

EDF Renewables Energy Limited

Swansea North BESS
Planning, Design and
Access, and Green
Infrastructure Statement

Draft Report

Prepared by LUC

May 2025

EDF Energy Renewables Limited

Swansea North BESS Planning, Design and Access, and Green Infrastructure Statement

Project Number
13337

Version	Status	Prepared	Checked	Approved	Date
1.	PAC submission	M. Davies R. Finnigan	K. Salter	H. Roberts	14.05.2025

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FS566056



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OHS627041



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Chapter 1

Introduction

1.1 This Planning, Design and Access, and Green Infrastructure Statement has been prepared by LUC (the Agent) on behalf of EDF Energy Renewables Limited (the Applicant) for Pre-Application Consultation (PAC) prior to submission of a full planning application to Swansea City & County Council ('Swansea Council'). The description of development is:

“Erection of battery energy storage system (BESS), associated infrastructure and vehicular access”

1.1 The Application Site ('the Site') is located on land at Abergelli Farm in Felindre (nearest postcode **SA5 7NN**), to the north-west of Morriston and the city of Swansea.

1.2 The location and extent of the developable area and the Site is set out on the Site Location Plan ref. *SWA-EDFR-BESS-CIV-PLN-150-B-Site Location Plan* and the Proposed Development is identified on the Proposed Layout Plan ref. *SWA-EDFR-BESS-CIV-PLN-100-E-Proposed Site Layout* and *SWA-EDFR-BESS-CIV-PLN-110-0 Proposed Site Layout – Entire RLB*.

Overview of the Proposals

1.3 The Proposed Development is for the construction, operation, maintenance, and decommissioning of a 250 MW Battery Energy Storage System (BESS), known as Swansea North BESS. This would operate for a time limited period of 40 years, after which it would be decommissioned.

1.4 The Site is 22.1 hectares and is therefore classed as a major planning application according to Article 2 of The Town and Country Planning (Development Management Procedure) (Wales) Order 2012.

1.5 A detailed description of the Proposed Development is included within **Chapter 2**, including its construction and operation. The Site Layout Plan ref. *SWA-EDFR-BESS_LND_PLN-150* illustrates the layout of the Proposed Development, key elements of which are summarised below:

- Battery storage facility comprising 112 battery enclosures;
- 64 no. transformer and inverter combined units and other associated electrical infrastructure distributed throughout the Site;

- A customer substation comprised of a 33 kV switchgear, LVAC switchroom, auxiliary transformer, control room and an extra-high voltage compound with 400/33 kV transformer;
- Underground cabling to connect the batteries and inverters to the customer substation and control room;
- Security fencing and closed circuit television (CCTV) towers mounted along the perimeter of the development site;
- Active fire prevention and control measures built into the system design;
- Landscape planting, biodiversity enhancements and surface water attenuation measures; and
- Temporary construction compound with site offices and welfare facilities for construction personnel; and
- Vehicular access from the public highway at Heol Penfidy (the C159).

1.6 The Proposed Development does not include a connection to the National Grid transmission network, which will be included in a separate planning application. This will take the form of an underground cable. The proposed route of the cable is not yet determined and is reliant on the findings of ecological surveys and commercial feasibility studies.

1.7 The purpose of the Proposed Development is to ensure that the essential expansion of renewable energy generation projects such as solar and wind, which are intermittent by nature, do not harm grid parity and security. The proposals would support growth in the renewable energy sector and improve energy security and resilience of the National Grid.

The Applicant

1.8 The Applicant is a major renewable energy company and developer specialising in wind, solar power and battery storage. In addition to the Proposed Development, EDF Renewables Energy Limited have experience in delivering renewable energy development and its associated development across the UK, including the now operational Coventry, Bustleholme, and Oxford battery storage sites. They have a number of staff based in the Cardiff office and are looking to expand their portfolio in Wales beyond their operational wind and solar sites to contribute to national renewable energy targets.

Environmental Impact Assessment

1.2 A request for a Screening Opinion was submitted to Swansea Council in relation to the Proposed Development, a “250 megawatt (MW) Battery Energy Storage System (BESS)”, in late 2024. On the 13th March 2025, the Council

confirmed that EIA would not be required for the Proposed Development, as it would not be likely to have significant effects on the environment by virtue of factors such as its nature, size or location (ref. 2024/2380/SCR).

Supporting Information

1.9 This Planning, Design and Access, and Green Infrastructure Statement (PDAS) forms part of the PAC information which includes the following:

- Completed Full Planning Application Form;
- Completed Ownership and Agricultural Land Certificates;
- Completed Community Infrastructure Levy Form;
- Planning, Design and Access, and Green Infrastructure Statement (this document);
- Plans and Drawings;
 - Site Location Plan
SWA-EDFR-BESS-CIV-PLN-150-B-Site Location Plan
 - Proposed Site Plan
SWA-EDFR-BESS-CIV-PLN-100-E-Proposed Site Layout
 - Proposed Site Plan – Entire RLB
SWA-EDFR-BESS-CIV-PLN-110-0 Proposed Site Layout – Entire RLB
 - Arrangement drawings of infrastructure
SWA-EDFR-TCL-DRG-G001-PCS and Transformer Arrangement
SWA-EDFR-TCL-DRG-G002-Spare Parts Container Arranger
SWA-EDFR-TCL-DRG-G004-Battery Arrangement
SWA-EDFR-TCL-DRG-G005-DNO Incomer Substation Arrangement
SWA-EDFR-TCL-DRG-G006-Fencing Gate and CCTV Arrangement
SWA-EDFR-TCL-DRG-G007-BESS 33kV Switch Room Arrangement
SWA-EDFR-TCL-DRG-G008-Auxillary and Earthing Transformer Arrangement
SWA-EDFR-TCL-DRG-G010 - LV Auxillary Switch Room, Control Room and Welfare Unit
SWA-EDFR-TCL-DRG-G011 - EV Charge Point Arrangement
SWA-EDFR-TCL-DRG-G013 - Water Tank Arrangement

- Arboricultural Impact Assessment (AIA);
- Biodiversity Net Benefit Information;
- Construction Traffic Management Plan (CTMP);
- Desk Based Coal Mining Risk Assessment (CMRA);
- Flood Consequences Assessment and Outline Drainage Strategy (FCA);
- Historic Environmental Appraisal (HEA);
- Noise Assessment;
- Ecological Impact Assessment Report (EclA);
- Geological and Ground Conditions Desk Study (DTS);
- Sustainable Drainage Strategy;
- Outline Battery Safety Management Plan (OBSMP);
- Transport Statement;
- Bare Earth Zone of Theoretical Visibility (ZTV) of Proposed Development; and
- Screened Zone of Theoretical Visibility (ZTV) of Proposed Development

- **Chapter 4** explains the Proposed Development and comprises the design and access statement of the planning application.
- **Chapter 5** provides the Green Infrastructure Statement for the Site.
- **Chapter 6** considers the planning policy context related to the Proposed Development.
- **Chapter 7** focuses on the appraisal of planning policy and how the Proposed Development accords with the relevant planning policy.
- **Chapter 8** presents the conclusions.

Structure of this Planning, Design and Access, and Green Infrastructure Statement

1.10 This document has been produced to accompany the PAC for the Proposed Development and fulfils the requirements of the Validation Checklist for major planning applications as identified in the Welsh Government's Development Management Manual.¹

1.11 It explains the design principles and approach to the Proposed Development with respect to layout, scale, amount, appearance, access, landscaping, flood risk and drainage, impact on trees, ecology, heritage, security and construction practices. The PDAS demonstrates that the Proposed Development has been designed to respond appropriately to the Site's context.

1.12 The remainder of the report is structured as follows:

- **Chapter 2** describes the Site, it's surroundings and planning history.
- **Chapter 3** sets out the need for the development.

¹ Development Management Manual, Section 7 Annex: Planning Applications – Lists of Validation Requirements, Welsh Government, 2016

Chapter 2

The Application Site and Context

Application Site

- 2.1** The Application Site ('the Site') is located on land at Abergelli Farm (nearest postcode **SA5 7NN**).
- 2.2** Vehicular access to the Site is from the C159 at the north, via a private access road through Abergelli Farm.
- 2.3** The Site comprises gently sloping agricultural fields used for pasture, an overhead line which runs through these fields, woodland, hedgerows and an existing access track. The developable area lies over the fields and avoids the woodland. The Site slopes from the north-west (134 mAOD) towards the Afon Llan in the south-east (76 mAOD). The developable area chosen has a maximum elevation of 101 mAOD to 87 mAOD.
- 2.4** The Site is surrounded by the Abergelli Fach Plantation and scrubland. The developable area is separated by two private access tracks lined by hedgerows and trees, running from the north-west to the south-east. The remainder of the Site, retained in the red line boundary to ensure net biodiversity benefit can be created, includes part of the Llety-Morfil Site of Interest for Nature Conservation (SINC). A network of streams cross the Site running in a broadly south-easterly direction.

Figure 2.1: View from central track to the north-east part of Site



Figure 2.2: View across Site from north-east field adjacent to woodland looking south-west



Figure 2.3: View looking north from central track to small wetland area at east



Figure 2.4: View looking south-east along access more compacted track running through Site



Site Surroundings

2.5 The Site's surroundings can be described as follows:

- To the immediate north of the Site are agricultural fields and Abergelli Farm.
- To the north and east of the Site is the Cefn Betingau Solar Farm accessed via Rhydypany Road.
- Agricultural land to the south is being developed for a Greener Grid Park facility.
- The Afon Llan watercourse runs into the Penllergare Valley Woods at the south.
- The Swansea North 400 kV National Grid Energy Transmission (NGET) Substation, the proposed point of connection for the Proposed Development, is c. 400 m to the south-west. The Felindre Gas Compressor Station (part of the National Gas pipeline) is c. 100 m from the south-west at its closest point.
- To the west of the Site is woodland within the Llety-Morfil Local Wildlife Site (LWS) / SINC.

2.6 The nearby land uses in the vicinity are mixed and in transition towards energy development, as Table 2.1 summarises. The surroundings include land used for agriculture, dispersed residential properties, and several renewable energy developments and existing utilities infrastructure.

2.7 The developable area of the Site is located approximately 230 m south of the existing residential property at Abergelli Farm. There is also a residential property, Maes-Eglwys, located 500 m to the south.

2.8 Morriston Hospital is located c. 1 km south-east of the Site's boundary, with the suburb of Morriston approximately 3 km to the south-east. Pontardawe is c. 7 km to the north-east of the Site boundary, while Pontarddulais is c. 6 km to the north-west. Felindre is located approximately 1.1 km to the north-west of the northernmost extent of the Site, although further away from the developable area.

2.9 There is one Public Right of Way, a footpath ref. MW64B, which crosses the land to the north of the Site from Heol Penfidy and joins the private access track for less than 150 m before leaving the Site at the west.

Site Constraints

Agricultural Land

2.10 The Site comprises agricultural grassland pastures currently used for grazing horses and sheep. The Predictive Agricultural Land Classification Map indicates that the likely agricultural land classification for the Site is Grade 3b

(moderate quality) or lower. As such, this means that it is not the most productive or versatile land for agricultural use.

Ecology

2.11 There are no Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA's), Special Areas of Conservation (SAC's), Ramsars or other statutory ecological areas of interest within the Site.

2.12 The Site is bound on both the east and west by the Llety-Morfil Site of Interest for Nature Conservation (SINC), which comprises a pocket of ancient semi-natural woodland on-site. Wern Garn Wen SINC is also adjacent to Site to the north-east.

2.13 Part of the Llety-Morfil SINC located on-site is designated for supporting Habitats of Principal Importance, including wet woodland, ancient woodland purple moor-grass and rush pasture with other notable habitats including structurally diverse and species-rich scrub, and moth species of principal importance.

2.14 The Site comprises some small areas of priority habitat (lowland deciduous mixed woodland and hedgerows) and the remaining habitats do not have priority habitat status.

Landscape

2.15 The Site does not lie within any national or local landscape designations. The Mawr Uplands Special Landscape Area (SLA) is located approximately 2 km to the east of the Site.

Cultural Heritage

2.16 There are no scheduled monuments, Grade I or II listed buildings or other designated historic designations within the Site.

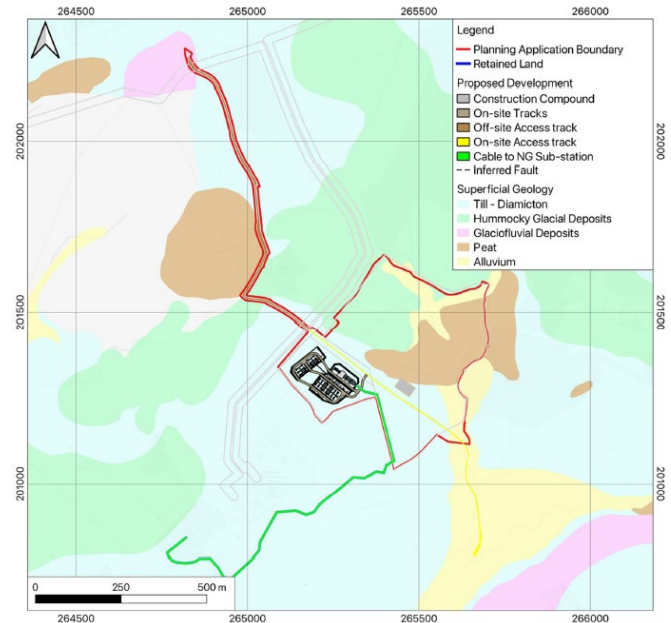
Flood Risk

2.17 The majority of the Site is not at risk of flooding, however, certain sections along the southern boundary, adjacent to the Afon Llan, fall within Flood Zone 2 and 3. These areas are also susceptible to surface water flooding and flooding from small watercourses.

Ground Conditions

2.18 There is a small area of peat in the RLB at the east, outside the developable area, indicated by the mapping taken from the Geological and Ground Conditions Desk Study (Figure 2.5).

Figure 2.5: Mapped Superficial Geology



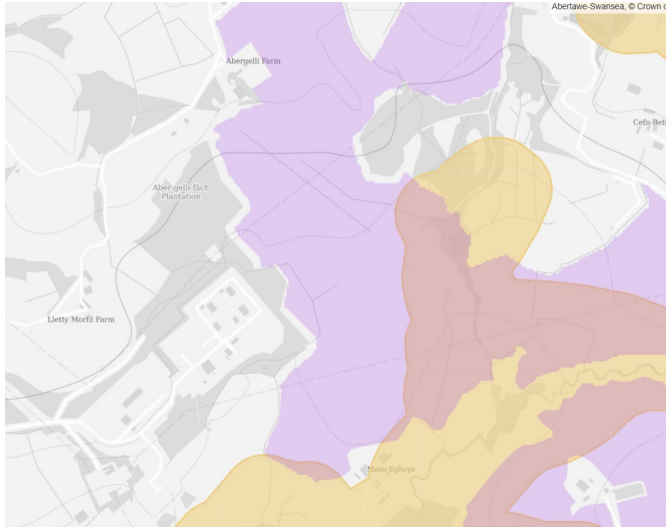
Coal Mining

2.19 The Site lies within a Coal Mining Reporting Area, however it is not located within a Development Risk Area. The Site lies within an area which could be affected by underground workings. There are no recorded mine entries at the Site. No notices have been given stating the Site is at risk of subsidence. There is no evidence to suggest any recent mining induced instability.

Planning Designations

2.20 The Site sits within a designated Local Search Area (LSA) for solar energy, as identified by the Proposals Map and Policy EU1 of the adopted Swansea Local Development Plan 2010-2025 (LDP) (Figure 2.6). The Site is located within the countryside outside a defined settlement.

Figure 2.6: Extract from LDP Proposals Map (purple shading indicates extent of LSA)



2.26 To the north-west of the Site, on the other side of the plantation, a Scoping Opinion was received for Llettyscilp Farm Energy Storage System, a 400 MW BESS and Substation (ref. 2022/2847/SCR).

Planning History

2.21 The Site has an extensive planning history, including for a gas-fired peaking plant (Abergelli Power Station) approved in September 2019, and a gas pipeline system approved in September 2018. Abergelli Power Station was located on the eastern field within the Site.

2.22 A full summary of the Site's planning history from the last 10 years can be found in **Table 2.1** overleaf.

2.23 To the north-west of the Site at land west of Llettyscilp Farm s another battery energy storage system, being developed by Innova, for 400MW. This application has been submitted to the Council (ref. 2024/2401/FUL).

2.24 To the south of the Site is a proposal for the construction of a 100 MW BESS at the Scoping stage (ref. 2022/2847/SCR).

2.25 Also to the south, a Greener Grid Park Facility is being constructed by Statkraft. This was originally approved in August 2021 (ref. 2021/0163/FUL). A subsequent Section 73 application was submitted to reconfigure the layout of the approved infrastructure, allowing management system buildings to accommodate four condensers instead (ref: 2022/2988/S73), which as approved in December 2022. An application for an updated Greener Grid Park Facility approved in April 2023 included six synchronous condensers and omits battery storage (2023/0889/FUL). There have been numerous recent discharge of conditions applications for this site, and an non-material amendment (NMA) to amend minor details of the scheme. It is understood that this proposal is being constructed. Access for this is being taken from the B4489 to the west.

Table 2.1: Planning History of the Site

Planning Ref.	Description of Development	Status	Decision Date
2024/2380/SCR	Screening Opinion - 250 megawatt (MW) Battery Energy Storage System (BESS)	Decided – EIA Not Required	13.03.2025
2022/2847/SCR	Battery storage / Energy management facility (EIA Screening Opinion)	Decided – EIA Not Required	04.01.2023
EN010069	Gas-fired peaking plant and connection infrastructure with a capacity of up to 299 MW. Located north of Swansea (north of M4, Junction 46) in the City and County of Swansea, approximately 1 km south-east of Felindre, 750 m south-west of Llwynceilyn and 1.5 km north of Llangyfelach.	Granted	19.09.2019
2018/2021/FUL	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.	Granted	06.12.2028
2018/2020/FUL	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

Chapter 3

Design and Access Statement

3.1 This section of the report includes details of the Proposed Development and the Design and Access Statement, which sets out how the Proposed Development has responded to local issues and context. It complies with the requirements of the Town and Country Planning (Development Management Procedure) (Wales) Order 2012, specifically Article 7 and has been prepared with regard to the guidance document 'Design and Access Statements in Wales' published in April 2017.

3.2 The Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended) sets out that, as a minimum, the DAS must explain:

- the design principles and concepts that have been applied to the development; and
- how issues relating to access to the development have been dealt with.

3.3 **Chapter 7** of this report provides the response to planning policy.

The Proposed Development

3.4 This section provides a description of the Proposed Development submitted for full planning permission, together with details regarding its construction and operation. When reading this section, reference should be made to the planning application drawings.

3.5 The Proposed Development is for a 250 MW Battery Energy Storage System (BESS), including construction, operation, maintenance and decommissioning. The following elements of infrastructure are proposed as part of the Proposed Development:

- Battery storage facility comprising 112 battery enclosures;
- 64 no. transformer and inverter combined units and other associated electrical infrastructure distributed throughout the Site;
- A customer substation comprised of a 33 kV switchgear, LVAC switchroom, auxiliary transformer, control room and an extra-high voltage compound with 400/33 kV transformer;
- Underground cabling to connect the batteries and inverters to the customer substation and control room;

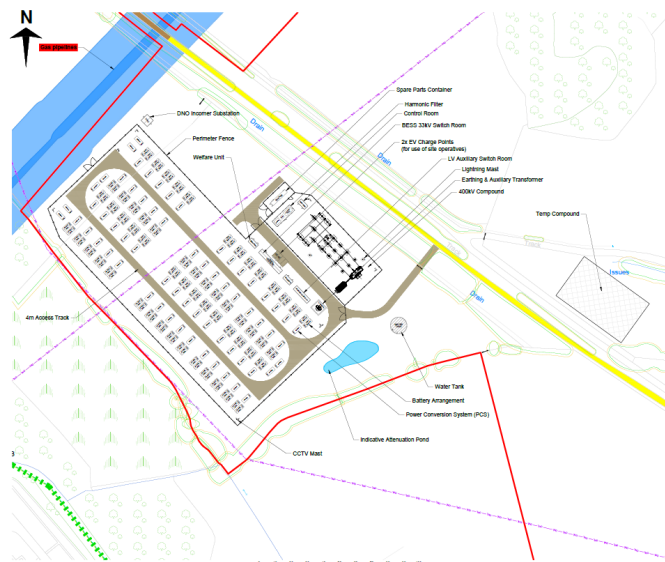
- Security fencing and closed circuit television (CCTV) towers mounted along the perimeter of the development site;
- Active fire prevention and control measures built into the system design;
- Landscape planting, biodiversity enhancements and surface water attenuation measures; and
- Temporary construction compound with site offices and welfare facilities for construction personnel; and
- Vehicular access from the public highway at Heol Penfidy (the C159).

3.6 The Proposed Development also includes site access from the existing gated farm access on the C159 Heol Penfidy and minor upgrades to the existing internal access road.

3.7 The Site will be remotely managed and controlled 24 hours a day. No employees will be based on Site during operation, except for occasional maintenance visits.

3.8 The Proposed Development footprint will be confined to areas of grazing pasture, with a standoff from field boundaries to reduce impacts on sensitive features (i.e., Llety-Morfil SINC and the Afon Llan 200m to the south). No lighting is proposed as part of the scheme.

Figure 3.1: Proposed Site Layout



Site and Context Analysis

3.9 Chapter 2 describes the existing Site, its surroundings and the key constraints on and adjacent the Site.

Site Selection

3.10 The Site has been carefully selected following a comprehensive assessment of technical, environmental, and commercial factors that influence the viability of BESS developments.

3.11 The Applicant uses a combination of specialist mapping software and on the ground knowledge from their network of land agents to find suitable sites for BESS schemes that are in close proximity to substations; are outside densely populated areas; are predominantly low grade agricultural land; and would not have unacceptable adverse impacts on landscape setting or visual impact. Other requirements considered are topography of the site, as level sites which do not require significant groundworks are preferable, in addition to access for transformer delivery. Avoiding high value environmental and historic assets is also a critical factor.

3.12 A key driver behind the selection of this Site is its close proximity to the Swansea North 400 kV NGET Substation, which represents a viable grid connection point. A grid offer has been received by National Grid.

3.13 The ability to connect to the electricity network with a relatively short cable route significantly reduces infrastructure costs and minimises energy losses. Additionally, it contributes to lower disruption during construction works. The chosen Site also has the benefit of multiple route options for the cable route.

3.14 The Site of the Proposed Development is an ideal location, as it is very close to the existing Swansea North 400 kV NGET Substation, is of low agricultural quality, has good access and is surrounded by renewable energy projects and energy infrastructure.

3.15 The landholding that the Applicant has an option over is large, so the Applicant considered other options before deciding on the Site. The first site considered had more sloping terrain and drainage issues, so was discounted for these reasons. The second site was too small to host the required number of battery containers, and its access was also relatively constrained.

3.16 The suitability of BESS sites is also assessed against its ability to support safe construction and long-term operation.

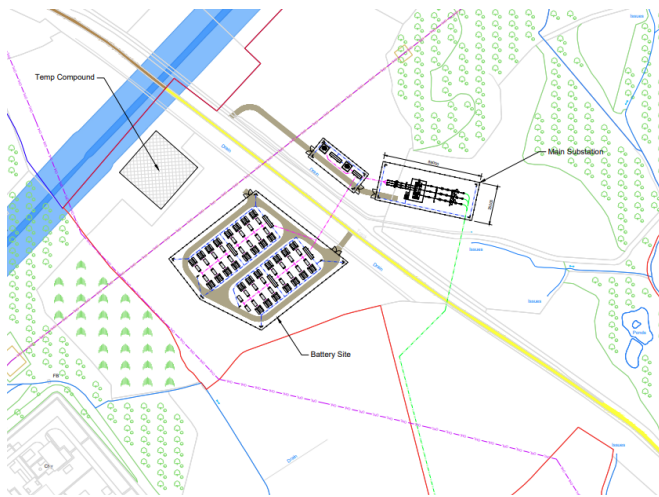
3.17 The overall chosen location represents a balanced and considered response to both strategic infrastructure needs and local environmental sensitivities, aligning well with the key requirements for a viable and sustainable BESS development.

Design Development

3.18 This section summarises the evolution of the design of the infrastructure of the development on the Site.

3.19 An initial layout proposed the siting of the customer substation on the land at the east of the tracks through the Site, and the battery site on the west. The temporary construction compound was located in the north of the western field.

Figure 3.2: Initial Layout



3.20 The initial layout incorporated a significantly smaller number of battery enclosures. The quantity of batteries on site was to be confirmed following confirmation of the exact specification of batteries to be used on-site. Following the selection of the equipment, an engineering review of the proposals necessitated additional enclosures, and therefore the creation of a larger area of hardstanding for the battery and inverter enclosures to be placed on, although their overall output remained the same.

3.21 The developable area has been moved away from the higher value habitat comprising the Llety-Morfil SINC and at the east of the access track to the current layout, which has all the infrastructure on the field at the west. Only the construction compound has been retained on the land at the west of the access track.

The Proposals

3.22 The next section summarises the proposals against the five objectives of good design as set out in Planning Policy Wales Edition 12 (PPW) and Technical Advice Note (TAN) 12 – both published by Welsh Government. The general approach taken by the Applicant to the design has been to limit and reduce the impact on identified environmental constraints, whilst also ensuring the engineering requirements can be met.

Character

3.23 The character of the Site is rural yet dominated by existing utility and electricity infrastructure, including the Felindre Gas Compressor Station, Swansea North 400 kV NGET Substation, and the Green Grid Park Facility currently under construction. The Site is also surrounded by areas of ancient woodland.

3.24 The tallest infrastructure proposed on the Site is 20 m for the Lighting Protection System, followed by 9.2 m for the 400/33 kV transformer in the on-site customer substation.

Access and Movement

3.25 Site selection also took account of planning policies and guidance related to transport, including those included in the LDP and TAN 18 'Transport'. These direct development to sites where impacts on traffic safety are minimal and can be overcome in a straightforward manner.

3.26 The existing access track to the Site from Heol Penfidy will be used for construction, operation and decommissioning activities. However, to facilitate the delivery of large construction vehicles, including the transformer delivery vehicle, the track will require widening in certain sections. This may necessitate the removal, pollarding or lopping of some trees along the route to ensure safe and unobstructed access.

3.27 The traffic generated by the Proposed Development during operation will be limited to occasional maintenance and servicing visits. These smaller vehicles will utilise the access route for HGVs formed during construction and therefore will be suitable for use by maintenance and operational staff.

3.28 A total of four parking spaces which will also be suitable for EV charging will be provided on Site, two near the welfare container, and two adjacent to the substation compound. These will be only used by operatives occasionally visiting the Site.

3.29 A Public Right of Way, footpath (ref. MW64B) crosses the land at the north of the Site from Heol Penfidy and joins the access track for less than 150m. It then leaves the Site and routes around the Gas Compressor Station. There is no requirement for a temporary or permanent diversion of this PRow. It is anticipated that the footpath could remain open throughout the construction period, with appropriate crossing provision and warning signs for drivers using the access to be aware of potential pedestrians.

Environmental Sustainability

3.30 The UK's power network was built to serve a centralised system in which power was generated in large, mostly fossil-fuelled, power stations and transmitted via the national and local distribution grids to homes and businesses. Electricity is

now being partly generated by smaller-scale localised generators, ranging from solar panels on roofs of houses and ground-mounted solar farms to off-shore wind farms.

3.31 As a result, demand has hugely increased for new connections to the local electricity network, increasing load on the network beyond what it was designed for. This shift has highlighted the need for flexible energy infrastructure capable of balancing supply and demand in real time. BESS play a crucial role in this transition by enabling the storage of electricity at times of low demand and its redistribution during peak periods. This not only reduces strain on the grid but also supports the integration of renewable energy sources by mitigating intermittency issues.

3.32 Local and national policy are driving Wales and the UK towards achieving net zero emissions by 2050, requiring an urgent and substantial reduction in CO₂ and other greenhouse gas emissions. A key part of this transition is shifting from traditional fossil fuel energy sources to renewable alternatives.

3.33 Across the UK, large-scale centralised fossil fuel and older nuclear power stations are being phased out, while decentralised renewable energy generation is expanding. Battery storage will reduce the National Grid's reliance on coal and gas while enhancing its capacity to integrate a greater share of renewable and zero-carbon energy. By providing battery energy storage, the Proposed Development helps to ensure that renewable power is available when demand is highest.

3.34 The Proposed Development will contribute to the decarbonisation of the energy system in line with Welsh Government policy, including Net Zero Wales Carbon Budget 2 (2021 – 2025), by providing a clean responsive, and efficient method of energy management. Located close to existing network infrastructure, the development is designed to make optimal use of the Site while seeking to minimise environmental impact.

3.35 The foundations of the BESS areas will be of impermeable hardstanding to avoid potential risk of contaminated firewater (in the highly unlikely case of fire). Runoff from the infrastructure areas will be collected in storage area. All other areas of the Site will have a permeable gravel finish to allow infiltration. The equipment foundations will be built to the finish level of the Site.

3.36 Policy and legislation require developers to maintain biodiversity and included enhancements for nature conservation and biodiversity. The following biodiversity enhancement measures are being considered on-site (further detail is provided in the EclA report):

- Enhance retained hedgerows using supplementary planting and long-term management regime.

- Enhance retained marshy grassland to improve structure and species diversity.
- New pond / wetland creation in areas of marshy grassland to improve aquatic connectivity across the Site.
- Installation of reptile banks and hibernacula within retained areas of grassland on Site.
- Removal of invasive species across the Site.

Community Safety

3.37 The primary way that the Applicant has protected communities is by locating the Proposed Development away from densely populated areas.

3.38 EDF Renewables Energy Limited has also provided an Outline Battery Fire Safety Management Plan which sets out how the risk of fire associated with Lithium-ion (Li-ion) batteries is managed. The main fire risks associated with Li-ion batteries are attributed to electrolytic fires which can result from physical damage to a battery cell, electrical fires in electrical system components and thermal runaway. A thermal runaway event in an individual cell can be caused by electrical abuse, physical damage, or thermal abuse from prolonged exposure to fires.

3.39 The Outline Battery Fire Safety Management Plan provides mitigation techniques during a thermal runaway fire, and general provisions for the development of BESS sites, and site-specific requirements.

Chapter 4

Need for the Development

International Agreements on Climate Change and Renewable Energy Legislation and Policy

4.1 In October 2014, the Heads of Government of the European Union (EU) agreed to adopt a new European Climate and Energy Policy². This requires at least a 40% cut in greenhouse gas emissions by 2030 (from 1990 levels), at least a 27% renewable energy share and a 27% improvement in energy efficiency across the EU member states.

4.2 In November 2016 the European Commission (EC) published a draft revised renewable energy directive to put into law the requirements of the new European Climate and Energy Policy³. In December 2018, the recast Renewable Energy Directive 2018/2001/EU entered into force, which sets a new binding renewable energy target for the EU and member states must set out National Energy and Climate Plans (NECPs) for 2021-2030⁴. More recently in September 2020, as part of the Green Deal, the European Commission proposed to raise the 2030 greenhouse gas emission reduction target to at least 55% (from 1990 levels), at least a 32% renewable energy share and a 32.5% improvement in energy efficiency across the EU member states. The Commission assessed action required across all sectors and started the process of making detailed legislative proposals by June 2021 for implementation to achieve increased ambitions⁵.

4.3 The European Green Deal was adopted in July 2020, which aims to build an integrated energy system fit for climate neutrality and to turn hydrogen into a viable solution. The Renewable Energy Directive is in the process of being reviewed and the Commission launched a public consultation for review of the renewable energy rules on 17th November 2020, which was open for input until 9th February 2021. No draft or schedule for a draft has been released since this date and it is unclear at present how the UK Government intends to align with the Green Deal.

² European Council, Conclusions on 2030 Climate and Energy Policy Framework, SN 79/14, 23.10.2014. Available at: https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/145356.pdf

³ European Commission (2016) Renewable Energy Directive. Available at: https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-directive_en

⁴ European Commission (2018) The recast directive 2018/2001/EU. Available at: https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-directive_en#directive-20182001eu

⁵ European Commission (2020) 2030 climate and energy framework. Available at: https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2030-climate-energy-framework_en#ref-2030-climate-and-energy-framework---existing-ambition

4.4 Prior to Brexit in 2020, the UK operated under European Union (EU)⁶ legislation and policy, driven by international co-operation to cut the emissions of greenhouse gasses, through the United Nations Framework Convention on Climate Change (UNFCCC). However, as of 2022 the UK now operates under The Environment Act 2021. This includes the 'Kyoto Protocol'⁷, which became a legally binding treaty in February 2005, and the 'Paris Agreement'⁸, a legally binding international treaty on climate change, established in December 2015 at the global climate summit COP21 (Conference of the Parties). This also includes the more recent 'Glasgow Climate Pact'⁹ in November 2021, a product of the COP26 in Glasgow.

4.5 The Paris Agreement entered into force on 4th November 2016 and was ratified in the UK on 18th November 2016. The Paris Agreement sets out the ambition of holding the increase of global average temperature to "well below 2°C", and pursuing efforts to limit temperature increase to 1.5°C. Under the Paris Agreement, countries committed to bring forward national plans setting out how much they would reduce their emissions – known as Nationally Determined Contributions, or 'NDCs'. They agreed that every five years they would come back with an updated plan that would reflect their highest possible ambition at that time.

4.6 The aim of the Egyptian COP27 Presidency was to call for an acceleration in global action on climate mitigation and adaptation and to begin implementing the outcomes from COP26 (the 'Glasgow Climate Pact'). This included revising NDCs for 153 countries covering 80% of global emissions, accelerating the phasing out of coal, limiting deforestation and methane release, and promoting electric vehicles).

UK and Wales Climate Change and Renewable Energy Legislation and Policy

UK and Welsh Government Climate Emergency

4.7 In May 2019, following the Inter-Governmental Panel on Climate Change (IPCC), the UK Government declared an Environmental and Climate Change Emergency. This declaration required a commitment to avoid a rise of more

than 1.5°C in global temperature. To achieve this, global emissions are required to fall by approximately 45% by 2030 from the 1990 levels. A target for the UK to be net-zero by 2050 was legally set out in June 2019 under the UK Climate Change Act 2008 (2050 Target Amendment) Order 2019¹⁰. This amended the previous legal 2050 target to reduce Greenhouse Gas (GHG) emissions from 80% to 100% below the 1990 levels, otherwise referred to as net-zero.

4.8 By this declaration, the UK Government recognises a duty to combat climate change, as well as an opportunity to lead the way in green and sustainable economic opportunities and a future low carbon economy.

4.9 The Welsh Government has been a staunch leader in the road to a carbon neutral economy, having made a climate change declaration in April 2019. In June 2019, the Welsh Government also accepted the Climate Change Committee's (CCC) recommendation for a new emissions target of net zero emissions no later than 2050¹¹.

4.10 The devolved Welsh Government has published a suite of policy in relation to renewable energy and climate change which continues to drive Wales' low carbon ambitions.

4.11 It is important for the Welsh economy that the country remains at the forefront of tackling climate change and must continue to invest in technology and development that carries the country towards a net-zero future and world leader in addressing the climate crisis.

Path to Net-Zero

4.12 In December 2020, the CCC published a further report, titled 'The Path to Net Zero'¹², which called for Wales to legislate the target to reach net zero by 2050. In March 2021, new legislation came into force in Wales, setting a legally binding net zero emissions target by 2050 under The Environment (Wales) Act 2016 (Amendment of 2050 Emissions Target) Regulations 2021 as well as setting interim emissions targets¹³.

⁶ Following the UK's exit from the European Union on the 31st January 2020, the UK continues to align itself with European legislation goals, and as of 2022, created its own national legislation.

⁷ UNFCCC (1997) Kyoto Protocol to the United Nations Framework Convention on Climate Change adopted at COP3 in Kyoto, Japan, on 11th December 1997.

⁸ United Nations (2015) The Paris Agreement

⁹ United Nations (2015) The Glasgow Pact. Available at: <https://ukcop26.org/cop26-keeps-1-5c-alive-and-finalises-paris-agreement/>

¹⁰ UK Government (2019) The Climate Change Act 2008 (2050 Target Amendment) Order 2019. Available at: <https://www.legislation.gov.uk/ukdsi/2019/9780111187654>

¹¹ Committee on Climate Change (2019) Net Zero – The UK's contribution to stopping global warming. Available at: <https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-The-UKs-contribution-to-stopping-global-warming.pdf>

¹² Climate Change Commission (2020) The path to Net Zero and reducing emissions in Wales. Available at: <https://www.theccc.org.uk/publication/the-path-to-net-zero-and-progress-reducing-emissions-in-wales/>

¹³ The Climate Change (Interim Emissions Targets) (Wales) (Amendment) Regulations 2021. Available at: <https://www.legislation.gov.uk/wsi/2021/338/note/made>

Climate Change Strategy for Wales (2010)

4.13 The Climate Change Strategy for Wales has accompanying Delivery Plans on Emissions Reduction and Adaptation, that set out how the Welsh Government intends to limit greenhouse gas emissions and adjust to changes in our climate. The strategy focuses on several areas: creating behaviour change; leading by example in the Assembly Government and wider public sector to consider climate change in all decisions; delivering increased energy efficiency, low carbon transport and buildings skills for a low carbon economy; making the most of opportunities to cut emissions and adapt to climate change; ensuring research and development, technology, innovation and skills help Wales to gain maximum benefit; creating a framework to support effective adaptation that delivers for those who are less able to adapt or in need; and ensuring that land use and spatial planning promote sustainable development and enable a move to a low carbon economy¹⁴.

Energy Wales: A Low Carbon Transition (2012)

4.14 The ambition is to create a sustainable, low carbon economy for Wales. The plan¹⁵ is to take full advantage of the transition to a low carbon economy to secure a wealthier, resilient, and sustainable future. As such, business and industry will play a key role, so everything must be done to create a stable environment essential for long-term investment. According to the report, Wales needs to be responsive to the needs of business and industry; develop Wales Infrastructure Investment Plan to ensure future infrastructure investment is clear and strategically prioritized; and ensure regulatory processes are efficient and simplified. The report also notes that there should be a focus on energy projects of the greatest potential benefit. As such, an integrated, cross-Government approach will focus on delivery and partnership to ensure that through leadership, the economic and community benefits of delivering these energy developments are maximised in Wales¹⁶.

Well-being of Future Generations (Wales) Act (2016)

4.15 The Well-being of Future Generations (Wales) Act provides a comprehensive framework for sustainable development in Wales. It includes seven long term well-being goals for Wales and a well-being duty on government and specified public bodies to carry out sustainable development

and act in a manner, which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.

Prosperity for All: A Low Carbon Wales (2019)

4.16 Under Section 39 of The Environment Wales Act 2016, Welsh Ministers must prepare and publish a report for each budgetary period setting out their policies and proposals for meeting the carbon budget for that period. 'Prosperity for All: A Low Carbon Wales'¹⁷ is the first statutory decarbonisation plan produced by the Welsh Government.

4.17 The report sets out the foundations for Wales' transition to a low carbon nation, which will bring opportunity for growth of green businesses and wider benefits for people and the environment. It sets out how Wales aims to meet the first carbon budget (2016-2020) and consequently the 2020 interim target through 100 policies and proposals across Ministerial portfolios. The report shows that power and industry have the biggest shares of emissions in Wales, which is greater than these sectors in the UK.

4.18 Net Zero Wales Carbon Budget 2 (2021 – 2025) which supersedes this report has since been published (this is described below).

A Plan for Wales' Renewable Energy Future: Essential Actions to Re-energise Wales by 2035 (2019)

4.19 The 2019 Institute for Welsh Affairs (IWA) report builds on evidence from ten previous reports published by IWA and sets out a 10-point plan with detailed actions for Wales to reach 100% renewable energy by 2030. The ten points are as follows:

1. Fund the future
2. Renew Wales' homes
3. Retain the benefits in Wales
4. Use local land for local benefit
5. Focus on delivery
6. Future-proof the grid
7. Get SMARTer
8. Get ahead in marine

¹⁴ Welsh Government (2010) Climate Change Strategy for Wales: Delivery Plan for Emission Reduction. Available at: <https://gov.wales/sites/default/files/publications/2019-04/climate-change-research-emission-reduction-scenarios.pdf>

¹⁵ Welsh Government (2012) Energy Wales: A Low Carbon Transition. Available at: <https://www.gov.wales/sites/default/files/publications/2019-07/energy-wales-a-low-carbon-transition.pdf>

¹⁶ Welsh Government (2012) Energy Wales: a low carbon transition. Available at: <https://gov.wales/sites/default/files/publications/2019-07/energy-wales-a-low-carbon-transition.pdf>

¹⁷ Welsh Government (2019) Prosperity for All: A Low Carbon Wales. Available at: https://www.gov.wales/sites/default/files/publications/2019-06/low-carbon-delivery-plan_1.pdf

9. Harness the potential of bioenergy

10. Decarbonise transport¹⁸

Energy Generation in Wales (2020)

4.20 The Welsh Government published *Energy Generation in Wales* in May 2022¹⁹. It sets out the energy generation capacity in Wales in 2020 and analyses how it has changed over time. The overall purpose of the report is to support the Welsh Government with the development of energy policy helping to “*evidence the economic, social and environmental benefits from the development of Welsh energy projects*”.

Local Ownership of Energy Generation in Wales – Benefitting Wales Today and for Future Generations (2020)

4.21 The intent of the policy statement²⁰ is to help Wales retain the social and economic benefit from future energy developments located in Wales. It is currently estimated that Wales inadvertently exports between 6-10% of Gross Value added. Locally owned energy generation would provide a strong opportunity to retain this money in the local economy.

Net Zero Wales Carbon Budget 2 (2021 – 2025)

4.22 In October 2021, the Welsh Government published their second Low Carbon Delivery Plan, which outlines the delivery of the Second Welsh Carbon Budget (2021-2025) and looks beyond to start building the foundations for Carbon Budget 3 and the 2030 target, as well as net zero by 2050²¹.

Welsh Policy: The Climate Change (Wales) Regulations 2021

4.23 In 2021 the Welsh Government’s Department for Economy, Skills and Natural Resources published several regulations subsequently adopted by the Government. This formally committed Wales to legally binding targets to become a net-zero emissions country by 2050. These are collectively referred to as The Climate Change (Wales) Regulations 2021.

4.24 The Regulations set out a series of milestones along a ‘decarbonisation pathway’ acting as a long-term framework in conjunction with near-term actions outlined in the more frequent carbon budgets. Hence, the Regulations provide a linear route towards achieving net-zero in Wales and

safeguarding the country and its resources for future generations.

4.25 By achieving the goals of each milestone, Wales lowers its impacts on the World and will continue to benefit from combatting climate change without which risks to health, flooding, water shortages, weather extremes, and risks to biodiversity would all increase.

The Environment (Wales) Act 2016 (Amendment of 2050 Emissions Target) Regulations 2021

4.26 The Environment Wales Act 2016 (‘the Act’)²² sets the target for the Welsh Government to reduce greenhouse gas emissions by 80% by 2050 (from 1990 levels), with interim emissions targets such as 45% by 2030 and 67% by 2040.

4.27 Under Section 39 of the Act, Welsh Ministers must prepare and publish a report for each budgetary period setting out their policies and proposals for meeting the carbon budget for that period. The Act also aims to enable Wales to manage resources in a more proactive, sustainable, and coordinated way, while establishing a framework necessary to tackle climate change.

4.28 The Act provides a legislative approach which helps to manage Welsh natural resources at a national and local level, through National Natural Resources Policy, a State of Natural Resources Report and Area Statements. Furthermore, the Act allows Welsh Ministers to take action to achieve higher levels of recycling for business waste, food waste treatment and energy recovery. It also provides Natural Resources Wales (NRW) with powers to undertake land management agreements and experimental schemes.

The Climate Change (Interim Emissions Targets) (Wales) (Amendment) Regulations 2021

4.29 These regulations updated the existing interim targets for reductions in greenhouse gas emissions by 2030 and 2040. This updated the target for 2030 from 45% to 67%, and the target for 2040 from 63% to 89%. This aligned the interim targets within the updated 2050 target in line with the Climate Change Committee’s advice.

¹⁸ IWA (2019) A plan for Wales’ renewable energy future: Essential actions to re-energise Wales by 2035. Available at: https://www.iwa.wales/wp-content/media/2019/03/IWA_Energy_WP6_Digital-2.pdf

¹⁹ Welsh Government (May 2022) *Energy Generation in Wales 2020*. Available at: <https://www.gov.wales/energy-generation-wales-2020>

²⁰ Welsh Government (2020) *Local ownership of energy generation in Wales – benefitting Wales today and for future generations*. Available

at: <https://www.gov.wales/sites/default/files/publications/2020-02/policy-statement-local-ownership-of-energy-generation-in-wales.pdf>

²¹ Net Zero Wales Carbon Budget 2 (2021 to 2025). Available at: <https://www.gov.wales/net-zero-carbon-budget-2-2021-2025>

²² The Environment (Wales) Act 2016. Available at: <https://www.legislation.gov.uk/anaw/2016/3/contents/enacted>

The Climate Change (Net Welsh Emissions Account Credit Limit) (Wales) Regulations 2021

4.30 A revision of the existing carbon budgets for 2021 – 2025 as well as 2026 – 2030. This set new averages of 37% and 58% respectively in reductions below the baseline statistics.

The Climate Change (Carbon Budgets) (Wales) (Amendment) Regulations 2021

4.31 Limits the use of carbon offsetting (carbon credits) for 2021 – 2025 to zero. The regulation in effect prohibits the use of carbon offsetting as a method for achieving reductions in greenhouse gas emissions during this period.

Powering up Britain (2023)

4.32 This report, published in March 2023, sets out the plans of the UK government in enhancing energy security, economic opportunities, and the transition towards achieving the, and a clearer structure as to how the UK will deliver on its net-zero emissions commitments.

Local Level Climate Change and Renewable Energy Legislation and Policy

4.33 Swansea Council declared a climate emergency on 27th June 2019 and is actively pursuing measures to address climate change. In 2021, Swansea Council published the 'Swansea Council Net Zero by 2030' plan, which outlines a series of commitments and targets, including:

- Swansea Council will be carbon neutral by 2030;
- The wider Swansea area will work towards becoming as close to carbon neutral as possible by 2030;
- Swansea Council will collaborate with public and private sector partners to support the decarbonisation of all organisations operating within the city by 2040; and,
- Swansea Council will contribute to the Welsh Government's ambition of a net-zero public sector by 2030.

4.34 In November 2021, Swansea Council further declared a Nature Emergency, to emphasise the relationship between climate change and biodiversity loss. This led to the development of a combined Climate Change and Nature Strategy 2022 – 2030, which outlines actions to address both environmental challenges.

Assessment of need for the development

4.35 In accordance with the legislation and policy referred to above, there is a significant need and political willingness to increase the amount of renewable energy produced by in

Wales. The Proposed Development will deliver up to 250 MW of battery energy storage which will provide a significant step towards meeting legislated renewable energy generation targets and those set out in national planning policy.

Chapter 5

Green Infrastructure Statement

Introduction

5.1 This Green Infrastructure Statement has been produced in line with the requirements of Welsh Government (2024) Planning Policy Wales Edition 12 (PPW12). PPW12 sets out that a Green Infrastructure Statement (GIS) should be submitted with all planning applications to describe how green infrastructure has been incorporated into the proposal. The statement must also be used to demonstrate how the step-wise approach (Section 6.4.15 of PPW12) has been applied.

5.2 This Green Infrastructure Statement outlines how the Proposed Development has been designed in accordance with the requirements of the duty imposed by Section 6 of the Environment (Wales) Act 2016 and the 'DECCA Framework' development by NRW. Planning Policy Wales outlines the step-wise approach, which is to firstly avoid impacts to species and habitats set out in Section 7 of the Environment (Wales) Act 2016, and if this is not possible to minimise impacts on these, followed by mitigation / restoration, compensation on site and compensation off site.

Demonstration of Policy Compliance

5.3 This section demonstrates how the principles set out in the step-wise approach have been reflected in the site selection and design process for the Proposed Development, in line with the DECCA framework.

5.4 In line with PPW12, Green Infrastructure Statements should highlight the baseline data considered and surveys and assessments undertaken, the following list of submission documents detail the relevant baseline data, surveys and assessments undertaken for the Proposed Development:

- Ecological Impact Assessment Report (EclA);
- Arboricultural Impact Assessment; and
- Design and Access Statement (**Chapter 4** of this report)

5.5 This Statement should be read in conjunction with the EclA.

Locating and Designing in Accordance with the Step-wise Approach

Step 1: Avoid

5.6 The first step described in the step-wise approach is to 'avoid', as follows:

- a. *The first priority for planning authorities is to avoid damage to biodiversity in its widest sense (i.e. the variety of species and habitats and their abundance) and ecosystem functioning. Where there may be harmful environmental effects, planning authorities will need to be satisfied that any reasonable alternative sites (including alternative siting and design options) that would result in less harm, no harm or benefit have been fully considered.*
- b. *Proposals in statutory designated sites are, as a matter of principle, unacceptable and therefore must be excluded from site searches undertaken by developers. This principle also extends to those sites containing protected species and habitats which are irreplaceable and must be safeguarded. Such sites form the heart of resilient ecological networks and their role and the ecosystem services they provide must be protected, maintained and enhanced and safeguarded from development. It will be wholly exceptional for development to be justifiable in such instances. (Paragraph 6.4.15, 1)*

5.7 As detailed in Chapter 4, the process and approach to selecting the location of the Proposed Development involved ensuring early assessment of potential capacity for energy storage in balance with environmental and technical constraints, relevant policy and project deliverability in line with the urgency of reaching 2050 net zero targets for Wales. Step 1 of the step-wise approach was employed in this context.

5.8 The site selection criteria applied to the Proposed Development included early desk-based assessment of site technical and environmental constraints including known heritage, ecological, hydrological and other statutory designations, utilities and services to provide information regarding the suitability of the site for BESS development and the potential land area where associated infrastructure could be placed.

5.9 The following changes were made to the design:

- Moved the developable area of the BESS from the east to the west.
- Locate the construction compound outside any root protection areas.

5.10 Following the careful site selection and design process, it can be confirmed that the Proposed Development avoids the following ecological and landscape designations and assets. This includes those "sites containing protected species and habitats which are irreplaceable" that are present within the Site, as listed under footnote 23²³ (footnote 129 in PPW12), detailed above.

- Special Areas of Conservation (SAC);
- Special Protection Areas (SPA);
- Sites of Special Scientific Interest (SSSI);
- Nature Reserves;
- Ancient hedgerows;
- Wet woodlands;
- Sand dunes;
- Salt marsh;
- Blanket bog;
- Lowland fen;
- Ancient Woodland;
- Peatland;
- Species rich grassland;
- Veteran trees; and
- Long undisturbed soils.

Step 2: Minimise

5.11 The second step described in the step-wise approach is to 'minimise'. This step is described as follows:

"When all locational, siting and design options for avoiding damage to biodiversity have been exhausted, applicants, in discussion with planning authorities, must seek to minimise the initial impact on biodiversity and ecosystems by:

- *maintaining the largest possible area of existing habitat supporting biodiversity and functioning ecosystems, particularly Section 7 habitats and species where present, by minimising development size and appropriate orientation on site, paying due regard to the*

²³ "Habitats, including the natural resources which underpin them, which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. Examples

include, ancient woodland and veteran trees, ancient hedgerows, wet woodlands, sand dunes, peatland, species rich grassland, long undisturbed soils, blanket bog, salt marsh and lowland fen."

potential for continued long term maintenance and management of retained areas to benefit biodiversity;

- *ensuring that retained habitats continue to be well connected to adjacent habitats to provide connectivity for key species and ensuring that the favourable conservation status of local species populations is maintained;*
- *retaining existing features, develop a management plan for their future care (e.g., trees, hedgerows, species rich grasslands, heath, wetlands, ponds and freshwater habitats) and use appropriate buffers to protect these from construction and operational impacts; and*
- *using proven innovative/creative solutions (where required) to minimise damage and maintain existing biodiversity features and ecosystems in tandem with robust monitoring and rectification strategies”* (Paragraph 6.4.15, 2)

5.12 The proposals have reduced the impact on the habitats in the area, with as many existing features retained on Site as possible.

5.13 There is some Section 7 habitat within the Site which comprises lowland mixed deciduous woodland and hedgerow. The Ecl report confirms no direct impacts are anticipated to priority habitats as these fall outside the development footprint, and impacts will be reduced by implementation of work exclusion buffers.

Steps 3 and 4: Mitigate/Restore and Compensate on Site

5.14 Steps 3 and 4 described in the step-wise approach are to 'mitigate' (Step 3) and 'restore' (Step 4), both 'on site' and 'offsite'. It is noted that Step 4 is split into two sections, respectively. The steps are described as follows:

- *Where, after measures to minimise impact, biodiversity and ecosystems could still be damaged, or lost through residual impacts, the proposed development should mitigate that damage. Mitigation measures must be put in place to limit the negative effects of a development.* (Paragraph 6.4.15, 3a)
- *Effective mitigation or restoration measures should be incorporated into the design proposal following the consideration of steps one and two above. Mitigation or restoration measures must be designed to address the specific negative effects by repairing damaged habitats and disturbed species. They should seek to restore in excess of like for like, accounting for disturbance and time lags for the recovery of habitat and species, and in every case, mitigation or restoration measures should seek to build ecosystem resilience within the site and where possible the wider area. In some circumstances,*

where like for like mitigation measures are not possible, particularly in respect of restoration measures, it may be necessary to consider on site compensation measures in the first instance. In designing mitigation measures where uncertainty exists, applicants should follow the precautionary principle and assume a significant effect. Off-site compensation measures (as set out in step four below) should be considered as a last resort. (Paragraph 6.4.15, 3b)

5.15 Generally across the Site, the connectivity between the two parcels of the Llety-Morfil SINC could be improved, especially as many protected species records are found at the west of the Site. The following connectivity measures could be achieved, subject to outcomes of discussions with the landowner and feedback from the consultation period:

- Gapping up hedgerows – recreating the shrub layer for defunct hedgerows with appropriate planting. One off planting with monitoring and potential intervention depending on success rate.
- Enhancing retained marshy grassland - improve diversity and structure of retained grassland (i.e., either removing topsoil to reduce nutrients, and over-sewing with appropriate grassland mix and rotational cutting / grazing). Similar to other grassland, this would need light grazing and monitoring with potential intervention depending on success rate.
- Pond / wetland creation – within areas of retained grassland surrounding the facility to improve connectivity. One off creation and monitoring.

5.16 Additional benefits across the Site could be achieved though:

- Invasive species management – removal of Japanese knotweed and Himalayan balsam using a specialist invasive species contractor across all areas of the Site.
- Creation of reptile banks and hibernacula in retained areas of marshy grassland to benefit reptiles and amphibian species. Grass snake and lizard have been recorded during the reptile surveys on Site.

Step 4: Compensate Off Site

5.17 Step 4 (the second part thereof) described in the step-wise approach is to 'compensate off site'. This step is described as follows:

“When all the steps above have been exhausted, and where modifications, alternative sites, conditions or obligations are not sufficient to secure biodiversity outcomes further on-site/immediately proximate, as a last resort off-site compensation for unavoidable damage must be provided” (Paragraph 6.4.15, 4)

5.18 Through development of the mitigation, compensation and enhancement measures for the Proposed Development, it has been identified that all potential adverse effects can be mitigated on-site and therefore no off-site compensation is required.

Summary

5.19 This Green Infrastructure Statement has been prepared to satisfy the requirement set out in PPW12 to accompany all planning applications. The Statement has demonstrated how the step-wise approach has been followed. The location of the Proposed Development was selected to avoid known designated ecology sites. The design of the Site has sought to avoid any direct impacts on SINC, ancient woodland and priority habitats by retaining these. In line with minimising the impacts on green infrastructure, the design has evolved to provide a buffer to the SINC and locate the construction compound outside any RPAs. The proposals have reduced the impact on the habitats in the area, with as many existing features retained on Site as possible. Finally, mitigation measures are recommended for the different areas on the Site and across the Site, subject to discussion with the landowner. It is not expected that any off-site compensation is required.

Chapter 6

Planning Policy Context

6.1 The Proposed Development has been designed to comply with the relevant local, national, and neighbourhood planning policies, as well as other material considerations. This section sets out a summary of the relevant planning policies.

The Development Plan

6.2 The relevant Statutory Development Plan for the Site comprises 'Future Wales: The National Plan 2040' (Future Wales), adopted in 2021 and the Swansea Local Development Plan (2010 - 2025) (LDP) which was adopted in February 2019. The LDP sets out the vision, objectives, and spatial strategy for the City and County of Swansea, including strategic and detailed development management policies. The LDP comprises the statutory framework for planning decisions to be made up until 2025. However, this period has now been extended, until a new plan is published.

6.3 Work is currently underway in the preparation of this new development plan for Swansea, the 'Swansea Local Development Plan 2023-2038' (LDP2). Once adopted, LDP2 will replace the existing LDP and will provide the new planning blueprint for future development across Swansea up to 2038. The Preferred Strategy has finished public consultation as of 18th April 2025. At present, there are no draft policies available that should be considered. The submission of LDP2, along with its supporting evidence base, to the Welsh Government for Examination in Public is scheduled for Spring 2027.

Future Wales: The National Plan 2040

6.4 Future Wales is the Welsh Government's National Development Framework and is the highest tier of the Development Plan in Wales. As the most recent expression of national planning policy, Future Wales is considered to take precedent in the planning policy hierarchy where there is any discrepancy with local development plans.

6.5 It is highly supportive of the development of renewable and low carbon energy in Wales. On page 99 of Future Wales, it is stated that the UK's energy system is undergoing significant change, with *"energy generation and delivery becoming more distributed in the communities and regions where the energy is used. The boundaries between systems are also becoming blurred, with energy being converted into (and stored in) different forms to address a range of needs."*

There is also a need to consider large-scale energy storage as part of the energy system to provide grid balancing.”

6.6 The key policy for the principle of development for a battery energy storage system on the Site is Policy 17: Renewable and Low Carbon Energy and Associated Infrastructure, which states:

“The Welsh Government strongly supports the principle of developing renewable and low carbon energy from all technologies and at all scales to meet our future energy needs. In determining planning applications for renewable and low carbon energy development, decision-makers must give significant weight to the need to meet Wales’ international commitments to generate 70% of consumed electricity by renewable means by 2030... all proposals should demonstrate that they will not have an unacceptable adverse impact on the environment... Proposals should describe the net benefits the scheme will bring in terms of social, economic, environmental and cultural improvements to local communities.”

6.7 Future Wales sets the following targets for the generation of renewable energy on page 96:

- For 70% of electricity consumption to be generated from renewable energy by 2030.
- For one gigawatt of renewable energy capacity to be locally owned by 2030.
- For new renewable energy projects to have at least an element of local ownership from 2020.

6.8 Policy 28, National Growth Area: Swansea Bay and Llanelli, is also relevant, which states that growth in the South West region should be focused in the Swansea Bay and Llanelli area. This area is the main existing centre of population, employment and services and is served by the main connectivity infrastructure.

Swansea Local Development Plan (2010 – 2025)

6.9 The following policies of the LDP are relevant to the Proposed Development:

- PS 1 – Sustainable Places
- PS 2 – Placemaking and Place Management
- ER 1 – Climate Change
- CV 2 – Development in the Countryside
- HC 1 – Historic and Cultural Environment
- ER 5 – Landscape Protection
- ER 6 – Designated Sites of Ecological Importance

- ER 8 – Habitats and Species
- ER 11 – Trees, Hedgerows and Development
- T 1 – Transport Measures and Infrastructure
- 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 4 – Water Pollution and the Protection of Public Resources
- RP 5 – Avoidance of Flood Risk
- RP 6 – Land Contamination
- RP 7 – Land Instability

Planning Policy Wales Edition 12

6.10 PPW12 is the national planning policy document for Wales which provides the framework for making planning decisions and sets out the Welsh Government’s policies on different aspects of land use planning. It is not part of the development plan, yet it has substantial weight in the planning process. The latest edition of PPW was published in July 2024. PPW is supplemented by a series of Technical Advice Notes (‘TANs’), Welsh Government Circulars and policy clarification letters which together provide the national planning policy framework for Wales.

Section 3: Strategic and Spatial Choices

6.11 Paragraph 3.3 of PPW12 notes that good design is fundamental to creating sustainable places where people want to live, work and socialise. Meeting the objectives of good design should be the aim of all those involved in the development process and should be applied to all development proposals, at all scales (Paragraph 3.4).

6.12 Paragraph 3.33 of PPW12 notes that the planning system plays a significant role in managing the significant risk of climate change to people, property, infrastructure and natural resources.

6.13 Good design can help to ensure high environmental quality. Landscape and green infrastructure considerations are an integral part of the design process. Integrating green infrastructure is not limited to focusing on landscape and ecology, rather, consideration should be given to all features of the natural environment and how these function together to contribute toward the quality of places.

6.14 Paragraph 3.59 of the PPW states that considerable weight should be given to protecting such land from

development. Land in grades 1, 2 and 3a should only be developed if there is an overriding need for 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.

Section 5: Productive and Enterprising Places

6.15 Paragraph 5.7.1 of PPW12 states the Welsh Government's highest priority is to reduce demand wherever possible and affordable. Low carbon electricity must become the main source of energy in Wales.

6.16 PPW12 confirms at Paragraph 5.7.2 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.

6.17 Paragraph 5.7.12 of the PPW states that energy storage has an important part to play in managing the transition to a low carbon economy. The growth in energy generation from renewable sources requires the management of the resultant intermittency in supply, and energy storage can help balance supply and demand. Proposals for new storage facilities should be supported wherever possible.

6.18 PPW states at Paragraph 5.9.1 that local authorities should facilitate all forms of renewable and low carbon energy development and should seek cross-department co-operation to achieve this.

6.19 In determining planning applications for renewable and low carbon energy technologies, planning authorities should consider:

- The contribution a proposal will make to meeting identified Welsh, UK and European targets;
- The contribution to cutting greenhouse gas emissions;
- The wider environmental, social and economic benefits and opportunities from renewable and low carbon energy development.

6.20 Paragraph 5.9.20 requires planning authorities to identify and require suitable ways to avoid, mitigate or compensate adverse impacts of renewable and low carbon energy development. The construction, operation, decommissioning, remediation and aftercare of proposals should take into account:

- the need to minimise impacts on local communities, such as from noise and air pollution, to safeguard quality of life for existing and future generations;
- the impact on the natural and historic environment;
- cumulative impact;
- the capacity of, and effects on the transportation network;
- grid connection issues where renewable (electricity) energy developments are proposed; and
- the impacts of climate change on the location, design, build and operation of renewable and low carbon energy development.

Technical Advice Notes

6.21 The following TANs are considered relevant to the Proposed Development:

- TAN 5: Nature conservation and planning
- TAN 12: Design
- TAN 15: Development and flood risk
- TAN 18: Transport
- TAN 24: Historic environment

Other Material Considerations

6.22 Relevant material considerations for the Proposed Development are listed below:

- Swansea County Council Supplementary Planning Guidance
- Climate Change and Nature Strategy 2022 - 2030

Supplementary Planning Guidance (SPG)

6.23 Swansea Council has prepared SPG documents in relation to several development factors that may have an impact upon the Proposed Development:

Biodiversity and Development SPG

6.24 This SPG provides guidance to augment Policies ER 6, ER 8 and ER 9 of the LDP, and provide clarity on the interpretation of those policies, to ensure development within Swansea maintains and enhances the County's biodiversity and delivers long term ecosystem resilience. This aligns with the Council's duties under Section 6 of the Environment (Wales) Act 2016 and the Resilient Wales Goal of the Well

Being of Future Generations Act 2015 and is consistent with National Development Plan (Future Wales) Policy.

Trees, Hedgerows and Woodlands SPG

6.25 This SPG provides guidance on how the relevant policies of the LDP should be applied to planning applications with respect to all existing, retained and newly planted trees, hedgerows and woodland on development sites.

Climate Change and Nature Strategy 2022 – 2030

6.26 A key local policy document developed in response to Swansea Council's declaration of a climate emergency in 2019 and a subsequent nature emergency in 2021.

6.27 The Strategy outlines Swansea Council's commitment to support decarbonisation across Swansea and promote nature recovery. It identifies energy storage and grid-balancing infrastructure, such as BESS facilities, as essential components in enabling the transition to a low-carbon energy system and supporting the growth of renewable energy.

6.28 Under the Strategy, development proposals are expected to demonstrate how they support these objectives through appropriate siting, design, and mitigation. The proposed BESS development directly supports the Strategy's objectives by enabling greater flexibility in the use of renewable energy, reducing dependency on fossil fuels, and enhancing the resilience of the local energy network.

Chapter 7

Planning Policy Appraisal

7.1 This Chapter confirms how the Proposed Development has responded to relevant planning policy and guidance. It considers the following:

- Principle of Development; and
- Technical Considerations;
 - Cultural Heritage
 - Ecology
 - Flood Risk and Drainage
 - Landscape and Visual
 - Ground Conditions
 - Noise
 - Transport and Access
 - Trees

Principle of Development

Policy Summary

7.2 The Proposed Development's location has been carefully selected for its proximity to the grid connection and in combination with technical and environmental constraints including heritage, ecological, hydrological and other statutory designations, utilities and services.

7.3 Policy PS 1 (Sustainable Places) of the LDP states that in order to deliver sustainable places and strategically manage the spatial growth of the City and County of Swansea, the LDP's sustainable settlement strategy 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.

7.4 Policy EU 1 of the LDP states that within the LSA, proposals for solar PV between 5 – 50 MW will be permitted subject to criteria iii to v. All other proposals for renewable and low carbon energy development will only be permitted where they can demonstrate they would not prejudice the purpose of the LSA. The third point of the Policy provides the criteria that all types of renewable and low carbon energy development and associated infrastructure, on their own, cumulatively and in combination with existing, approved and proposed

development, should comply with all other relevant policies in the Plan and should not have an 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 The Policy continues that, *"Satisfactory mitigation should be in place to reduce the impact of the proposal and its associated infrastructure; and in the case of solar proposals must mitigate against any impacts of glint and glare. Proposals shall make provision for the restoration and after-care of the land for its beneficial re-use. This will be agreed with the LPA prior to the development being carried out. Where necessary, additional compensatory benefits will be sought in accordance with Policy IO 1 Supporting Infrastructure."*

7.6 Policy CV 2 of the LDP protects the countryside by restricting development outside settlement boundaries, allowing exceptions only for necessary infrastructure and enhancement of infrastructure networks, amongst other types of development. Proposals must be sustainable, respect cultural heritage and prioritise clustering near existing development.

7.7 Policy ER 1 of the LDP states that development should promote resource and energy efficiency and increase the supply of renewable and low carbon energy.

7.8 PPW12 confirms at Paragraph 5.7.2 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.

7.9 Paragraph 5.7.12 of the PPW states that energy storage has an important part to play in managing the transition to a low carbon economy. The growth in energy generation from renewable sources requires the management of the resultant intermittency in supply, and energy storage can help balance supply and demand. Proposals for new storage facilities should be supported wherever possible.

Appraisal

7.10 The Proposed Development is for battery storage with a capacity of 250 MW, contributing towards targets for the UK and Wales. It will support the National Grid by providing stability and reducing reliance on fossil fuel generation, whilst enhancing the grid's capacity to integrate a greater share of renewable and zero-carbon energy which is more intermittent in nature. By providing energy storage, the facility will help ensure that renewable power is used by the grid when demand is highest.

7.11 The Proposed Development is particularly relevant in the context of Swansea Council's climate emergency declaration in June 2019, when the Council committed to reducing carbon emissions, enhancing biodiversity and securing a prosperous, low-carbon economy for the region.

7.12 The principle of delivering battery energy storage is explicitly supported by PPW12, which acknowledges that significant investment in energy generation, transmission and distribution infrastructure is required to meet future demand.

7.13 Policy 17 of Future Wales sets out significant support for renewable energy development. Whilst the Proposed Development is not strictly a renewable energy generation scheme, BESS constitutes an important step to the further deployment of renewable energy schemes by providing storage capacity and delivering increasing amounts of renewable energy to the grid.

7.14 The construction of a 250 MW BESS will enhance grid stability by ensuring the efficient distribution of electricity to the National Grid. By storing excess energy during periods of low demand and releasing it when demand is high, the BESS will support the integration of renewable energy sources, reducing reliance on fossil fuels and contributing to Wales net zero 2050 target. The Proposed Development will indirectly contribute towards the Welsh Government targets set out in Future Wales for Wales to generate 70% of its electricity consumption from renewable energy by 2030.

7.15 The Site falls within a designated LSA for solar, as identified on the LDP Proposals Map. The developable area of the Site would be approximately 7 ha in size which amounts to a very small proportion of the wider LSA – although the wider red line boundary extends to 22 ha. The proposal would not significantly reduce the total amount of land available for solar development elsewhere in the LSA.

7.16 The Site is located outside the defined settlement boundaries and within the countryside. The Proposed Development falls within the category of "necessary infrastructure provision and enhancement of infrastructure networks" listed in Policy CV2. This type of development is not inappropriate in the countryside, yet it should be of sustainable form with prudent management of natural resources and

respect for the cultural heritage of the area. The proposals are therefore considered in accordance with Policy PS 1.

7.17 The Site comprises agricultural land which has been used for livestock grazing. The Predictive Agricultural Land Classification Map indicates that the likely agricultural land classification is grade 3b (moderate quality) and, therefore, the Proposed Development will not result in the loss of best and most versatile agricultural land.

7.18 The Design and Access Statement confirms the effect on the character and features of the Site as a result of siting, design, layout and type of installation is acceptable. The impacts on public amenity and public accessibility are appraised within the Transport and Access section that follows. The Proposed Development will have no impact on radar, aircraft operations or telecommunications. Lastly, with respect to the final criteria in EU 1, the Proposed Development is sited outside the peat deposits on the Site, and there will therefore be no loss or impact on the peat.

Summary

7.19 In summary, the Proposed Development seeks to meet an identified need for an energy storage facility, aligning with national and local planning policy, which recognises and supports the provision of such infrastructure. 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. The Proposed Development represents necessary infrastructure and is in accordance with the aims of the LSA. Therefore, in principle, the Proposed Development does not conflict with the policies in the LDP or other material considerations.

Cultural Heritage

7.20 Policy HC 1 of the LDP seeks to protect and enhance the county's historic and cultural environment by ensuring that new development upholds high design standards that respect local character and distinctiveness. It emphasises the identification and safeguarding of heritage assets, their sites, and settings to preserve cultural and historical significance.

7.21 LUC have prepared a Historic Environment Assessment (HEA) to accompany the planning application. The HEA covers effects on both above and below-ground historic assets. No historic assets have been identified within the Site

7.22 Twelve designated historic assets have been identified within 3 km of the Site, and 106 non-designated historic assets have been identified within 1 km of the Site.

7.23 The historic environment baseline in proximity to the Site is characterised by evidence of post-medieval agricultural activity, along with rural domestic dwellings.

7.24 The potential for the presence of previously unrecorded historic assets, including buried archaeological remains, within the Site has been assessed to be negligible to low.

7.25 No physical changes to historic assets have been identified. No historic assets are predicted to experience adverse setting change as a result of the operation of the Proposed Development.

7.26 There is the potential for the removal or truncation of previously unrecorded buried archaeological remains that may be present within the construction footprint of the Proposed Development. Potential mitigation for these changes may include targeted archaeological monitoring of groundbreaking within the construction footprint, which could be secured by a suitably worded planning condition.

7.27 Overall, the Proposed Development complies with local policy HC 1 as there are no designated heritage assets within the Site itself and the nearest listed buildings and scheduled monuments are located at a sufficient distance to avoid adverse impacts on their settings. The Proposed Development respects the historic environment by avoiding harm to the character or distinctiveness of nearby heritage assets, in line with the Policy HC 1's aim to safeguard cultural and historical significance.

7.28 Policy HC 1 of the LDP is therefore complied with.

Ecology

7.29 Policy ER 6 relates to designated sites of ecological importance and states that development that would adversely affect locally designated sites of nature conservation importance should maintain and enhance the nature conservation interest of the site. Where this cannot be achieved [it should be demonstrated that] any unacceptable harm is kept to a minimum by effective avoidance measures and mitigation, or where this is not feasible, compensatory measures must be put in place to ensure that there is no overall reduction in the nature conservation value of the area.

7.30 Policy ER 8 protects the resilience of protected habitats and species by restricting development that would cause significant adverse effects upon protected habitats and species. Exceptions are only permitted where the need for development outweighs conservation value, no alternative sites are available and effective mitigation ensures no net loss of biodiversity. Where mitigation is not feasible, compensation measures must be implemented to conserve and restore natural habitats.

7.31 Policy ER 11 of the LDP protects trees, woodlands, and hedgerows of ecological, cultural and public amenity value, with specific safeguards for Ancient Woodland and Veteran Trees. Development that would cause harm, fragmentation, or environmental degradation to these features is generally not permitted. Proposals affecting trees must include appropriate assessments and protection plans, with replacement planting and aftercare required where necessary.

7.32 BSG Ecology have prepared an Ecological Impact Assessment (EclA) report to support the application. The EclA reports on the extended Phase 1 habitat survey and an initial scoping walkover of habitats north of the access track.

7.33 There is one statutory designated site and 21 non-statutory designated sites (SINCs) within 2 km of the Site. The SINCs include Llety-Morfil and Waun Garn Wen which are on and immediately adjacent to Site.

7.34 Lowland mixed deciduous mixed woodland and hedgerow within the Site are likely to qualify as priority habitats under Section 7 of the Environment (Wales) Act 2016. The remaining habitats are common and widespread and do not have priority habitat status.

7.35 Habitats on Site support protected species including bats (roosting, foraging and commuting), badger, breeding birds, reptiles, common toad and hedgehog. The EclA provides summaries of protected species and habitat suitability on-site.

7.36 The EclA confirms the direct impacts of the Proposed Development include habitat loss (scrub and grassland) and indirect impacts upon habitats through accidental damage, disturbance (noise and visual) and pollution events.

7.37 The EclA makes recommendations for additional mitigation measures for habitats and protected species. It is recommended that a Construction and Environmental Management Plan (CEMP) is produced and adhered to during all phases of the development, and this should include measures to avoid impacts on SINCs, ancient woodland sites, priority habitats and trees during construction, and precautionary method statements should be produced for bats, common toad, badger, hazel dormouse, breeding birds, hedgehog and reptiles.

7.38 The design of the Proposed Development has sought to avoid any direct impacts on SINCs, ancient woodland sites and priority habitats by retaining these and a stepwise approach has been applied. The Green Infrastructure Statement at **Chapter 4** confirms this. Enhancement measures on the Site which would improve biodiversity may include:

- Enhance retained hedgerows using supplementary planting and long-term management regime.

- Enhance retained marshy grassland to improve structure and species diversity.
- New pond / wetland creation in areas of marshy grassland to improve aquatic connectivity across the Site.
- Installation of reptile banks and hibernacula within retained areas of grassland on Site.
- Removal of invasive species across the Site.

7.39 Overall, the Proposed Development would not result in a detrimental impact on any designations, habitats or species within or nearby the Site. The Proposed Development therefore complies with policies ER 6, ER 8 and ER 11.

Flood Risk and Drainage

7.40 Policy RP 5 of the LDP seeks to avoid flood risk by restricting development in areas vulnerable to fluvial, pluvial, coastal, or reservoir flooding unless justified by national guidance and supported by technical assessments. Proposals must not increase flood risk on-site or elsewhere, compromise flood defences, or obstruct access for maintenance. Developments should incorporate sustainable drainage systems (SuDS) or other environmentally sympathetic mitigation measures where feasible.

7.41 TAN15 states that new development should be directed away from Zone C and towards suitable land in Zone A, otherwise to Zone B.

7.42 A Flood Consequences Assessment (FCA) and Outline Drainage Strategy has been prepared by Aqua Terra Consulting to support the application.

7.43 The Afon Llan, a Main River and WFD waterbody, runs along the southern boundary of the Site with a number of drainage ditches around the edge of the Site. A network of streams (ordinary watercourses) extend across the southern land parcel running in a broadly south-easterly direction.

7.44 According to NRW online maps the Site is located within Flood Zone 1 and is at very low risk of flooding from rivers or sea. The Site is at high risk of flooding from surface water, although the developable area is entirely within Flood Zone 1. There are some limited areas of medium surface water flood risk within the Site boundary associated with areas of hardstanding and one area of high risk around the access to the Site. The risk of flooding from other sources is also considered to be low.

7.45 The BESS and substation of the Proposed Development is considered to fall under the category of Highly Vulnerable Development according to TAN15, and the access tracks as Less Vulnerable Development. A flood consequences assessment has been completed for the main access route

and internal access track at the south of the developable area. This is considered to be acceptable due to the type of development within the flood zones, and the lack of need to use the internal southern access tracks. As the only part of the Site falling within an area of higher flood risk is associated with the access tracks, which are Less Vulnerable, the location of the Proposed Development is considered acceptable and compliant with TAN15.

7.46 The FCA and Outline Drainage Strategy provides an outline SuDS strategy with due regard to the statutory national standards for sustainable drainage systems and the surface water hierarchy. There is limited use on Site for runoff water, therefore infiltration is considered first.

7.47 The foundations of the BESS areas will be of impermeable hardstanding to avoid potential risk of contaminated firewater (in the highly unlikely case of fire) and will be determined at later stage. Runoff from the infrastructure areas will be collected in storage underneath the BESS and discharged to the ordinary watercourse to the south. All other areas of the Site (access tracks) will have a permeable gravel finish to allow infiltration to gravel trenches alongside the tracks. There is no requirement for foul sewerage or drainage during the operational phase.

7.48 The report assesses the runoff rate to the watercourse and provides maintenance and management schedules for the proposed stormwater drainage system. Therefore, the relevant policies have been complied with.

Ground Conditions

7.49 Policy RP 6 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.

7.50 A Geological and Ground Conditions Desk Study has been undertaken by Aqua Terra Consulting to evaluate the potential impact of the Proposed Development upon the local environment and undertake a preliminary conceptual site model.

7.51 The Desk Study found a small section of peat in the east of the Site. This is not located within the developable area of the Site.

7.52 Historical mapping of the locality indicates that the Site has remained undeveloped since earliest OS mapping data in the 1870s. No potential sources of contamination were noted within the Site. Off-site potential sources of contamination include Abergelli Farm Landfill, Felindre Gas Compressor Station, an infilled Gravel pit (potential to have been backfilled

with unknown Made Ground), Abergelli Colliery and an unspecified tank west of the Site.

7.53 Based on the findings of the desk study, an assessment of land quality has been undertaken in accordance with current guidance and best practice. On this basis, the potential risks, prior to mitigation, are considered to be low-moderate for human health (moderate relating to potential vapour/gas generation within areas of former coal extraction) and very low in regard to leaching of contaminants to groundwater, aquifers and peat and headwaters. It is recommended that further site-specific ground gas data is collected and a ground gas risk assessment is prepared.

7.54 In summary, the proposals are in accordance with Policy RP 6 of the LDP.

Coal Mining

7.55 Policy RP 7 'Land Instability' states that development which might be affected by unstable or potentially unsafe land will not be permitted where there would be significant direct risk to life, human health, property, buildings and structures or natural heritage.

7.56 The Coal Mining Risk Assessment (CMRA) prepared by Aqua Terra Consulting provides a desktop review in relation to coal mining and potential land instability. The Site lies within a Coal Mining Reporting Area, however it is not located within a 'Development Risk Area'.

7.57 The Site is within the surface area that could be affected by underground coal mine workings in at least five seams, at depths ranging from approximately 38m to 303m below ground level. The most recent recorded working of the coal in the vicinity was in 1947.

7.58 The CMRA finds a previous mine entry location to the south-west of the Site just outside of Abergelli-fach Plantation with an abandoned mine located 1.5 km southwest just north of the M4 motorway. There are also a couple of areas that are designated as Surface Coal Resource Areas within the 5 km buffer zone, however, there is no coal activity past or present within the Site boundary.

7.59 The CMRA provides an assessment of stability, and notes there is no evidence to suggest that there is any recent mining induced instability at the Site. No further works are recommended. The risk assessment concludes a low risk of collapse of underground workings. Therefore, the Proposed Development would accord with Policy RP 6.

Landscape and Visual

7.60 Policy ER 5 of the LDP seeks to protect and enhance the county's landscape character by restricting development that would cause significant harm, particularly within

designated Special Landscape Areas (SLAs). The Site lies within the National Landscape Character Area (NLCA) of Swansea Bay (NLCA38). A large proportion of the area comprises habitats typical of urban and peri-urban areas, including large housing and industrial infrastructure.

7.61 The Mawr Uplands Special Landscape Area (SLA) is located approximately 2 km to the east of the Site.

7.62 Both Bare Earth and Screened Zone of Theoretical Visibility maps (ZTV) have been prepared by LUC. The ZTV is a computer model which identifies where elements of the Proposed Development will be visible from. The Bare Earth ZTV calculates the visibility solely based upon topography using a 'bare earth model' i.e. one where buildings, structures and vegetation are excluded. Therefore, whilst the Bare Earth figure shows theoretical visibility in Llangyfelach due to its elevated position, the actual visibility of the Proposed Development from the settlement will be limited due to the screening provided by buildings and existing vegetation (indicated by the Screened ZTV figure).

7.63 The Proposed Development has theoretical visibility from the Mawr Uplands SLA to the north and east of the Site (i.e. from Mynydd Gelliwastad) but the existing vegetation coverage in the area in the form of hedges and woodland would serve to aid integration of the Proposed Development into the view and into the landscape. This is indicated by the Screened ZTV, which demonstrates a considerably smaller area where the Proposed Development would be visible from. Furthermore, the visual impact would be further mitigated by the proposed landscaping scheme for the Proposed Development.

7.64 In relation to cumulative impacts, the Proposed Development, together with infrastructure associated with the existing Swansea North 400kV Substation and Felindre Gas Compressor station, would increase the man-made influence on this landscape.

7.65 The Proposed Development is therefore not expected to have any significant adverse effect on the character and quality of the landscape of the County and therefore complies with the provisions of Policy ER 5 and Policy CV 2.

Transport and Access

7.66 Policy TR 1 of the LDP sets out the key transport criteria that new development must consider. Development must be supported by appropriate transport measures and infrastructure. Developments should provide necessary mitigation measures and include appropriate parking and access for service vehicles. Development that compromises transport safety or efficiency will not be permitted.

7.67 As detailed in the accompanying Transport Statement, Rappor have reviewed the existing road conditions, capacity

and accident history of the surrounding road network. No concerns were raised and access to the Site via the C149 using the existing gated farm access is considered suitable.

7.68 The Transport Statement includes a Swept Path Analysis for the Site access which confirms it can accommodate the swept path of a 16.5 m articulated HGV.

7.69 Anticipated traffic flows are set out in the Transport Statement. This sets out that the adverse transport impacts of the Proposed Development will be limited to the construction and decommissioning phases of the development's lifespan. An anticipated total of 20 two-way HGV movements each during the construction phase. Once operational, there are anticipated to be up to two visits to the Site per month for maintenance and servicing, which would typically be made with LGVs or 4x4 vehicles less than 7.5t. The Transport Statement concludes that the Proposed Development will not impact upon the operation or safety of the local highway network.

7.70 The Construction Traffic Management Plan (CTMP) prepared by Rappor sets out the principles to manage construction traffic. The CTMP sets out the proposed construction route to Site from the M4 Junction 46 via Rhydypany Road and the C159.

7.71 The CTMP states that during the anticipated 12 to 15-month construction period, it is estimated that approximately 2,200 HGV trips (equivalent to 4,400 two-way movements) will be required. The construction programme will be split across three phases. The enabling works phase, lasting up to 25 weeks, is expected to generate the highest volume of traffic, with approximately 1,800 HGV trips (3,600 two-way movements). The main construction phase, lasting up to 22 weeks, is anticipated to generate a further 325 HGV trips (650 two-way movements), associated primarily with the delivery of major components such as BESS containers and transformer units. The post-construction phase, which includes activities such as fencing installation, CCTV setup, removal of welfare facilities and any remedial works, is expected to involve minimal vehicle movements (up to 50 HGV deliveries, or 100 two-way movements), with final estimates to be confirmed once a contractor is appointed.

7.72 In conclusion, the Proposed Development complies with Policy TR 1 by avoiding adverse impacts on transport safety. The Proposed Development is appropriately located and does not give rise to transport or access concerns, aligning with the policy's aim to ensure safe and efficient infrastructure provision.

Public Rights of Way

7.73 Policy T 7 (Public Rights of Way and Recreational Routes) 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. Policy EU 1 also requires that, inter alia, that public accessibility and amenity is not adversely affected by renewable energy developments.

7.74 A footpath ref. MW64B, crosses the Site at the north and joins the private access track, then leaves the Site at the west and routes around the Gas Compressor Station. The PRoW uses the existing access track that the Proposed Development will use for construction, operation and decommissioning. There is no requirement for a temporary or permanent diversion of this PRoW. It is anticipated that the footpath could remain open throughout the construction period, with appropriate crossing provision and warning signs for drivers using the access to be aware of potential pedestrians.

7.75 In summary, the proposals are in accordance with Policy TR 7 as the Proposed Development will not significantly adversely affect the use of the PRoW, and the provisions of Policy EU 1.

Noise

7.76 General guidance on noise is provided by PPW, supplemented by TAN11 which sets out the importance of appropriately considering noise in planning applications and states how the planning system can be used to: “minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business.” The Noise and Soundscape Plan for Wales also provides guidance within Annex E, where BS4142 is referenced as a guidance document for the assessment and control of noise in industrial and commercial activities.

7.77 A detailed Noise Assessment has been undertaken by Rappor to evaluate the potential impact of the Proposed Development on the acoustic environment.

7.78 Baseline noise measurements were conducted at locations representative of the nearest residential dwellings, isolated buildings located at Abergelli Farm and Maes-Eglwys, approximately 230 m north-west and 530 m south-east from the BESS.

7.79 The results confirm that the Site currently experiences low ambient noise levels, typical of a countryside setting. Construction noise was noted from the south-east associated with the Greener Grid Facility, yet this was during the day only, and the assessment was undertaken at night to understand worst-case effects.

7.80 Modelling of the operational noise associated with the battery units and auxiliary equipment demonstrated that predicted sound levels at the closest noise-sensitive receptors, based on the worst-case assessment period during

the nighttime, with the BESS operating at maximum power, is expected to have an adverse impact at Abergelli Farm and a low impact at Maes-Eglwys. The report indicates that the operational data used in the assessment is for maximum power, which occurs for less than 1% of operational time. At all other times the sound power level is reduced. Therefore, the operation of the BESS is considered to have a low impact at all assessed locations because the predicted specific sound level is significantly below the ambient sound level in the area, and by using a partially open window, the indoor noise level at receptors would be significantly below the guideline values presented in BS8233.

7.81 The assessment concluded that the Proposed Development is unlikely to result in any significant adverse impact in terms of noise, and noise does not represent a material constraint to the development. The proposals are therefore in accordance with the relevant policies of the development plan.

Trees

7.82 Policy ER 11 of the LDP protects trees, woodlands, and hedgerows of ecological, cultural and public amenity value, with specific safeguards for Ancient Woodland and Veteran Trees. Development that would cause harm, fragmentation, or environmental degradation to these features is generally not permitted. Proposals affecting trees must include appropriate assessments and protection plans, with replacement planting and aftercare required where necessary.

7.83 LUC has prepared an Arboricultural Impact Assessment (AIA) to support the planning application.

7.84 The AIA confirms that the removals required for the proposal are minimal, with all but one section of a group classified as category C. Part of Category B G023 will be removed. The retention of the majority of trees will preserve the screening benefits, and there will be minimal visual change to the landscape.

7.85 All other trees surveyed can be retained on site with adequate protection or specialised mitigation methods.

7.86 Protection measures will be required around all retained trees to avoid any detrimental damage via their canopies or roots. The general method to achieve this is through the use of temporary protection fencing which encloses the RPA of retained trees, creating a Construction Exclusion Zone (CEZ) where no works can take place. Where protection fencing is not practicable or would cause an excessive constraint to development operations, further protective methods can be used such as ground protection measures to avoid soil compaction or stem boxes to protect tree stems from physical damage.

7.87 To mitigate against the loss of one tree and sections of four groups being removed, a detailed landscape plan will be prepared to accord with the provisions of PPW for replacement trees to be planted. The proposals will be in accordance with Policy ER 11 of the LDP.

Summary

7.88 The planning appraisal has demonstrated that the development has been designed in a manner which addresses all relevant policy considerations and is therefore in accordance with the development plan relating to the Site.

Chapter 8

Conclusions

8.1 This Planning, Design and Access, and Green Infrastructure Statement has been prepared by LUC (the Agent) on behalf of EDF Renewables Energy Limited (the Applicant) in support of the planning application for the erection of battery energy storage system (BESS), associated infrastructure and vehicular access on land at Abergelli Farm, Felindre.

8.2 This Planning, Design and Access, and Green Infrastructure Statement includes a description of the Site and surrounding area, relevant designations, a description of the site requirements and design evolution of the proposal and an appraisal of the proposals against relevant planning policy. It demonstrates compliance with key policy and should be read in collaboration with accompanying documents.

8.3 The Proposed Development's benefits are summarised below:

- Contributing to meeting Net Zero Strategy target of decarbonising the electricity grid by 2035 and the Wales and wider UK target of reaching net zero emissions by 2050, alongside targets in the Clean Power 2030 Action Plan which acknowledges that flexible storage capacity is essential in meeting these targets.
- Assisting with the significant need and political willingness to increase the amount of renewable energy produced in Wales by delivering up to 250 MW of battery energy storage which will enhance grid stability.
- The time limited 40-year operational period ensures that the Site can be restored in the long-term.
- The Proposed Development will incorporate net benefit for biodiversity which will provide environmental benefits whilst mitigating potential ecological impacts.
- The Proposed Development will provide employment opportunities during the construction, operational and decommissioning phases.

8.4 Overall, the Proposed Development proposes a sensitive and appropriate new use for the Site that is compliant with all required policy and legislation, including the Development Plan. It would contribute to local and national policies to achieve this without significant detriment to social, cultural, economic, and biodiversity environments. Hence, the Proposed Development should be approved without delay once a full planning application has been submitted.

8.5 The Proposed Development is required to assist in meeting the objectives, ambitions and targets set by the Welsh Government in regard to renewable energy generation and the eventual goal of becoming a net-zero energy country.

8.6 The proposals will have no significant detrimental impact on the surrounding natural or historic environment, and deliver positive social, environmental, cultural, and economic benefits. The appraisal has demonstrated compliance against policies of Future Wales, Planning Policy Wales, and the Swansea Council Local Development Plan.