

# DWD

**Swansea Greener Grid Park –  
Land West Of Rhydypany Road,  
Morrison, Swansea**

**Statkraft**

**Planning, Design and Access Statement**

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**APPENDICES**

**APPENDIX 1: LIST OF PLANS**

Revision	Description	Originated	Checked	Reviewed	Authorised	Date
1	PAC DRAFT	JM	JM	CT	CT	Feb 2023
DWD Job Number: 16544						

## **1.0 INTRODUCTION**

### **Overview**

- 1.1 This Planning, Design and Access Statement ('PDAS') has been prepared in support of an application for full planning permission submitted to Swansea Council (the 'Council') under the provisions of the Town and Country Planning Act 1990 (as amended) on behalf of Swansea Grid Solutions Limited, part of Statkraft UK ('Statkraft' or the 'Applicant').
- 1.2 This Statement has been prepared in line with the requirements for Design and Access Statements for Major Development set out in The Town and Country Planning (Development Management Procedure (Wales) (Amendment) Order 2016.
- 1.3 This application is seeking permission for the Construction and operation of a Greener Grid Park Facility comprising synchronous compensators, transformers, generators and ancillary plant, underground electricity ducting and/or cabling to connect to the existing substation, and associated hard and soft landscaping (the 'Proposed Development).
- 1.4 The project is known as the 'Swansea Greener Grid Park ('GGP'). This GGP's key function is to provide critical balancing services and to strengthen and stabilise the electricity network and to facilitate the connection of more renewable energy generation to the system. The Proposed development will not generate any additional electricity nor will it result in any direct emissions of operational CO<sub>2</sub>.
- 1.5 An application for Swansea GGP was approved on 09 August 2021 for a proposal which included two synchronous condensers and battery storage (planning app ref 2021/0163/FUL) (the 'Extant Permission'). A Minor Material Amendment ('MMA') application was later submitted to slightly reconfigure the layout of the approved infrastructure to allow for the energy management system buildings to accommodate four synchronous condensers (planning app ref 2022/2988/S73), which at the time of writing is awaiting determination. The Proposed Development differs from these previous applications in that it includes six synchronous condensers and does not include battery storage, as it is considered that there is greater demand for synchronous condensers in this location.
- 1.6 The Extant Permission, and the MMA application, and the subject application, are each mutually exclusive i.e., only one of those can be implemented. If all approved, any of them could in theory be permitted and therefore the Extant Permission represents a 'fallback position' in planning terms.

- 1.7 The proposed development site (the 'Site') is located approximately 300 metres ('m') north of Maes Eglwys Farm, 400 m south of Abergelli Farm, 300 m west of Cefn Betingau Solar Farm and 200 m west of the site of the approved Abergelli Power Station, which is yet to be constructed. The Site measures approximately 6.24 hectares ('ha'). The Lle Predictive Agricultural Land Classification Map indicates that the likely agricultural land classification for the Greener Grid Park is Grade 5 (very poor quality), while the proposed access track is predicted to be Grade 3b (moderate quality).
- 1.8 The Welsh Government declared a Climate Emergency in 2019 and have committed to reaching net zero by 2050, with ambitions to get there sooner, while the UK Government has committed to meeting a legally binding target of net-zero carbon emissions by 2050. This requires major investment in renewable electricity generation technology alongside equally important investment in technology to balance the demand and supply of electricity. The Proposed Development would help to address this need by providing much needed stability and resilience whilst supporting the decarbonisation of the Electricity Grid.
- 1.9 The proposed development would be temporary and planning permission is proposed to be sought for an operational period of 30 years, after which the site would be decommissioned and.

### **Statkraft**

- 1.10 Statkraft UK LTD. is 100% owned by the Norwegian state and is Europe's largest generator of renewable energy. In the UK, Statkraft develop, own and operate wind, solar, hydro and Greener Grid Park projects.
- 1.11 Since 2006 Statkraft has invested over £1.4 billion in the UK's renewable energy infrastructure and is a leading provider of Power Purchase Agreements (PPAs), having facilitated over 6 GW of new-build renewable energy generation through PPAs. National Grid recently launched its 'Stability Pathfinder Scheme' to enable a competitive tender process for the provision of such grid stability services. Statkraft wishes to participate in this tender process by offering grid stability services at Swansea in the form of Synchronous Compensator capability.

### **Environmental Impact Assessment**

- 1.12 The Applicant submitted a request for an Environmental Impact Assessment ('EIA') Screening Opinion from the Council on 2 December 2022 (Planning App Ref 2022/2847/SCR). The Applicant received a Screening Opinion from the Council on 4 January 2023 confirming that the Proposed Development would not require an Environmental Statement.

### **Pre-Application Consultation**

1.13 The Applicant is currently undertaking Pre-Application Consultation in accordance with the Planning (Wales) Act 2015.

### **Planning Application and Submission**

1.14 The application submission comprises the following documents:

- Application Cover Letter;
- Application Forms and Certificates;
- Community Infrastructure Levy ('CIL') Form;
- Planning, Design and Access Statement (this document);
- Consultation Report;
- Plans (the full list of plans is itemised at Appendix A of this report);
- Scheme of Historic Environment Mitigation: Archaeological Watching Brief;
- Flood Consequence Assessment;
- Landscape and Visual Appraisal;
- Noise Assessment;
- Construction Traffic Management Plan;
- Outline CEMP;
- Tree Survey;
- Preliminary Ecological Appraisal; and
- 3D Visualisations.

1.15 The application has been submitted electronically via the Planning Portal and the requisite application fee has been paid to the Council.

### **Purpose and Structure of this Report**

1.16 The primary purpose of this PDAS is to demonstrate how the design of the Proposed Development is a suitable response to the Site and its setting, and to demonstrate that it can be adequately accessed. Furthermore, this PDAS demonstrates how the Applicant has taken account of relevant

planning policy and the extent to which the Proposed Development is compliant with the Statutory Development Plan.

1.17 In doing so, this PDAS draws upon and cross-refers, where relevant, to the other documents that form part of the planning application submission.

1.18 The PDAS has been prepared in accordance with Article 9 of the Town and Country Planning (Development Management Procedure) (England) Order 2015. Article 9 requires that all applications for major development, such as the Proposed Development, are accompanied by a ‘design and access statement’ that should:

- explain the design principles and concepts that have been applied to the development;
- demonstrate the steps taken to appraise the context of the development and how the design of the development takes that context into account;
- explain the policy adopted as to access, and how policies relating to access in relevant local development documents have been taken into account;
- state what, if any, consultation has been undertaken on issues relating to access to the development and what account has been taken of the outcome of any such consultation; and
- explain how any specific issues which might affect access to the development have been addressed.

1.19 The above details are contained in the remainder of this document.

Structure

1.20 The remainder of this document is structured as follows:

**Table 1.1: Structure of this document**

<b>Section</b>	<b>Title</b>	<b>Overview</b>
<b>Section 2</b>	The Site and Surrounding Area	Describes the Site and its key features, the planning history of relevance that relates to it, any local planning designations and allocations that apply, and the Applicant’s site selection process.
<b>Section 3</b>	The Proposed Development	Provides an overview of the Proposed Development, including need, use, amount, layout, appearance and access.
<b>Section 4</b>	Design Approach	Outlines the approach taken to the design of the Proposed Development.
<b>Section 5</b>	Design Components	Provides the design and access details of the Proposed Development, including



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		layout, use, amount, scale, appearance, access and landscaping.
<b>Section 6</b>	Planning Policy Context	Sets out the legislative and policy framework for the determination of the planning application.
<b>Section 7</b>	Assessment of the Proposed Development	Provides an assessment of the Proposed Development against relevant policy at national and local level.
<b>Section 8</b>	Summary and Conclusions	Sets out the conclusions of this PDAS in terms of the overall acceptability of the Proposed Development.

## **2.0 THE SITE AND SURROUNDING AREA**

2.1 This section describes the location and key features of the Site and the surrounding area, identifies any relevant planning and environmental designations, and explains the Applicant's site selection process.

### **Location, Description and Use**

2.2 The Site largely comprises agricultural land located within a partially agricultural partially energy related setting located north of the city of Swansea, the closest residential dwellings from which are approximately 1.2 kilometres ('km') south of the Site. There are a number of farmsteads scattered in the wider area, the closest of which comprises Maes Eglwys Farm which is approximately 300 metres ('m') from the Site and occupied by the landowner.

2.3 Felindre National Grid gas compressing station is located immediately west of the Site, and Swansea North Substation is located beyond that. The Site is otherwise surrounded by agricultural fields and areas of woodland. There are a number of constructed and approved energy projects in the wider area, further details of which can be found in the Planning History section of this chapter.

2.4 The red line boundary also includes land within the Swansea North Substation to allow for an electrical connection and land leading to and including the existing National Grid access.

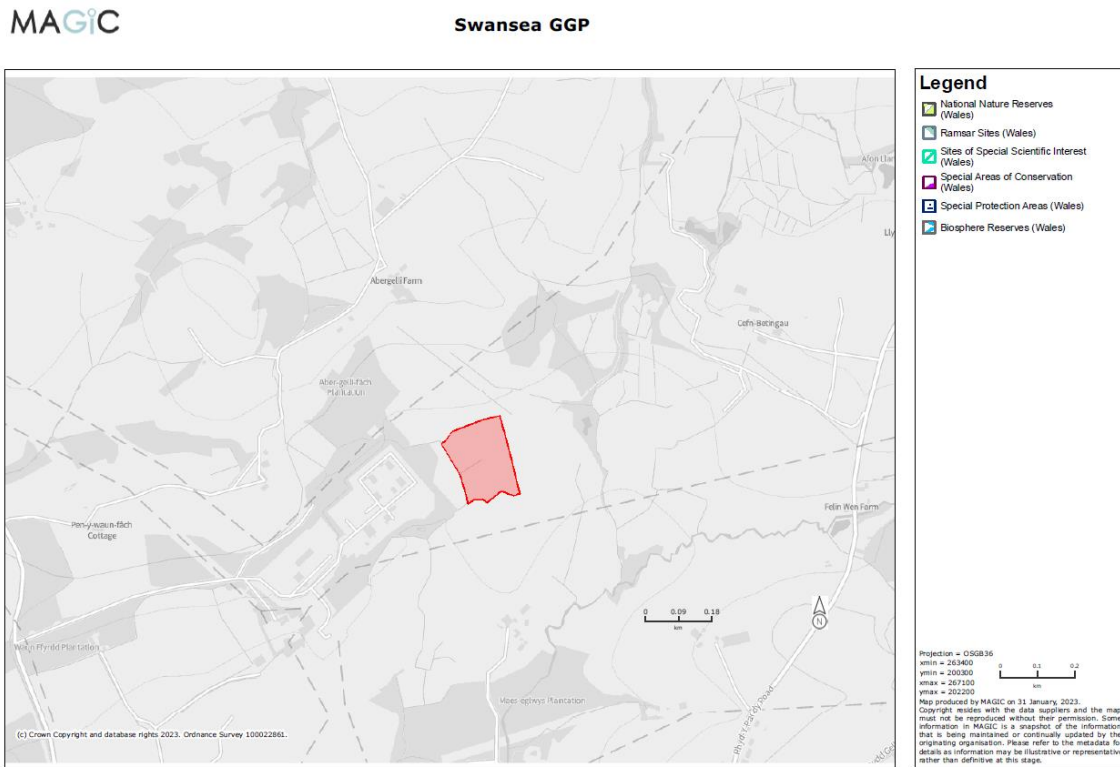
2.5 The Lle Predictive Agricultural Land Classification Map indicates that the likely agricultural land classification for the Greener Grid Park is Grade 5 (very poor quality), while the proposed access track is predicted to be Grade 3b (moderate quality).

2.6 Some existing screening along field boundaries provides screening but there is considerable potential for the strengthening and addition of screening along these and other boundaries which has been included as part of the Proposed Development.

### **Planning and Environmental Designations**

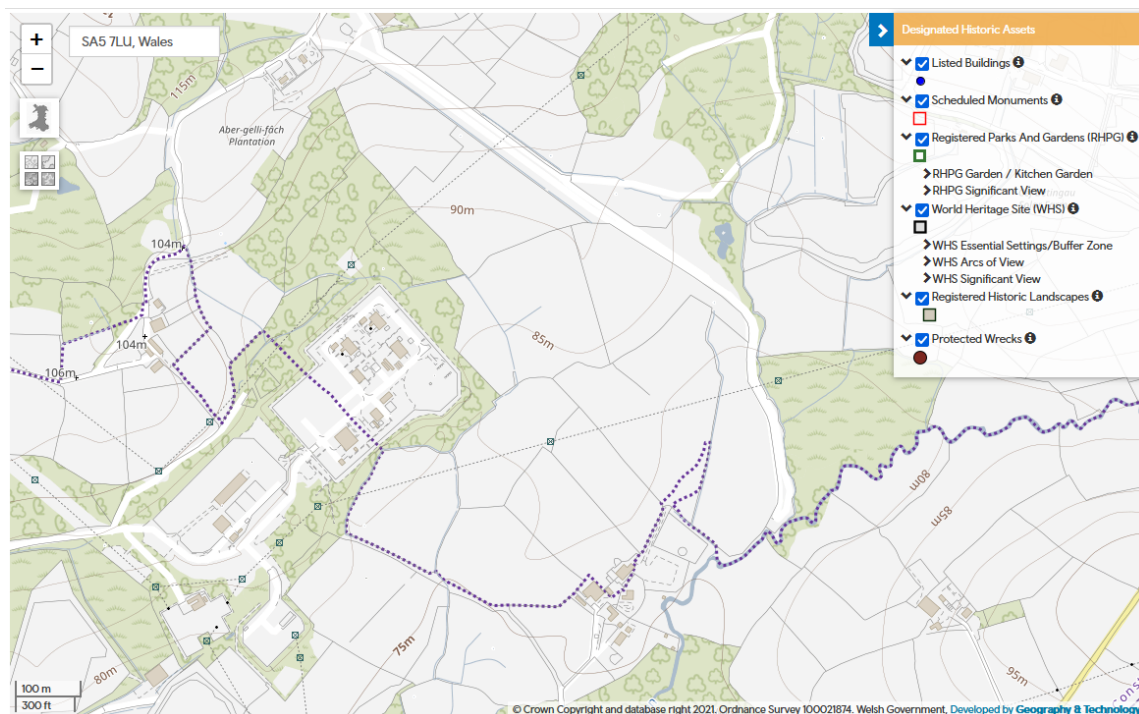
2.7 The UK Government's MAGIC Map system identifies that there are no environmental designations located on, adjacent to or in close proximity to the Site. This is shown in the extract below at Figure 2.1.

**Figure 2.1: MAGIC Map Extract – Environmental Designations**



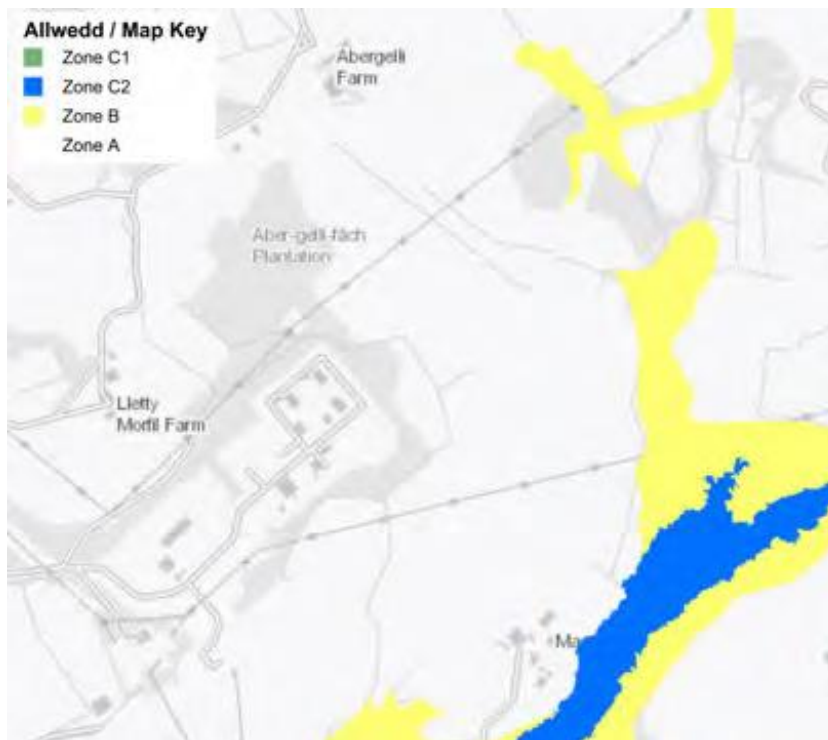
2.8 The extract from Cadw records online search included below at Figure 2.1 demonstrates that there are no heritage designations located on, adjacent to or in close proximity to the Site.

**Figure 2.2: Cadw Records Online Search Extract – Heritage Designations**



2.9 The 'Development Advice Map' for flood risk obtained from the Natural Resources Wales website (see Figure 2) shows that the site is located within Zone A, described in TAN15 as an area 'considered to be at little or no risk of fluvial or tidal/coastal flooding'.

**Figure 2.3: Flood Map**



### Site Selection

2.10 National Grid have published information on the regions across Great Britain which have an unstable grid and the south of Wales has been identified specifically as an area requiring the stability service this Development can provide. This led to a search in South Wales where a substation can support the technology.

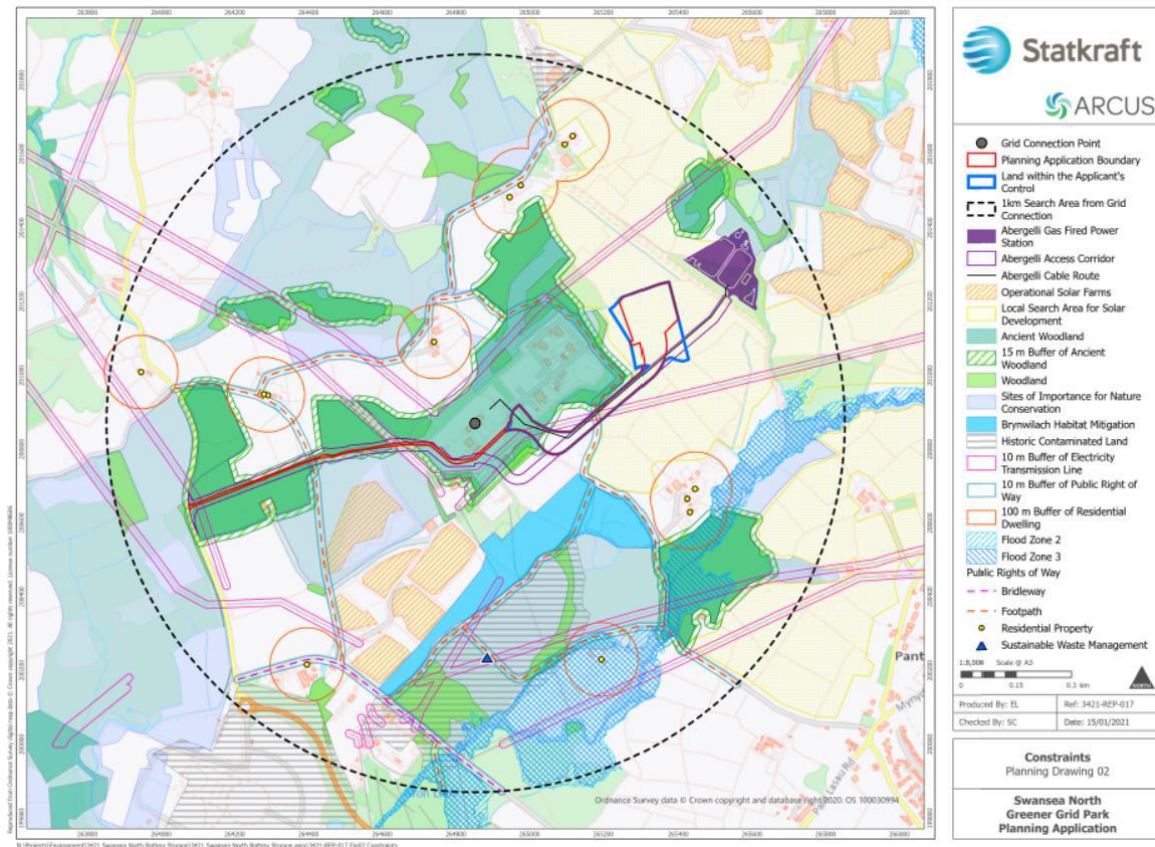
2.11 The Development has been strategically sited adjacent to Swansea North Substation, which lies to the west of the Site. The Substation is capable of accommodating the transfer of electricity to and from the Development at an acceptable cost which will provide valuable support to National Grid, protecting customers at times when high demand places stress on the local and national electricity network. As a result of the close proximity to the Substation, underground cables will avoid any major infrastructure, minimising connection and transmission costs. The small scale of the underground grid connection required will also significantly minimise construction-related disruption.

2.12 The other key criteria which have led to the Site being selected as a Greener Grid Park development include:

- Adequate separation from residential properties in terms of visual and other residential amenity impacts (e.g. noise); and
- Lack of environmental constraints (e.g. absence of ecological/landscape designations, heritage designations, flood risk, etc.).

2.13 Alternative sites within 1 km of the grid connection point were considered but were found to be subject to a variety of environmental/planning constraints as shown on the Constraints Plan in Figure 2.3 below.

**Figure 2.3: Environmental & Planning constraints within 1 km of grid connection**



The constraints applicable to the alternative locations are summarised in Table 2.1 below.

**Table 2.1: Summary of Constraints**

Location	Constraints
North of Swansea North NG Substation	<ul style="list-style-type: none"> <li>• Residential property</li> <li>• Ancient Woodland</li> <li>• Woodland</li> <li>• Sites of Importance for Nature Conservation</li> <li>• Overhead electricity transmission lines</li> </ul>
West of Swansea North NG Substation	<ul style="list-style-type: none"> <li>• Ancient Woodland</li> <li>• Site of Importance for Nature Conservation</li> <li>• Brynwilach Solar Farm</li> </ul>
South of Swansea North NG Substation	<ul style="list-style-type: none"> <li>• Brynwilach habitat mitigation area</li> <li>• Public rights of way</li> <li>• Abergelli Power Station access track</li> <li>• Woodland</li> <li>• Residential Properties</li> <li>• Solar PV Local Search Area</li> </ul>

	<ul style="list-style-type: none"> <li>• Areas of medium or high flood risk</li> </ul>
East of Swansea North NG Substation	<ul style="list-style-type: none"> <li>• Solar PV Local Search Area</li> <li>• Abergelli Power Station</li> <li>• Public Right of Way</li> <li>• Ancient Woodland</li> </ul>
Development Site	<ul style="list-style-type: none"> <li>• Solar PV Local Search Area</li> </ul>

2.14 Following consideration of the above factors and the existing infrastructure within the wider area, the Site was identified as having excellent potential for development with minimal environmental and planning constraints. The only planning or environmental designation identified on Site was the Solar PV Local Search Area. Furthermore, the principle of this form of development on this Site has been established by the Extant Permission.

### Planning History

2.15 The Site currently comprises agricultural land which has historically been used for farming, however, it currently benefits from full planning permission for a Statkraft Greener Grid Park. Table 2.2 below sets out this along with other identified planning applications relevant to the application site.

**Table 2.2: Site Planning History**

Application reference	Address	Proposal	Decision
2022/2988/S73	Land West Of Rhydypanyd Road Morryston Swansea	Construction of a Greener Grid Park comprising energy storage and grid balancing equipment, including change of use from agricultural grazing land, along with associated infrastructure, landscaping and access track. Variation of conditions 1, 2 and 17 of planning permission 2021/0163/FUL granted 8th June 2021 to allow for changes to proposed equipment and layout	Awaiting determination
2021/0163/FUL	Land West Of Rhydypanyd Road Morryston Swansea	Construction of a Greener Grid Park comprising energy storage and grid balancing equipment, including change of use from agricultural	Approved 09/08/2021

		grazing land, along with associated infrastructure, landscaping and access track	
2018/2021/FUL	Land At Abergelli Farm Felindre Swansea SA5 7NN	Installation of an electrical connection in the form of a new 400kV underground cable to export power from the Abergelli Power Station to the National Grid Electricity Transmission System at the Swansea North Substation, including associated engineering operations and landscaping	Approved 06/12/2018
2018/2020/FUL	Land At Abergelli Farm Felindre Swansea SA5 7NN	Installation of a gas connection in the form of a new above ground installation and underground gas pipeline to bring natural gas from the National Gas Transmission system to the Abergelli Power Station, including access, associated engineering operations and landscaping	Approved 06/12/2018
2018/1289/DCO	Land At Abergelli Farm Felindre Swansea SA5 7NN	Gas fired power station	Approved 19/09/2019
2010/0539	National Grid 400KV Substation, Heol Llangyfelach, Felindre, Swansea, SA5 7LU	Construction of proposed amenity building (11.4m long x 7.4m wide x 4.75m high) in association with the new Swansea North 400KV Electricity Substation (amendment to planning permission 2008/1685 granted on 12th November 2008)	Approved 15/07/2020
2008/1685	National Grid Electricity Transmission Plc, 400KV Substation, Heol Llangyfelach, Felindre, Swansea, SA5 7LU	Construction of a new Swansea North 400KV Electricity Substation incorporating a gas insulated switchgear (GIS) building (60m long x 15m wide x 13.5m high) with separate super grid transformers (SGT), associated infrastructure works, sealing end compound and temporary lay down area	Approved 12/11/2008



		and access road (amendment to planning permission 2007/2733 granted on 8th August 2008)	
2007/2733	National Grid Electricity Transmission Plc, 400KV Substation, Heol Llangyfelach, Felindre, Swansea, SA5 7LU	Construction of a new Swansea North 400KV Electricity Substation incorporating a gas insulated switchgear (GIS) building (95m long x 23m wide x 13.5m high) with separate super grid transformers (SGT), associated infrastructure works, sealing end compound and temporary lay down area and access road	Approved subject to s106 06/08/2008
2006/1222	National Grid Site, Off Heol Llangyfelach, Near Velindre, Swansea	Erection of gas compressor station comprising one 30 mw electrically driven gas compressor, two 15 mw gas driven compressors and associated housing buildings, a 20 metre vent stack, and ancillary buildings and pipework to connect the compressor station to the national gas transmission system.	Approved subject to s106 05/12/2006

2.16 The following energy related planning applications have been identified within the vicinity of the Site and are considered to be of relevance to the Proposed Development.

**Table 2.3: Wider Area Planning History**

<b>Application reference</b>	<b>Address</b>	<b>Proposal</b>	<b>Decision</b>
2014/1022	Land At Brynwhilach Felindre Road Llangyfelach Swansea SA5 7PE	Construction of 12.69 megawatt solar park consisting of installation of up to 47,000 pv panels and 8 inverter/transformer stations, 2 substations, storage container, new access tracks, security fencing/cctv and associated equipment and infrastructure works	Approved 04/11/2014

2013/1639	Cefn Betingau Farm Rhydypany Road Morrison Swansea SA6 6NX	Construction of 7 megawatt solar park consisting of installation of up to 28,250 pv panels and up to 6 inverter/transformer cabins, a single control building and provision of security fencing	Approved 20/02/2014
2013/0865	Land At Cefn Betingau Farm, Morrison, Swansea SA6 6NX	Construction of 9 megawatt solar park consisting of installation of upto 135,000 pv panels and 9 inverter/transformer cabins and a single control building	Approved 28/08/2013
2013/0135	Land At Abergelli Farm Felindre Swansea SA5 7NN	Installation of ground mounted array of solar panels, inverter substations and 2.4m high fencing	Approved 28/05/2013

### **3.0 PROPOSED DEVELOPMENT**

3.1 This section provides a description of the Proposed Development including its main components and development features with reference to the submitted plans and other application documents.

3.2 This planning application seeks full planning permission for the following Proposed Development:  
*“Construction and operation of a Greener Grid Park Facility comprising synchronous compensators, transformers, generators and ancillary plant, underground electricity ducting and/or cabling to connect to the existing substation, and associated hard and soft landscaping.”*

#### **Development Summary**

3.3 The Proposed Development is a grid stability facility (to be known as a ‘Greener Grid Park’ or ‘GGP’). Which will comprise the following:

- 3 no. of Energy Management Buildings (15m (W) x 25.5m (L) x 7m (H)) each housing 2 no. synchronous compensators to stabilise, provide fault current, and inertia to the National Grid.
- 2 Welfare Facility/Office Containers (3.1m (W) x 9.8 (L) x 3.5m (H)) & 2 Store Containers (2.4m (W) x 6.1m (L) x 2.6m (H)).
- HV Equipment & structures including large & small transformers, circuit breakers, cable sealing ends, busbars, ducting & cables (over & underground) bus ducts, concrete plinths & bunds etc., all contained within a porous gravel yard.
- 1 Comms House (7m (W) x 13m (L) x 3.5m (H)) & 3 Cooler banks (2.8m (W) x 15.83m (L) x 2.5 (H)).
- 2 Emergency Diesel Generators for the rare occurrence of a loss of external Grid supply. Described as ‘Genset’ in layout plan. The site will generate no power for export.
- Electric/weld-mesh steel palisade Security Fencing (up to 3.4m in height) which will enclose the high voltage compounds.
- Security Columns with CCTV Cameras and Lighting (up to 6m in height).
- Extension of the existing access road from the National Grid Substation (intended to be shared with Abergelli Power Station).
- Underground Cable Connection to existing Substation.

- Landscaping hard & soft.
- All associated and ancillary site works necessary to facilitate the development including: all necessary drainage systems, foundations works for the above compounds, various underground cables and ducts, equipment plinths, internal services roads and other necessary infrastructure.

3.4 As mentioned above, an application for Swansea GGP was approved on 09 August 2021 for a proposal which included two synchronous condensers and battery storage (planning app ref 2021/0163/FUL). A Minor Material Amendment ('MMA') application was later submitted to slightly reconfigure the layout of the approved infrastructure to allow for the energy management system buildings to accommodate four synchronous condensers (planning app ref 2022/2988/S73), which at the time of writing is awaiting determination. The Proposed Development differs from these previous applications in that it includes six synchronous condensers and does not include battery storage, as it is considered that there is greater demand for synchronous condensers in this location.

### **Need**

- 3.5 The Development is designed to support the flexible operation of the National Grid and decarbonisation of electricity supply. The proposed Greener Grid Park would provide rapid-response electrical back energy management to the National Grid and would represent an early deployment within the UK of a high-tech grid balancing facility, addressing intermittency and fluctuations in inertia.
- 3.6 The Development will provide the grid with the stability needed to accommodate more renewable energy from other sources including solar farms, many of which have recently been constructed in the Swansea area.
- 3.7 On Easter Monday 2020, National Grid needed to run 17 gas-fired power stations, not for their energy, but in order to keep the grid stable. Statkraft plans to develop projects and technologies to reduce the need for such polluting fossil fuel generation, and the biggest benefit of this development will be felt in South Wales.
- 3.8 The Swansea North National Grid Substation ('the Substation') is a key strategic transmission substation in South Wales and therefore is a strong point to develop and deliver grid flexibility services and grid stability for the National Grid. The Substation is interconnected by 6 x 400 kV

circuits and 2 x 275 kV circuits and has the option to turn in the Pembroke Walham 400 kV Circuit to create another 2 x 400kV connections.

- 3.9 The South Wales transmission grid forms a spur from England and is not interconnected within Wales to the transmission grid in North Wales. The grid in South Wales is subject to voltage variations which led to a National Grid tender and voltage control contracts let specific to the region. This Substation has been selected by Statkraft after assessing the needs of the transmission grid in South Wales and considering all of the substations in South Wales.

### **Access**

- 3.10 The Development will be accessed via a new track which will run from the south of the main compound through the agricultural fields to the south of the substation, then north through the substation to join the existing private road which connects the substation to the B4489. Much of the route will be shared with that of the approved Abergelli Power Station, with a new spur to provide access north into the main compound of the Development.

### **Cable Routing**

- 3.11 The Proposed Development will be connected into the electricity grid by an underground cable which will connect to the existing Swansea North Substation.

### **Landscaping**

- 3.12 The Proposed Development includes a landscaping strategy which has been designed to respect the site's landscape character and visual appeal. Both agricultural fields have strong field boundaries which will be protected and strengthened and all trees and hedgerows around the Greener Grid Park facility would be retained.

- 3.13 Key landscaping proposals include:

- 35 m of native species hedgerow planting with hedgerow trees;
- 0.81 ha of native species woodland and shrub planting;
- 0.2 ha of wildflower and grass seeding on embankments; and
- Attenuation pond with increased tree planting along the existing ditch line.

### **Construction**

- 3.14 The construction and installation of the Development will approximately 14 months. The sequence of construction activities is anticipated as follows:

- Site surveys & welfare;

- Construction of the access route to site;
- Earthwork for foundations/cable runs;
- Balance of plant and temporary site equipment;
- Major equipment delivery;
- Assembly of major equipment;
- Construction of main building over installed equipment;
- Installation of supporting equipment; and
- Testing and commissioning.

3.15 During the construction period, it is anticipated that approximately 91 vehicles per day will visit the Site at the peak of construction.

### **Operation**

3.16 The Greener Grid Park will be operated remotely, with occasional inspection and maintenance visits which will occur on average once per month. The proposed welfare facility for visiting staff will contain a WC with a sealed septic tank so that no foul drainage connection is required.

### **Decommissioning**

3.17 It is proposed that the decommissioning of the Proposed Development would be controlled by a condition similar to that found at condition 10 of the decision notice for the existing planning permission (2021/0163/FUL). This condition is as follows:

*“By no later than 24 months from the development ceasing to be used for the purposes of the storage and distribution of electricity a decommissioning and site restoration scheme with a proposed implementation timetable shall be submitted to and approved in writing by the local planning authority. The scheme shall include:*

- a) community liaison;*
- b) complaints procedures;*
- c) nuisance management (including measures to avoid or minimise the impacts of decommissioning works (covering dust, noise, vibration and lighting));*
- d) dust management measures;*
- e) site waste and materials management measures;*

- f) environmental protection and pollution control measures;*
- g) security measures and use of artificial lighting;*
- h) landscape restoration scheme; and,*
- i) a list of additional consents required for decommissioning activities and a programme for the intended submission of relevant consent applications.*

*The development shall be decommissioned in accordance with the approved scheme and timetable.”*

## **4.0 DESIGN APPROACH**

4.1 This section sets out the approach that the Applicant has taken to the design of the Proposed Development and how the design has evolved through the pre-application process.

### **Design Principles**

4.2 The main design principles adopted by the Applicant are:

- Design Principle 1: Seek to assimilate the Proposed Development into the local landscape and preserve the open character of the landscape;
- Design Principle 2: Ensure safe and efficient access to the public highway;
- Design Principle 3: seek opportunities for the management and enhancement of biodiversity; and
- Design Principle 4: Position the main components to minimise environmental impact and impact on residential amenity.

### **Design Approach**

4.3 The approach taken to the design of the Proposed Development has been informed by technical requirements of the Proposed Development and the context within which it would be situated, in addition to the opportunities and constraints presented by the Site.

4.4 The sites immediate and wider context is characterised by a mixture of energy and agricultural uses, as well as a number of areas of ancient woodland. Extensive landscaping has been proposed to allow the Proposed Development to be in keeping with the more natural elements of its surroundings and reduce the potential for significant cumulative visual impacts. The general design and siting of infrastructure has been designed to respect the character of the Site whilst being practical and efficient in terms of technical and engineering considerations.

4.5 The main components of the facility will be dark green, to blend in the Development with the adjacent substation. This will result in the Development being read as an extension to the substation rather than as a separate built form within the rural landscape.

### **Design Evolution**

4.6 The design and layout of the GGP has evolved since November 2019 when a pre-application enquiry was undertaken with the Council based on a preliminary design. A subsequent pre-application meeting was held in November 2020 and further comments were received. The key changes which were made in response to feedback from Council officers are as follows:



- Electric weld mesh fencing rather than palisade fencing will be used in order to minimise visual impact, particularly given the rural countryside setting;
- The access route will align with that of the approved Abergelli Power Station as much as possible given the available land in order to avoid unnecessary built development;
- The layout and access route has been amended to avoid the need to culvert the stream to the west of the Site;
- The scale of the energy management building fire wall has been reduced through various design iterations from a maximum height of 14m to 7m; and
- The drainage strategy has been amended to incorporate swales rather than underground attenuation.

4.7 An application for a scheme incorporating these changes was submitted and approved by the Council on 09 August 2021 (Planning App. Ref. 2021/0163/FUL). Following some further technical and electrical market analysis the Applicant has decided to remove the battery storage from the Site and increase the number of synchronous condensers to improve the efficiency of the Site. The resultant physical changes to the scheme are as follows:

- The number of synchronous condensers to be housed on Site has been increased to increase efficiency of the Site from 10m to 7m to decrease visual impact;
- Supporting infrastructure has been reconfigured to allow for efficient use of space;
- Battery Storage has been removed from the Proposed Development; and
- The red line boundary has been increased to allow for more biodiversity and screening.

## 5.0 DESIGN COMPONENTS

5.1 This section describes the key components of the Proposed Development. This includes in relation to the Site's use, the quantum of development (amount), the proposed layout, the scale of main structures, the appearance and the approach taken to landscaping.

### Use

5.2 The Proposed Development is for a Greener Grid Park facility comprising synchronous condensers, transformers and associated infrastructure. The site currently comprises agricultural land (arable) in a rural fringe countryside setting.

5.3 The GGP has undergone extensive review to be sympathetic to its surroundings whilst being practical in terms of technical and engineering considerations. The southern half of the western field will be retained as arable land, whilst arable land excavated to construct the GGP will be collected in a topsoil bund and stored for the lifetime of the development. The GGP is a temporary development, with a 30 year lifespan. After which time, it is envisaged that all infrastructure associated with the GGP would be removed and the land returned to agricultural use.

### Amount

5.4 As mentioned above, the Proposed Development consists of the following equipment:

- 3 no. of Energy Management Buildings (Steel clad framed style structures 7m high) [EMB] each housing 2 no. synchronous compensators to stabilise, provide fault current, and inertia to the National Grid.
- 2 Welfare Facility/Office Containers & 2 Store Containers.
- HV Equipment & structures including large & small transformers, circuit breakers, cable sealing ends, busbars, ducting & cables (over & underground) bus ducts, concrete plinths & bunds etc., all contained within a porous gravel yard.
- 1 Comms House, 3 Coolers banks
- 2 Emergency Diesel Generators for the rare occurrence of a loss of external Grid supply. The site will generate no power for export.
- Electric/weld-mesh steel palisade Security Fencing which will enclose the high voltage compounds.
- Security Columns with CCTV Cameras and Lighting.

- Extension of the existing access road from the National Grid Substation (intended to be shared with Abergelli Power Station).
- Underground Cable Connection to existing Substation.
- Landscaping hard & soft.
- All associated and ancillary site works necessary to facilitate the development including: all necessary drainage systems, foundations works for the above compounds, various underground cables and ducts, equipment plinths, internal services roads and other.

5.5 In addition, a landscaping scheme has been designed.

5.6 In total, all of the proposed development is considered to be the minimal level of development necessary to ensure that the site performs effectively with regards to its main purpose of stabilising the Electricity Grid.

### **Layout**

5.7 Throughout the design process, the site layout has been assessed by planning and environmental specialists in respect of, landscape and visual, cultural heritage, ecology, flood risk and drainage and traffic considerations. Each specialist has visited the site and identified the presence or absence of potential environmental constraints and opportunities. This analysis in conjunction with the feedback received from HBC and community consultation has informed the layout of the site. There are technical factors which limit the extent to which the layout and design of the Proposed Development can be adjusted but the however the design iterations to the site layout have ensured that the Proposed Development has as little impact on the environment as possible.

### **Scale**

5.8 The scale of development at the Site is in part determined by the equipment necessary to effectively operate the GGP most efficiently. The tallest structures comprise the HV equipment which is 10.85 m in height and the energy management buildings which are 7 m in height. The energy management buildings have been reduced from 14 m in height, meaning this aspect of the scale of the Proposed Development has significantly reduced from the Extant Permission. The heights of these structures are not out of keeping with existing building heights in the area and would be dwarfed by existing electricity pylons and the approved Abergelli Power Station.

5.9 Significant landscaping, which has increased from the Extant Permission will provide screening when it matures and help the Proposed Development assimilate into the landscape over time.

When viewed from nearby vantage points the scale of development would not be overbearing due to its comparatively low profile, which has been somewhat reduced to the reduction in height of the energy management buildings.

### **Appearance**

- 5.10 The visual appearance of the buildings, e.g. e-buildings, Comms house, office, energy management buildings and fence will be finished in moss green, as approved within the Extant Permission. This was chosen because it is visually sympathetic to the surrounding countryside and provides a similar aesthetic to agricultural barns which are established part of the built vernacular at this location. The HV Yard contains technical and functional design characterised by electrical plant connected by overhead bus bars.
- 5.11 Cabling between the GGP and the Swansea North Substation would be underground meaning that there would be no visual impact associated with this element of the Proposed Development, as was the case under the Extant Permissions.

### **Access**

- 5.12 As mentioned above, the Proposed Development will be accessed via an extension to the existing National Grid access, much of which will be shared with the approved Abergelli Power Station, with a new spur to provide access north into the main compound of the Development.
- 5.13 The Development will be accessed via a new track which will run from the south of the main compound through the agricultural fields to the south of the substation, then north through the substation to join the existing private road which connects the substation to the B4489. Much of the route will be shared with that of the approved Abergelli Power Station, with a new spur to provide access north into the main compound of the Development.

## **6.0 PLANNING POLICY CONTEXT**

- 6.1 This section provides a brief overview of the relevant planning policy and guidance at the local and national level. The Proposed Development has been influenced by these policies and is assessed against at Section 7 of the PDAS.
- 6.2 The planning application would be determined in accordance with section 70(2) of the Town and Country Planning Act 1990 (as amended), which states that in dealing with applications, local planning authorities shall have regard to the provisions of the statutory development plan and to other material considerations.

### **Local Planning Policy**

- 6.3 The statutory development plan for the site is the Swansea Local Development Plan ('LDP') 2010-2025 which was adopted on the 28 February 2019. The following policies from the LDP are considered to be of most relevance:
- PS 1 – Sustainable Places;
  - PS 2 – Placemaking and Place Management;
  - IO 1 – Supporting Infrastructure;
  - HC 1 – Historic and Cultural Environment;
  - ER 1 – Climate Change;
  - ER 2 – Strategic Green Infrastructure Network;
  - ER 5 – Landscape Protection;
  - ER 8 – Habitats and Species;
  - ER 11 – Trees, Hedgerows and Development;
  - CV 2 – Development in the Countryside;
  - T 1 – Transport Measurements and Infrastructure;
  - T 5 – Design Principles for Transport Measures and Infrastructure;
  - T 6 – Parking;
  - T 7 – Public Rights of Way and Recreational Routes;
  - EU 1 – Renewable and Low Carbon Energy Proposals;

- RP 1 – Safeguarding and Public Health and Natural Resources;
- RP 2 – Noise Pollution
- RP 3 – Air and Light Pollution
- RP 4 – Water Pollution and the Protection of Public Resources;
- RP 5 – Avoidance of Flood Risk; and
- RP 6 – Land Contamination.

6.4 The following Supplementary Planning Guidance provides further information and guidance to clarify the policy aims of the relevant LDP policies set out above:

- The Protection of Trees on Development Sites (adopted 2016);
- City and County of Swansea Parking Standards (adopted 2012);
- Biodiversity and Development (adopted 2021); and
- Planning Obligations (2010).

### **National Planning Policy**

6.5 Planning Policy Wales ('PPW') (11<sup>th</sup> Edition, 2021) is considered to be a material consideration. PPW sets out the land use planning policies of the Welsh Government and looks to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation and resultant duties.

6.6 PPW is supplemented by a series of Technical Advice Notes ('TANs'), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. PPW, the TANs, MTANs and policy clarification letters comprise national planning policy.

6.7 Furthermore, the National Development Framework: Future Wales – the National Plan 2040 sets out the Welsh Government's land use priorities and provides a national land use framework for SDPs and LDPs. Policy 17 (Renewable and Low Carbon Energy and Associated Infrastructure) is considered to be of particular relevance to the Proposed Development.

### **Other Material Considerations**

- 6.8 It is notable that on Monday 29th April 2019, the Minister for Environment, Energy and Rural Affairs declared a climate emergency in Wales, committing the Welsh Government to achieving a carbon neutral public sector by 2030 and coordinating the transition away from fossil fuels in other areas of the economy.
- 6.9 In June 2019 the Government raised the UK's ambition on tackling climate change by legislating for a net-zero greenhouse gas emissions target for the whole economy by 2050. Decarbonising the power sector is integral to achieving this goal and will require a significant increase in the proportion of electricity generated by renewable energy.
- 6.10 The National Infrastructure Commission ('NIC'), official advisor to the Government on infrastructure, has recommended that in order to meet the 2050 target the energy generation mix is up to around 90% renewables.
- 6.11 Whilst not planning policy documents, the following, also form material considerations:
- On 4 November 2021 the UK signed the Statement on International Public Support for the Clean Energy Transition<sup>1</sup> at the United Nations Climate Change Conference UK 2021 (COP26) which committed to prioritising support fully towards the clean energy transition.
  - The UK Government published its Energy White Paper ('the Paper')<sup>2</sup> in December 2020. The Paper acknowledges that flexibility services have traditionally been provided by gas-fired power stations but that there is an opportunity for flexibility to be provided by cleaner sources such as batteries. Additional physical infrastructure is required to maintain the resilience and reliability of the grid.
  - The 2020 Committee on Climate Change Progress Report to Parliament<sup>3</sup> was published in May 2020 and provides a review of Government efforts over the previous 12 months with regards to Climate Change. To achieve low-carbon and climate-resilient infrastructure, grid flexibility and energy supply security, the report states that 'electricity networks must be strengthened across the UK to accommodate electrification of heat and transport' and

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<sup>1</sup> <https://ukcop26.org/statement-on-international-public-support-for-the-clean-energy-transition/>

<sup>2</sup> <https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future>

<sup>3</sup> <https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>

recommends that the Government should implement the actions within the Smart Systems and Flexibility Plan.

- The Climate Change, Environment and Rural Affairs Committee of the National Assembly for Wales published its second annual report on the Welsh Government's progress on climate change in December 2019<sup>4</sup>. The report confirms that emissions from the power sector in Wales are currently falling. However, the decrease in emissions in Wales has been lower than in other nations in the UK due to increases in power demand. The report indicates that further decarbonisation of the power sector is required to enable further progress on climate change.
- Welsh Government's Prosperity for All: A Low Carbon Wales (June 2019)<sup>5</sup>, which sets out 100 policies and proposals to help meet the 2016 to 2020 carbon budget and 2020 emission reduction targets, with a view a further plan being prepared to cover the period from 2021 to 2026. The document states that 'the system will need to integrate renewable generation with storage and other flexibility services, in order to minimise the need for new generation and system reinforcement to serve large peak demands.'
- In May 2019 the Committee on Climate Change published Net Zero – The UK's Contribution to Stopping Global Warming<sup>6</sup>. The report recommends a new emissions target for the UK: net zero greenhouse gas emissions by 2050. The Report highlights the falling cost of key renewable technologies including battery storage and advises that flexibility in the energy supply (e.g. demand response, storage and interconnection) should be encouraged by policy and regulatory frameworks.
- The UK's Integrated National Energy and Climate Plan (January 2019)<sup>7</sup> makes clear that in order to meet the UK's 2050 climate change target, improvements in energy efficiency and energy management are required. This includes smart technologies such as energy storage and system balancing.

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<sup>4</sup> <https://business.senedd.wales/mglIssueHistoryHome.aspx?lId=15122>

<sup>5</sup> <https://www.gov.wales/prosperity-all-low-carbon-wales>

<sup>6</sup> <https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>

<sup>7</sup> <https://www.gov.uk/government/publications/uk-national-energy-and-climate-plan-necp>



- In July 2017, BEIS and Ofgem published Upgrading our Energy System: Smart Systems and Flexibility Plan<sup>8</sup>. The Government aims to implement the actions in the Plan by 2022, enabling the electricity system to work more flexibly and efficiently, potentially unlocking £17-40 billion in savings across the electricity system by 2050.
- The Environment (Wales) Act 2016<sup>9</sup> places new duties on the Welsh Government to reduce emissions and set a carbon budget for the maximum amount of net Welsh emissions for each five-year period.

6.12 There is a clear and growing body of policy support and evidence to demonstrate Wales's and the UK's commitment to decarbonising the power system. Across all of these documents it is clear that decarbonisation will be achieved through a significant increase in the proportion of electricity generated by renewable means. It is therefore equally important that there is enough provision of ancillary services to support the deployment of further renewable generation capacity.

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<sup>8</sup> <https://www.gov.uk/government/publications/upgrading-our-energy-system-smart-systems-and-flexibility-plan>

<sup>9</sup> <http://www.legislation.gov.uk/anaw/2016/3/contents/enacted>

## **7.0 ASSESSMENT OF THE PROPOSED DEVELOPMENT**

7.1 This section of the statement provides an assessment of the Proposed Development, in order to demonstrate how it has been influenced by and accords with the relevant planning policy.

### **Principle of Development**

#### Policy Summary

7.2 PS 1 (Sustainable Places) of the LDP states that in order to deliver sustainable places and strategically manage the spatial growth of the County by complying with the LDP's sustainable settlement strategy that requires development to be directed toward defined settlement boundaries, the character and openness of the Green Wedges to be protected and inappropriate development in the countryside to be resisted.

7.3 ER 1 (Climate Change) of the LDP states that to mitigate the effects of climate change development should promote energy and resource efficiency and increasing the supply of renewable and low carbon energy.

7.4 EU 1 (Renewable and Low Carbon Energy Proposals) of the LDP states that *"Proposals for all types of renewable and low carbon energy development and associated infrastructure ... should not have a significant adverse effect on:*

- a. The characteristics and features of the proposed location as a result of the siting, design, layout, type of installation and materials used;*
- b. Public amenity or public accessibility to the area;*
- c. Radar, Aircraft Operations or Telecommunications; and*
- d. Carbon sinks, unless it can be demonstrated that on-site loss can be adequately mitigated."*

7.5 Paragraph 5.7.2 of the PPW states that *"Overall power demand is expected to increase as a result of growing electrification of transport and heat. In order to ensure future demand can be met, significant investment will be needed in energy generation, transmission and distribution infrastructure. The system will need to integrate renewable generation with storage and other flexibility services, in order to minimise the need for new generation and grid system reinforcement. Collectively we will need to concentrate on reducing emissions from fossil fuel sources, whilst driving further renewable generation which delivers value to Wales."*

7.6 Paragraph 5.7.10 goes on to state that *"Planning authorities should plan positively for grid infrastructure. Development plans should facilitate the grid infrastructure required to support the*

*renewable and low carbon energy potential for the area, particularly areas identified for such development. Planning authorities should support appropriate grid developments, whether or not the developments to be connected are located within their authority.”*

#### Assessment

- 7.7 The Proposed Development comprises essential infrastructure to support the existing National Grid Substation and wider electricity system by providing stability to the grid. The Greener Grid Park will reduce the reliance of the national grid on coal and gas to provide inertia, and support the move to renewable and low carbon energy sources. This will help to reduce the carbon emissions footprint in Swansea in light of the climate emergency and contribute to meeting the ‘Net Zero’ carbon emissions targets for Wales and the UK.
- 7.8 The Proposed Development will not have an adverse effect on the characteristics and features of the proposed location as a result of the siting, design, layout, type of installation and materials used, public amenity, or any other sensitive receptors, as set out in the remainder of this chapter.
- 7.9 Furthermore, it is notable that the principle of the Proposed Development was accepted during the approval of the existing application, with the officer’s report finding that *“the development would not conflict with national planning policies nor would it conflict with the Policies within the LDP.”* Although the battery storage element of the Proposed Development has been removed, it still makes an important and necessary contribution to local electricity infrastructure to allow Swansea and Wales move to a low carbon energy system, and the increase of synchronous condensers on Site allows for a stronger service and more efficient use of land.
- 7.10 In light of the above it is considered that the principle of the Proposed Development is supported by planning policy.

### **Development in the Countryside**

#### Policy Summary

- 7.11 CV 2 (Development in the Countryside) of the LDP states that *“Outside defined settlement boundaries development will be required to ensure that the integrity of the countryside is conserved and enhanced.”* It goes on to state that exceptions will be made for necessary infrastructure provision and enhancement of infrastructure networks, amongst other things.
- 7.12 Paragraph 3.59 of the PPW states that *“When considering the search sequence and in development plan policies and development management decisions considerable weight should be given to protecting such land from development, because of its special importance. Land in grades 1, 2 and*

*3a should only be developed if there is an overriding need for the development, and either previously developed land or land in lower agricultural grades is unavailable, or available lower grade land has an environmental value recognised by a landscape, wildlife, historic or archaeological designation which outweighs the agricultural considerations. If land in grades 1, 2 or 3a does need to be developed, and there is a choice between sites of different grades, development should be directed to land of the lowest grade.”*

#### Assessment

- 7.13 It is noted the Site is located in the Countryside. The location of the Site has been selected due to its proximity to the existing Substation where there is an identified need for energy storage and management. The need for the Proposed Development is covered earlier in this report. An alternative site assessment was undertaken as part of the submission relating to the Extant Permission, and is repeated in this report.
- 7.14 The Site comprises poor quality agricultural land which has previously been used for livestock grazing, with no known history of agricultural crop cultivation. As mentioned earlier in the report, the Lle Predictive Agricultural Land Classification Map indicates that the likely agricultural land classification for the Greener Grid Park is Grade 5 (very poor quality), while the proposed access track is predicted to be Grade 3b (moderate quality).
- 7.15 Given the limited agricultural value of the land and relatively small footprint of the Development, it will not result in a loss of ‘best and most versatile’ agricultural land and will not affect the continued farming operations at Maes Eglwys farm.
- 7.16 It is notable that the officer’s report for the extant permission states that *“The development is considered to provide necessary infrastructure and the applicant has undertaken a considered site selection process.”*
- 7.17 In light of the above it is considered that the Proposed Development is in compliance with planning policy related to development in the countryside.

### **Landscape and Visual**

#### Policy Summary

- 7.18 ER 5 (Landscape Protection) of the LDP states that *“Development will not be permitted that would have a significant adverse effect on the character and quality of the landscape of the County.”* It goes on to state that Special Landscape Areas will be given priority and that Landscape Impact Assessments will be required where appropriate.

7.19 Paragraph 6.3.3 of the PPW seeks to ensure that the value of all landscapes for their distinctive character and special qualities is protected.

Assessment

7.20 A Landscape and Visual Appraisal has been submitted as part of this application. It found that overall, the Development introduces new native planting surrounding the Development. Whilst introducing a change in land use from agriculture and expanding the power infrastructure in the immediate area, the position of the Development has been sensitively considered taking account of the landscape context and has the ability to be screened from views in a short to medium (i.e. 5-10 years) period of time and would improve the baseline landscape above its current state.

7.21 Given the similar scale and height of the Development to both the consented application (2021-0163-FUL) for the site for similar infrastructure use, as well as the existing adjacent infrastructure, and associated mitigation measures proposed, it is assessed that the receiving landscape has the capacity to accommodate the Development without adverse effects on the character and quality of the landscape.

7.22 It is notable that the officer's report for the Extant Permission, from which the Proposed Development differs only slightly, concluded that:

*"Taking into consideration the information presented within the LVA, and specifically having regard to the context of the site described above, which includes significant existing infrastructure as well as natural screening vegetation, while accepting that the site is currently open countryside and farmland, it is considered that the overall visual impact of the development would not be so significant as to recommend refusal of the application. The site is not located within a protected landscape area and is within a LSA for renewable solar development, as such this is not a highly sensitive landscape area and, amongst other things, the site selection process undertaken by the applicant has taken this into account. In accordance with Policy EU1, mitigation is proposed that, in time, would serve to ameliorate the visual impact of the development within the local landscape."*

7.23 In light of the above it is considered that the Proposed Development is in compliance with planning policy related to landscape and visual impact.

## **Scale, Appearance and Design**

### Policy Summary

- 7.24 PS 2 (Placemaking and Place Management) of the LDP states that *“Development should enhance the quality of places and spaces, and respond positively to aspects of local context and character that contribute towards a sense of place. The design, layout and orientation of proposed buildings, and the spaces between them, should provide for an attractive, legible, healthy, accessible and safe environment.”*
- 7.25 IO 1 (Supporting Infrastructure and Planning Obligations) of the LDP states that *“Development must be supported by appropriate infrastructure, facilities and other requirements considered necessary as part of the proposal.”*
- 7.26 Paragraph 3.9 of the PPW states *“The special characteristics of an area should be central to the design of a development. The layout, form, scale and visual appearance of a proposed development and its relationship to its surroundings are important planning considerations. A clear rationale behind the design decisions made, based on site and context analysis, a strong vision, performance requirements and design principles, should be sought throughout the development process and expressed, when appropriate, in a design and access statement.”*

### Assessment

- 7.27 Information on the scale, appearance and design of the Proposed Development can be found in sections 3 (Proposed Development), 4 (Design Approach) and 5 (Design Components) of this report, along with the submitted plans.
- 7.28 The Proposed Development is broadly in keeping with the extant permission, the key differences relate to a change in siting, the removal of battery storage, an increase in the number of synchronous condensers to be housed and the decrease in size of the energy management buildings. The approach taken to the design of the Proposed Development has been informed by technical requirements of the Proposed Development and the context within which it would be situated, in addition to the opportunities and constraints presented by the Site. It is considered that none of these changes result in the scale, appearance or design of the Proposed Development becoming inappropriate.
- 7.29 In light of the above it is considered that the Proposed Development is in compliance with planning policy related to scale, appearance and design.

## **Biodiversity**

### Policy Summary

- 7.30 ER 2 (Strategic Green Infrastructure Network) of the LDP states that *“Green Infrastructure will be provided through the protection and enhancement of existing green spaces that afford valuable ecosystem services.”*
- 7.31 ER 8 (Habitats and Species) of the LDP states that development proposals that would have a significant adverse effect on the resilience of protected habitats and species will only be permitted where the need outweighs the harm, there are no satisfactory alternatives and unavoidable harm is minimised by mitigation.
- 7.32 ER 11 (Trees, Hedges and Development) of the LDP states that *“Development that would adversely affect trees, woodlands and hedgerows of public amenity or natural/cultural heritage value, or that provide important ecosystem services, will not normally be permitted.”* It goes on to state that Ancient Woodland will receive specific protection.
- 7.33 Paragraph 6.4.21 of the PPW states that *“Planning authorities must follow a stepwise approach to maintain and enhance biodiversity and build resilient ecological networks by ensuring that any adverse environmental effects are firstly avoided, then minimized, mitigated, and as a last resort compensated for; enhancement must be secured wherever possible.”*
- 7.34 Paragraph 6.4.25 goes on to state that *“Planning authorities should protect trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial and identified green infrastructure function.”* Paragraph 6.4.26 states that *“Ancient woodland and semi-natural woodlands and individual ancient, veteran and heritage trees are irreplaceable natural resources, and have significant landscape, biodiversity and cultural value.”*

### Assessment

- 7.35 A Preliminary Ecological Appraisal Report has been submitted alongside this application which evaluated the potential of the proposed Development to have potential adverse effects on a number of habitats and species, as well as setting out the requirements for further survey and proposed mitigation/compensation as necessary.
- 7.36 It also set out the proposed enhancements which were contained within the Extant Permission and which will remain the same for the Proposed Development, namely:
- Log and brash piles along the northern boundary;

- Bird and bat boxes installed on two mature trees along the southern boundary;
- Existing grazing grass to be managed to increase species richness and tussocky grassland for marsh fritillary butterfly; and
- Batters (except southern slopes) seeded with fescue/bent species mix and to include suitable wildflower spp. to attract wall butterfly.

7.37 Further enhancements that are recommended that support local biodiversity include:

- One additional bird box along the western boundary, with a variation of design from other boxes added, such as 45mm entrance box or 32mm entrance box;
- One Schwegler 2F bat box to be installed on the southern boundary;
- Hedgerows to be planted where possible with native flora of local provenance and connected to retained habitats that link into the wider landscape;
- The design and implementation of a sensitive lighting scheme, designed in conjunction with a lighting engineer and an ecologist, to ensure that habitats created/retained for biodiversity are not indirectly degraded by light pollution;
- Implementation of a hedgehog house within the scheme for sheltering opportunities and implementation of hedgehog friendly fencing, by creating 13cm x 13cm holes, to limit fragmentation;
- Sowing of areas of open space with a diverse native wildflower seed mix would provide a foraging resource for a range of species including invertebrates and birds;
- Seed mix could include the following species; common knapweed *Centaurea nigra*, yarrow *Achillea millefolium*, red campion *Silene dioica*, meadow vetchling *Lathyrus pratensis*, meadow buttercup *Ranunculus acris*, devils bit scabious *Succisa pratensis* and bird's foot trefoil *Lotus corniculatus*.
- Provision of an additional hibernaculum for the benefit of common reptiles and amphibians;
- Provision of an additional insect hotels, wood piles / loggery would benefit invertebrates; and
- Bulb planting could also be undertaken to provide early nectar sources for invertebrates. Planting of native bluebell (*Hyacinthoides non-scripta*), cowslip (*Primula veris*), ragged



robin (*Lychnis flos-cuculi*), daffodil (*Narcissus sp.*), snowdrop (*Galanthus nivalis*) and crocus (*Crocus sp.*) will provide an early nectar source for insects.

7.38 Based on proposed habitat retention, enhancement and creation measures, including off-site mitigation would result in a 6.89% net gain in biodiversity in terms of area-based habitats and a 23.54% net gain in biodiversity in terms of hedgerows (linear habitats). The results also indicate that trading rules are satisfied for medium distinctiveness broad habitats 'Grassland' and 'Other woodland - broadleaved.'

7.39 Furthermore, it is notable that the officer's report for the Extant Permission states that:

*"While the proposal would result in the loss of an area designated as ancient woodland, the affected area has already been cleared and is managed due to its location under overhead power lines. On this basis the proposal would not result in the loss of an area of ancient woodland of significant ecological or amenity value. Having regard to the enhancement proposals for the development it is considered that the proposed development would have the potential to enhance the green infrastructure and ecology of area. The development is therefore considered to be acceptable in terms of its impacts upon ecology and green infrastructure."*

7.40 In light of the above it is considered that the Proposed Development is in compliance with planning policy related to biodiversity.

## **Traffic and Transport**

### Policy Summary

7.41 T 1 (Transport Measures and Infrastructure) of the LDP states that *"Development must be supported by appropriate transport measures and infrastructure"* and does on to provide further detail of what may be required of specific proposals where relevant. T 5 (Design Principles for Transport Measures and Infrastructure) provides further design principles.

7.42 T 6 (Parking) of the LDP states that *"Proposals must be served by appropriate parking provision, in accordance with maximum parking standards, and consider the requirements for cycles, cars, motorcycles and service vehicles."*

7.43 T 7 (Public Rights of Way and Recreational Routes) of the LDP states that *"Development that significantly adversely affects the character, safety, enjoyment and convenient use of a PROW will only be permitted where an acceptable alternative route is identified and provided."*

### Assessment

- 7.44 A Construction Traffic Management Plan has considered the likely impact of traffic generated by the Proposed Development on the local road network.
- 7.45 Construction of the proposed Development will generate approximately 91 movements vehicle movements per day at the peak of construction. It is expected that during the peak month of construction (Month 6), 75 two-way HGV movements per day will occur per day. A further 16 car / LGV trips would be created by construction staff travelling to and from the site.
- 7.46 The increase in traffic generation due to construction traffic was calculated. This noted that the impact of construction traffic on the B4489 will not lead to operational difficulties. On this basis, and due to the lack of sensitive receptors on the access route, the impact on traffic generation due to construction is therefore negligible.
- 7.47 Traffic management procedures have been proposed within this report which would ensure the safe operation of the approach route to the proposed development during construction. Determination of the final details of these traffic management measures will occur once the Balance of Plant contractor has been appointed and can be secured via an appropriately worded planning condition.
- 7.48 The proposed development will not be manned, operational traffic is expected to be minimal and would be conducted by smaller vehicles. The impact of this on the wider road network will be negligible.
- 7.49 Furthermore, it is notable that the officer's report for the Extant Permission stated that *"subject to conditions, it is considered that the proposed development would not result in any significant impacts upon highway safety or pedestrian safety."*
- 7.50 In light of the above it is considered that the Proposed Development is in compliance with planning policy related to traffic and transport.

### **Flood Risk and Drainage**

#### Policy Summary

- 7.51 RP 4 (Water Pollution and the Protection of Water Resources) of the LDP states that *"Development that compromises the quality of the water environment, or does not comply with good water resource management, will not be permitted."*

*Development proposals must make efficient use of water resources and, where appropriate, contribute towards improvements to water quality. SuDS must be implemented wherever they would be effective and practicable.*

*Watercourses will be safeguarded through green corridors/ riparian buffers: to protect water quality and water habitats and species; and to provide for flood plain capacity.*

*Development proposals that would have a significant adverse impact on biodiversity, fisheries, public access or water related recreation use of water resources, will not be permitted."*

7.52 RP 5 (Avoidance of Flood Risk) of the LDP states that *"In order to avoid the risk of flooding, development will not be permitted:*

- i. In areas at risk of fluvial, pluvial, coastal and reservoir flooding, unless it can be demonstrated that the development can be justified in-line with national guidance and is supported by a technical assessment that verifies that the new development is designed to alleviate the threat and consequences of flooding;*
- ii. In areas at risk of flooding from local sources, unless the Council is satisfied with the proposed drainage strategy;*
- iii. Where it would lead to an increase in the risk of flooding on the site or elsewhere from fluvial, pluvial, coastal or increased water run-off from the site;*
- iv. Where it would have a detrimental effect on the integrity of existing fluvial, pluvial or coastal flood defences;*
- v. Where it would impede access to existing and future tidal and fluvial defences for maintenance and emergency purposes; or*
- vi. Where the proposal does not incorporate environmentally sympathetic flood risk mitigation measures, such as SuDS, unless it can be demonstrated that such measures are not feasible."*

7.53 Paragraph 6.6.19 of the PPW states that *"Development proposals should incorporate design for surface water management, based on principles which work with nature to facilitate the natural functioning of the water cycle, providing issues such as land contamination would not result in the mobilisation of contaminants which may have an impact over a wider area."*

Assessment

- 7.54 A Flood Consequence Assessment has been submitted as part of this application which has been carried out in accordance with TAN15. The site is located within Flood Zone A, described in TAN15 as an area ‘considered to be at little or no risk of fluvial or tidal/coastal flooding’ on the Welsh Government’s Development Advice Map.
- 7.55 The risk of fluvial, surface water, and artificial flooding are considered to be Very Low, and the risk of groundwater flooding is considered to be Low. Tidal and sewer flooding are both discounted.
- 7.56 Flood risk management measures will be put in place to ensure that the risk of flooding to areas downstream of the site are not increased as a result of the development. This will include a surface water drainage strategy that will mimic greenfield performance for a range of storm events.
- 7.57 A Surface Water Management Plan will demonstrate that on-site attenuation will be provided by Sustainable Drainage Systems (SuDS) features to accommodate flows in exceedance of the discharge rate up to and including the 1 in 100 year storm event, including an appropriate allowance for climate change.
- 7.58 As the risk of flooding to the site is generally considered to be Low to Very Low, and the risk of flooding to surrounding areas will not increase as a result of the proposed development, it is considered that, from a flood risk and drainage perspective, the site is suitable for the type of development proposal.
- 7.59 Furthermore, it is notable that the officer’s report for the extant permission states that:
- “Following full and detailed consideration of the factors listed within 2.6 of the Circular 008/2018, it is considered that the proposed cesspit would, if properly managed, be an acceptable means of foul water disposal having regard to the specific circumstances of this application and particularly having regard to the fact that the site would not be manned. On this basis and subject to a condition requiring details of the proposed foul water system and its long term maintenance, it is considered, on balance, that the proposed method of foul water disposal is acceptable and the proposal would not fundamentally conflict with LDP Policy RP4, which broadly seeks to prevent water pollution.”*
- 7.60 In light of the above it is considered that the Proposed Development is in compliance with planning policy related to flood risk and drainage.

## **Contaminated Land**

### Policy Summary

- 7.61 RP 6 (Land Contamination) of the LDP states that *“Development proposals on land where there is a risk from actual or potential contamination or landfill gas will not be permitted unless it can be demonstrated that measures can be taken to satisfactorily overcome any significant risk to life, human health, property, controlled waters, or the natural and historic environment.”*

### Assessment

- 7.62 The Applicant notes that there is a former landfill site (LF:024: Gorswen Farm) some 300m to the south of the site, and that in the officer’s report for the Extant Permission it was stated that *“in view of the potential hydrological connection to designated sites it is considered, following a precautionary approach, that condition should be included in relation to the unsuspected contamination at the site.”* This condition was as follows:

*“If, during the course of development, contamination not previously identified is found to be present at the site no further development, unless previously agreed in writing with the Local Planning Authority, shall be carried out until the developer has submitted and obtained written approval from the Local Planning Authority for, a detailed strategy for dealing with said contamination. The development shall thereafter be implemented in accordance with the approved strategy.*

*Reason: In the interests of health and safety and to protect the environment.”*

- 7.63 The Applicant would be satisfied to add said condition to any forthcoming decision notice relating to the Proposed Development.
- 7.64 It is notable that Natural Resources Wales raised no concerns in relation to potential land contamination at site.
- 7.65 In light of the above it is considered that the Proposed Development is in compliance with planning policy related to contaminated land.

## **Historic Environment**

### Policy Summary

- 7.66 HC 1 (Historic and Cultural Environment) of the LDP sets out how the County’s distinctive historic and cultural environment can be preserved and enhanced, including by high quality design standards responding positively to local character and distinctiveness and the safeguarding of heritage assets and their settings.

### Assessment

- 7.67 As identified in the officer's report for the Extant Permission, the closest heritage assets are over 1 km from the Site and there is no intervisibility between heritage assets and the application site due to prevailing topography and existing vegetation coverage. Furthermore, Cadw's response to the applicant's formal pre-application consultation for the Extant Permission confirms that no scheduled monuments or registered historic parks and gardens would be affected by the development.
- 7.68 However, the Glamorgan-Gwent Archaeological Trust ('GGAT') noted that the Site is located in an area of archaeological potential and recommend a condition for a written scheme of investigation for a programme of archaeological works. The Applicant has submitted a Written Scheme of Investigation as part of this application for consideration by the GGAT.
- 7.69 In light of the above it is considered that the Proposed Development is in compliance with planning policy related to the historic environment.

### **Public Amenity**

#### Policy Summary

- 7.70 RP 1 (Safeguarding Public health and Natural Resources) of the LDP states that *"Development will not be permitted that would result in significant risk to: life; human health and wellbeing; property; controlled waters; or the natural and historic environment, particularly in respect of air, noise or light pollution"* amongst other things.
- 7.71 RP 2 (Noise Pollution) and RP 3 (Air and Light Pollution) of the LDP provide further information with respect to noise, air and light pollution.
- 7.72 Paragraph 6.7.6 of the PPW states that *"In proposing new development, planning authorities and developers must, therefore:*
- *address any implication arising as a result of its association with, or location within, air quality management areas, noise action planning priority areas or areas where there are sensitive receptors.*
  - *not create areas of poor air quality or inappropriate soundscape; and*
  - *seek to incorporate measures which reduce overall exposure to air and noise pollution and create appropriate soundscapes."*

7.73 Paragraph 6.7.26 of the PPW states that *“Planning authorities must consider the potential for temporary environmental risks, including airborne pollution and surface and subsurface risks, arising during the construction phases of development. Where appropriate planning authorities should require a construction management plan, covering pollution prevention, noisy plant, hours of operation, dust mitigation and details for keeping residents informed about temporary risks.”*

Assessment

7.74 As noted in the officer’s report for the Extant Permission, the proposed development would be sited a significant distance from existing residential properties such that the development would not result in any material overbearing, overshadowing or overlooking impacts upon nearby residential properties. The only concern relating to public amenity as a result of the Proposed Development is noise.

7.75 The Applicant submits as part of this application a Noise Assessment Report. This finds that, like the Extant Permission, the Proposed Development will not exceed the agreed noise limits during the daytime and night-time at any receptors. This achieves the required noise levels as agreed with Swansea Council.

7.76 In light of the above it is considered that the Proposed Development is in compliance with planning policy related to public amenity.

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## **8.0 SUMMARY AND CONCLUSIONS**

- 8.1 The Proposed Development comprises the construction and operation of a Greener Grid Park and other associated infrastructure located on land west of Rhydypany Road, Morriston, Swansea, to be known as 'Swansea GGP'.
- 8.2 The principle of electricity infrastructure to support the grid and allow for stability in electricity supply as we move to a low carbon electricity system dominated by intermittent renewable energy sources is strongly supported by local and national planning policy. Furthermore, the UK Government has committed to meeting a legally binding target of net-zero carbon emissions by 2050 as well as strengthening the UK's security of supply. There is therefore a significant and demonstrable need for the Proposed Development.
- 8.3 The Applicant is currently undertaking Pre-Application Consultation in accordance with the Planning (Wales) Act 2015.
- 8.4 The Site currently benefits from an Extant Permission for a similar proposal. The key differences relate to removal of battery storage but an increase in synonymous condensers, although within buildings that have been significantly reduced in size from 14m to 7m. The siting of some other items of infrastructure has changed but other aspects of the Proposed Development, such as cabling, access and finishes of buildings, are similar to the Extant Permission.
- 8.5 It has been demonstrated that the Proposed Development complies with planning policy and there are significant benefits associated with it. The environmental and technical reports that form part of the planning application submission demonstrate that there would be no unacceptable environmental impacts, and there are a number of added benefits, including biodiversity gains.
- 8.6 These factors, when combined with the significant need for electricity infrastructure so support the grid and allow for stability as we move to a low carbon electricity system, mean that the planning balance (and, in particular, when considered in the context of the tests under Section 38(6) Planning and Compulsory Purchase Act 2004) is weighted significantly in favour of the Proposed Development.
- 8.7 The Applicant therefore respectfully requests that planning permission is granted for the Proposed Development.



## APPENDIX 1: LIST OF PLANS

No.	Reference	Title
1	STA005-SP-01	Site Location Plan
2	STA005-PL-01	Existing Site Plan
3	STA005-PL-02	Site Layout
4	STA005-SD-01	Comms House
5	STA005-SD-02	Office
6	STA005-SD-03	Energy Management Building
7	STA005-SD-04	Genset
8	STA005-SD-05	Cooler
9	STA005-SD-06	Stores
10	STA005-SD-07	Aux Transformers
11	STA005-SD-08	Palisade Fence & Security Gate
12	STA005-SD-09	HV Yard with GCB & Transformer
13	STA005-SD-10	CCTV Post