebedd o tua 28 hectar
- Araeau paneli solar sefydlog gyda chyn lleied â phosibl o bolion
- Ardaloedd pori ledled y safle solar



### Gwynt

- Tri thyrbîn gwynt 4.8MW hyd at 150m
- Traciau mynediad newydd neu wedi'u huwchraddio
- Tir o amgylch tyrbînau yn parhau i gael ei ddefnyddio at ddiobenion amaethyddol llawn



Bydd lleoliad araeau solar a thyrbînau gwynt yn cael ei osod yn dilyn asesiadau a gynhelir fel rhan o'r Asesiad o'r Effaith Amgylcheddol. Bydd hyn yn cynnwys asesiad o'r effaith weledol a bydd ffotografosodiadau yn dangos sut olwg a allai fod ar ynt o olygfannau allweddol ar gael yn ystod cam nesaf yr ymgynghoriad. Yn y cyfamser, gweler y map sy'n dangos y Parth Gwelededd Damcaniaethol (ZTV). DS: mae hwn yn seiliedig ar fodel pridd mael ac nid yw'n cynnwys effeithiau sgrinio adeiladau neu lystyfiant.

### Cronfa Buddion i'r Gymuned:

Rhagwelir y byddai tua **£73,000\*** yn cael ei dalu i Gronfa Buddion Cymunedol bob blwyddyn i gefnogi prosiectau a mentrau lleol. Rhannwch eich barn ar sut y gellid defnyddio a gweinyddu'r Gronfa Budd Cymunedol gan ddefnyddio'r bwrdd awgrymiadau a'r post-its a ddarperir.

\*Mae'r ffigur hwn yn seiliedig ar £5,000 y MW o wynt, gan ddefnyddio'r tyrbînau â'r sgôr isaf (4.2MW) a £10,000 o ynni solar.



## Asesiad o'r Effaith Amgylcheddol

Asesiad o'r Effaith Amgylcheddol (AEA) yw'r broses o nodi, asesu a chyflwyno effeithiau amgylcheddol sylweddol tebygol cynnig datblygu er mwyn llywio penderfyniadau cadarn.

Mae deall y potensial ar gyfer effeithiau sylweddol wrth i wybodaeth ddod i'r amlwg drwy'r broses AEA yn caniatáu ar gyfer gweithredu cynnar i osgoi'r effeithiau hyn fel rhan o ddyluniad y prosiect.

Cynhelir arolygon ac asesiadau gan dim o ymgynghorwyr arbenigol. Bydd y canlyniadau'n cael eu hadrodd yn y Datganiad Amgylcheddol drafft, a fydd yn rhan o'r ymgynghoriad statudol y flwyddyn nesaf.

Yn seiliedig ar brofiad blaenorol o brosiectau ffermydd gwynt, solar a hydrogen eraill a gwybodaeth am y safle, bydd pynciau AEA yn cynnwys:

- Tirwedd a gweledol
- Adareg
- Ecoleg
- Yr amgylchedd dwr
- Priddoedd, daeareg ac ansawdd tir
- Treftadaeth ddiwylliannol
- Sŵn
- Mynediad, traffig a chludo
- Economeg gymdeithasol, twristiaeth a hamdden
- Ansawdd aer





## AM GWM TRECŴN

### OEDDECH CHI'N GWYBOD?

- Yn y cyfnod cyn y Normaniaid, roedd Trecŵn yn Nheyrnas y Deheubarth, yng Nghantref Pedidiog ac yng Nghwmwd Pen-caer.
- Dylanwadodd teulu Barham ar natur Trecŵn a'i ddaliadau tir. Roedd y teulu Barham yn berchen ar stadau mawr yn Jamaica ac yn byw yn y plas yn Nhrecŵn. Ymhlith aelodau dylanwadol y teulu roedd Joseph Foster Barham (1759-1832) AS dros Stockbridge a Charles Henry Foster Barham\* (1808-1878) AS Appleby. Dechreuwyd a chynhalwyd yr ysgol wreiddiol yn Nhrecŵn gan Elizabeth Maria Barham (gwraig Charles Barham) a sefydlwyd Ysgol Barham er cof amdani yn 1877. Caeodd yn 2001 pan ostyngodd nifer y plant wedi eu cofrestru yn dilyn datgomisiynu'r Depo a cholli swyddi o ganlyniad.
- Adeiladwyd Eglwysi bren gan garcharorion rhyfel Eidalaedd yn Nhrecŵn, Henllan yn Sir Gaerfyrddin ag ar Ynys Lamb Holm o fewn Ynysoedd Erch. Ar wahan i Drecŵn, mae'r ddwy Eglwys arall yn agored i ymwelwyr a pharhau fel adeiladau sylweddol.
- Adeiladwyd y siambrau helaeth yn Nhrecŵn, a adeiladwyd i storio arfau yn ddiogel, gan y peirianwyr sifil Edmund Nuttall Sons and Co., Manceinion.

\*Bu Charles farw yn Nhrecŵn yn 1878 yn dilyn cyfnod hir o afiechyd a gadawodd y rhan fwyaf o'i gyfoeth personol i'w wedd. Roedd yn berchen ar ffemrydd a chwareli yn Buckett, Barnard's Well, Cilglynau, Henry's Moat, Llanstinian, Maenclochog, Revel Fach a Temple Druid.



# Appendix 9



## Hwb Ynni Gwyrdd Trecwn

### Trecwn Green Energy Hub

OCTOBER 2022



## The National Challenge

- In April 2019, the Welsh Government declared a climate emergency.
- Pembrokeshire County Council declared a climate emergency in May 2019 and has The Big Green Plan in place to steer the Council towards becoming a net zero-carbon local authority by 2030.
- Increasing the generation of clean, renewable electricity will contribute to the Welsh Government's net zero target of 70% of the nation's energy being supplied by renewable sources by 2030.
- To meet these targets, low carbon energy will need to be introduced across all industries, including transport, power, heat, agriculture and industrial sectors.

That's where we come in!



# About Statkraft

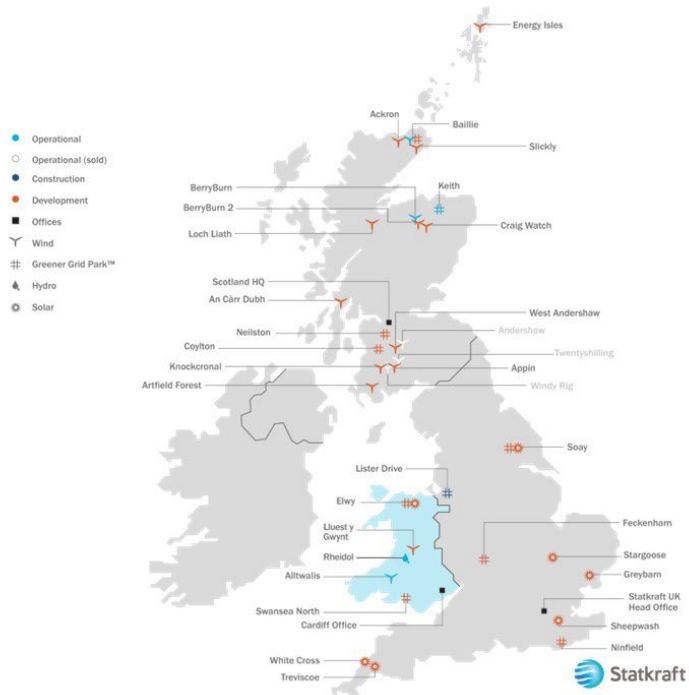
- A Norwegian state-owned utility company, we are Europe’s largest renewable energy producer, with 4,800 employees in 19 countries.
- Operating in the UK since 2006, our skilled team recently secured a new base in Cardiff to progress Welsh operations.
- Our UK portfolio includes four onshore wind farms and one hydropower plant, with a further 700MW of projects in development.



# Statkraft in the UK

## OUR TRACK RECORD: Facts & Figures

<p><b>5</b> Operational assets (wind &amp; hydro)</p>	<p><b>3</b> Number of Greener Grid Parks</p>	<p>Present in the UK since <b>2006</b></p>
<p><b>100+</b> Solar farms operated and maintained by Statkraft</p>	<p><b>~280</b> Number of employees working in the UK</p>	
<p><b>8,500</b> EV charging units operated by subsidiary, Mer</p>	<p><b>2000+ MW</b> Generated from projects installed and in construction</p>	
<p><b>£1.5 MILLION</b> Generated in community funding</p>	<p><b>2500 MW</b> In development</p>	
<p><b>12.5 TWh</b> Annual total generation managed through Power Purchase Agreements (Market Leader)</p>	<p><b>178 MW</b> Of consented onshore wind</p>	



## Statkraft in the community

- With all our projects, we are committed to working with the local community to ensure we bring value over the projects' lifetime.
- A community benefit fund is established in each of our project locations.
- We actively explore all options with local communities, including community and shared ownership and local investment.

5

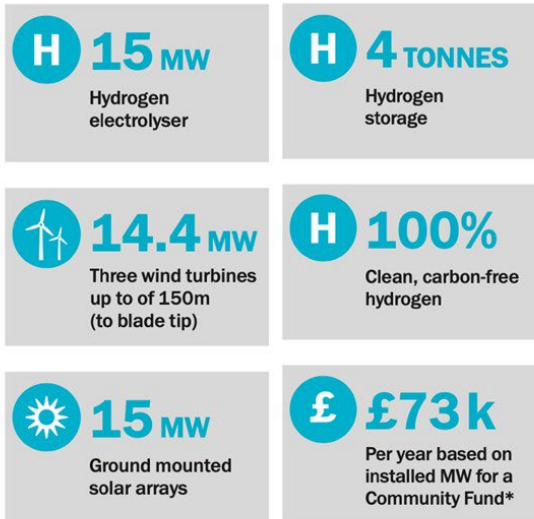
**10**

Community Benefit Funds established

**£2 million**

generated from UK projects to local causes and innovative schemes

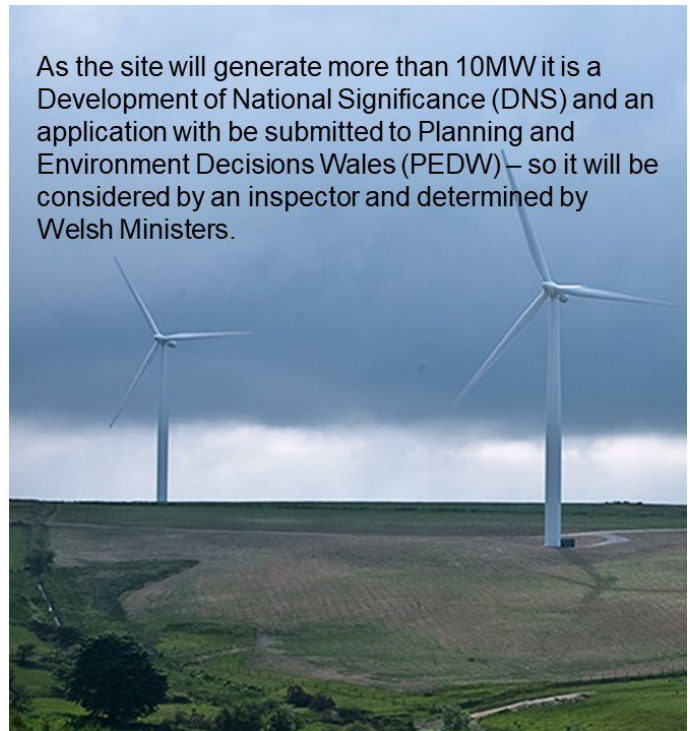
### Project summary



\* Based on £5k per MW from wind, using the lowest rated turbines (4.2MW) and £10k a year from solar.

6

As the site will generate more than 10MW it is a Development of National Significance (DNS) and an application will be submitted to Planning and Environment Decisions Wales (PEDW) – so it will be considered by an inspector and determined by Welsh Ministers.



## What is green hydrogen?

### Clean

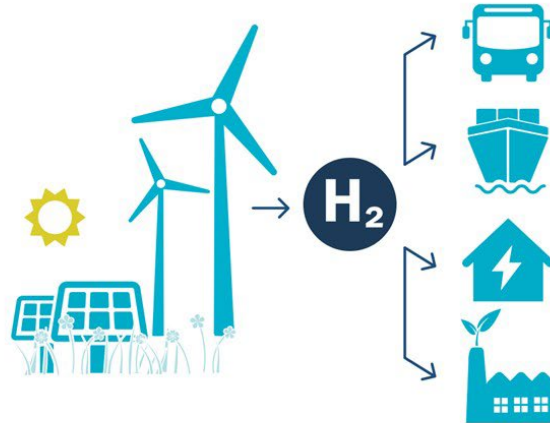
Produced using electrolysis and from renewable energy sources, making it completely clean and carbon free.

### Versatile

Hydrogen can be utilised across the energy system as a fuel, to generate electricity, to heat, and as a raw material in industrial processes.

### Storable

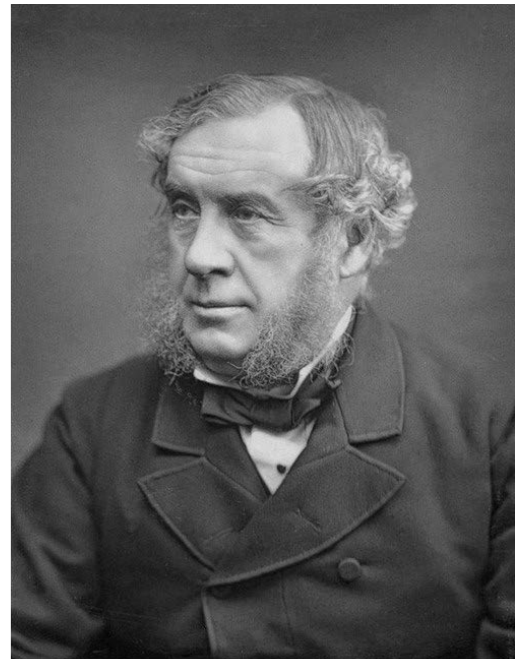
Doesn't require grid access and can be stored in large quantities over long periods of time.



7

## What is hydrogen?

- Most abundant element in the universe
- Production since the 18<sup>th</sup> Century
- Hydrogen Fuel Cell invented by William Grove, of Swansea, in 1842
- Formed part of the UK gas network prior to the 1960s in the form of 'Town Gas'
- 70 million tonnes produced globally each year
- UK has been producing and distributing hydrogen for over a century



8

## Safety

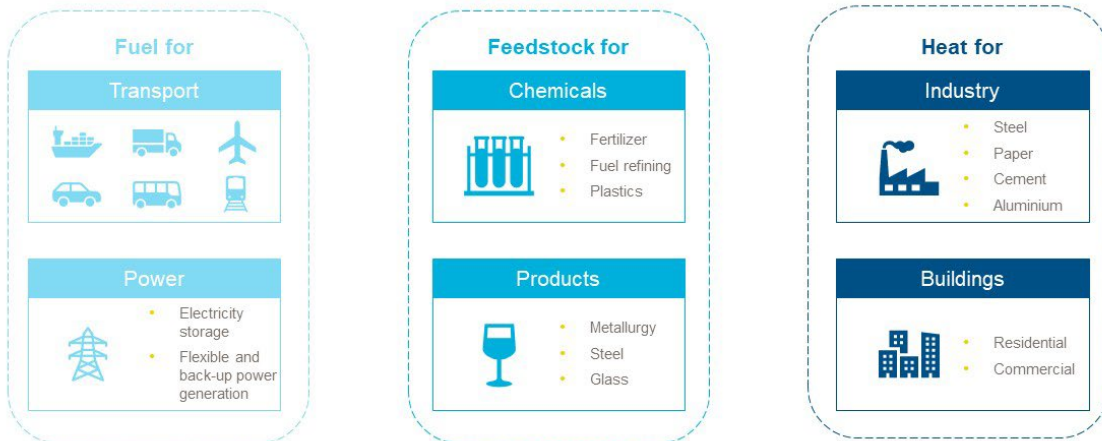
- Hydrogen has been used in industrial, research and commercial settings for decades
- UK has excellent industrial knowledge and record in the safe distribution of combustion gases
- Electrolysers are fitted with detection units and will automatically shut down and purge if leakage occurs; Hazards can be minimised in design and operation
- Broad range of regulations to ensure that production, transport and storage are conducted safely
- The UK Health & Safety Laboratory has been involved in research into hydrogen safety for over a decade; studying how it can be used safely:
  - as a transport fuel
  - in gas turbines
  - in small scale stationary applications
  - in pipeline distribution



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## Green Hydrogen: Use Cases



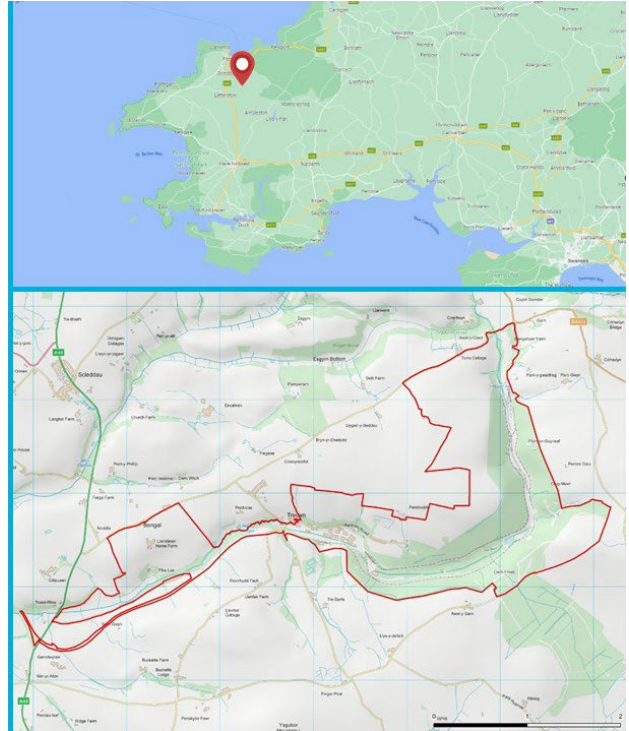
10

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## The site

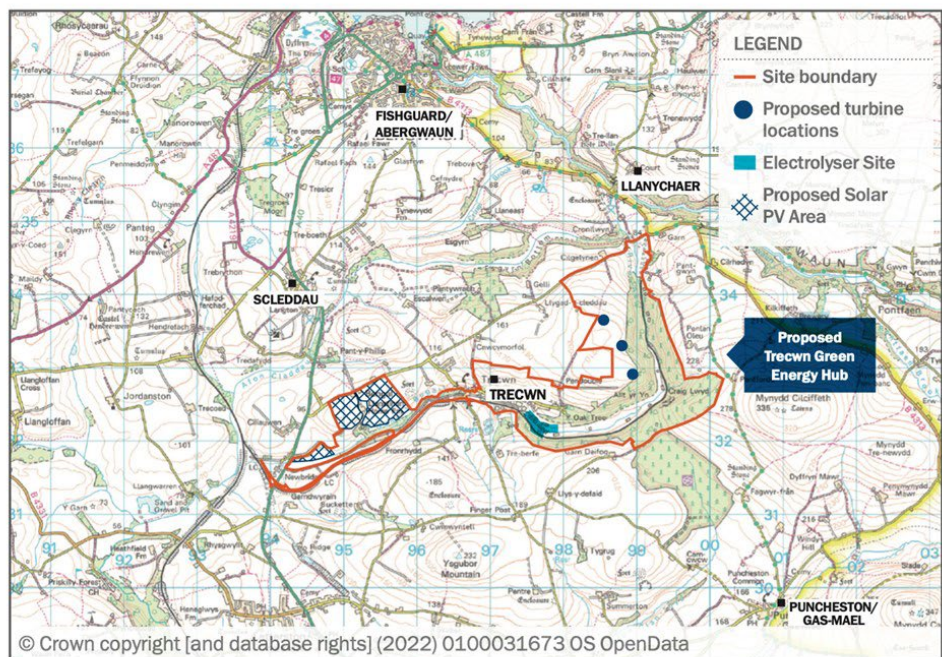
An excellent site to contribute to Wales's ambitions of reaching 70% renewable energy production by 2030.

- The site is a strategic employment site located in Trecwn, Pembrokeshire and sits within the ward of Bro Gwaun.
- The land was previously used as a RNAD facility to store ammunition, which was closed and sold in 1992.
- In addition to the ex-MOD land, we are working with some adjacent landowners on the project.



11

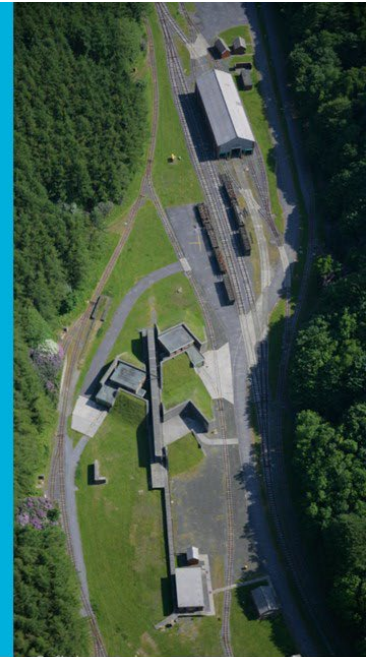
## Site location plan



12

## Why this site?

- **Clusters:** Ideally located within Haven Waterway Enterprise Zone, near the largest energy port in the UK.
- **Transport access:** Pre-existing railway access direct to the site.
- **Regeneration:** Brownfield site in need of regeneration – bring more business to the area.
- **Demand:** Local demand for hydrogen – recent R&D/investment in the use of hydrogen for transport and heating buildings.
- **Targets:** Will contribute to Wales and Pembrokeshire County Council's decarbonisation targets.
- **Storage:** Separate research project to investigate the use of pre-existing storage bunkers to store hydrogen safely.



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## Environmental considerations



Environmental surveys are being undertaken by a team of specialist consultants to establish a baseline of current ecology and ornithological conditions in and around the site.

A scoping report is due to be submitted to PEDW in October 2022.

**Key areas:**  
Noise  
Ecology  
Shadow flicker  
Visual impact  
Flooding

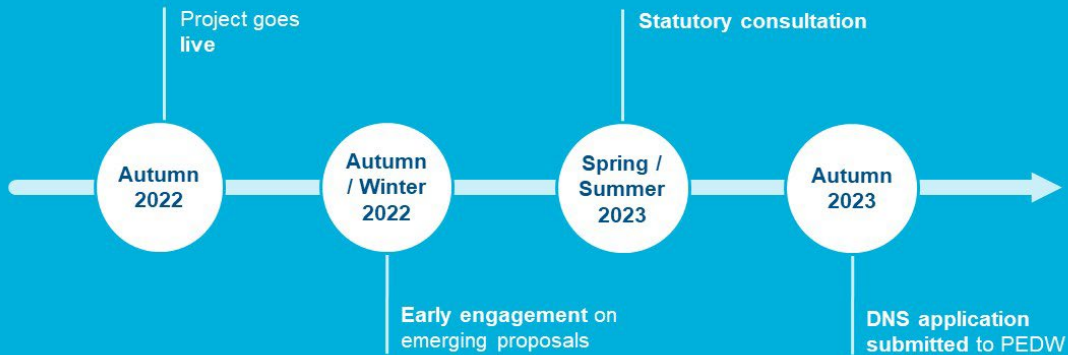


During 2022/23 we will undertake further surveys and assessments on a range of environmental considerations – including ecology, noise and visual impact.

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## Indicative project timeline



Construction would take around 15 months, so the site could be generating green hydrogen by 2026

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## Consultation approach

**We will use a range of tools to reach a wide audience and encourage engagement:**

- Newsletter to over 5,500 addresses in the core consultation zone
- Advert in local press (The Pembrokeshire Herald and Western Telegraph)
- Social media campaign (Facebook advertising)
- Drop in exhibitions from 3-7pm on 24, 25 and 26 October in Trecwn, Letterston and Fishguard respectively
- Webinar from 6-8pm on 9 November
- Facilitated neighbour engagement/formation of CLG
- Project webpage with online information
- Feedback form (online and paper)

16



## Core consultation zone



98 square miles

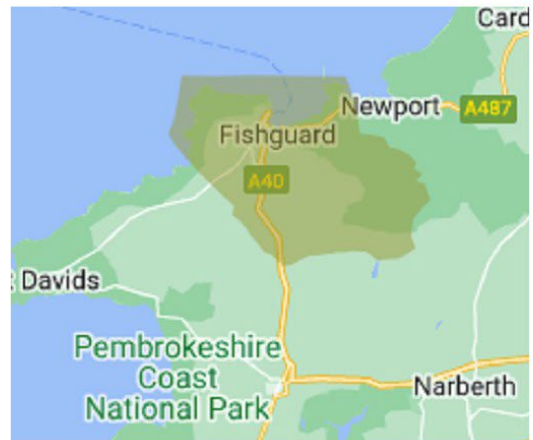


5,364 households



223 businesses

17



## Contact details



Webpage: [www.trecwn-energy.wales](http://www.trecwn-energy.wales)



Phone: 0800 722 0668



Email: [UKprojects@statkraft.com](mailto:UKprojects@statkraft.com)



**Statkraft**

[statkraft.com](http://statkraft.com)



**Thank you for your time.  
Any questions?**



# Appendix 10

## **Trecwn Green Energy Hub early engagement: Neighbour meeting**

Time: 6.30-8.30pm  
Date: Thursday, 10 November 2022  
Location: Depot Office, Admiralty Park, The Valley, Trecwn

### **Introduction:**

Following three public exhibitions (24-26 October) and a webinar (9 November) on the emerging proposals for Trecwn Green Energy Hub, immediate neighbours<sup>1</sup> near the electrolyser site were invited to an independently facilitated meeting. Ward member, Cllr Delme Harries was also invited.

This meeting was arranged to help the project team better understand local issues and opportunities, respond to outstanding queries that could be answered at this stage in the project and discuss next steps, which include the potential to create a Community Liaison Group to enable neighbours to meet at key stages throughout the project.

A few residents living close to the solar and wind farm sites also expressed an interest in attending the meeting and the invitation was extended to them. The invite was also shared on social media by a local resident and a number of people turned up on spec and space was found to accommodate them in the meeting. The venue was chosen based on residents who had indicated they would be attending; with the additional attendees the venue was very full but space was made so that everyone could participate.

The meeting, independently facilitated by PLANED, was attended by 32 residents, Cllr Delme Harries - ward member for the site, and Mícheál Ó Broin – senior project manager for Statkraft.

Cris Tomos from PLANED invited attendees to write thoughts and comments on post-it notes and put them on the flip chart board during the presentation.

### **Presentation:**

The meeting started with a presentation from Mícheál Ó Broin for those who had not attended one of the other engagement events or reviewed the information on the project webpage.

The presentation given was the same as the one used during the webinar on 9 November and [can be viewed on the project page](#).

---

<sup>1</sup> The invitation was sent to 56 properties in close proximity to the electrolyser site including those on Barham Road and Admiralty Way.

**Discussion:**

During the presentation, questions were asked by attendees, which have been collated into themes in this report to avoid duplication. A transcript of all post-its can be found in Appendix One.

The draft report was circulated to attendees for review before it is finalised, so any omissions or inaccuracies could be addressed. The project team has also taken some time to address outstanding queries where possible at this stage on the project and has provided addendums to the draft originally circulated for review.

Wider issues**Comment: Stating there is a 'climate emergency' is a contentious statement!**

Response: A climate emergency has been declared by Welsh Government.

**Question: Will the project (in Norwegian ownership) receive subsidies from the UK government?**

Response: There is a price stabilisation mechanism being devised by UK Government to encourage development of low carbon hydrogen in the UK. This would provide projects with a guaranteed price for 15 years. If the sales price is greater than the guaranteed price the project would pay the difference back, and if the sales price is lower than the guaranteed price the project would be paid the difference.

**Question: Have you considered other industrial areas in Pembrokeshire? There are other brownfield sites with road and train access outside residential areas and close to industry end users.**

Response: We have a number of sites across Britain that we are looking to develop. The Trecwn project is the first project we have publicly announced.

*Addendum: The unique nature of the site is what attracted Statkraft to Trecwn. It has a spur line off the Fishguard to Swansea line, a road connection to the A40 and is a brownfield site with history of industrial use. The onsite caverns are also unique to this site and we are investigating if they can be renovated for use as hydrogen storage (at a future stage).*

## Comments:

- Current energy issues and climate damage. Need to drive down carbon footprint and this project will tick boxes for Pembrokeshire County Council.

Hydrogen**Question: Will people be able to buy the hydrogen produced?**

Response: If it was supplied as fuel, it would most likely be sold to a fuel station rather than individuals.



**Question: Are there any plans for domestic supply?**

Response: Not for this project.

**Question: If hydrogen has been in existence for so long, why aren't we using it now?**

Response: The process of making hydrogen has historically involved using fossil fuels such as natural gas, which meant that it was quite a carbon intensive process and directly using natural gas was a better alternative.

**Question: Will you be storing hydrogen as gas or liquid?**

Response: Gas.

**Question: What pressure will hydrogen be stored at?**

Response: It will be at a mix of high and medium pressure - medium pressure about 30bar and high somewhere around 300 to 400bar. The exact ratio between high and medium pressure is being investigated.

**Question: Do you need a license to operate the facility?**

Response: In addition to the planning permission, we would need a hazardous consents licence and an environmental licence.

**Question: Will the compressors be loud and noisy?**

Response: The compressors can be encased to reduce noise. We're looking into options and the noise assessment being carried out will help inform the design.

**Question: What is the blast radius? Is the distance from houses enough?**

Response: Initial research suggests it is and we'll be carrying out more thorough investigations as the project progresses.

**Question: Why can't you develop at the northern end of the site where there are very few houses?**

Response: We have looked at the northern end of the site, but our initial designs indicate that the valley is too narrow at this end to accommodate the spacing required between components.

*Addendum: Following community feedback, we are looking at two possible options within the Valley site for the green hydrogen production facility. We will continue to assess this as the design progresses and environmental studies and surveys are carried out.*

**Question: It will affect house prices and knock up to 30% off property values/reduce value by a 7th. How will residents be compensated?**

Response: We do not offer compensation to nearby houses. The site itself is identified in the local plans for industrial uses. It is in a strategic employment area, so we believe the proposals for Trecwn Green Energy Hub are appropriate for The Valley. Previous planning consents include a biomass

facility.

**Question: Is Dŵr Cymru providing water to the site? Could you operate on the existing supply of water to residents?**

Response: The facility won't be operational until residents are on mains supply so we would not have an impact on water supply. The water for the hydrogen facility will come from the reservoir, there is more than enough water within the onsite reservoirs to supply the hydrogen site.

**Question: How will it be transported out of the site? How many movements a day?**

Response: It will be transported in tankers with gas cylinders, similar to those you will see moving other fuels around. Up to 15 tankers a day are currently anticipated but we will know more as the project develops.

**Question: Who will use the hydrogen? Anything locally to benefit from the investment?**

Response: Discussions are underway with a number of potential end users, including HGV and bus companies looking to introduce hydrogen vehicles to their fleets.

This response was disputed by some residents based on their local knowledge of bus companies.

**Question: There is a ferry service in Scotland that uses hydrogen. Could the ferry terminal be a hydrogen user?**

Response: They are a potential end user.

**Question: What is the business case? Will you only go ahead if companies express an interest in the hydrogen produced?**

Response: We would need to have end users before going ahead but there are a number of companies already interested.

Residents asked for more information about these companies, but further information could not be provided at this stage due to commercial confidentiality.

**Question: If you are considering options to use the underground caverns as storage, could hydrogen production take over the whole site?**

Response: Potential to use the caverns is very much at a very early stage of research and there are currently no plans beyond the proposals currently being discussed.

**Question: There are other industries already using hydrogen. Could it be used to supply industry for fertiliser etc if plans for trains and trucks don't work out?**

Response: We see this as an ideal hub for transport but lots of industries are investing in decarbonisation, so there could be other options. We expect it to have local use, within about a 50miles radius of the site.



**Question: What's the worst-case scenario in hydrogen transportation?**

Response: As with any chemical or fuel tanker transportation carries risks, however hydrogen tankers have been developed with rigorous safety standards that mitigate risk alongside a range of other safety measures.

*Addendum: Hydrogen tankers are purpose built using materials able to hold hydrogen at pressure, and these are already in use within the chemical industry and operating within the UK.*

**Question: What's the risk rate for hydrogen? Will fire engines be supplied? It would take quite a long time for them to get here!**

Response: The fire service will be a consultee and we'll need to speak to them as the plans develop. Safety is a key part of the design for a hydrogen electrolyser and how the facility meets those the requirements will need to be demonstrated in the planning application.

**Question: What waste will be produced? Understand that oxygen is a by-product but what about the water, when the last bit is left, what will be in there and how will it be treated?**

Response: There may be a small amount of wastewater produced from the electrolysis process. This water would need to be treated. We are still working on the detailed designs for this and will have more information on this topic next year.

**Question: What happens on days when the wind turbines and solar panels don't generate enough energy to power the electrolyser?**

Response: There will be a small amount of electricity taken from grid to ensure that the hydrogen facility can operate and keep the equipment in standby mode. The facility's storage design will include a buffer to reduce the likelihood of this occurrence.

**Question: What will happen to the excess solar and wind? Will it go into the grid?**

Response: No, we would have to curtail this energy. However, we do not expect this to happen very often as wind and solar generating profiles typically complement each other.

**Question: Could you lose one of the turbines and take the extra needed from the grid?**

Response: That wouldn't be possible on this site.

*Addendum: The use of locally generated green energy is a part of keeping the price of our green hydrogen low for end users, helping to accelerate decarbonisation. The electricity grid in Pembrokeshire is quite weak and if we were to use a grid import connection instead of a turbine at Trecwn this would require significant and costly grid upgrades.*

**Question: Will the facility be manned 24/7? Will HGV movements be 24/7?**

Response: We anticipate that the facility will be monitored 24/7 and that HGV movements will be required 24/7 to meet demand.

**Question: Will you own the transport coming in and going out?**

Response: It is unlikely we would own the transport coming and going from site. We would have a contractual relationship with an experienced haulage company to transport the hydrogen by road.

**Comments from residents:**

- Re impact on property values - the solar array would be on some 230 acres of prime agricultural land, which lies outside of the designated Trecwn strategic site, part of the Haven Waterway Enterprise Zone.
- Cost of hydrogen vehicles isn't economically viable. Only two companies in the country currently making them at a starting price of £60k.
- If Pembrokeshire County Council replace/convert buses to hydrogen, the cost will fall on local people.
- Trains are going electric and money is being put into that and not hydrogen.
- We only get three trains a day and don't believe they will be hydrogen – or capable of transporting hydrogen, so it will all need to be moved by road.
- If there is a fire with hydrogen, it disperses quickly.
- Sceptical about how hydrogen can be used locally as potential industries in the area at 60+miles away (rather than the 50miles radius suggested).
- Don't understand why this site has been selected when there is nothing industrial here.
- There's only one hydrogen powered train at the moment, produced at an exorbitant cost.
- MOD retro fitting diesel trains.
- Should have sorted end users before putting the plans into the public domain.
- Other industrial proposals have been granted planning permission on the site, which haven't been developed and there's every chance this will be the case for this project.

Wind/solar

**Comment: the wind turbines and solar panels are outside The Valley site and will have a major impact on local residents and property values. There are already solar panels in the field across the road already and this proposal will put solar panels on three sides of my house, destroying my home!**

Response: We're looking at the location of the solar panels and the area indicated on the location plan represents the whole area being considered. We don't propose to put solar panels on the whole of that area and will be



avoiding best and most versatile land.

*Addendum: While the maps provided as part of the early engagement are indicative, the feedback received has allowed us to make revisions to the layout of the solar panels. The extent of the solar has modified and reduced and is available to view in scoping report.*

**Question: What size will the solar panels be and how many panels per acre?**

Response: What we have shown on the map is the widest extent of coverage of the panels. This did not include any on the ground surveys. In reality, the overall coverage of the solar will be approximately half of the area shown.

*Addendum: As procurement of the project components won't take place unless the project is consented, the exact size of an individual panel cannot be confirmed yet.*

**Question: Could the solar panels be moved into The Valley?**

Response: The topography of The Valley means it is in shadow for large proportions of the day, so not suitable for solar arrays.

**Question: The north side of The Valley is south facing, largely scrubland and would be nearer the electrolyser – why can't you put the solar panels there rather than on agricultural land?**

Response: The proposed site provides a faster and more cost-effective solution. The alternative site suggested would not be economically viable.

**Question: Will there be 7ft fence around the solar panels?**

Response: It is usual practice to have a fence around solar panels – chain link or stronger. More information will be available as the project progresses.

**Comment: Statkraft recently had a solar project turned down as it as on best and most versatile land.**

Response: Correct, each project is judged on its own merit. On this project we are avoiding grade 3a land (which is considered best and most versatile land) with our solar panels.

Residents countered that it is still prized agricultural land and lies outside the designated area for industrial development.

**Question: The wind turbines will be visible from a wide distance. Are you in discussions with Pembrokeshire County Council and the National Park Authority?**

Response: Yes, we'll be speaking to the County Council and National Park Authority along with a wide variety of other stakeholders. Photo montages showing the proposals from a range of viewpoints will be available during the next stage of consultation.



**Question: How will you bring in the turbines?**

Response: They'll come in sections and will be delivered through the estate road.

**Question: Why do the turbines need to be so close to the project? Couldn't they be further afield?**

Response: We carried out a wider search of areas that would be suitable for wind turbines. The area we selected was the most suitable and would also reduce the costs of developing the site.

**Comments from residents:**

- Would like to see what the solar panels will look like.
- With food shortages, solar panels shouldn't be put on agricultural land.
- Putting sheep to graze isn't appropriate for good quality agricultural land
- The turbines would stand higher than the nearest natural feature, Dinas Mountain, at blade tip, and would be visible from as far afield as the Preselis, Plumstone Mountain, Strumble Head, Wolfcastle and beyond. They would dominate the landscape.

Environment

**Question: Have the SSSIs in the area been taken into consideration? They aren't shown on the location plan.**

Response: They will be assessed as part of the Environmental Impact Assessment. We have a plan showing the SSSIs and all the other constraints that will be taken into consideration as the project develops.

**Comment: Noise from wind turbines and buzz from generator and solar panels will cause harm to my child's health**

Response: Noise will be considered as part of the Environmental Impact Assessment and mitigation measures adopted where appropriate.

**Question: Could you fell trees in the plantation area and put development there instead? Should be considered!**

Response: There would be financial and ecological impacts associated with clearing a wooded area for development.

**Question: With 15 lorries a day going down a private road, will you be responsible for the upkeep? It's recently been re-laid and we need to know how it will be maintained. Will there be any traffic controls? There is no footpath and it will be dangerous for residents**

Response: We will look into possibilities.

**Question: What would happen to people living in the bungalows with large HGVs travelling down the road?**

Response: Ffos Las is suitable for HGV traffic and although the road is not the



responsibility of Statkraft, we could discuss potential traffic calming measures and impose speed limits on any of the vehicles working on our project.

*Addendum: Subsequent to this meeting, Valley Management Services have confirmed willingness to implement traffic calming or management on Ffos Las as part of the project.*

**Question: How will you address concerns about light pollution – in particular on the SSSIs in the area?**

Response: This will be assessed as part of the Environmental Impact Assessment and appropriate mitigation proposed as appropriate.

**Question: What are the estimated fatalities on birds and bats from the wind turbines?**

Response: We've started bird and bat surveys and there will be more surveys in the spring, after which we'll have a better understanding of potential impacts.

**Comments from residents:**

- People move to Pembrokeshire for the peaceful natural environment.
- It was suggested that the loss of ancient woodland should be considered if it means element of the project can be relocated to have less impact on local residents.

#### Socio-economic

**Comment: I attended the webinar, and this isn't going to be a big employer!**

Response: There will be 2-3 permanent jobs once the facility is operational. It is hoped that the facility will act a catalyst for further redevelopment of The Valley and generate more jobs.

**Question: how much of The Valley is the project taking up? If it is only going to generate 3 jobs, what opportunities are there for other businesses to come to the site with more jobs?**

Response: The electrolyser will take up a relatively small area of The Valley - only about 2 hectares of the entire Valley.

**Question: If Statkraft is considering future expansion options, how could the site attract other businesses whilst it is keeping its options open?**

Response: At this stage, Statkraft is only considering potential for future opportunities. Statkraft has no firm plans that would prevent other businesses interested in setting up or relocating to The Valley.

**Comments from residents:**

- Industrialisation of the area won't benefit local people.
- Pembrokeshire relies on tourism and farming.

### Community Benefits Fund

**Question: Query about the amount of the annual fund stated – could it be less than £73k?**

Response: Based on the current project proposed, £73k will be the lowest annual amount for the Community Benefits Fund, once the Green Energy Hub is fully operational. It could go up to £80k.

**Question: Could there be a reduction in electricity bills as a result?**

Response: Not in this case, as electricity produced will power the electrolyser and will not go into the grid.

**Question: Is the £73k Community Benefits Fund for Trecwn or will it be distributed further?**

Response: The way the Fund is administered, its geographic reach and terms of reference will need to be defined as the project progresses.

Comments:

- The Community Benefits Fund should give more to those more directly impacted.
- If the Community Benefits Fund is available to everyone with a visual impact, it would be a wide reach.

### Engagement/consultation

**Comment: It isn't early engagement. You should have spoken to local residents before this stage.**

Response: It is still at a very early stage in the planning process and there will be other opportunities to engage with the project team as the development progresses.

**Comment: It doesn't matter about the impact on residents. If you get the go-ahead, you'll proceed regardless of what we say.**

Response: the engagement/consultation isn't about the principle of development but what we can do to minimise impacts and maximise benefits for people living in the area.

**Question: How is the engagement open and transparent if not everyone was invited to this meeting?**

Response: We have held three public exhibitions, a webinar and put all the consultation material on the project webpage. The presentation was the same presentation given at the webinar, so everyone has had access to the same information. This meeting was an opportunity for immediate neighbours of The Valley to ask any additional questions and discuss the possibility of setting up a Community Liaison Group, with an invitee list extended to include people living close to the solar panels and wind turbines.



A number of attendees continue to feel this was not an appropriate approach. As such, we will discuss the suggested invitees and draft Terms of Reference for a Community Liaison Group and, if there is a general consensus that a Community Liaison Group is not an appropriate forum as it will be by invitation - albeit that the meeting notes will be shared on the project website - we will rethink this as a mechanism for engaging local residents moving forward.

**Question: Why isn't anyone from Pembrokeshire County Council here? Where's our local ward member?**

Response: This is an engagement organised by the developer and we wouldn't expect officers from Pembrokeshire County Council to be in attendance, but your ward Councillor Delme Harries is in attendance.

**Question: Can PLANED facilitate the Community Liaison Group?**

Response: Yes, that was the suggestion being put forward so the community and development team can meet at key stages throughout the project.

**Question: Will you come back with responses to the queries raised?**

Response: Yes, the Community Liaison will provide an opportunity for updates as key stages, prior to the statutory consultation.

**Comments from residents:**

- Think there should be representatives from the Local Authority at engagement events.
- There were mixed views about whether the meeting should have been extended to a wider audience and who should be invited to join the Community Liaison Group.
- Paul Davies MS should be invited

**Next steps:**

The next step for the project will be the submission of the scoping report to Planning and Environment Decision Wales (PEDW). Environmental Impact Assessments will be carried out and the results will inform the emerging proposals, along with discussions with neighbours, local communities, stakeholders and statutory consultees.

A Community Liaison Group, independently facilitated by PLANED will be established. Proposed invitee list and draft terms of reference will be circulated to attendees of the neighbour meeting for consideration before being finalised. It was suggested the first meeting will be in January/February 2023.

## APPENDIX ONE

### Post-it notes:

#### Proposals

- Location of the plant – better up the valley!!! Weigh up felling trees to safety of residents and families!!!
- Is Trecwn site realistically the most appropriate location for a site of this type over brownfield sites closer to the haven.
- This valley was self-contained – instead of connecting to the grid. Could you run on hydrogen generators – to tick over if production of wind or solar as at its lowest?

#### Environment

- Noise/pollution
- Noise levels
- Light pollution
- Possibly plant extra trees on Barham Road side of valley to shield noise/light pollution to adjacent properties
- Visual impacts
- Surrounding our homes by solar panels
- Impact of solar arrays on our pristine rural view
- Would like to see updated solar array proposal, now that some soil grading has been carried out
- 245 acres of prime farmland out of food production
- Water being used to create hydrogen. Barham Road residents having to pay for new DCWW supply as Depot infrastructure unfit to supply
- Consider water reservoir - used in past for water in event of fire
- Explosion risk
- Risk factors from electrolyser/fuel storage tank failure
- Proximity to houses in Barham Road. What is the blast radius if there was an explosion?
- My land is next to the railway line. I breed valuable horses. What protection will my stock have?
- What would happen to the wind turbines/solar panels if the business failed – who would be responsible for remaining

#### Community Benefits Fund

- The residents of Trecwn should benefit more than outstanding areas (the closer you are the higher the benefit). We will have the noise etc.
- Would the Club and Bat be opened again with community fund?

#### Transport

- Route to be taken by 15 lorries per day
- Heavy tanker traffic on Admiralty Road danger to residents. Is the rail line being developed?
- Maintenance of the road – currently a private road so will need to be



looked after – possibly look after Barham Road too to help keep people sweet...

#### Economy/investment

- Why only 2-3 full time jobs for such a big project?
- Only 3 jobs
- Would local contractors be used in the preparation of the site/sites?
- House prices ↓
- Property value from solar panels
- Impact on house prices must be considered, recognised and addressed? Ordinary people use the security in their homes as a core part of their finances
- Who is going to compensate residents for consequent loss of property values, increased insurance premiums, degraded quality of life in terms of degraded environment and so on?
- By putting this in the public domain you have affected all residents financially
- If a woodland area (plantation) has less impact on local people, then money needs to be committed to clearing woodland – this cannot be about the cheapest and most convenient option

#### Renewable energy

- The energy produced 'green' is going to be more some days than others – also you will not use all energy produced. What will happen to the energy? Will it be wasted or stored somewhere, or put back into the grid?
- Potential to expand away from the planned supply recipient into the public
- Will there be definite companies locally to use this facility?

#### Engagement/consultation

- Many more meetings with immediate residents are required!!
- Council and Parks need to be at these engagement meetings