



PLANNING STATEMENT

**Land at Pengarnddu Industrial
Estate, Dowlais, Merthyr Tydfil**

Conrad Energy
July 2024

Document reference: JW/SM/99866

Planning Statement

Land at Pengarnddu Industrial Estate, Dowlais, Merthyr Tydfil

Date: July 2024

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Contents

1.0 Introduction1

2.0 The Site and Surroundings3

3.0 Relevant Planning History4

4.0 The Proposed Development6

5.0 Planning Policy Context8

6.0 Planning Assessment11

7.0 Conclusions19

1.0 Introduction

- 1.1 Alder King Planning Consultants have been instructed by Conrad Energy to submit a full planning application seeking permission for the development of a hydrogen electrolyser facility on land at Pengarnddu Industrial Estate, Merthyr Tydfil.
- 1.2 The purpose of this statement is to describe the planning context, set out the merits of the proposal, assess this against relevant planning policy and pertinent material considerations and conclude on the overall suitability in relation to policy requirements.
- 1.3 Conrad Energy is an independent power producer providing renewable and low carbon generation across the UK and is the UK's market leader in flexible generation technology.
- 1.4 Conrad Energy is continuing to grow its pipeline of flexible electricity generation, as well as developing battery storage, solar and grid stability projects, with opportunities being explored for the use of hydrogen.
- 1.5 Energy generation is a dynamic sector and one that has great potential to assist National Grid to balance the UK's power network, both in terms of generation and demand, and frequency services. Conrad Energy aims to be one of the biggest participants in this sector in the UK, having already developed a portfolio of 900 MW operational and a further 2,000 MW of sites going through the development process. The Company is one of the few managing all aspects of development, construction, operation and trading of its own assets.
- 1.6 This statement should be read in conjunction with all application submission documents, comprising the following:
 - Noise Impact Assessment, prepared by Inacoustic.
 - Drainage Strategy, prepared by Hadyn Evans.
 - Biodiversity & Green Infrastructure Statement, prepared by Western Ecology.
 - Preliminary ecological appraisal, prepared by Western Ecology.
 - The following Site Plans, prepared by Conrad Energy:
 - Location Plan;
 - Proposed Plan;
 - Proposed Site Plan;
 - 20ft Amenity Cabin Duplex;

- Auxiliary Transformer;
- CCTV Column;
- Palisade Security Fence;
- Compressor Unit;
- Electrolyser Unit;
- Hydrogen Tubes Storage Rack and Water Storage Tank;
- Transformer 33kV-11kV.

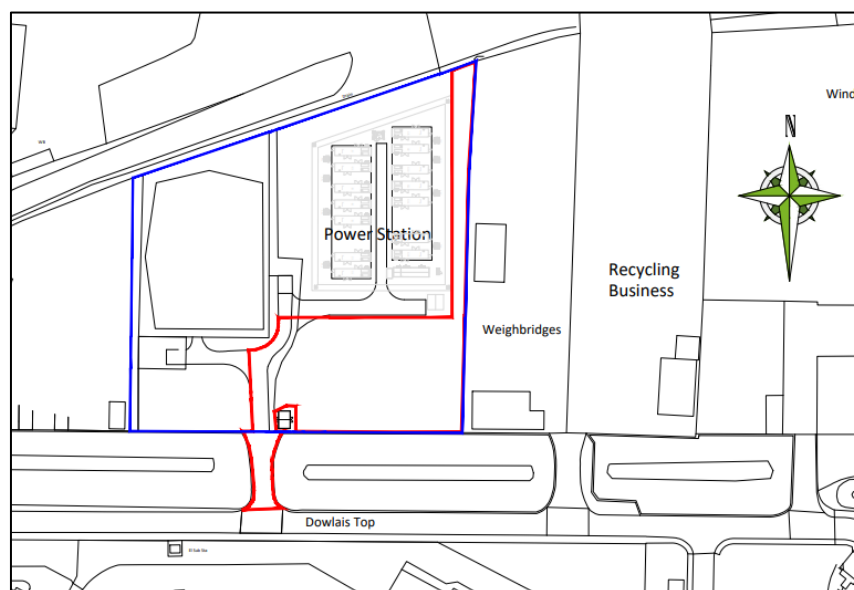
1.7 The remainder of this statement is structured as follows:

- Section 2: describes the site and surroundings.
- Section 3: sets out the relevant planning history.
- Section 4: provides details of the proposed development.
- Section 5: sets out the relevant town planning policy context for the proposed development, including a summary of the main issues.
- Section 6: provides an assessment of the proposals having regard to the development plan and other material considerations.
- Section 7: sets out the conclusions.

2.0 The Site and Surroundings

- 2.1 The site comprises circa 0.33ha of land at Pengarnddu Industrial Estate, Dowlais, Merthyr Tydfil as delineated on the site location plan at **Figure 2.1** ('the Site'). The Site is made up of an area of unused hardstanding and scrub within the existing industrial estate.

Figure 2.1: Site Location Plan



- 2.2 An existing vehicular access services the Site from the highway to the south. This currently serves two energy generation/storage facilities situated adjacent to the Site to the north and west.
- 2.3 A scrap yard is situated to the east of the Site with a landscaped verge to the south. The wider setting of the Site is made of a mix of commercial and industrial uses, commensurate to the industrial estate location.
- 2.4 The Council's proposals map confirms that the Site is located within the defined Settlement Boundary.
- 2.5 The Site is at a low risk of flooding from all sources.
- 2.6 The Site is not located within a conservation area, nor is it located in close proximity to any heritage assets.

3.0 Relevant Planning History

Relevant Planning History on the Site

- 3.1 In reviewing the Council's online planning history records, this confirms the history of the Site is limited to full planning permission ref: P/04/0012, approved 14 May 2004 for a thermal waste separation processing plant. The planning permissions covers the Site and wider land to the north and west, albeit there is no built development on the Site.

Relevant Surrounding Planning History

- 3.2 With regard to the immediate setting of the Site, the planning history provides precedent for energy-related development in this location. The relevant planning permissions which have been implemented are identified on the plan at **Figure 3.1** with a summary provided below. The Site is accessed off the same access point as the developments set out below.

1: Land to the west of the Site

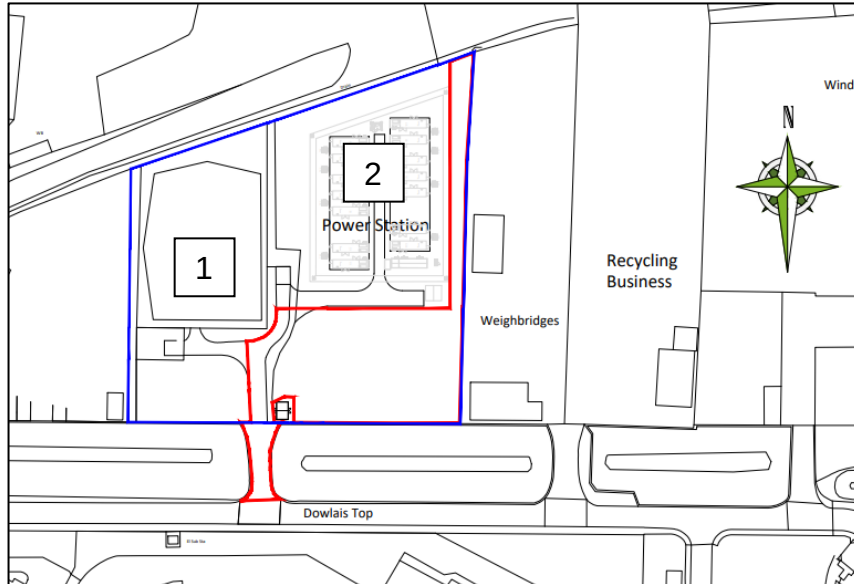
- 3.3 Full planning permission ref: P/12/0135 was approved by the Council on 21 September 2012 for the:
- "Erection of standby embedded STOR power plant with associated transformer/generators and connection to national grid. Erection of switchrooms, welfare officer, bunded fuel tanks and security/acoustic fencing and other associated engineering works."*
- 3.4 Full planning permission P/21/0164 was approved by the Council 29 June 2021 for development to:
- "Replace 52 diesel generators with low carbon battery storage technology"*
- 3.5 Planning permission P/21/0164 resulted in the upgrading of the development delivered under planning permission P/12/0135 to replace the technology with a battery energy storage system facility. The Council's delegated report confirms that *"the proposed battery storage facility is deemed to provide a complimentary service outside of Class B uses"* with regard to its location within the Pengarnddu Industrial Estates and that *"Accordingly, the principle of development is acceptable."*

2: Land to the north of the Site

- 3.6 Full planning permission ref: P/14/0236 was approved by the Council on 6 November 2014 for the:
- "Erection of embedded power plant (20mw) with associated transformers/generators and connection to national grid. Erection of substation switchgear cabin, welfare cabin, gas governor and metering kiosk and security fencing with associated access and engineering works."*
- 3.7 Full planning permission ref: P/15/0081 was approved by the Council on 27 April 2015 for the:

“Erection of electric substation and acoustic fencing with associated access to serve embedded power plant (Revision to application P/14/0236).”

Figure 3.1: Planning permissions adjacent to the Site



- 3.8 Moreover, it is notable that the Council have approved full planning permission for two wind turbines within the industrial estate ref: P/12/0078 approved 13 December 2012 and ref: P/16/0128 approved 8 December 2016, both of which have been implemented.

Conclusion

- 3.9 Owing to the foregoing, it is clear that energy related development has been supported by the Council in this general location.

4.0 The Proposed Development

4.1 The proposed development on the Site is as follows:

Erection of storage containers, support infrastructure and security fence for Hydrogen Electrolyser Plant Facility along with landscaping and all associated works.

4.2 The proposed development consists of the construction and operation of a 8MW Green Hydrogen Electrolyser facility.

4.3 The development proposed includes the following elements on the Site, within a secure site compound, pursuant to its use as a hydrogen electrolyser plant facility:

- Electrolyser units;
- Gas compressors;
- Water tanks;
- Storage tanks/tube trailers;
- DNO substation;
- Amenity cabin;
- Transformer;
- Auxiliary transformer; and
- CCTV cameras.

4.4 The gated site compound will be bordered by a palisade security fence, 2.4m in height.

4.5 The appearance and scale of the infrastructure equipment is provided on the detailed plans submitted with this application.

4.6 The proposed development incorporates biodiversity enhancements with a north/south landscaped corridor formed with native planting along the eastern boundary. This will also support the drainage strategy.

4.7 The proposed development will be served by the existing established vehicular access to the highway to the south.

- 4.8 The layout is designed to facilitate a one-way system through the Site for HGV movements travelling into/out of the Site in forward gear. The layout further provides parking on the Site for maintenance vehicles (vans).
- 4.9 The proposed development will generate hydrogen through electrolysis, via two electrolyzers. The proposed hydrogen electrolyzers will generate green hydrogen through the process of electrolysis which is the process of using electricity to split water into hydrogen and oxygen and then using the hydrogen as an energy source which can be used for a variety of purposes including:
- to power hydrogen-fuelled vehicles,
 - de-carbonise industrial processes,
 - domestic heating/cooking
 - form of energy storage.
- 4.10 The hydrogen produced will be stored and routinely collected from the Site by HGVs. The Site imports electricity which is linked to a renewable source of power to ensure all hydrogen produced is Green.
- 4.11 The electrolyser imports electricity from the grid. The electrolyser will sleeve off a renewable power source to ensure all hydrogen generated is green and will likely correspond with periods of low electricity demand and times when there is excess renewable power generation which cannot be directly utilised by consumers, for example operating during a windy night, or at lunchtime on a sunny day. Through the process of electrolysis, hydrogen and oxygen are separated. The hydrogen then passes through a compressor, where the pressure is stepped up and it then goes into storage tanks.
- 4.12 The hydrogen will be stored on site in a multi-tank as a pressurised gas until it is needed, while the oxygen will be safely released into the atmosphere, with no contamination emissions. The oxygen can also be used by third parties in processes such as aeration in sewage treatment works to improve aerobic digestion. The hydrogen produced by the facility will be used to provide an alternative fuel source for sectors such as heating, industry and transport. Water is the only by-product of the installation and therefore there is no 'emissions' arising from the proposed development. There will be small quantities of effluent comprising effectively the concentrated minerals in the incoming water. No contaminants are added. This doesn't necessarily need to dispose to the sewer.
- 4.13 Hydrogen production is increasingly perceived as a pioneering method of renewable energy production that can contribute to the UK's transition to a net zero economy. The UK Government has committed to net zero carbon emissions by 2050 and hydrogen is seen as a significant resource in reaching this target. Hydrogen is currently an underutilised fuel for electricity production in the UK economy, but the Government have expressed a desire to enhance its potential in future schemes.

5.0 Planning Policy Context

- 5.1 Planning decisions must be taken in accordance with section 70(2) of the Town and Country Planning Act 1990 and section 38(6) of the Planning and Compulsory Purchase Act 2004.
- 5.2 Section 70(2) of the Town and Country Planning Act requires the decision maker to have regard to the provisions of the Development Plan and any other materials considerations. Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires decisions be made in accordance with the Development Plan unless material considerations indicate otherwise. The Development Plan for the Site consists of the:
 - Merthyr Tydfill Replacement Local Development Plan 2016-2031 (January 2020).
 - Future Wales: The National Plan 2040 (February 2021).
- 5.3 Other material considerations include National Planning Policy Wales, Technical Advice Notes, relevant Supplementary Planning Documents and legislation.
- 5.4 The Replacement Local Development Plan proposals map confirms that the Site is located within the defined settlement boundary and the Pengarnddu Protected Employment Site.

Merthyr Tydfill Replacement Local Development Plan 2016-2031 (January 2020) ('RLDP')

- 5.5 Policy SW4 (Settlement Boundaries) sets out that settlement boundaries are defined within the RLDP to encourage development within urban areas, support the re-use of previously developed land, and to protect and support the functioning of the rural economy and the countryside.
- 5.6 Policy SW11 (Sustainable Design and Placemaking) states that development must contribute to the creation of attractive and sustainable places through high quality, sustainable and inclusive design. New development is required to accord with the policy criteria, where appropriate. *Inter alia*, development must be appropriate to its local context and minimise the demand for energy and utilise renewable energy resources.
- 5.7 Policy EnW1 (Nature Conservation and Ecosystem Resilience sets out that development proposals will be required to promote the resilience of ecosystems.
- 5.8 Policy EnW4 (Environmental Protection) states that development proposals will be required to demonstrate they will not result in an unacceptable impact on people, residential amenity, property and/or the natural environment.
- 5.9 Policy EnW5 (Landscape Protection) sets out that development proposals will be permitted where it can be satisfactory demonstrated that, *inter alia* it would not cause unacceptable harm to the character and quality of the landscape setting of the County Borough and that development respects the local distinctiveness and historic character of the landscape.

5.10 Policy EcW2 (Protecting Employment Sites) states that at Pengarnddu Industrial Estate, development will be permitted if:

- It is within Use Classes B1(b), B1(c), B2 or B8; or
- It provides an ancillary facility or service that supports the primary employment use, or
- It is an acceptable complementary commercial service outside class B uses, or
- It is an appropriate waste management facility compatible with existing industrial and commercial activities.

5.11 Policy EcW8 (Renewable Energy) states that the Council will support the use of renewable energy as a tangible means of reducing local carbon footprint, where appropriate to do so.

Future Wales: The National Plan 2040 (February 2021) ('The National Plan')

5.12 The National Plan sets out a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of communities.

5.13 Policy 1 states that the Welsh Government supports sustainable growth in all parts of Wales.

5.14 Policy 17 states that the Welsh Government strongly supports the principle of developing renewable and low carbon energy from all technologies and at all scales to meet future energy needs.

Planning Policy Wales Edition 12 (February 2024) ('PPW')

5.15 Paragraph 3.31 states that The Environment (Wales) Act 2016 sets a legal target of reducing greenhouse gas emissions in Wales by at least 80% in 2050. The Act also requires a series of interim targets (for 2020, 2030 and 2040) and carbon budgets. The budgets set a limit on the total amount of greenhouse gas emissions in Wales over a 5-year period to serve as stepping stones and ensure progress is made towards the decadal targets.

5.16 Paragraph 4.2.23 states that planning authorities need to ensure that they make the most efficient use of land through the development management process.

5.17 With regard to energy, paragraph 5.7.1 states that the Welsh Government's highest priority is to reduce demand wherever possible and affordable. Low carbon electricity must become the main source of energy in Wales. Renewable electricity will be used to provide both heating and transport in addition to power. The future energy supply mix will depend on a range of established and emerging low carbon technologies, including biomethane and green hydrogen.

- 5.18 Paragraph 6.4.5 states that planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species (not including non native invasive species), locally or nationally and must work alongside nature and it must provide a net benefit for biodiversity and improve, or enable the improvement, of the resilience of ecosystems. A net benefit for biodiversity is the concept that development should leave biodiversity and the resilience of ecosystems in a significantly better state than before, through securing immediate and long-term, measurable and demonstrable benefit, primarily on or immediately adjacent to the Site.

Technical Advice Notes ('TAN')

- 5.19 TAN 11 (Noise) provides guidance on the to use the planning system to reduce the adverse impact of noise.
- 5.20 TAN 15 (Development and Flood Risk) provides guidance to reduce flood risk and develop away from high risk areas.

Other Material Considerations

- 5.21 Other material considerations to the proposed development include, but are not limited to, the following:
- Department for Energy Security & Net Zero Overarching National Policy Statement for Energy (EN-1) (November 2023) ('the National Policy Statement for Energy').
 - Welsh Government 'Hydrogen in Wales' consultation – a pathway and next steps for developing the hydrogen energy sector in Wales (9 April 2021).
 - Department for Energy Security & Net Zero UK Hydrogen Strategy (August 2021) ('the UK Hydrogen Strategy') and associated Hydrogen Delivery Update (December 2023).
 - UK Government Net Zero Strategy: Build Back Greener (October 2021) ('the UK Net Zero Strategy').

6.0 Planning Assessment

6.1 This section of the Planning Statement provides an assessment of the main planning considerations relating to the proposed development having regard to the pertinent planning policies established by section 5. The key planning considerations are:

- Principle of development;
- Renewable Energy & need for Green Hydrogen Projects;
- Design & Appearance;
- Noise & Air Quality;
- Biodiversity & Landscape;
- Drainage & Flood Risk; and
- Highways & Transport.

6.2 The remaining part of this section deals with the relevant main planning considerations in turn.

Principle of Development

- 6.3 The Site is located within the defined Settlement Boundary in an urban location where RLDP Policy SW4 encourages development. In this regard, the Site is wholly urban in both use and context with complementary surrounding industrial/commercial uses.
- 6.4 The Site is a wholly appropriate use for the proposed development in a sustainable location within the Pengarnddu Industrial Estate. The nature of the proposed development will ensure sustainability benefits through delivery of a green hydrogen facility.
- 6.5 RLDP Policy EcW2 supports development within the Pengarnddu Industrial Estate where it is within Use Classes B1(b), B1(c), B2 or B8, it provides an ancillary facility or service that supports the primary employment use or it is an acceptable complementary commercial service outside Class B uses. The Land Use Gazetteer confirms that an 'Electrolysis Place' constitutes a Class B2 Use.
- 6.6 The proposed development constitutes a B2 use and is therefore wholly compliant with Policy EcW2 of the RLDP. It is clear that the proposed development is a positive use of the Site, in keeping with within the industrial character of the area, where renewable/low carbon energy related development is already well established. As set out within Section 3 of this statement, such development is located adjacent the Site to the north (under Conrad Energy ownership) which further establishes the acceptability of the proposed development on the Site.

- 6.7 The proposed development comprises an efficient use of land on an unused part of the industrial estate. The scale of the Site does not lend itself to a multitude of alternative uses and in any case, the proposed development is wholly appropriate and would support the function of the industrial estate.
- 6.8 Ultimately, the Site is within the settlement boundary, and located within an area where industrial activity and processes such as that proposed, are actively encouraged and appropriate. The proposed development, within the Pengarnddu Industrial estate, is in principle acceptable.

Renewable Energy & need for Green Hydrogen Projects

- 6.9 RLDP Policy EcW8 states that the Council will support the use of renewable energy as a tangible means of reducing local carbon footprint, where appropriate to do so.
- 6.10 A report published on 29 March 2023 by RenewableUK calls for the Government and devolved administrations to reform planning rules to enable green hydrogen projects to be built swiftly around the country, acknowledging that they will play a key role in our future energy system. The Government has set a target of installing 10 gigawatts (GW) of low carbon hydrogen production capacity by 2030, half of which will be green hydrogen generated by renewables, including wind. To meet this target, the amount of green hydrogen we produce would have to be about a hundred times bigger than it is currently. There is therefore, a need to build further capacity into the system.
- 6.11 Green hydrogen can be used in a wide range of sectors which have proved to be difficult to decarbonise so far, including generating heat for heavy industry and providing fuel for transport. Green hydrogen can also be stored to be used whenever it is needed, providing flexibility and contributing to ensuring the UK can meet its energy needs.
- 6.12 Several small-scale green hydrogen plants are already operating in the UK, and a number of larger projects are in planning or have consent to go ahead. However, a report titled 'Planning for Onshore Green Hydrogen', warns that the current planning regime is too slow, complex and difficult to navigate for developers to build projects at the scale and speed which is needed.
- 6.13 Unlike other renewable technologies, there is limited national planning guidance specific to green hydrogen across the UK, so local planning authorities and national governments have a very limited framework to provide guidance. The 2023 report recommends updating guidance to include green hydrogen, taking due account of the target set by Government. The report also notes that there is a need to explain to decision makers how this innovative technology works, as it is not yet widely understood and the knowledge gap is hampering progress.
- 6.14 The Senior Policy Analyst for Emerging Technologies at RenewableUK states:

"Green hydrogen is a game-changing technology which has vital role to play in the UK's transition to net zero, as it's a flexible clean power source which can be used across an extraordinarily wide range of

sectors, and it can be stored so that we can use it whenever we need it, adding vital security and flexibility to our modern energy system. But at the moment there's a policy vacuum in the planning system which makes limited reference to this cutting-edge technology. So we need to see planning guidance overhauled to enable new projects to go ahead as swiftly as possible to build a new industry and help us to meet our climate change goals".

6.15 Conrad Energy is developing a number of hydrogen projects across the country. It's site at Lowestoft has secured a government grant to support the development of the project, to produce green hydrogen.

6.16 The National Policy Statement for Energy provides clear support for the type of development proposed from central government, with support for hydrogen. Paragraph 2.3.6 states that:

"We need to transform the energy system, tackling emissions while continuing to ensure secure and reliable supply, and affordable bills for households and businesses. This includes increasing our supply of clean energy from renewables, nuclear and hydrogen manufactured using low carbon processes (low carbon hydrogen), and, where we still emit carbon, developing the industry and infrastructure to capture, transport and store it."

6.17 Moreover, paragraph 2.3.7 sets out that low carbon hydrogen is likely to play an increasingly significant role in decarbonisation and paragraph 3.3.49 states that low carbon hydrogen could be capable of replicating the role of natural gas in the electricity system including providing both firm, flexible capacity in the future and a decarbonisation route for unabated combustion power plants.

6.18 The UK Hydrogen Strategy states that low carbon hydrogen will be critical for meeting the UK's legally binding commitment to achieve net zero by 2050, and Carbon Budget Six in the mid-2030s on the way to this. Hydrogen can support the deep decarbonisation of the UK economy, particularly in 'hard to electrify' UK industrial sectors, and can provide greener, flexible energy across power, heat and transport. Moreover, the UK's geography, geology, infrastructure and expertise make it particularly suited to rapidly developing a low carbon hydrogen economy, with the potential to become a global leader on hydrogen and secure economic opportunities across the UK. Moreover, figure 1.2 within this document predicts that hydrogen could make up 20-35% of the UK final energy consumption by 2050.

6.19 The Welsh Government carried out consultation on the 'Hydrogen in Wales' paper – a pathway and next steps for developing the hydrogen energy sector in Wales in 2021. This identifies that achieving the 2025 Net Zero target will require decarbonisation across all areas of the economy, including the difficult-to-decarbonise sectors. Hydrogen is identified as having a crucial role in decarbonising difficult-to-decarbonise applications such as high temperature heating for industry and heavy-duty transport.

6.20 The UK Net Zero Strategy sets out that the policies and proposals for fuel supply and hydrogen in the Net Zero Strategy will:

- Deliver 5GW of hydrogen production capacity by 2030, whilst halving emissions from oil and gas.

- Support up to 10,000 jobs in 2030 in fuel supply.
- Start to mobilise additional public and private investment of £20-30 billion, in line with the 2037 delivery pathway.

6.21 The need for hydrogen producing development is clear in achieving Net Zero, supporting the transition and decarbonisation to this. The proposed development therefore wholly aligns with the provisions set out by Welsh Government through the PPW and The National Plan (Policy 17) along with Policies SW11 and EcW8 of the RLDP. Specific to renewable energy, RLDP Policy EcW8 states that the Council will support the use of renewable energy as a tangible means of reducing local carbon footprint, where appropriate to do so which the proposed development wholly supports.

Design & Appearance

- 6.22 RLDP PolicySW11 with regard to sustainable design and placemaking states that development must contribute to the creation of attractive and sustainable places through high quality, sustainable and inclusive design. New development is required to accord with the policy criteria, where appropriate. *Inter alia*, development must be appropriate to its local context and minimise the demand for energy and utilise renewable energy resources.
- 6.23 The proposed infrastructure is designed with functionality and purpose in mind and is small in scale, relative to the surrounding uses and industrial estate setting. The infrastructure is clean and low key in terms of appearance which visually will be industrial.
- 6.24 The design of the facility is predetermined by the equipment available; varying manufacturers making essentially visually similar equipment. **Figure 6.1** provides photographic reference of an example hydrogen electrolyser, albeit this is not the exact unit which will be used on the site.

Figure 6.1: Hydrogen Electrolyser Example Photograph



- 6.25 The layout of the development has been influenced by wider environmental objectives including landscaping, drainage, and biodiversity. This is enhanced by supporting landscaping which forms a critical element of the proposed development to incorporate a biodiversity corridor along the eastern boundary of the Site.
- 6.26 Utility supply and connections can be conveniently provided to the Site which will be underground and not visible.
- 6.27 Ultimately, the proposed development will be industrial in both character and appearance. This echoes the established character of the Pengarnddu Industrial Estate and will be visually commensurate to the existing energy development facilities adjacent to the Site both to the north and west. Views into the Site from the highway and public realm generally are minimal owing to the adjacent highway landscape bund/verge therefore any resultant change to the street scene will be negligible.
- 6.28 With regard to the design and appearance of the proposed development, this is wholly appropriate for the location. It reflects the local industrial estate context in terms of scale, height, massing, elevational treatment, materials and detailing, layout, form, mix and density. The proposal comprises an efficient use of land, has no unacceptable impact on local amenity and utilises renewable energy resources. The proposed development is therefore wholly in accordance with the sustainable design and placemaking requirements of RLDP Policy SW11.

Noise

- 6.29 Policy EnW4 states that development proposals will be required to demonstrate they will not result in an unacceptable impact on people, residential amenity, property and/or the natural environment.
- 6.30 Hydrogen electrolyzers do create some noise via the cooling fans and compressor which are required when the facility is operational and generating. The application is supported by a noise impact assessment, prepared by Inacoustic. This provides an assessment of the proposed development in noise terms.
- 6.31 The Site is located within the Pengarnddu Industrial Estate where a degree of noise associated with industrial/commercial uses is expected. RLDP Policy EcW2 defines this industrial estate as an employment site where such development is supported.
- 6.32 The supporting assessment identifies that there are no noise sensitive receptors in the immediate proximity to the Site, with the closest being a residential building circa 390m to the south. While the premises are not currently in residential use, it is still considered in the assessment due to its potential for future noise-sensitive use.
- 6.33 The supporting assessment identifies that the proposed development will give rise to rating sound levels that do not exceed the measured background sound levels at all noise sensitive receptors during the day and during the night thus giving rise to a 'Low Impact' and aligned with the principles of TAN 11 and Policy EnW4 of the RLDP..
- 6.34 Ultimately, it is confirmed that the proposed development will not give rise to unacceptable noise levels and is wholly appropriate for the industrial estate setting in which it will be located. This will not result in an unacceptable impact on people, residential amenity, property and/or the natural environment in accordance with RLDP Policy EnW4.

Biodiversity & Landscape

- 6.35 This application is supported by a Preliminary Ecological Appraisal, prepared by Western Ecology, comprising a desktop and field survey. This has identified that existing onsite habitat is of no greater than site value.
- 6.36 The Preliminary Ecological Appraisal has confirmed that it is possible that common bird species nest at the Site boundary. Vegetation clearance in these areas is therefore proposed to be completed during the period September to February inclusive, outside the main bird nesting season. If this is not practicable prior to the start of construction, the Site will be thoroughly inspected by a suitably qualified person. If nesting birds are found, all activities likely to adversely impact the nesting area will be delayed until chicks have fledged.
- 6.37 Japanese Knotweed has been identified to be growing just outside the southern boundary of the Site which could, over time, begin to colonise the Site. In this regard a Japanese Knotweed management plan will be

developed to avoid its spread into the Site. The presence of any other species onsite is negligible with no further mitigation required.

- 6.38 The proposed development includes biodiversity and landscape measures to ensure habitat creation on the Site, details of which are provided within the support Biodiversity Assessment, prepared by Western Ecology. In this regard, the existing Site comprises an area of sparsely vegetated land with limited value for biodiversity. The main features of value are an area of grassland at the margins.
- 6.39 Along the eastern extents of the Site boundary, species rich tussocky grassland will be created for the benefit of pollinators and other invertebrates and to enhance linkage from the south to the north.
- 6.40 A sparrow terrace will be fitted to the eastern aspect of the amenity cabin to provide habitat for House Sparrow and other nesting birds. This is designed to help redress the balance of falling House Sparrow numbers.
- 6.41 Moreover with regard to invertebrates, bee boxes/bee post will be provided on the Site which will attract solitary bees and wasps.
- 6.42 Ultimately, the proposed development provides an opportunity to create and maintain a species-rich grassland, whilst bee boxes/post and bird boxes will create and secure habitats for these species which are largely lacking within the Site at present. A planning condition to this effect can be agreed to secure landscape and biodiversity enhancement measures on the Site to secure the creation, management and monitoring of the biodiversity net benefit delivered by the proposed development.
- 6.43 This positively addresses RLDP Policies SW111, EnW1 and EnW5 through provision of suitable, appropriate and proportionate landscape and biodiversity measures which ultimately deliver a net gain for biodiversity for the proposed development, in accordance with the provision of the PPW.

Drainage & Flood Risk

- 6.44 This application is supported by a Flood Consequence Assessment and SuDs Drainage Strategy, prepared by Haydn Evans. This confirms that the Site is at a low risk of flooding from all sources and meets the requirements of TAN 15 in terms of appropriate development.
- 6.45 The surface water drainage strategy for the Site has been designed based on the requirements of the Flood & Water Management Act 2010 Schedule 3 Sustainable Drainage and the Welsh Government document Statutory standards for sustainable drainage systems (2018).
- 6.46 It is proposed to discharge surface water runoff generated by the site into the ground using infiltration techniques. Surface water generated by the site is discharged via an infiltration blanket or a swale and infiltration trench.

- 6.47 The use of infiltration drainage techniques, green space and vegetated components provide amenity and biodiversity benefits.
- 6.48 The surface water drainage system has been designed so that it can be constructed and maintained easily; this has been achieved by using SuDS techniques that allow surface water to be managed at source. A SuDS Management and Maintenance Plan is provided in this regard.
- 6.49 The proposed development for the site does not increase on or off-site flood risk and is wholly acceptable. Standards 1-6 required by the Welsh Government document *Statutory standards for sustainable drainage systems (2018)* have been met.

Highways & Transport

- 6.50 The Site benefits from an existing vehicular access directly off the highway to the south which also serves the existing two energy development facilities adjacent to the north and west of the Site. The established access is suitable in all regards for the proposed development through construction and operational phases and, as such, no upgrade/improvement works are proposed. An appropriate level of visibility can be achieved from the access and the visibility splays will remain free from obstruction to sightlines.
- 6.51 Construction of the proposed development will require HGVs/lorries delivering the plant/infrastructure to the Site via the established access. A crane will also be required to lift the containers from the HGVs into position on the Site. The remaining requirements for construction deliveries and plant will be very limited.
- 6.52 A Construction Management Plan will be prepared prior to the commencement of development to ensure robust management policies and procedures are implemented throughout the construction phase to avoid, minimise or mitigate any effects on the surrounding area.
- 6.53 With regard to movements to/from the Site when the proposed development is operational this will require routine maintenance visits by technicians which will not require a vehicle larger than a light van. Off street parking is provided within the compound in this regard. For collection of the stored hydrogen, this will be done by HGVs which will travel in/out of the Site compound via a one way system. Swept path analysis is provided on the submitted site plan demonstrating that vehicles can comfortably enter and leave in forward gear, utilising the existing access serving the Site.

7.0 Conclusions

- 7.1 The proposed development seeks full planning permission for the construction of a Green Hydrogen Electrolyser facility on the Site, situated on the Pengarnddu Industrial Estate in Dowlais, Merthyr Tydfil.
- 7.2 Hydrogen production is increasingly perceived as a valuable and reliable method of renewable energy production that can make a meaningful and significant contribution to the UK's transition to a net zero economy. The UK Government has committed to net zero carbon emissions by 2050 and hydrogen is seen as a significant resource in reaching this target. Hydrogen is currently an underutilised fuel for electricity production in the UK economy, but the Government have expressed a desire to enhance its potential in future schemes.
- 7.3 The proposed development directly responds to the national direction of growth in the renewable energy sector, delivery a hydrogen generating system which will positively contribute towards transition to Net Zero, decarbonisation and climate-resilience. The need for the proposed development is great.
- 7.4 The location of the development on the Pengarnddu Industrial Estates is in principle acceptable and wholly appropriate for this setting and commensurate with established uses in this area.
- 7.5 It is demonstrated that the proposed development would give rise to no unacceptable impacts and would incorporate a net benefit for biodiversity on the Site.
- 7.6 This planning statement provides an assessment of the proposed development against the Development Plan, and relevant material considerations. Ultimately it is concluded that the proposed development accords with the Development Plan and in the planning balance, the proposed development is wholly acceptable and should be granted planning permission in accordance with the statutory presumption as set out in Section 38(6) of the Planning and Compulsory Purchase Act 2004.



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