Green GEN Rhiwlas Connection

Route Alignment Document Addendum

Re-routed Section between Clatter and the Cors y Garreg Substation

February 2026

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1 Introduction

1.1 Purpose of this Document

1.1.1 This Route Alignment Document (RAD) addendum has been prepared by Sweco on behalf of Green Generation Energy Networks Cymru Limited (Green GEN Cymru) to inform a non-statutory consultation on the routeing process and refinement of the preferred route alignment for the proposed 'Green GEN Rhiwlas Connection Project' (the Proposed Development).

1.2 Context and Background

1.2.1 The existing electricity network in Mid Wales does not have the capacity to connect new renewables projects to the national grid. Green GEN Cymru has received an Independent Distribution Network Operator (IDNO) licence from Ofgem allowing the construction, owning, operation and maintenance of electricity distribution networks that will support the growing demand for renewable energy infrastructure both locally and nationally[1].

1.2.2 The proposed network would:

- Connect community and renewable energy generation projects to the grid;
- Reduce pressure on the existing grid network;
- Support energy resilience and security; and
- Help to enable the rollout of green heating and electric vehicles.

1.2.3 The Proposed Development is for a 132 kilovolt (kV) wood pole overhead line (OHL) connecting the proposed Rhiwlas and Banc Du Energy Parks (the Energy Parks) near Llangurig to a new collector substation near Cefn Coch (known as the 'Cors y Garreg substation'), all located within Powys County Council (PCC). The Cors y Garreg substation is part of the Vyrnwy Frankton Connection Project, which is being consulted on separately. Further information about this project is available at www.greengenvyrnwyfrankton.com.

1.3 Effect of proposed changes to the Vyrnwy Frankton Connection Project

1.3.1 Following the statutory consultation on the Vyrnwy Frankton Connection Project in 2025, due to engineering assessments and analysis of cumulative effects on the area a further design iteration of the Vyrnwy Frankton Connection Project is proposed. The collector substation near Cefn Coch, part of the Vyrnwy Frankton Connection Project, has been repositioned to the northwest to reduce the overall amount of infrastructure required as part of that project (including removing the double circuit underground cabling through the Llyn Lort Energy Park). Initially the collector substation was located to the south west end of Llyn Lort Energy Park (approx. location ///trails.albums.famines) (known as the 'Grug y Mynydd substation') but under proposed revisions to the design of the Vyrnwy Frankton Connection Project, would now be located to the north east of Llyn Lort energy park at Cors y Garreg (approx. location ///league.burden.tricycle). The northern end of the Proposed Development connects to this new collector substation at Cors y Garreg.

Due to the proposed change in the collector substation location, the route of the Proposed Development requires diversion and this has affected the majority of Section 1 at the northern end of the route, between Clatter and the Vyrnwy Frankton Collector Substation at Cors y Garreg. Sweco were commissioned by Green GEN Cymru in July 2025 to identify a route (initially 200m wide) within which a specific pole-spotted alignment would be developed. The route, for the new section of wood pole OHL, would connect the earlier identified route as far as Clatter to the substation location at Cors y Garreg (the 'new point of connection'). This new route is referred to as the 'Re-routed Section 1'. An overview of the proposed new re-route of Section 1 (including the locations of the former and current proposed substations) is presented in Figure 1-1Figure 1-1 and

[1] https://greengencymru.com/green-gen-cymru-granted-idno-license-by-ofgem/

1.3.2 Figure 1-2, alongside the route corridors that have been the subject of previous consultations for the Proposed Development in 2023 and 2024.

1.3.3 To identify the 200m wide route, a site visit to the area was undertaken on behalf of Green GEN Cymru by Sweco's landscape and visual impact assessment (LVIA) lead who identified the proposed alternative point of connection route having regard to the Holford Rules[2]. Cultural Heritage and Ecological constraints were also considered in establishing the 200m wide route to avoid any important constraints related to these aspects. Consideration has also been given to other potential planning applications in the region and the new route in this section has been proposed to take all of these into account. Figure 4-1 shows the re-route of Section 1 in greater detail, including the identified 200m corridor.

[2] See section 3.3 of the November 2023 Routeing & Consultation Document for further detail: https://rhiwlasgen.wales/downloads/Routeing%20Consultation%20Document_Final.pdf

Figure 1-1: **Green GEN Rhiwlas Connection– Comparison of previous Section 1 route (from previous Routeing Consultation Document RCD)) and new re-routed Section 1 to the Cors y Garreg Substation**

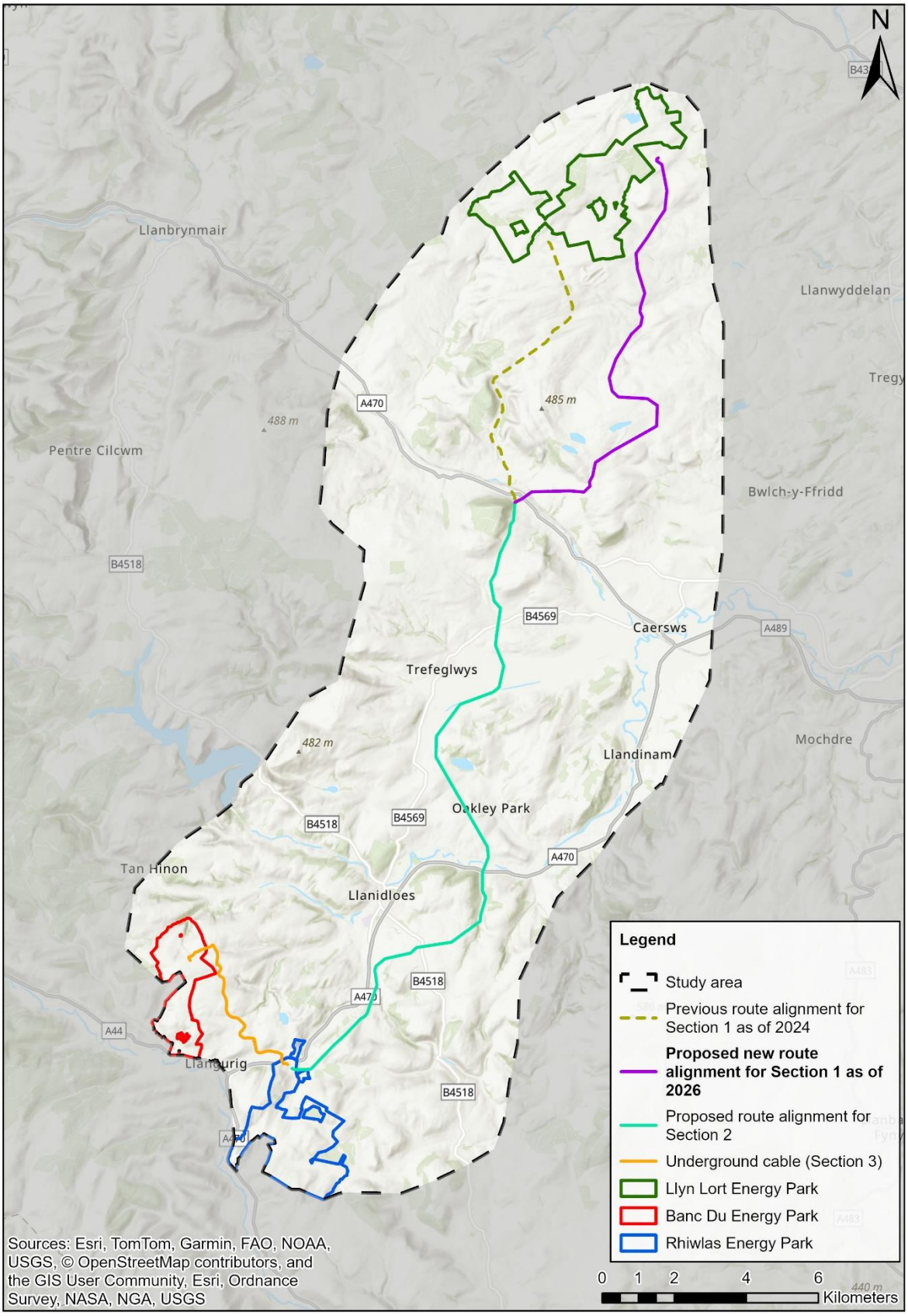
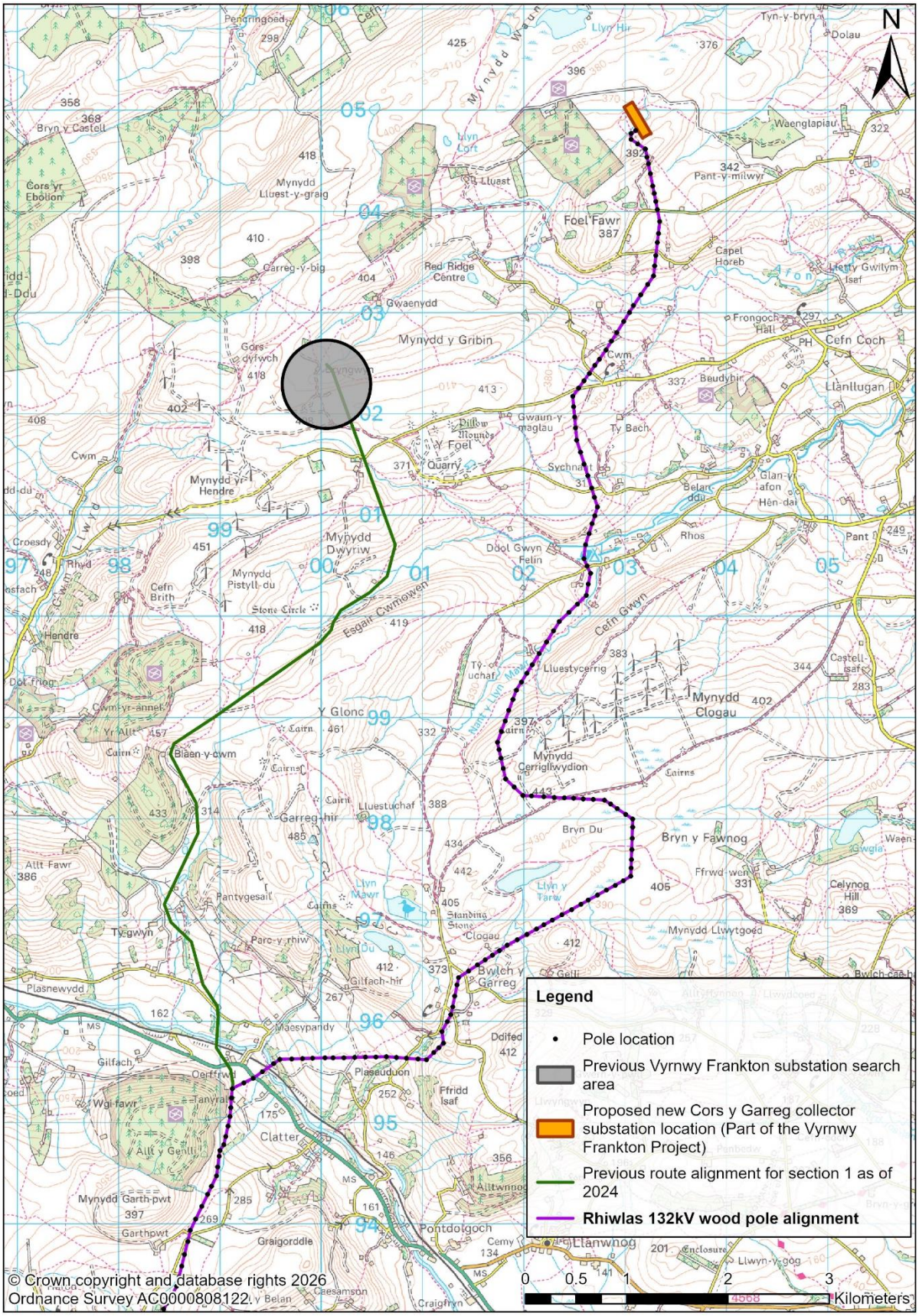


Figure 1-2: Comparison of previous Section 1 route and new re-routed Section 1 to the Cors y Garreg Substation



1.4 Purpose of this Report

1.4.1 Between 15 November 2023 and 10 January 2024, Green GEN Cymru undertook the first stage of non-statutory consultation on the Proposed Development, outlining the background to, and need for, the Proposed Development.

1.4.2 As part of that consultation, a Routeing and Consultation Document (RCD) was published, setting out the process followed by Green GEN Cymru in appraising potential route options and defining a preferred route corridor. The RCD published in November 2023 is available on the Rhiwlas Connection Project website: https://rhiwlasgen.wales/.

1.4.3 The RCD identified the following preferred route corridor options (split into three sections to include the OHL and underground cable) as shown on Figure 1-1Figure 1-1:

- A corridor from the collector substation at Llyn Lort to Trefeglwys (crossing the A470 between Carno and Clatter). (Referred to as Corridor 1B);
- A corridor from Trefeglwys to Llangurig broadly following the route of the A470 and connecting to the northern end of the Rhiwlas energy park. (Referred to as Corridor 3A); and
- An underground cable between the Banc Du Energy Park and the Rhiwlas Energy Park substation (Referred to as Corridor 4).

1.4.4 The Corridor of sections 3A and 4 of the route remain unchanged. However, the majority of Corridor 1B has been changed due to the proposed change in the new collector substation location at Cors y Garreg.

1.4.5 In November 2024 Green GEN undertook the second stage of non-statutory consultation on the routeing process and refinement of the preferred route corridor to a preferred route alignment for the Proposed Development and published a Route Alignment Document (RAD) to support the consultation process. The RAD is available on the Rhiwlas Connection Project website: https://rhiwlasgen.wales/.

1.4.6 As the re-route of Section 1 is a major change to the previously consulted route (in the previous RCD and RAD), this targeted stage of non-statutory consultation is being undertaken on this specific re-routed section only. This RAD Addendum has been prepared by Sweco on behalf of Green GEN Cymru to inform this non-statutory consultation on the routeing process and refinement of the preferred route corridor to a preferred alignment for the re-routed Section 1 of the overall Proposed Development.

1.4.7 It is not the intention of this RAD Addendum to reproduce all the information within the original RAD and references to the previous RAD are included where appropriate, which should be read alongside this document.

Structure of this RAD addendum

1.4.8 This RAD addendum is structured as follows:

- Chapter 2 introduces the Proposed Development;
- Chapter 3 describes the overall methodological principles applied to the routeing stage (beyond the identification of the preferred corridor as presented in the RCD);
- Chapter 4 describes the outcome of the Stage 2b route identification process and describes the preferred route alignment. The four key stages of the overall routing process are shown in Figure 1-3;
- Chapter 5 sets out the proposals for the consultation on the preferred route; and
- Chapter 6 describes next steps in the route alignment process including the EIA.

1.4.9 This document provides an opportunity for interested parties to comment on the changes and the proposed re-routed Section 1 and any other related issues which can inform the next stages of the Proposed Development (Chapter 5).

1.5 The Need for the Proposed Development

1.5.1 In 2008, the Climate Change Act came into force. Section 1 of this Act (amended in 2019 when the UK Government declared a climate emergency) requires the Secretary of State to ensure that the net UK carbon account for 2050 is at least 100% lower than the 1990 baseline. This is often referred to as the "net zero" target. It also requires the Secretary of State to set legally binding carbon budgets which apply for five year intervals from 2008 and (in theory), place a restriction on the total amount of greenhouse gases the UK can emit over those five-year periods. These carbon budgets are there to set a trajectory towards the net zero target by 2050. The UK Government's October 2021 Net Zero Strategy sets out its policies and proposals for decarbonising all sectors of the UK economy in order to meet its net zero target by 2050.

1.5.2 The Environment (Wales) Act 2016 also requires the Welsh Government to reduce greenhouse gas emissions (GGEs) in Wales to net zero for the year 2050, with a system of interim emissions targets and carbon budgets. In 2017, the Welsh Government set a target that at least 70% of Wales' electricity consumption would be met from renewable generation by 2030.

1.5.3 In April 2019, the Welsh Government also declared a climate emergency. As part of its plan to tackle this emergency, the Welsh Government has brought forward policies to encourage innovative ways of creating energy that are sustainable, secure and cost effective.

1.5.4 Onshore wind development will play a critical role in assisting the Welsh Government to meet its renewable targets. A key challenge to delivering Wales' net zero obligations is the lack of existing electricity network capacity in some of the best locations for onshore wind. Without intervention, this will hinder progress on achieving the UK Government and Welsh Government's net zero targets. Future Wales notes "*The Welsh Government acknowledges the significant challenge that grid infrastructure and capacity will have on the potential for new on-shore and off-shore renewable energy development across Wales*". There is therefore a clearly identified national need for new renewable energy development and associated grid infrastructure in Wales.

1.6 Benefits and impacts of the Green GEN Cymru proposals

1.6.1 The proposals increase access to new renewable energy, helping address the biggest threat facing us and future generations – the climate emergency. The Proposed Development will be designed to transport the clean, green energy generated by the Energy Parks, to the homes, businesses, hospitals and communities that need it, helping to support Wales' energy resilience.

1.6.2 These benefits cannot be achieved, however, without some effects, including those which are linked to the construction and operation of the Proposed Development and the associated development. These potentially include effects on landscape and visual amenity; ecology and ornithology; water quality and flood risk; cultural heritage; noise and vibration; land use including woodland and transportation and socio-economic factors. The Proposed Development requires an Environmental Impact Assessment (EIA) which will systematically assess the environmental effects of the project on the environment. The outcomes of the EIA will be presented in an Environmental Statement (ES) which will be submitted as part of the application for consent. A draft version of the ES will be available as part of the statutory pre-application consultation materials, and the consultation process is discussed further in section 5 of this RAD.

1.6.3 Many of these effects can be reduced or avoided through careful routeing, design and the use of mitigation measures – part of the reason for consulting is to get views on how this can best be achieved.

1.7 Who are Green GEN Cymru?

1.7.1 Green GEN Cymru is working to develop a stronger, more resilient renewable electricity network for Wales – distributing clean, green energy to our homes, hospitals, schools, businesses, and communities. This will help to address the climate emergency whilst supporting the Welsh Government's target to meet the equivalent of 100% of Welsh electricity needs from renewable sources by 2035.

1.7.2 As an IDNO[1], Green GEN Cymru's proposed network looks to unlock Wales's energy potential and support, accelerate and enable Wales's net zero transition. New grid infrastructure in Wales is needed to

strengthen energy resilience, add capacity to the local network and help pave the way for the widespread rollout of green heating and electric vehicles

1.7.3 Green GEN Cymru are committed to working closely with Welsh communities and stakeholders as they develop their plans, to maximise the benefits and minimise the impacts for local people.

1.8 The Development and Consenting Process

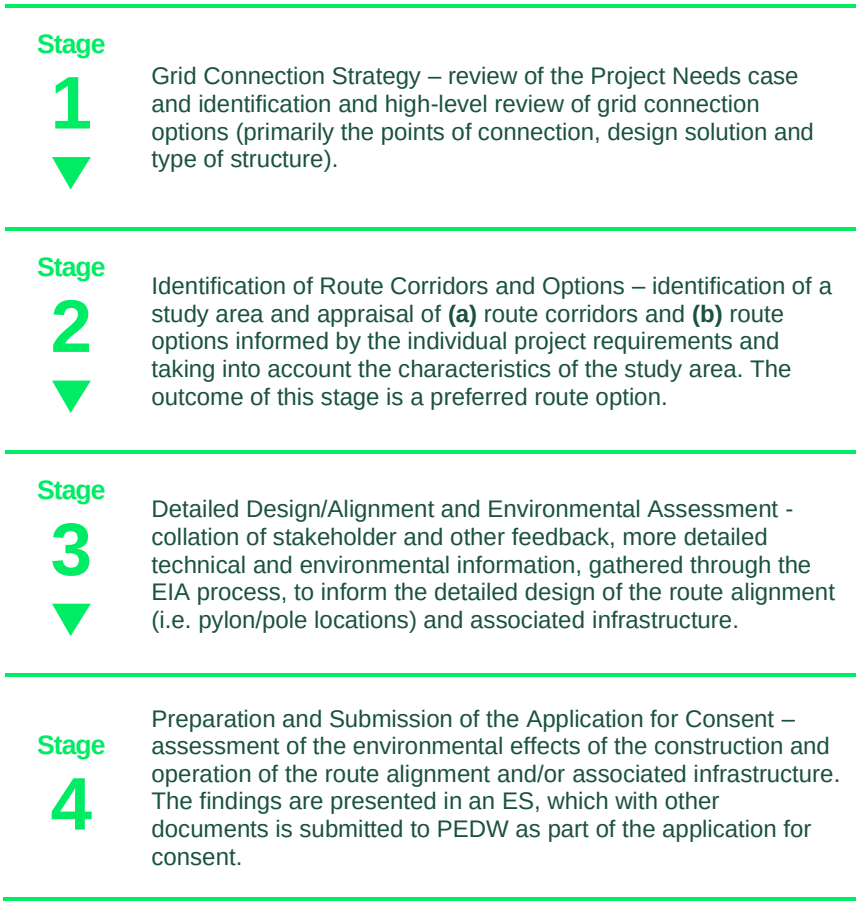
1.8.1 This document reports on the next stages of the routeing process of the Proposed development, following on from the RCD which set out the identification of the preferred route corridor and the RAD which set out the preferred route alignment.

1.8.2 The staged approach follows the approach as described in the Green GEN Cymru 'Approach to Routeing Grid Infrastructure in Wales' guidance document[3] which has been adapted for the Study Area for this project. The staged process is summarised in Figure 1-3Figure 1-3.

1.8.3 The RCD and consultation undertaken in December 2023 represented Stages 1 and 2a of the process, whereas the RAD (and this Addendum) presents the findings of Stage 2b, the outcome of which being a preferred route alignment.

1.8.4 The routeing process is iterative in nature with the output of each stage informing the subsequent stages. Feedback received from consultation and/or technical review can also result in earlier stages being repeated as necessary in an iterative manner.

Figure 1-3: Principal stages of the iterative routeing process



[3] https://rhiwlasgen.wales/downloads/Approach%20to%20routeing%20Grid%20infrastructure%20in%20Wales.pdf

1.8.5 Chapter 5 of this document sets out the approach to consultation in further detail.

The Infrastructure (Wales) Act 2024 and Significant Infrastructure Projects (SIP)

1.8.6 The Green GEN Rhiwlas Connection Project satisfies the criteria of a 'Significant Infrastructure Project' (SIP) and will require consent under the Infrastructure (Wales) Act 2024. SIPs are infrastructure development projects of national importance which are decided by the Welsh Ministers, replacing the Developments of National Significance (DNS) consenting regime for certain types of major infrastructure projects in Wales.

1.8.7 The Infrastructure (Wales) Act 2024 became law in June 2024, seeking to modernise and simplify the process for developing significant infrastructure projects in Wales by establishing a single infrastructure consenting process for specified types of major infrastructure projects and create more consistency and certainty in Wales' ability to deliver infrastructure projects in the future.

1.8.8 A series of new regulations came into force on 15 December 2025 which will implement the Infrastructure (Wales) Act 2024, including transitional provisions to ensure a smooth passage from one regime to another. Further information on the SIP consenting regime is available on the Welsh Government Website, including details of the regulations that came into force on 15 December 2025 and detailed guidance for Applicants, Consultees and other interested parties in the SIP process: https://www.gov.wales/significant-infrastructure-projects-sip-guidance

Planning Policy

1.8.9 The RCD and RAD cited Welsh Renewable Energy and Climate Change Policy Future Wales: The National Plan 2040 (February 2021) as the primary key planning policy to determining whether or not the Proposed Development should be consented. Future Wales is the Welsh Government's National Development Framework and is the highest tier of the Development Plan in Wales. Future Wales has particular regard to the following Welsh Government policy and legislation:

- Planning Policy Wales (Edition 12 February 2024) (PPW);
- Well-being of Future Generations (Wales) Act 2015;
- Environment (Wales) Act 2016;
- Prosperity for All: A Low Carbon Wales (March 2019); and
- Policy Statement: Local ownership of energy generation in Wales – benefitting Wales today and for future generations (February 2020).

1.8.10 Also of particular relevance is the PCC Adopted Local Development Plan (2011-2026) (April 2018). Commentary was provided on all of the aforementioned planning policy as part of the RCD, and that commentary remains relevant for the purposes of this RAD (with the exception of PPW, which was updated to edition 12 in February 2024).

1.8.11 PPW (Edition 12) provides the key principles for the planning system in Wales, in terms of what development plans and decisions must achieve and how development should deliver the best possible outcomes and it is a material consideration in the planning process.

1.8.12 Section 5.7 of PPW details the policy in relation to energy generation and the electricity grid network and that a positive approach to grid infrastructure should be taken to support low carbon emissions. The proposals of Green GEN Cymru would make a significant contribution to these ambitions by both unlocking and delivering the renewable energy potential in areas that are not currently serviced by sufficient grid infrastructure.

1.9 Environmental Impact Assessment (EIA) Scoping

1.9.1 Due to the size and nature of the Proposed Development an EIA will be required. To identify the scope (i.e. topics, features and impacts to be considered) of the EIA, a scoping exercise was undertaken and in March 2024, Green GEN Cymru requested a Scoping Direction from Planning and Environment

Decisions Wales (PEDW) in accordance with the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017[4] (the EIA Regulations).

1.9.2 The Scoping Report outlined the proposed approach to the EIA and identified potential environmental impacts that could affect sensitive receptors. The EIA process is to ensure that the Proposed Development has due regard for the environment, minimising adverse environmental effects and identifying opportunities for environmental enhancement.

1.9.3 The Scoping Direction received from PEDW sets out matters to be assessed in the ES which documents the EIA process for the Proposed Development and includes comments from a number of relevant statutory consultees . The ES will be prepared for the Proposed Development based on this scoping direction as required by the EIA Regulations.

1.9.4 Whilst Re-routed Section 1 is a change from the route corridors presented in the previous Scoping Report the principles of the Scoping Direction are also applicable to the Re-routed Section 1. This RAD Addendum will also be provided to statutory consultees including Powys County Council and Natural Resources Wales to provide an opportunity for comment.

1.9.5 The previous Scoping Report and Scoping Directions are available on the PEDW DNS project page for the Proposed Development[5].

[4] Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017. Available at: https://www.legislation.gov.uk/wsi/2017/567/contents/made

[5] https://planningcasework.service.gov.wales/. Case Reference: DNS CAS-02913-L1W3K0

2 The Green GEN Rhiwlas Connection – Re-routed Section 1

2.0.1 The Proposed Development will commence at the Banc Du Energy Park at the southern end of the Connection route. An underground cable of approximately 3km will then link directly to the Rhiwlas Energy Park, where the proposed new 132kV OHL will commence, linking to a proposed Collector Substation adjacent to the proposed Llyn Lort Energy Park at the northern end of the Proposed Development. The Llyn Lort Energy Park is located approximately 20-25km northeast of Banc Du and Rhiwlas Energy Parks.

2.0.2 This document focuses on the part of the OHL route that has changed location since the previous RAD, which comprises of a change to Section 1 of the route (the northern end) as shown on Figure 1-1 and Figure 1-2Figure 1-1. The remainder of the OHL route remains as described in the RAD.

2.1 New 132kV Overhead Line Infrastructure

2.1.1 The new 132kV OHL will comprise approximately 35 km of 132kV single circuit double wood poles between the Rhiwlas Energy Park and the Collector Substation at Cors y Garreg.

Wood Poles

2.1.2 The overhead lines for the Proposed Development will be supported on wood H poles. Wood poles are fabricated from pressure impregnated softwood, treated with a preservative to prevent damage to structure integrity. New wood poles are dark brown in colour and weather over the year to a light grey.

2.1.3 Double (also known as 'H') poles are proposed to be used for the new connection. Three types of wood pole will be required:

- **Intermediate**: where the pole forms part of a straight-line section
- **Angle**: where the OHL requires a change of direction. All angle structures will require to be back stayed.
- **Terminal**: where the OHL terminates into the substation or onto the underground cable via a cable sealing end.

2.1.4 Maximum allowable angle deviations of up to 75° are permitted on 'H' pole line, subject to specific limitations. An intermediate support 'H' pole, and a stayed angled 'H' pole are shown in Figure 2-1 and Figure 2-2 respectively.

Figure 2-1: Typical intermediate 'H' pole

Figure 2-2: Typical back stayed angled 'H' pole where the OHL changes direction

Pole Heights and Span Lengths

2.1.5 The standard wood pole height is typically 10-14m (including steelwork and insulators), and individual pole heights are determined to meet statutory clearance requirements. Pole height may be required to be increased where circumstances dictate, e.g., road and railway crossings, over elevated land, structures, or features. Pole sizes may also be slightly reduced where there are short spans or localised topography. As a consequence, the heights of the poles (above ground to the top of the insulators mounted on the poles), will range from 9 to 18m in height with an average height above ground level of 11.3m along the c. 35km OHL.

2.1.6 The average span length between wood poles is approximately 106m, although the length of individual spans can vary to suit localised conditions, depending on route alignment needs, landform and topography, existing infrastructure, environmental constraints and ownership boundaries conditions. Typically, the maximum possible span would be 120-140m.

Overhead Line Components

2.1.7 The line will carry one 3-phase circuit, which means that the poles will support three conductors. Each conductor is made of aluminium alloy, with a nominal diameter of 22 - 25mm². A fourth wire will be installed below the level of the 3-phase circuit to carry fibre optic communications signals.

2.1.8 Insulators attached to the pole cross arms support the conductors and prevent the electric current from crossing to the pole body. The insulators are likely to be made from a polymeric compound (grey plastic). The steelwork and insulators are between approximately 9 - 18m in height.

2.2 Ancillary Development

2.2.1 In addition to the proposed wooden poles supporting the OHL conductors, ancillary development will be required to facilitate the construction of the OHL. Ancillary development will include construction working areas around individual poles, temporary access tracks, watercourse crossings, winching/pulling areas and construction compounds/laydown areas. This ancillary development will be temporary and will be removed and the ground re-instated following completion of construction of the OHL.

2.3 Construction Works

2.3.1 The construction of the new 132kV OHL, will follow a well-established sequence of activities. This will be set out in further detail as part of the application for consent, but is briefly summarised below:

- Preparation of accesses and felling of woodland (where required but this will be minimised wherever practicable);
- Delivery of pole, excavation of foundations and erection of poles;
- Pole conductor ‘stringing’ and commissioning of the OHL; and
- Removal of temporary infrastructure and reinstatement. The construction of OHLs can sometimes require temporary infrastructure such as temporary accesses to pole locations. All have minimal / no maintenance requirements and will be subject to recognised procedures for dismantling/ decommissioning.

2.4 Access

2.4.1 Prior to construction of the OHL, temporary accesses will be constructed, as needed, and laydown and storage areas set up along the route as required. The use of existing tracks and watercourse crossings will be maximised, with the upgrading of these if needed. The locations of these temporary accesses, laydown and storage areas and watercourse crossings will be set out as part of the application for consent and the impacts associated with them assessed in the EIA.

2.4.2 The use of low ground pressure and plant when taking temporary access is preferred. If access is required to be taken through sensitive areas, identified during the EIA process, other less intrusive methods can be applied such as temporary steel matting, or timber roadways. However, sensitive areas

will be avoided where possible and alternatives considered as part of the iterative design and EIA process.

2.4.3 Any trees which may have an impact on safety clearances will be removed or lopped. Safety clearances, in the context of overhead lines and electrical installations, refer to the minimum distances that must be maintained between energized conductors, with other objects or people. Safety clearances help prevent accidental contact with live electrical components, which could result in electric shock, electrocution, or fires.

2.4.4 Following commissioning of the OHL, all equipment and temporary access of construction areas will be removed, with the land being reinstated to its prior condition in agreement with the relevant landowner(s).

Temporary Working

2.4.5 Temporary working areas and construction compounds will be required for the duration of construction works. There is a requirement for temporary vehicular access to every pole location as well.

2.4.6 'H' Pole locations have a working area of approximately 15m x 15m for intermediate poles and 30 x 30m for angle and terminal poles. In certain circumstances, the shape and size of the working area is controlled by the environmental and / or land-use constraints that are located nearby.

2.4.7 The temporary working areas will be returned and restored to former conditions following the completion of the construction works.

Operation and Maintenance

2.4.8 Most OHL components require minimal maintenance. The exposed elements which suffer from corrosion, wear, deterioration and fatigue, will require inspection and periodic maintenance over the lifespan of the OHL. OHL cables generally require refurbishment after approximately 40 years.

2.4.9 Any felled easement areas will also be managed to maintain the required clearances whilst the connection remains active. These measures will ensure that the necessary safety clearances are maintained to guarantee the safety and functionality of the active utility connections. Walkover surveys or flyovers will identify where there is a requirement to clear wayleaves of new growth.

Decommissioning

2.4.10 When the operational life of the Proposed Development ends, it is possible the OHL may be re-equipped with new conductors, insulators and refurbished. However, the OHL may also be decommissioned fully. At this stage, it is anticipated that the operational lifespan of the Rhiwlas and Banc Du Energy parks will be 40 years. There may be potential to extend the operational life of the energy parks or replace the turbines and electricity infrastructure, which would be subject to new planning consent(s) in the future. The need for the Proposed Development is therefore linked to the operational lifespans of the energy parks.

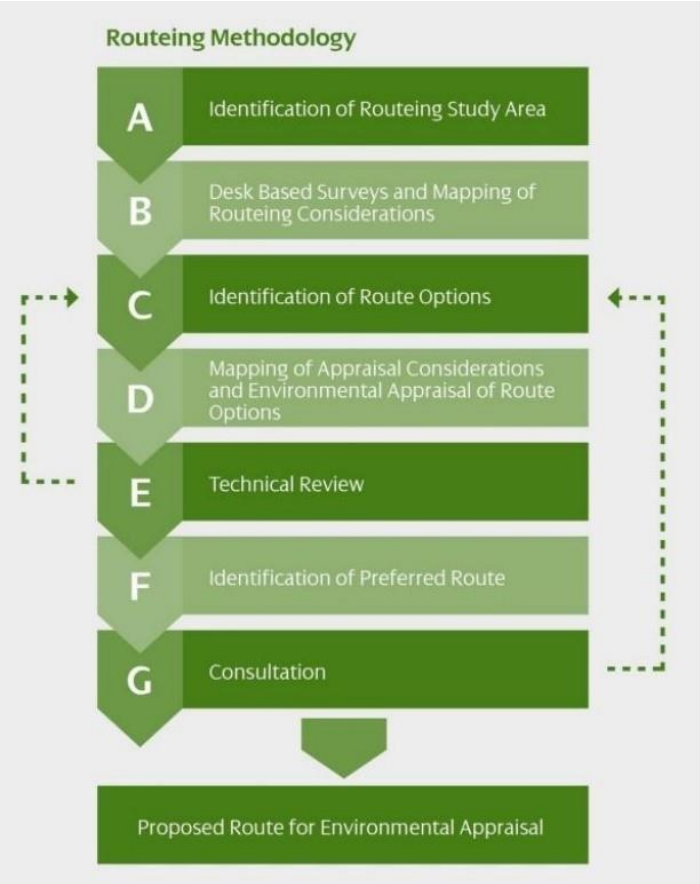
3 Routeing Process

3.1 Introduction

3.1.1 Section 3 of the RCD presented an overarching approach to the routeing process, and that is not replicated in this RAD Addendum. Environmental and technical constraints and effects have been taken into account during the routeing process and the overall approach to routeing has been based on Green GEN Cymru's Approach to Routeing Grid Infrastructure in Wales[3].

3.1.2 The general routeing process can be represented simplistically as shown in Figure 3-1 with the findings of each step informing the next step as the routeing design is progressively refined based on increasingly detailed assessment. This RAD Addendum marks the completion of Stage F for the re-routed Section 1 to the Cors y Garreg substation and will be used to inform the consultation on the preferred alignment in Stage G. Although the principles of this approach have been adhered to for the re-route of Section 1 considered here, desk based surveys and mapping of routeing considerations, supported by a field survey, concluded with the identification of only one feasible route option. An appraisal of route options was therefore not required.

Figure 3-1: OHL Routeing Process



3.2 Environmental Considerations

3.2.1 Statutory duties imposed by Section 38 and Schedule 9 of the Electricity Act 1989 require licence holders to seek to preserve features of natural and cultural heritage interest, and to mitigate where possible, any effects which their proposals may have on such features. The pole locations identified as part of this RAD have been determined through consideration of the natural and cultural heritage interest as well as technical and constructability factors. The pole locations and construction techniques will be reviewed as part of the ongoing, iterative design and EIA process.

3.2.2 The construction, operation and decommissioning of an OHL may have potential effects on people and the environment, including potential effects on (but not limited to, and in no particular hierarchical order):

- Visual amenity;
- Landscape character;
- Cultural heritage (including archaeology);
- Ecology and ornithology;
- Hydrology, hydrogeology, geology and water resources;
- Land uses including mineral operations, agriculture and forestry; and
- Socioeconomics, recreation and tourism.

3.2.3 Some effects can be avoided or limited through careful routeing, and that process is outlined in sections 3 and 4 of the RCD in defining the preferred corridor. Other effects are best mitigated through local deviations, the refining of the pole locations and / or specific construction practices.

3.2.4 There are other topics such as carbon, materials, traffic and transport (access), noise and air quality that would be considered in more detail during the EIA stage of the development and consenting process if scoped in based upon the preferred route.

3.3 Technical Considerations

3.3.1 Technical considerations which can influence routeing include the existing electricity transmission and distribution networks, existing transport infrastructure such as railways, access requirements, commercial operations such as quarries, Ministry of Defence (MoD) safeguarding areas, slope gradient, altitude, waterbodies and existing and proposed wind farms. It is important that these technical considerations are considered at the early stages of routeing to ensure that the preferred route is buildable.

3.4 Economic Considerations

3.4.1 Section 9 of the Electricity Act 1989, states that '*It shall be the duty of an electricity distributor…to develop and maintain an efficient, co-ordinated and economical system of electricity distribution...*'. This duty has been interpreted by Green GEN Cymru to mean that, as far as is reasonably practicable, and all other concerns being equal, the proposed OHL should be as direct as possible, and the route should avoid areas which would render the scheme unviable on economic grounds.

3.5 Identification of Corridors and Preferred Route

3.5.1 The re-routed Section 1 to the Cors y Garreg collector substation deviates from the previously selected route approximately 1 km north west of the village of Clatter. The Cors y Garreg substation is located approximately 10 km to the north of this point.

3.5.2 With regard to this point of deviation north west of Clatter, an analysis of routeing constraints across the entire original RCD study area was undertaken. The point of deviation lies on a direct line between Rhiwlas Energy Park and Cors y Garreg. There are topographical constraints that make deviating from the previously selected route at any other location unsuitable. For example, a more direct alignment might have deviated from the previously selected route slightly further to the south but high ground at Foel y Belan determined that this would not be suitable. This checking exercise confirmed that, had Cors y Garreg been the northern point of connection from the outset, the previously chosen route from the point of deviation near Clatter and southwards to Rhiwlas Energy Park would have been selected as the preferred route.

3.5.3 Consideration was then given to whether there was more than one feasible route option from the point of deviation to the north west of Clatter to the Cors y Garreg substation. This focused on whether a route further east (and closer to Caersws) should be identified and appraised in detail to fully consider an option which avoided passing over high ground in the vicinity of Bryn y Fawnog. This exercise concluded that any such route would be too indirect and would pass though more densely settled lower lying areas to the east. It was concluded that such a route did not merit detailed appraisal as an option. As a consequence,

only one route option was identified and no detailed appraisal of options is presented in this RAD Addendum.

3.5.4 The proposed route was determined through a combined process of desktop constraint analysis and 'ground truthed' with a study area survey.

3.5.5 The principal determining constraints associated with the identified route comprise:

- The presence of existing and proposed wind farms – a buffer of three rotor diameters was adopted (based on best available information for proposed wind farms) to determine a preferred safety routing constraint around individual turbines;
- The presence and distribution of Scheduled Monuments, particularly that located at the eastern end of Llyn y Tarw;
- Topographical form; and
- The distribution of residential properties.

3.5.6 The presence of existing and proposed turbines and Scheduled Monuments accounts for the indirect route required to cross the high ground at Bryn y Fawnog.

3.5.7 The identified preferred route from the point of deviation to the north west of Clatter to Cors y Garreg is described in more detail below.

Pole spotting

3.5.8 Pole spotting refers to the process of considering localised constraints and identifying potential specific locations for each individual wood pole. The initial pole spotting exercise has now been undertaken for the re-route of Section 1 and further details of the route are provided in Chapter 4.

3.6 Review of Preferred Route Post-Consultation and Confirmation of Proposed Route

3.6.1 Following consultation with stakeholders, including landowners and the community, and a review of consultation responses, the preferred route may be refined further to take account of feedback. This process results in confirmation of a proposed route for the purposes of progression to the EIA stage. Further public consultation on a detailed route alignment for the Proposed Development, including proposed wood pole locations, access routes and working areas will also take place during the statutory consultation phase of the pre-application process, as discussed further in Chapters 5 and 6 below.

4 Re-routed Section 1 to Cors y Garreg Substation

4.1 Description of the Re-routed Section 1 to the Cors y Garreg Substation Preferred Route Alignment

4.1.1 The new end point for the connection at the Cors y Garreg substation is shown at Figure 1-1 and Figure 1-2, alongside the proposed realignment to it from the previous alignment near the A470 at Clatter. A more detailed location plan is provided at Figure 4-1, showing the alignment of the re-routed corridor for Section 1 as well as the proposed individual wood pole locations.

4.1.2 There are numerous constraints including topography, proposed wind energy parks and accessibility for construction which has resulted in the location near Clatter being the most appropriate location to diverge from the original route alignment to the original substation at Grug y Mynydd. The new route of the OHL alignment is described (from north to south) in the following paragraphs.

4.1.3 From the Cors y Garreg substation, the OHL heads southward across undulating fields where it crosses the River Rhiw and then southward towards the settlement at Brynllugan, crossing the minor road that runs between Cefn Coch to the east and the A470 at Carno to the west. The route passes 900m to the east of the Tan-y-Foel quarry and continues southwest towards the River Rhiw where it crosses to the west of the Carmel Caravan Park.

4.1.4 From the River Rhiw crossing near the caravan park, the route heads up the valley following the Nant y Llyn Mawr and northwest of the existing Mynydd Clogau wind farm. It turns to the south west at Bryn y Fawnog and heads around the east side of Llyn y Tarw, following around the southern site of the lake before heading downwards near the small settlement at Bwlch y Garreg. It continues down the hillside south-westerly towards the A470, the River Carno and the Railway line between Caersws and Machynlleth, crossing all of these as it reaches the alignment of the route in open fields to the northeast of Clatter, where it joins the OHL that has been previously consulted upon.

4.1.5 Figure 4-1Figure 4-1 shows the alignment of the OHL re-routed corridor for Section 1. The following provides a more detailed description of the proposed Re-routed Section 1 from Clatter to the Cors y Garreg Substation. The route is described from north to south in four sub-sections with the key determining constraints and considerations identified below (in sections 4.2 to 4.5 of this document).

4.2 Sub-Section 1: Cefn Coch Road to Cors y Garreg substation

4.2.1 North of the Cefn Coch road the proposed route seeks to maximise its distance from a number of residential locations but also avoid the distinct and steeply sloping landform at Foel Fawr, passing instead within a shallow valley landform to its east.

4.2.2 In the final approach to the proposed site of the Cors y Garreg substation the proposed route traverses a ridgeline of quite elevated land slightly to the east. This has been carefully considered but has been deemed a preferable route into the northern connection point given the distinct landform at Foel Fawr (which is positioned on a more direct alignment) and the forest and woodland cover within the valley to the west.

4.3 Sub-Section 2: Ridgeline at Mynydd Cerrigllwydion to Cefn Coch Road

4.3.1 The highest point along the proposed re-routed Section 1 is located on the ridgeline at Mynydd Cerrigllwydion. The ridgeline is crossed at a slightly lower point and at an oblique angle.

4.3.2 The proposed route then curves westwards around the existing wind turbines at Mynydd Clogau and then takes advantage of a valley landform to drop down in elevation across open moorland to pass on low ground to the east of Ty Hir. To the north of Ty Hir the proposed route takes a slightly winding alignment to maximise its distance from the campsite at Ty-newydd and then climb the steep slopes of the valley to the north at an oblique angle.

4.3.3 The final stretch to the Cefn Coch road runs across open farmland in an optimal position between the high open moorland to the west and the more settled valley to the east.

4.4 Sub-Section 3: High ground of Bryn y Fawnog

4.4.1 To the north of Bwlch y Garreg the proposed route turns to the north east and passes from a settled landscape into an area of more open moorland culminating at Bryn y Fawnog. The route initially takes advantage of a shallow valley landform to the south of Clogau to minimise effects on the setting of Llyn y Tarw and the footpaths that climb to it. The western end of this waterbody and surrounding paths attract a notable level of recreational use, particularly in the summer months.

4.4.2 The proposed route has been carefully aligned to the east of Llyn y Tarw. This would minimise any effect on the setting of a substantial scheduled monument located at the eastern end of the waterbody, and also take best advantage of lower ground to its east to minimise effects on views and setting. This results in a winding route across this area of higher ground which has been selected to minimise its visibility. Further route refinement is anticipated in this vicinity to ensure that constructability is eased and effects minimised by wherever possible pole siting away from suspected areas of peat (that will be subject to further detailed assessment as part of the EIA process).

4.5 Sub-Section 4: North West of Clatter to Bwlch y Garreg

4.5.1 From the point of deviation north west of Clatter the proposed route heads north east to cross the valley of the Afon Carno. This river valley features an almost continuous belt of woodland cover (much of it on the inventory of native woodland or identified as possibly ancient woodland) and a number of alternative positions to cross the valley and river were considered. The chosen position picks up where the river is already crossed by the railway and where the belt of woodland cover on the northern side of the river is narrower. The route passes over the railway at an appropriate angle in line with Network Rails operational requirements.

4.5.2 Once the river is crossed, the proposed route turns east to cross an area of reasonably gently sloping open farmland, passing to the north of residential properties and a listed building in the vicinity of Plasaudyon.

4.5.3 To the south of Wtrawen, the proposed route runs parallel to an existing 132 kV OHL. This existing OHL is crossed to the east of Wtrawen.

4.5.4 The proposed route then turns north to follow a shallow valley landform and pass between a number of dispersed residential properties at Bwlch y Garreg. An optimal route has been identified to minimise impacts on the amenity of these properties by running parallel to a local uncategorized road.

Figure 4-1: Green GEN Rhiwlas Connection Re-routed Section 1 alignment and pole locations

5 Consultation Process

5.1 Introduction

5.1.1 Green GEN Cymru is committed to consulting comprehensively on its proposals for the Proposed Development. This is so feedback from stakeholders and communities can be taken into account in the decisions made on the Proposed Development. This chapter provides an overview of the consultation Green GEN Cymru will undertake for the Proposed Development.

5.1.2 Our targeted consultation on Re-routed Section 1 for the Proposed Development between Clatter and Cors y Garreg (near Cefn Coch) is open from **Wednesday 11th February to Wednesday 11th March 2026**. It focuses on the updated route and proposed wood pole locations. Feedback is only being sought for this section only (i.e. only the re-routed Section 1 as shown on Figure 1-2 and Figure 4-1).

5.1.3 A final statutory consultation period, with full plans for the whole route, is expected to take place later in 2026 where there will be opportunity to give feedback on the entire route and detailed proposals (including access routes, construction compounds and the like).

5.2 Why Consult?

5.2.1 Green GEN Cymru is developing a stronger, more resilient renewable electricity network that is greatly needed to distribute clean, green energy. The proposals increase access to new renewable energy, helping address the climate emergency. The proposals will be designed to enable the connection of other energy parks, community projects, and support energy resilience.

5.2.2 Delivering the infrastructure we need to address climate change, requires a careful balance. Green GEN Cymru is focused on causing the least disturbance to those who live, work and enjoy recreation close to the proposals and is committed to protecting the surrounding environment.

5.2.3 It is important to Green GEN Cymru that communities and stakeholders have the opportunity to comment on proposals at an early stage so decisions can be made in view of their feedback and identify ways to reduce or avoid effects and create opportunities.

5.3 Green GEN Cymru plans for consultation

5.3.1 Green GEN Cymru is planning to undertake one further stage of statutory consultation to invite comments on the proposals, prior to making a SIP consent application. An indicative overview of the consultation stages and dates for these can be found in Table 5-1Table 5-1 below.

Table 5-1: Overview of each consultation stage for the Rhiwlas Green Energy Network

Stage	Overview of consultation	Date
Stage one: Non-statutory consultation Route Consultation Document (RCD) **COMPLETED**	Work to date to identify route options. Identification of local issues and further considerations Proposed route in which a connection could be developed.	Concluded in January 2024
Stage two: Non-statutory consultation Route Alignment Document (RAD) **COMPLETED**	Proposed route alignment for the new connection including sites for the infrastructure required (including wood pole locations).	Concluded in December 2024

Stage	Overview of consultation	Date
Stage two: Non-statutory consultation (this consultation, for the Re-routed section 1) RAD Addendum (this document)	Proposed re-route of Section 1 for the new connection including sites for the infrastructure required.	February – March 2026
Stage three: **Statutory consultation** Draft ES and other planning documents	Statutory Pre-Application Consultation process to align with SIP and Infrastructure (Wales) Act 2024 requirements. Draft ES and planning application documents available to review, including findings from survey and assessments undertaken as part of the EIA.	Planned to take place in Autumn 2026

5.3.2 Through all Green GEN Cymru consultation stages a mix of physical and digital engagement will be utilised to maximise the opportunities for local communities to provide their feedback.

5.3.3 The project website will be the primary means of accessing information about the proposals and the preferred method for providing feedback. The digital platform will be suitable for both desktop and mobile devices. However, this will be accompanied by physical engagement methods including mailings to addresses, community events, and hard copies of consultation materials being available.

5.4 Stage Two Consultation- February – March 2026

Where Green GEN Cymru is consulting?

5.4.1 Green GEN Cymru has defined an area in the vicinity of the proposals for re-routed Section 1 based on the potential impacts of the proposals (such as visual effects and/or effects from construction). This area comprises approximately 1km from either side of the preferred route alignment, the consultation zone. This approach is also consistent with previous Green GEN Cymru projects.

5.4.2 The majority of the proposed community consultation activities will be focused on this zone, including information publicising the consultation being issued to households, and community events. Where suitable venues are not available in the consultation zone events will be organised in the nearest population hubs.

5.4.3 Green GEN Cymru will also undertake activities to promote broad awareness of the consultation outside the consultation zone. This will include local advertising and notifying relevant stakeholders across the wider region.

Who Green GEN Cymru is consulting?

5.4.4 Those living and working in the consultation zone - Green GEN Cymru is primarily seeking to engage with the communities and stakeholder groups within the consultation zone. This will include residents, businesses, and their elected representatives.

Seldom heard groups

5.4.5 Green GEN Cymru recognise that there are individuals and groups that may have difficulties taking part in the consultation process, such as young and elderly people; people with a physical disability or learning difficulty; or whose first language is not Welsh or English. Requests for consultation materials to meet specific requirements (such as Braille or foreign languages, or for those with literacy difficulties) will be considered on a case-by case basis to establish how best to provide information.

People with an interest in land

5.4.6 Organisations and individuals who have a legal interest or right in the land potentially affected by the proposals at this stage.

Recreation and interest groups

5.4.7 Where local and other stakeholder organisations have a particular interest in or specific knowledge of a topic relevant to providing feedback on the proposals – such as landscape, wildlife, heritage, commerce, tourism, agriculture – Green GEN Cymru will also notify them of the consultation and invite their feedback.

What Green GEN Cymru is consulting on?

5.4.8 Green GEN Cymru is consulting on:

- Any factors which residents near to the preferred route corridor feel have not been considered in the identification of the route alignment; and
- Any specific factors residents feel Green GEN Cymru should consider when developing its proposals.

How are Green GEN Cymru consulting?

Public Exhibition

5.4.9 Green GEN Cymru is holding a community event to give people the opportunity to learn more about the re-routed Section 1 of the Rhiwlas Green Energy Network project, talk to the Green GEN Cymru team and ask questions. Large scale maps, photos and other materials will be available to view at in person events. Welsh and English speaking staff will also be at the event. Details of this event are as follows:

Date: **Wednesday 25 February 2026**

Time: 4pm – 7pm

Location: The Elephant & Castle Hotel
Broad Street
Newtown
SY16 2BQ
///ribcage.awakening.pushing

Consultation Materials

5.4.10 Green GEN Cymru is producing a range of materials for this consultation to ensure that residents, stakeholders and other interested parties are able to understand more about the Proposed Development and how they can get involved and shape the plans at an early stage. The materials which have been produced are intended for the public and provide information on our proposals to support providing feedback – with more details about these being available in Table 5-2Table 5-2 below.

Table 5-2: Overview of public consultation materials

Consultation Material	Overview
Project website	The website for the Proposed Development will have details of the re-routed Section 1 and the wider proposals. It holds all consultation materials. The website also hosts an interactive map, which enables users to scroll across the entire preferred route corridor and zoom in on areas of interest. A digital feedback form is also available, as are hard copies, which can be downloaded, printed and returned to the team in person or via a freepost address.

Consultation Material	Overview
	The project website will be hosted at www.rhiwlasGEN.wales, with a Welsh language version of the website hosted at www.rhiwlasGEN.cymru.
Consultation leaflet	A bilingual A5 consultation leaflet with a brief explanation of the Proposed Development and clear signposts of how to find out more (including website, contact details for the team and details of consultation events). The leaflet is being sent to all addresses in the consultation zone.
Consultation brochure	A detailed document including an overview of, and indication of the need for, the Proposed Development. The consultation brochure also includes maps of the preferred re-routed section 1 alignment. The consultation brochure is available to download from the website, in hard copy on request from a member of the team, and will be made available to attendees at the drop-in events.
Consultation feedback form	Hard copy and digital versions of feedback form for consultees to provide comments. These forms include questions on the topics outlined in this RAD Addendum.
Drop-in event display materials	Display boards at the public drop-in events will provide information on a range of topics related to the Proposed Development, as well as details of key project milestones and how to get involved in the consultation. The drop-in event display materials will be made available on the website to coincide with the first public drop-in event.

5.4.11 Copies of the documents, plans and maps will be available free of charge in digital format in the first instance. Requests for hard copies will be reviewed on a case-by-case basis. A reasonable copying charge may apply (up to a maximum of £500 for one full suite of documents) depending on the extent of documents requested.

Enquires, information, and how to provide feedback

5.4.12 Green GEN Cymru will operate a freephone enquiry line between 9am and 5pm, Monday to Friday (excluding Bank Holidays), with an answer phone service in operation outside of these hours. The freephone number is **0800 699 0081**.

5.4.13 A dedicated email address, **info@rhiwlasGEN.wales**, will also be available throughout the process for residents and stakeholders to request additional information and provide their feedback.

5.4.14 A freepost address, **FREEPOST TC CONSULTATION**, will also be available should residents or stakeholders wish to send in their views, questions or feedback in writing.

5.4.15 Feedback will also be able to be provided online, via the website – www.rhiwlasGEN.wales / www.rhiwlasGEN.cymru (CYM).

5.4.16 This targeted second stage of non-statutory consultation on the re-routed Section 1 of the Rhiwlas Green Energy Network project will run from **Wednesday 11 February to Wednesday 11 March 2026**. It is felt that will provide ample opportunity for local communities and stakeholders to engage with the proposals.

5.4.17 Feedback will need to be received by **23:59 on 11 March 2026**. Any feedback received after this day may not be considered by the team.

5.5 How Green GEN Cymru will use feedback

5.5.1 Green GEN Cymru will draw together all of the feedback and respond to the themes and issues raised in a feedback report. In this way, everyone will be able to see all of the themes and issues raised and how Green GEN Cymru plan to take them into account.

5.5.2 Green GEN Cymru will use the feedback to review the decisions made to date and to inform the work going forward. The next steps will involve more detailed routeing and siting including the identification of locations for the wood poles and additional infrastructure.

5.5.3 In making these decisions, Green GEN Cymru will also consider:

- Further information gathered as part of ongoing environmental assessments;
- Additional requirements based on technical considerations;
- Feedback from statutory bodies and other organisations, such as Natural Resources Wales, Powys County Council and others;
- Our duties to develop a safe, efficient and affordable connection; and
- Planning policy and related guidance.

5.5.4 Green GEN Cymru will take into account all of these considerations and refine the proposals ready for the final, statutory consultation which will be undertaken before a DNS application is submitted.

5.6 Next Steps

5.6.1 Comments to the consultation together with the findings of Green GEN Cymru's own assessments will influence the next stage of our proposals. Green GEN Cymru anticipate the next stage of work to refine the proposal for the Rhiwlas Green Energy Network will take several months.

5.6.2 Green GEN Cymru will keep people up to date during this time on the progress of the work (such as through community updates). When they are ready, Green GEN Cymru will present these proposals to people and explain how Green GEN Cymru has taken account of the comments received. Where Green GEN Cymru has not altered the proposals to reflect comments, the reasoning will be explained.

5.6.3 The timeline below sets out the indicative key milestones for the Proposed Development at the time of writing. These milestones may be subject to change, and updates will be made to the timeline over the coming months.

- Ongoing technical surveys and assessments and development of design – Spring 2026 – Spring 2027;
- Statutory Pre-Application Consultation - Autumn 2026;
- Submission of the Infrastructure Consent application for a SIP – Spring/Summer 2027; and
- Green GEN Rhiwlas Connection operational - 2029

6 Next Steps: Route Alignment and EIA

6.0.1 The feedback received from the consultation on the route alignment and pole locations will be considered in combination with the emerging findings of the environmental surveys and discussions with affected landowners.

6.0.2 The preferred route for the re-route of Section 1 will be further refined in light of this feedback with a view to a fixed design in Q1 of 2026. That fixed design will ultimately be assessed along with the rest of the route alignment to the Rhiwlas Energy Park and the impacts presented and assessed in the ES.

6.0.3 Green GEN Cymru intends to consult fully with affected landowners and occupiers on all aspects of the proposals and will give them opportunity to comment on them as they progress. This will include the statutory public consultation on a final, detailed route alignment for the Proposed Development.